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Taking care of the caretaker: navigating compassion fatigue through a pandemic

INTRODUCTION

Clearly our world has changed. The World Health Organization (WHO) appointed 2020 'the Year of the Nurse and Midwife', however due to the impact of the pandemic on healthcare professionals (HCPs) internationally, the WHO extended the celebrations into 2021. Further, 'Nurses' Week' became 'Nurses' Month', and around the globe, people lauded the work of nurses and midwives. However, as we approach the fourth spike of COVID-19 in the United States, surging Delta-variant cases across the globe, and the second 'Year of the Nurse comes to an end', we wonder; "what's next?" Ask many nurses how they are doing, and there is a sense of uncertainty and hesitancy. Statistics show that approximately 32 percent of HCPs reported insomnia, while 40 percent exhibited anxiety symptoms. Similarly, more than 46 percent reported depression and 69 percent had high levels of stress.¹ Considering these concerning reports, what impact has the pandemic made on the ability of HCPs to care for their suffering patients?

Both responding to the COVID-19 crises directly and carrying out routine care in the context of a pandemic is extremely taxing on an often already stretched workforce. Nurses and midwives are complaining of extreme exhaustion, emotional distress, and physical anguish from long hours of wearing face masks and other personal protective equipment.²⁻³ In addition, they fear transmitting the coronavirus disease from the workplace to their family members, which causes some to live away from home.² Even more distressing for many is the thought of providing high quality patient care, while accommodating for the surge of patients with viral infections, caring for colleagues with COVID-19, and treating patients without family at their side.² The reality is that many nurses find themselves as the only person at the patient's bedside due to visitor restrictions. This leaves HCPs both overworked and vulnerable to bearing the weight of their own and other's suffering. This has exposed HCPs to predisposing risks of compassion fatigue (CF).⁴

WHAT IS COMPASSION FATIGUE?

Compassion fatigue is the gradual physical and emotional withdrawal experienced by those who take care of traumatised and sick patients.⁵ Specifically, CF is the intersection of burnout (the response to things at work such as under staffing or bullying caused by excessive and prolonged stress), vicarious trauma (suffering caused by seeing others suffer), and primary traumatic stress (the impact of personal daily stressors, including previous traumas, such as adverse childhood experiences).⁶⁻⁷ It is an extreme state of tension and preoccupation with the suffering of those being helped to the degree that it can create a secondary traumatic stress for the HCP.⁶

It is estimated that 48–53 percent of nurses experience compassion fatigue, which could be understood as the impact or cost of caring.⁸ Nurses are known for their ability to alleviate patient suffering, however, lack of effective resources and knowledge of how to effectively treat patients with COVID-19 has left many HCPs feeling powerless to care for the sick and suffering in their care. Evidence suggest that HCPs can experience various negative emotions such as distress and extreme sadness when working in high stress and high-risk environments such as during a disaster or pandemic.⁹

MANIFESTATIONS OF COMPASSION FATIGUE

Compassion fatigue can have negative consequences in multiple areas of HCP's professional and personal life and include aspects of burnout. These consequences can be physical, behavioural, psychological-emotional, and spiritual (see Figure 1).¹⁰

Compassion fatigue can affect people differently. It may be experienced as reduced job satisfaction or engagement or as decline in physical or mental health. People affected by CF may suffer from feelings of hopelessness, exhaustion, or be less willing to spend time with patients.⁴ There is a long-lasting effect on HCPs that witness prolonged suffering of patients lasting anywhere from months to years.³

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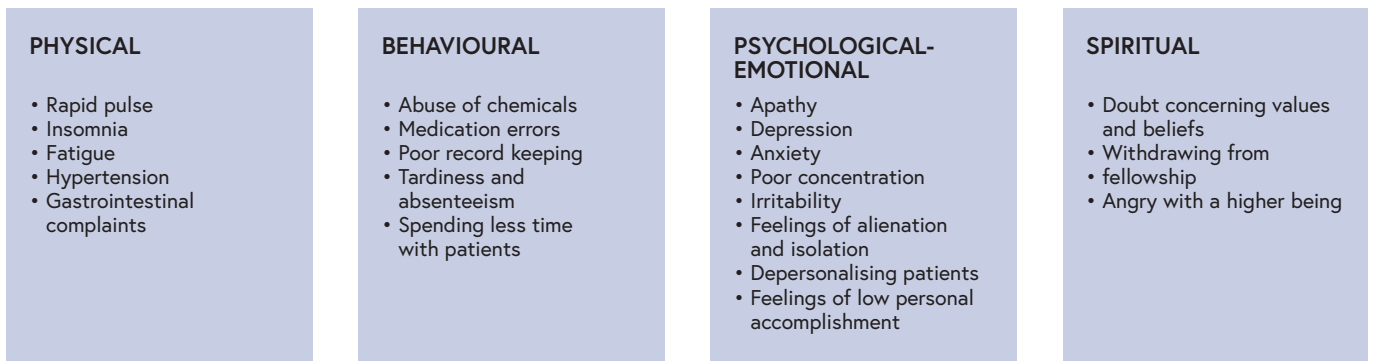


FIGURE 1: CATEGORICAL MANIFESTATIONS OF COMPASSION FATIGUE¹⁰

ADDRESSING COMPASSION FATIGUE

There are known protective factors against and strategies to reduce CF and other emotional stresses including; socialising, mindfulness habits, healthy lifestyle habits, journaling, and seeking professional help. These protective factors focus on resiliency, self-efficacy, and perceived support (see Figure 2).¹¹

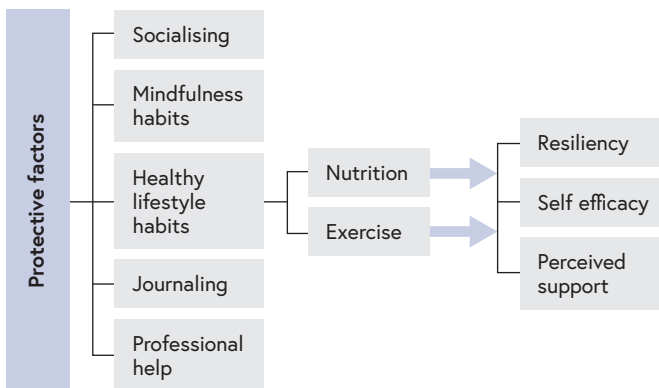


FIGURE 2: PROTECTIVE FACTORS AGAINST COMPASSION FATIGUE¹¹

The management of CF must be multi-dimensional and include prevention, assessment, and consequence minimisation.¹¹ The nursing profession has to be bold and acknowledge that compassion fatigue is a critical risk within many healthcare environments and is amplified by the pandemic situation in many contexts. The WHO recognises HCP's reactions to emotional stress due to their work environment as an occupational health and safety hazard, but CF is not well recognised as a barrier to providing quality care. If CF is not addressed early, it can alter the ability of HCPs to provide compassionate care and negatively impact their own health, safety, and wellbeing. Experiences of CF may also be linked with poorer workforce retention. Currently, there are few support strategies and interventions in healthcare organisations to assist nurses in dealing with sadness, grief, and loss.¹¹ While it is important for HCPs to take ownership of their mental health and wellbeing, employers of HCPs should also take responsibility for their workers.³ Organisational consequences of CF can

include reduced patient safety outcomes, negative workforce impacts, and greater costs.¹²

A more proactive approach to the development of strategies that address the mental health and well-being of HCPs could provide solutions for preventing and reducing CF among HCPs. Interventions that focus on work/life balance, education, and strategic interventions within the work environment have been shown to be beneficial.¹¹

We believe there should be intentionality in nurturing self, in order to nurture others. This balance involves creating a self-care routine to attempt to enhance one's own well-being. This is a way to render compassionate care for self. Some ways to render compassionate care include exercising, journaling, meditating, mindfulness, and doing things that focus on pleasurable, non-working related activities.¹¹ Unfortunately, the pandemic has made opportunities to engage in some of these activities harder. Creating the time for self, even throughout a busy shift, will be requisite for mitigating the impact of collateral damage in this historically, and globally stressful time in healthcare.

Lack of knowledge on CF risk factors often leads to a lack of communication skills for effective coping when under stress.¹¹ Strategies for communicating in stressful situations could improve nurses and midwives' ability to identify personal coping strategies, develop caring communication styles, and establish boundaries with colleagues and patients. In addition, education can assist HCPs to utilise self-care strategies such as mediation and mindfulness and coping with ethical conflict and dilemmas.¹¹

Workplace interventions are imperative to address the emotional distress nurses and midwives are currently experiencing.^{11,12} Workplaces that offer a multitude of resources to assist healthcare providers with their mental health and wellbeing are considered 'healthy work environments'. Resources such as on-site counseling, support groups for staff, art therapy, massage sessions, bereavement interventions, and de-briefing sessions are beneficial in supporting healthcare providers in alleviating CF and emotional distress (see Figure 3).¹¹ While some of these resources would be hard to implement in the midst of a

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pandemic, future planning could embed these opportunities within the strategic goals of organisations so resources are available for HCPs during future crises. Workplace leaders should develop programs that assist in developing resilience, assessment of mental health and wellbeing, and interventions that assist in minimising the consequence of extreme workplace stressors during a pandemic.

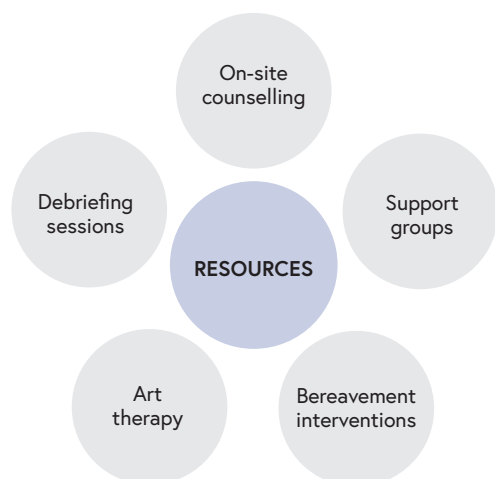


FIGURE 3: HEALTHY WORKPLACE STRATEGIES TO IMPROVE THE MENTAL HEALTH AND WELLBEING OF HCPS¹¹

CONCLUSION

In a caring profession, often nurses neglect their own needs to care for their patients. I can recall the impact of the 2005 Hurricane Katrina among Louisiana nurses, and the toll it had on their mental health. It was devastating. Nurses were exposed to the various socioeconomic inequalities, the racism, and the lack of access to healthcare that many of their patients also experienced. Nurses had to watch the suffering of their patients for several days without adequate resources. To this day, you can hear stories about the trauma that they are still addressing. It is essential that nurses learn the skills that will be a requisite for their survival. There must be an integration of self-care and mental health and wellness behaviours into our daily routine. To date, over four million people have died from the COVID-19 virus worldwide,¹³ and approximately 700 thousand in the United States.¹⁴ The impact of the pandemic has been traumatising for many nurses and midwives. A collaborative effort between hospital administrators and HCPs is imperative in assessing, implementing, and mitigating compassion fatigue that is a normal response to the abnormal exposure to trauma in this critical frontline workforce.

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Enabling difficult conversations in the Australian health sector

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ABSTRACT

Background: Research on difficult conversations is mainly about the impacts of avoiding difficult conversations, with little research on enabling difficult conversations except for improving communication.

Objective: This study aimed to identify the ideal environment for enabling difficult conversations to take place in healthcare settings.

Methods: Convergent Interviewing was used with 20 clinical supervisors to explore the following question: "What enables healthcare professionals in the workplace to have difficult conversations?" Of these 20 clinical supervisors, 10 were nurses, eight were in allied health (five speech pathologists, two physiotherapists, one community support worker) and two were in medicine.

Results: Enabling difficult conversations is complex and requires change at the individual, team, profession, and organisational levels. Enabling these conversations is not as simple as improving communication skills, although effective communication skills are necessary.

Discussion: Other requirements include the desire for someone to want to have a difficult conversation. This relationship exists between the people needing to have the conversation, the physical environment and time required to have the conversation,

and also having management, disciplinary and organisational support to engage in difficult conversations.

Conclusion: Enabling difficult conversations between healthcare professionals is a complicated endeavour involving individual, team, profession, and organisational changes. This implies making a significant effort in presenting training and educational opportunities for all health professionals.

What is already known about the topic?

- Poor communication is a key contributor to medical errors.
- While clinical supervisors need to have difficult conversations with peers, patients and managers, many supervisors lack the skills to adequately perform these on a regular basis.

What this paper adds:

- Having difficult conversations between healthcare professionals is complex.
- That focussing on 'enabling' is a more proactive and positive approach than focusing on 'avoiding'.

Keywords: Medical errors, enabling difficult conversations, crucial conversations, clinical supervision, clinical placement, health educators, nursing, allied health personnel.

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INTRODUCTION

A difficult conversation is defined as a discussion between two or more people where the stakes are high, options vary, and emotions run strong.¹ It can also be referred to as a crucial conversation.² Research on difficult conversations in the health sector is predominantly related to those between medical professionals and patients.^{3,4} Research on the difficult conversations that take place between healthcare professionals themselves (including students) is comparatively limited but has been linked to medical errors and patient safety. The impact of medical errors in Australia is a concern as is in America and the UK.^{6,7,10,11} One study regarding difficult conversations among peers, colleagues, and students does suggest that broken rules, mistakes, lack of support, incompetence, poor teamwork, disrespect, and micromanagement, represent seven different crucial conversations that need to take place between health professionals, but often do not.² This and other more recent examples illustrate the differences in the skills and culture change required to enable difficult conversations between health professionals themselves compared with those needed between health professionals and patients.¹³⁻¹⁶

Poor communication between health professionals has been well documented.¹⁷ Poor communication and collaboration can cause burnout and stress in nurses and can harm and even kill patients.^{2,12} Polito states that communication failures are the leading root cause of serious medical errors.¹⁹ After examining several strategies for managing difficult conversations, Polito came up with six suggestions on how to conduct successful communication during difficult conversations. These included: (i) being prepared by collecting facts and not opinions, (ii) being aware of the purpose of their conversation, (iii) practising having difficult conversations, (iv) managing emotions appropriately, (v) listening and understanding, and (vi) provide feedback and follow-up of communication behaviours.¹⁹

Today, much of the research on difficult conversations is about the impacts of avoiding difficult conversations, with little research on enabling difficult conversations, except for improving communication. Of this research on improving communication, most are on the communication between the healthcare professional and the patient. But is effective communication the solution to enabling difficult conversations, or is it more complex? This research explores this question from the perspective of clinical supervisors and educators. They interact with a broad range of students as well as peers and colleagues in the health sector. A convergent interview process is used to enable deeper level insights to be gained about the complex phenomenon than traditional interview techniques, to explore the question “What enables healthcare professionals in the workplace to have difficult conversations?”

METHODOLOGY AND METHODS

DESIGN

To explore the enabling of difficult conversations, an action research-based interview method known as Convergent Interviewing was used.²⁰ This method tests for convergent information and explores divergent information and is based on undertaking a series of paired interviews until the ‘saturation of ideas/knowledge’ is reached. After each pair of interviews, the interviewer constructs deeper levels of questioning based on this convergence and divergence, and these are added to the initial broad question and any other additional questions from previous cycles (Figure 1).

For example, if the first interviewee of the pair said that the sky was green and the second interviewee of the pair said it was blue (i.e. a difference in data) then a more in-depth level question would be constructed to find out why: “In previous interviews, some people have said the sky was blue, and some said it was green, why do you think there were these differences in perceptions?”

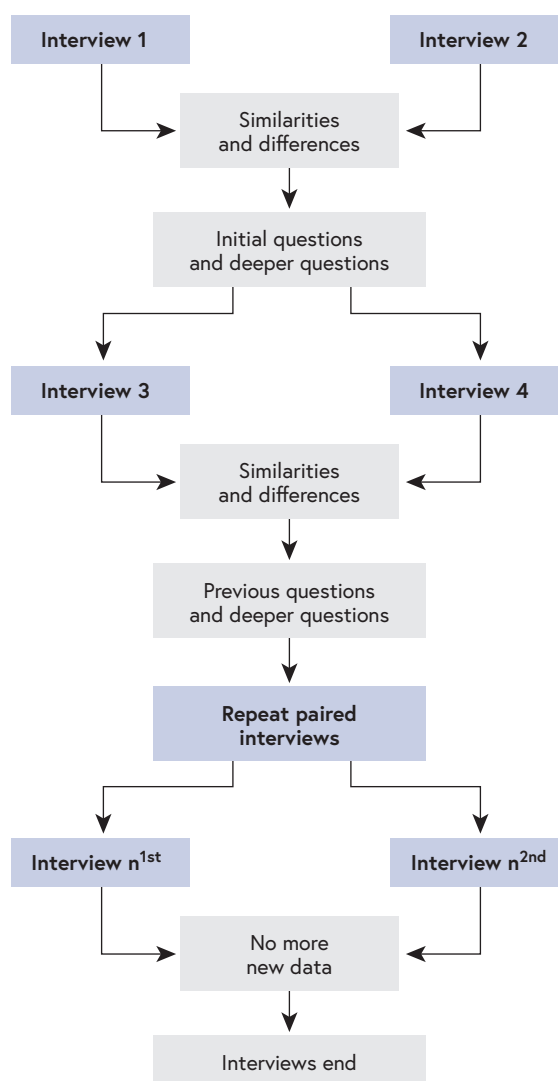


FIGURE 1: THE CONVERGENT INTERVIEWING PROCESS

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However, if both interviewees said the sky was blue (i.e. similarity in data), then a confirming question would be asked: “So far, everyone we have interviewed has said the sky was blue, can you think of any situations where this was not the case?” The deeper level question would then be asked to the next pair of interviewees. Through this deeper level of questioning, themes emerge from the data, and these form the basis of the results.

This method assumes that the interviewer (an outsider) does not have as much knowledge as the interviewees (insiders) about the situation, so is not well equipped to design and develop a list of interview questions. That is, the participant data helped to frame deeper level questions which are not possible with more traditional interview methods. King notes secondary benefits of convergent interviewing, including shared learning in the way in which deeper level questions are asked, and ownership, where participants recognise that the questions being asked are reflective of participants’ knowledge and that the interviewer is genuinely listening.²¹

PARTICIPANTS

The invitations to participate in the study were sent out to 113 clinical supervisors who were past participants of a ‘Difficult Conversations’ workshop that was run throughout Victoria in nine locations. Forty clinical supervisors responded to the invitation and suggested dates and times that they were available over two weeks. Of these 40, interviews were conducted until the saturation of ideas was reached at 20 interviews. Interviewees were selected based on their availability, and where participants had coinciding times available, the first to respond was provided their preferred interview time. The interview also ensured a cross-section of participants. Further information about the Difficult Conversations workshop can be found in Williams et al,¹⁶ and King et al.²²

DATA COLLECTION

Interviews were carried out over two weeks by phone and each interview took approximately one hour and consisted of two parts. Part A aimed to explore why difficult conversations are avoided in the workplace, and Part B sought to find out what workplace environment is needed to enable difficult conversations. This article reports on Part B and used the open-ended question: “*What enables healthcare professionals in the workplace to have difficult conversations?*”

Interviews were typed into a word document by the interviewer, as the interview took place. The interviewer (one of the authors) has over 20 years’ experience in this type of method and asked questions and prompted and typed responses during the interview. Interviews were also recorded so that the interviewer could fill in any words that were missed immediately after the interview. The findings of Part A are also published and can be found in King et al.²²

DATA ANALYSIS

The interviewer spent approximately two hours after each pair of interviews looking for similarities and differences in the data. These were then used to construct new additional questions to be asked to the next pair of interviewees, to confirm, disconfirm, and explore at a deeper level. The time to do this analysis throughout the process had to be factored into the interview schedule. The convergence of the data led to several themes being identified along the way. After the interviews were completed, the interviewer wrote up the emergent themes, referring back to the data to check assumptions, explore further depth for each of the themes, and distil interviewee ‘quotes’ that could be used to highlight the main themes.

ETHICS

Ethics approval was received from the relevant health service and the Monash University Human Research Ethics Committee (MUHREC).

RESULTS

Twenty health professionals took part in the study. Ten were nurses, eight were in allied health (five speech pathologists, two physiotherapists, one community support worker) and two were in medicine. Of these 20, two were from the private sector, and the remaining 18 were in the public sector. Concerning practice location, there were two rural, eight regional, and eight metropolitan participants. No participants identified as being remotely located. Of the 20 participants, 18 indicated that they had some previous form of training in clinical supervision, with eight indicating formal qualifications in clinical supervision. Table 1 shows the years of experience of participants in the health sector and as a clinical supervisor.

TABLE 1: LENGTH OF EXPERIENCE OF EDUCATORS

| Year of experience | Nil | Less than 1 year | 1–4 years | 5–10 years | 11–15 years | 16–20 years | More than 20 years |
|----------------------|-----|------------------|-----------|------------|-------------|-------------|--------------------|
| Health sector | 0 | 1 | 3 | 4 | 1 | 2 | 9 |
| Clinical supervision | 0 | 3 | 6 | 4 | 4 | 1 | 2 |

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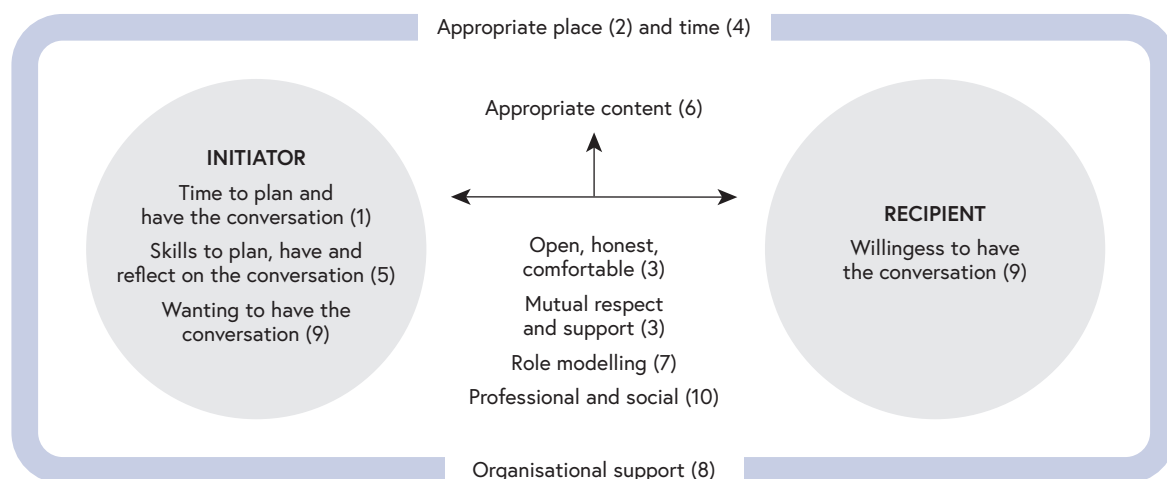


FIGURE 2: THE COMPLEXITY OF ENABLING DIFFICULT CONVERSATIONS

Ten themes emerged from the convergent interviewing process (Figure 2). Each of these is described below. Direct words or quotes of participants are presented in italics.

THEME 1: TIME TO PLAN AND HAVE A DIFFICULT CONVERSATION

Time was the most frequently cited enabler. As one participant put it, *'To have a difficult conversation, you do need to have time to make a plan, it can't be rushed, or it will be a disaster'*. Many of the participants echoed similar opinions. Concerning time, the busy nature within healthcare settings was often mentioned, especially about triage, and *'high paced fast-changing environments'*, as well as environments where a lot of emotional energy or attention had to be focused on patients, e.g., oncology. Ideally, enabling difficult conversations involves a person having enough time to have the conversation as well as plan the conversation.

THEME 2: AN APPROPRIATE PLACE TO HAVE THIS TYPE OF CONVERSATION

Almost all participants mentioned having an appropriate place to have the conversation was ideal. They noted that having a safe, private, quiet environment in which such conversations can take place using calm voices is a key factor and one that's often hard to come by in medical settings. Short sharp conversations were noted as being able to be said quietly at the time, e.g. *'not washing your hands'* but most difficult conversations needed a quiet private space. Most participants stated that these places were not easily accessible in their workplace, if not there at all; however, a few participants mentioned that their workplaces did have these places and they were seen as necessary.

THEME 3: OPEN, HONEST AND COMFORTABLE RELATIONSHIPS BETWEEN STAFF WHERE THERE ARE MUTUAL RESPECT AND SUPPORT

Many participants also noted that mutual respect for one another is a vital enabling factor. One particularly stressed the idea of a *'respectful environment where people value one another...not just individual but cultural as well...'* Others noted that this respect includes such concepts as privacy and confidentiality, and others mentioned respect to take on board each other's perspectives. Having an environment that encouraged teamwork and provided skills training in teamwork was mentioned by several participants. As one interviewee explained *'when the environment is one of a high-functioning team and where there is respect for each other and conflict is dealt with, these conversations are better able to take place'*. It was considered that when both parties feel comfortable, the conversation is much more likely to take place without much trouble. Participants also noted the need for a supportive environment. One participant highlighted the importance of senior staff support by stating, *'Having support from senior staff... having them available to have a pre-conversation with them before you see a student. Having that support is important.'*

THEME 4: ENGAGING IN CONVERSATIONS AS SOON AS POSSIBLE AFTER AN ISSUE ARISES, BUT AT AN APPROPRIATE TIME

Timeliness or being able to address things as they arise was also key. Several participants noted that when issues go unaddressed for days, they tend to grow in some way, and the needed conversation is harder to enact. As one participant put it: *'... a lot happens on the fly, and things are left a little longer and escalate where they didn't need to ... being proactive and not reactive...'* Another participant wished that all staff were *'... empowered enough so that they could have the conversation as the issue arises rather than calling me up four days later.'* As another participant stated *'by the time it comes to me,*

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and I have to deal with it, it almost becomes hearsay.' The ideal environment would enable people to have a conversation immediately when an issue came up.

THEME 5: THE RIGHT SKILLS IN PLANNING, HAVING AND REFLECTING ON DIFFICULT CONVERSATIONS

Staff having the skills to engage in difficult conversations was also seen as necessary as these types of conversations were seen as needing much higher levels of skill than everyday conversations. These included skills in planning the conversation, having the conversations, as well as reflecting on the conversations. As one interviewee expressed *'Having the skill is important. Some people have it innately, and others don't... but it is needed'*. Participants mentioned that the 'ideal' environment would enable access to education, training, courses, and workshops to improve the skills of staff having difficult conversations. As one participant described, *'Skill is paramount... one thing we have learned is that being able to practice that skill through training, where you are not being judged... it gives you the confidence to try it in practice. You can address challenges in a safe environment. Training has given me the ability to reflect back on your skills.'*

THEME 6: ENSURING APPROPRIATE CONTENT IS DISCUSSED

Basing conversation on objective facts, with evidence to back up what is being conveyed was seen as very important to participants. In addition to establishing conversations on fact, focusing on the behaviour and not the person was also emphasised as appropriate in terms of the content of a difficult conversation. Many of the participants expressed the need to ensure that the issue being addressed was placed in the bigger picture or concern, for example, the impact on the patient. As one participant noted, *'You need to bring it back to the patient or safety rather than a personal attack... and you need to let them speak.'* Being able to do this in practice was acknowledged as difficult, with participants suggesting that appropriately expressing things was not a skill many people had in both their personal and professional lives.

THEME 7: LEADERS ROLE-MODELLING HAVING THESE TYPES OF CONVERSATIONS

Participants also felt that role-modelling on the part of leaders and seniors was also necessary for enabling difficult conversations. That is, if junior staff or new staff observed other more senior or long-term staff having and supporting difficult conversations with each other, with junior staff and with staff from different disciplines, they would also be more likely to have these conversations themselves and see this as part of the culture. As one participant put it, *'Leadership and management lead the way... role modelling... strong leadership that models openness and shows how it [difficult conversations] is done in a professional way... if it is seen in the culture... more*

people will come forward and not hold back if they know it will be dealt with properly...' Another participant stated, *'If you have good role models and modeling of skills to junior staff when you are having these conversations... they will learn skills as well.'*

THEME 8: ORGANISATIONAL SUPPORT AND OPTIONAL MEDIATION

Another factor mentioned by participants was having an organisational mandate or expectation for difficult conversations to take place. Some of the participants felt that if difficult conversations were advertised or expressed as part of the corporate mandate, then people would be obliged to engage in these conversations. As one participant described, *'Even if it's not a written company policy, it can still be a clearly communicated expectation'*. Mediation was also mentioned as something that organisations could provide. It was expressed that difficult conversations can quickly spiral out of control, resulting in negative consequences for both parties. Having a mediator present can help diffuse tension and keep things on track. As one participant noted, *'...if things deteriorate you need someone else... they can call a halt to things before the situation becomes unsalvageable.'* This was seen as particularly important when conversations had to take place across hierarchical levels.

THEME 9: WANTING TO HAVE THE CONVERSATION COMPARED TO TIME AND SKILL

When participants were asked which was the most important, time or skill; almost all participants stated that skill was more important than time. This was an interesting finding, as when participants were asked the general question of what the 'ideal' qualities were, participants mentioned time before they mentioned skill. As one person noted, *'There is always time... I know from being in the coal face... time is a cop-out excuse... if you really have to have that conversation you create time... skills you cannot pull out of the air.'* Another person also said, *'I go with skills rather than time... if they say they don't have time they are probably avoiding it. Skill level is a whole different ball game. If you don't have the skill you could make the situation worse by having a difficult conversation. If you have a skill, you can usually make it a positive outcome.'* In terms of skill, the benefits of training and role modelling were emphasised.

Although skills were seen as more influential than time, many participants expressed that wanting to have the conversation was more important than skill or time. For example, *'Skill will help your communication, but it is whether you want to talk to them or not. If the person doesn't want to listen, then it won't work either. I can teach people with different personalities... but if it's a nasty person you have to have the conversation with... you suffer.'* In terms of time, one participant stated, *'Time is not the main issue. As long as you want to solve the problem, you will find the time. In the health system, it can be busy; however, it depends on how much you want to.'*

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THEME 10: CONVERSATIONS ARE MORE LIKELY TO BE HAD IF THE RELATIONSHIP BETWEEN HEALTHCARE PROFESSIONALS IS BOTH PROFESSIONAL AND SOCIAL

Navigating the boundary between social relationships and professional relationships was seen as a tricky business for many of the participants. The majority of participants suggested that there ‘needs to be a happy medium’ between or ‘a mix of both’ professional relationships and social relationships. Still, when you are at work, relationships need to be professional. This was seen as more of an issue in small organisations and rural areas. For example, *‘It is important to have a social relationship with what you do particularly with nurses on the ward – so getting to know each other well makes it easier for us to work together ... so hopefully it doesn’t come to the difficult conversation with them. Might come up to you informally – someone coming to you and saying I am not so confident in doing this.’* As one participant stated, *‘You don’t need to be socially hanging out, but there needs to be a genuine investment in a person, i.e. what did you do on your weekend ... this helps with people take on board feedback because they feel built up and affirmed ... and you show you want to connect.’* Participants felt that there must necessarily be a bit more distance if you were in a management position to be able to manage people professionally objectively, but that this does not preclude being personable to some degree.

The ten themes show the complexity of enabling difficult conversations. When a systems approach is taken, four system levels need to be considered: the components, the interaction between the components, the emergent properties of this interaction, and the broader system (i.e. context) that these are all embedded in. Figure 2 is a systems model of the themes that emerged in this study. These levels are useful in identifying what is needed at different system levels to enable difficult conversations and identify where changes can be made at these levels.

DISCUSSION

The study showed that difficult conversations could be enabled in a variety of ways. These are not just about communication, but also the desire for someone to want to have the difficult conversation, the relationship that exists between the people needing to have the conversation, the physical environment and time required to have the conversation, and also having management and organisational support to engage in difficult conversations. The findings can be compared with other studies in the literature. For example, Stans et al recommend that it is essential for healthcare professionals to have an overall awareness of the potential influence of environmental elements on conversations.²³ In a recent study,¹⁴ nine themes emerged (using a grounded theory method) about the aspects of team communication from the perceptions of interprofessional PCMH team members, and these were

shared knowledge, situation/goal awareness, problem-solving, mutual respect; and communication that is transparent, timely, frequent, consistent, and parsimonious (concise). Our findings were also congruent with three of the AACN Standards for establishing and sustaining healthy work environments, including skilled communication, true collaboration, and authentic leadership.²⁴

In the widely recognised SPIKES six-step protocol for delivering bad medical news,³ the first critical item to address is the *setting*. Although the difficult conversations medical professionals often have with patients are very different from the kinds of difficult conversations that need to occur between health sector peers, colleagues, and students, this is one area where the two show significant overlap. In considering the setting for a difficult provider/patient conversation, the SPIKES protocol highlights the need for reserving adequate time for the conversation as well as adequate privacy.³ However, when the setting can’t be controlled, such as an imminent mistake in the context of delivering care, the ideal environment includes one’s ability and willingness to speak up both immediately and as discreetly as possible. In a study of nurses who do and don’t speak up in such acute situations, Maxfield, Grenny, Lavandero & Groah suggest that critical factors included a positive culture where physicians accept or encourage nurses to speak up and speaking up in a discreet way that allows the caregiver to “save face”.¹² Ulrich suggest that to enable difficult conversations three things need to be carried out (i) identifying the communication that is required, (ii) instilling confidence in healthcare professionals to have difficult conversations, and (iii) create work environments where having difficult conversations is valued.^{25,26}

To borrow from psychology, where clinical training encompasses many of the same barriers to engaging in difficult conversations as are experienced in health sector clinical supervision educators need an integrated set of skills, and attitudes to have productive difficult conversations associated with functional competency domains.²⁷ The same can also be applied to difficult conversations between peers and colleagues in the health sector, and specifically applied beyond competency to the seven crucial conversations identified earlier. Obvious skillsets include giving and receiving quality feedback. A less obvious skillset is acquiring a higher level of insight regarding one’s skills, behaviours, and attitudes, which is an especially difficult undertaking when the lack of understanding is combined with incompetence.²⁸ The role of self-monitoring and self-reflection has been noted elsewhere.¹³ This highlights the importance of ‘enabling’ being seen as a process or a series of difficult conversations that can be reflected upon enabling learning to take place. In addition to skill-building, is an understanding of the complexity involved in different health settings and the impact this has on enabling difficult conversations. For example, it could be argued that not

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everyone is eligible to have these conversations, for example, not everyone is involved in medical error 'debriefings'. Hierarchical issues and issues that occur across disciplines also make this more complex. For example, it is commonly reported in nursing practice, that it is difficult for nurses to give critical feedback to doctors about care and for nurses to provide feedback to management on issues regarding workload.^{2,12,29}

When teams can mindfully engage in and conduct crucial conversations, they thrive.³⁰ In contrast, when they cannot engage in difficult conversations, it can result in high rates of avoidable medical errors. In 2005 the number of patients estimated to have died from mistakes made while they were in hospitals in the US alone was more than 195,000 although more recent studies report it to be as high as 400,000 per year and the third largest cause of death.^{2,15} A portion of those deaths could be avoided if health sector employees were willing and able to have the crucial difficult conversations that should happen around broken rules, mistakes, lack of support, incompetence, poor teamwork, disrespect, and micromanagement.² Within this high-stakes framework, engaging in a difficult conversation becomes an ethical responsibility.²⁷ It may also help to reassure people that feeling apprehensive about a difficult conversation is perfectly natural because the outcome is uncertain, which is why courage (acting despite apprehension) is needed to make it happen.³¹ All of this will require training and focussing on how to facilitate learning about the skills required. Kim et al, suggest that future work could focus on understanding how to teach and sustain effective parsimonious communication, with strategies such as team communication training, information, and communication technologies, and using standardised communication tools.¹⁴ We agree, and add that this needs to be carried out at all levels, and also needs to include additional training in the more systemic factors that have emerged through this study.

Concerning the change required in the health sector, there are two distinct changes needed to enable difficult conversations and move towards a culture of safety. The first is to overcome the various reasons for avoiding the difficult conversations altogether, and, second, to ensure that when difficult conversations do happen, they are executed effectively, which necessarily involves equipping people with the skills needed to do so, including both effective communication as well as other requirements at different system levels. To address these, we suggest, clinical educators particularly, using different types of learning depending on the changes needed, particularly single, double, and triple-loop learning.³² Single-loop learning is focused on correcting errors by changing routine behaviour. Double-loop learning, however, corrects errors by examining the underlying values and policies within an organisation. Triple loop learning, also referred to as deutero learning, includes designing norms and protocols that govern single and double-loop learning.³³

Groot and Maarleveld point out that it is important to note that one loop is not more important than another. In some situations, single-loop learning suffices (such as in the change of rules and procedures). Still, in other cases, double and triple-loop learning is required (a radical transition or innovation). Groot and Maarleveld provide a useful table for looking at the implications for the facilitation of the three learning loops (Table 2).³³

TABLE 2: DIFFERENT IMPLICATIONS FOR FACILITATION OF THE THREE LEARNING LOOPS³³

| Improving (single loop learning) | Renewing: double loop learning | Triple loop learning |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Facilitation focuses on learning about rules and regulations | Facilitation focuses on the underlying assumptions of the rules and regulations. | Facilitation focuses on underlying paradigms, objectives, norms and values. Facilitation focuses on learning about single and double loop learning |
| Facilitation focuses on how questions: how to improve, how to avoid failures? | Facilitation focuses on the why questions: why do existing practices, rules and regulations exist? | Facilitation focuses on the underlying why questions: why do we have the insights that underpin our routine as we have them? Why these goals? |
| Facilitation focus on obligation and permission | Facilitation focuses on knowing and understanding | Facilitation focus on will and being |
| Evolutionary, incremental | Revolutionary, concerned with conflicts and disputes | Revolutionary, concerned with conflicts and disputes |
| Increasing efficiency and effectiveness/do the things right | Renewing/do the right things | Development |

Along with those rational and moral arguments in favour of having difficult conversations, a big-picture effort might involve an organisational culture change effort to establish an environment more conducive to having difficult conversations, one where people are encouraged to speak up when something is amiss. This may involve moving a hospital or other clinical setting from an aggressive/defensive culture (opposition to new ideas, competitiveness, independently competent, protective of individual status and security) to a more constructive culture (cooperation, collaboration, teamwork-oriented, participative decision-making) as can be measured using a tool such as the Organisational Culture Inventory.³⁴ In the Difficult Conversations workshops we used a simple process of asking participants' 'What if I do?' and 'What if I don't?' in terms of having a difficult conversation.¹⁶ In this process, participants discovered that the negative consequences of not having the conversation far outweighed the negative effects of having the conversation. In this workshop, participants also had the opportunity to

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practice difficult conversations. As a result of our workshop, 75% of participants reported changes in behaviour about having difficult conversations. Also, interesting to note, was that participants in these workshops saw a need for all healthcare staff to be involved in similar training.

LIMITATIONS

Qualitative results are not typically generalisable or transferable. The study only involved 20 clinical supervisors and as such, can be considered small, as well as time and space bound. Also, the qualitative nature of this study leaves the results not easily transferable, generalisable, or applied across multiple contexts. Another limitation is that the results did not actively compare across professions. There is an opportunity to carry out a similar study later to focus on different professions to gain more depth or see differences between professions.

CONCLUSIONS

Understanding the depth and complexity of enabling difficult conversations was easily explored using the convergent interviewing method. It also allowed for some surprises to emerge, such as, the desire to have a conversation having more of an influence on enabling difficult conversations than time or skills. This highlights the need for specific training that links engaging in difficult conversations to reductions in medical errors and deaths. Comparing the findings of this study with other research, this study provided a more systemic view of enabling difficult conversations than previous studies that have used methods that have brought forward findings within system levels. Our findings are relevant across health professions and particularly important to nursing practice. In conclusion, we would like to put forward that although focussing on 'enabling' is a more proactive and positive approach than focusing on 'avoiding', understanding both provides a comprehensive understanding that can be used for future education and training content, design and approach in addressing difficult conversations.

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Barriers to the provision of optimal care to dying patients in hospital: a cross-sectional study of nurses' perceptions

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ABSTRACT

Objectives: To examine in a sample of nurses working in acute-care wards, self-reported perceptions of the: 1) patient; family; nurse; doctor; and health system-related barriers to the provision of optimal end-of-life care to people who are dying in hospital; and 2) five barriers which, if removed, would lead to the greatest improvements in hospital-based end-of-life care.

Background: Nurses play a central role in caring for dying patients and can offer a unique perspective about the factors that impact the quality of end-of-life care delivered in hospitals.

Study design and methods: Two hundred and fifteen registered and enrolled nurses from three metropolitan and three rural hospitals across three health services completed a questionnaire-based, cross-sectional study between April 2016 and June 2017.

Results: Nurses perceive that doctors continue to treat for too long (79% ranked as a large barrier); families have unrealistic expectations about a patient's prognosis (73%); junior doctors are unwilling

to alter the decision of senior doctors (67%); doctors do not adequately explain the dying process (66%); and doctors have inadequate training in end-of-life care (66%). Nurses indicated that doctors reducing the length of active treatment and families having a more realistic expectation about life-expectancy would lead to the greatest improvement in end-of-life care in hospitals.

Discussion: In this study of nurses working in a wide range of acute care settings across rural and metropolitan locations, substantial barriers to the provision of high-quality end-of-life care were perceived across all facets of healthcare provision. Important barriers included the continuation of potentially futile treatment, inadequacy of symptom control, and poor communication between doctors, patients and their families.

Conclusion: Nurses perceive a range of patient; family; provider; and health system-related challenges to the provision of optimal end-of-life care in hospital. Findings highlight potential areas for improvement as part of a coordinated approach to optimising the provision of end-of-life care in

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hospitals. Future goals should include larger-scale, longitudinal studies across various states and territories to inform the development of interventions that can help to address the identified gaps in service provision.

Implications for research, policy, and practice:

This study has highlighted the need to involve all stakeholders when designing interventions to improve end-of-life care. Nurses can provide valuable insight into the factors that can make the greatest impact in improving care provision. It suggests that the provision of high-quality end-of-life care in hospitals is complex, and that there is substantial overlap between items nurses perceive to be barriers in each of the five domains of care provision. To achieve sustainable improvement in the quality of end-of-life care provided in hospitals, a multi-factorial, and collegial, approach to designing interventions will be needed.

What is already known about the topic?

- End-of-life care is increasingly being provided in hospital settings.
- Nurses are an important source of information and support for dying patients and their families.
- Few studies have explored nurses' perceptions of the barriers to the provision of high-quality end-of-life care across all domains of healthcare provision.

What this paper adds:

- Important barriers include continuation of potentially futile treatment, adequacy of symptom control, and poor communication between doctors, patients, and their families.
- Findings can support the design of more effective intervention strategies to mitigate identified barriers and achieve improvements in the quality of end-of-life care delivered in hospital.

Keywords: nurses; terminal care; acute care; Australia; communication; barriers

INTRODUCTION

End-of-life care is defined as care that helps people who have been diagnosed with an advanced, terminal illness to live as well as possible until they die.¹ Although as many as two-thirds of the population would prefer to receive care at home in the last year of life, a significant proportion of people will receive hospital-based care in the last year of life.⁴ As families become smaller, and more geographically diverse, there may be fewer people available to care for dying family members (that is, patients expected to die within the next few days or weeks) in the home environment; or else those who are available may lack the ability to provide the care that is needed.² An ageing population, combined with limited availability of formal services to facilitate end-of-life care outside the hospital environment are other contributing factors.^{3,4} In addition, as people approach the end of their lives, some will choose to receive care in a hospital.^{5,6} Consequently, it can be expected that there will be increasing strain placed on a health system that continues to expose dying patients and their families to potentially unwanted interventions at the end of life.⁷ Such interventions can be invasive and aggressive, and there is little evidence that they alter outcomes; rather, they frequently reduce the quality of patients' remaining time and leads to more complicated bereavement outcomes for family members.⁸ Difficulty predicting the prognosis of dying patients has been cited as one reason for continuing to provide active treatment, even though many conditions tend to follow a predictable trajectory.⁹

Achieving improvements in the quality of hospital-based end-of-life care has been prioritised in national and international policy and practice documents.^{10,11} In Australia, the National Consensus Statement guidelines were released in 2015 in an effort to standardise/guide end-of-life care delivery in Australian acute care settings.¹² These guidelines describe 10 essential elements for high-quality end-of-life care, and address areas of direct healthcare provision in hospitals, including patient-centred communication, teamwork and coordination of care; as well as organisational characteristics such as ongoing training programs and the provision of support for clinical staff who are caring for dying patients. The provision of end-of-life care in hospitals is a recent addition to the National Safety and Quality Health Service Standards, with a requirement that end-of-life care meet the 10 essential elements outlined in the Consensus Statement.¹¹ Though all Australian hospitals are required to be accredited to these standards, the implementation of end-of-life policies remains the responsibility of individual healthcare services, and there is some evidence to suggest that end-of-life care in hospitals continue to fall short of expectations.¹³ The provision of complex and invasive treatments at the end of life is common; and there is some doubt that patients and their families are fully informed about the potential benefits and risks of these treatments.¹⁴ The result can be an end-of-life experience that fails to meet the expectations of patients or families, leading to extended, complex bereavement outcomes.¹⁵ This can also have adverse long-term implications for those delivering care, as well as placing an increasing burden on the health system.^{13,14}

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Developing interventions that can lead to better end-of-life outcomes for patients dying in hospitals requires an understanding of the factors that impede the delivery of high-quality end-of-life care. However, interventions are frequently designed without formal analysis of these issues.^{13,16} Evaluations of complex interventions are also often undermined by problems that could have been identified before the initiation of a large-scale effectiveness study.¹⁷ Improving the effectiveness relies on attention to their design and feasibility.¹⁷

The pivotal role of doctors in designing treatment regimens may result in them bearing much of the perceived responsibility when care does not meet expectations.¹⁸ It is important to recognise that treatment plans may be designed on the basis of issues that arise in other domains of healthcare provision. For example, continuing treatment beyond what might reasonably be considered appropriate may, in fact, be driven by patient or family-related demands. A holistic examination of the factors that may influence end-of-life care quality is essential if sustainable improvements are to be made. Such analysis should therefore include the perceptions of all key stakeholders in the provision of hospital-based end-of-life care. It should also encompass an analysis of the barriers across all domains of care; including individual patient, family, and healthcare provider domains, as well as institutional and system-related issues.

The relationships that can develop between nurses, their patients, and their families are unique and stem from the fact that nurses spend the bulk of their time at the bedside.¹⁹ Nurses are well-placed to understand the wishes and needs of their patients as they approach the end of their lives and, as such, can identify the issues that may impact delivery of care that meets those wishes.²⁰ To date, much of the literature examining nurses' perceptions of hospital-based end-of-life care has been qualitative and while this provides depth of understanding, there is a need for methodologically rigorous quantitative studies. Other studies have been conducted in single institutions or wards; or have not examined the wide range of factors that may impact care delivery.^{20–22} Obtaining the views of a diverse group of nurses working in a range of wards, and several hospitals, about the factors that may impact delivery of end-of-life care is essential if interventions to improve end-of-life care delivery are to be effective.

AIMS

To examine the perceptions of general nurses working in acute care wards regarding:

- 1) patient, family; nurse; doctor; and health system-related barriers to the provision of optimal end-of-life care to people who are dying in hospital;
- 2) those barriers which, if removed, would make the greatest impact upon the provision of hospital-based end-of-life care.

METHODS

DESIGN

A cross-sectional survey of 215 registered and enrolled nurses working in acute care wards of three metropolitan and three rural hospitals from three health services in Australia.

SURVEY DEVELOPMENT

The survey was adapted from a cross-sectional patient survey used in previous studies of oncology outpatients,²³ and older, hospitalised patients.²⁴ This ensured that nurses were presented with barriers perceived by patients to be important for their own end-of-life experience. Steps in the development and establishment of face and content validity of the patient version have been described previously.^{23,24} Briefly, the survey included: (1) healthcare providers and consumers participating in 20-minute individual interviews to elicit their views and experiences in relation to end-of-life care; (2) review of potential items by an expert panel selected based on their role in caring for patients that represent common trajectories of decline that are eventually fatal and have the greatest probability of dying in hospital;⁴ and (3) modifications and pilot testing of items with a convenience sample of 20 patients for acceptability, relevance and clarity, with refinements based on their feedback. A similar approach was used to adapt the patient version to the nurses' version of the survey administered in this study. It included: (1) qualitative interviews (n=15) and a focus group (n=9) with nurses; (2) review of items by an expert panel comprised of behavioural scientists experienced in survey development, as well as clinicians with more than 20 years of experience, including a palliative care physician, a surgeon, an oncologist, a geriatrician, a nephrologist and nurses working in acute-care settings; and (3) pilot testing procedures with a small number of nurses. The final survey included items assessing: perceived barriers to delivering end-of-life care in hospitals; advance care planning knowledge and attitudes,²⁵ and preferences for location of care;²⁶ however only the items examining nurses' perceived barriers to delivering end-of-life care in hospitals are presented here.

PROCEDURE

Eligible nurses on each ward were identified with the assistance of the Nurse Unit Manager and approached for consent by a member of the research team, who provided verbal and written information about the study. Completion of the survey was taken as consent. Participants completed an anonymous survey either during pre-scheduled in-service education sessions held on the ward during shift, or in the nurses' own time. Surveys were also placed in staff rooms of participating wards where nurses could access them if they wished to participate. Nurses could return their survey in a reply-paid envelope directly to the research team or seal it

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in an envelope and place it in a designated box on the ward to be collected by the research team. All nurses were advised that completion of the survey was voluntary. Evidence based strategies including an offer of providing feedback about the study results were used to maximise response to the invitation.²⁷

OUTCOME MEASURES

Participants were presented with a list of 47 items, separated into five domains: patient-related barriers (7 items); family-related barriers (8 items); nurse-related barriers (11 items); doctor-related barriers (12 items); and health system-related barriers (9 items). Participants were asked to indicate the extent to which each item was a barrier to the provision of optimal end-of-life care on a four-point Likert scale ranging from *large barrier* to *no barrier*. Participants were then asked to list the five most important barriers which, if removed, would have the greatest impact on the delivery of end-of-life care. Responses were ranked on a scale from 1 to 5, where 1 is the most important barrier and 5 is the least important barrier. Each item was given a score to indicate the ranking assigned by each nurse (a ranking of 1 was assigned a score of 5; a ranking of 2 was scored as 4; a ranking of 3 was scored as 3; a ranking of 4 was scored as a 2; and a ranking of 5 was scored as 1).

ASSOCIATE VARIABLES

All associate variables were obtained via participant self-report. Socio-demographic items included sex and age group (in 10-year increments). Clinical items included years of experience as a nurse, years worked in current hospital and current ward, number of shifts worked per week, and number of dying patients cared for in the past six months.

STATISTICAL ANALYSIS

Stata/IC 14 (StataCorp) was used for all analyses. Consent bias (age, sex and FTE status) was assessed by comparing responders to available Australian national data, using chi-squared analyses. Frequency data were used to describe barriers to the provision of optimal end-of-life care, including: the proportion of nurses who identified each item as a large/moderate/small/no barrier; and the proportion of nurses who ranked each large barrier as the most significant to the provision of optimal end-of-life care.

ETHICS APPROVAL

The University of Newcastle Human Research Ethics Committee (Ref: 16/02/17/5.03) and the ethics committees of the participating health services approved the study (LNRSSA/17/HNE/65; LNRSSA/17/HNE/66 – 23/3/2016; 0916–086C – 10/10/2016).

RESULTS

SAMPLE

Participants' characteristics are presented in Table 1. Almost all participants had cared for at least one dying patient in the past six months; and 27% (n=59) reported caring for 11 or more dying patients. The sample is representative of Australian national data in terms of nurses' gender and workload (FTE). There were significantly fewer respondents in the 51 years and over group compared to the Australian national data (30% vs 39%, $p < 0.01$).²⁸

Participating nurses identified a number of important barriers to the provision of optimal end-of-life care in each of the five domains. Table 2 presents the number and proportion of nurses who rated each item as either *large*, *moderate*, or *small* barrier, or no barrier at all, by individual domain. The most important issue overall, according to nurses in this study, was that doctors continue active treatment for too long (79%; n=168).

The importance of knowing patients' wishes for end-of-life care was clearly established, with two-thirds of nurses considering the lack of a documented Advance Care Plan to be a large barrier to the provision of optimal end-of-life care (n=137). The other key patient-related issue according to nurses in this study was the provision of appropriate symptom management (53%; n=111). It was very important to nurses in this study that families have realistic expectations about the prognosis of their dying family member (73%; n=156), and that there is consensus among family members about the care their family member receives (62%; n=131). Nurses were concerned about their inability to provide sufficient pain relief to their patients, with half of all respondents ranking this as the largest barrier in the nurse domain (51%; n=110). When nurses felt that treatment plans did not align with the care that their patients and families wanted, this was considered a significant barrier to optimal end-of-life care (47%; n=100).

In the doctor domain, nurses identified a substantial number of areas where improvements could be made. Eighty percent considered that doctors continue treatment for too long (n=168), and more than two-thirds were concerned that junior doctors were unwilling to alter decisions made by more senior doctors (n=143). According to nurses in this study, substantial barriers exist in several other areas of medical care, including a lack of training in end-of-life care (66%; n=142) and poor, or insufficient explanation of the dying process (66%; n=142) and delayed involvement of palliative care teams (66%; n=141). Avoidance of discussions with patients about end-of-life care was also a key concern of nurses in this study (65%; n=139).

Nurses were concerned that there was insufficient privacy for dying patients and their families (57%; n=122), and a lack of availability of specialist end-of-life care services was a key issue for nurses in this study (55%; n=119).

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TABLE 1: NURSE SOCIO-DEMOGRAPHIC CHARACTERISTICS AND CLINICAL EXPERTISE (N=215)

| Characteristic | Number | % | 2015 national data (%) |
|-------------------------------------------|--------|------|------------------------|
| Sex | | | |
| Male | 21 | 9.8 | 10 |
| Female | 184 | 85.6 | 90 |
| Missing | 10 | 4.7 | |
| Age group | | | |
| Under 30 | 44 | 20.5 | 16 |
| 31–40 | 42 | 19.5 | 20 |
| 41–50 | 56 | 26.0 | 25 |
| 51 and over | 60 | 27.9 | 39 |
| Missing | 13 | 6.0 | |
| Number of years nursing experience | | | |
| 1 or less | 12 | 5.6 | – |
| 2–10 | 69 | 32.1 | – |
| 11–20 | 48 | 22.3 | – |
| 21+ | 69 | 32.1 | – |
| Missing | 17 | 7.9 | |
| Number of years at this hospital | | | |
| 1 or less | 22 | 10.2 | – |
| 2–10 | 94 | 43.7 | – |
| 11–20 | 47 | 21.9 | – |
| 21+ | 39 | 18.1 | – |
| Missing | 13 | 6.0 | |

| Characteristic | Number | % | 2015 national data (%) |
|------------------------------------------------------------------|--------|------|------------------------|
| Number of years in this ward | | | |
| 1 or less | 42 | 19.5 | – |
| 2–10 | 101 | 47.0 | – |
| 11–20 | 34 | 15.8 | – |
| 21+ | 21 | 9.8 | – |
| Missing | 17 | 7.9 | |
| Full-time or part-time workload | | | |
| Part-time | 89 | 41.4 | 49 |
| Full-time | 104 | 48.4 | 51 |
| Missing | 22 | 10.2 | |
| Rural or metropolitan | | | |
| Rural | 27 | 13 | |
| Metropolitan | 188 | 87 | |
| Number of dying patients cared for in the past six months | | | |
| None | 13 | 6.0 | – |
| 1–10 | 126 | 58.6 | – |
| 11–20 | 31 | 14.4 | – |
| 21–30 | 15 | 7.0 | – |
| 30+ | 13 | 6.0 | – |
| Missing | 17 | 7.9 | |

TABLE 2: NURSES' PERCEPTIONS OF THE BARRIERS TO PROVIDING OPTIMAL END-OF-LIFE CARE IN HOSPITALS, BY DOMAIN (BARRIERS RANKED IN ORDER FROM MOST TO LEAST SIGNIFICANT BARRIER IN EACH DOMAIN)

| Patient-related barriers | Large N (%) | Moderate N (%) | Small N (%) | None N (%) |
|---------------------------------------------------------------------------------|-------------|----------------|-------------|------------|
| Not having a documented Advance Care Plan | 137 (64) | 54 (25) | 21 (10) | 2 (1) |
| Having unrelieved symptoms (e.g. pain/delirium/respiratory secretions) | 111 (53) | 56 (27) | 37 (18) | 7 (3) |
| Being unable to communicate their wishes (e.g. reduced conscious level/aphasic) | 102 (48) | 74 (35) | 37 (17) | 1 (1) |
| Having unrealistic expectations about prognosis | 97 (46) | 76 (36) | 35 (17) | 3 (1) |
| Not understanding 'life-saving measures' | 97 (45) | 82 (38) | 33 (15) | 2 (1) |
| Being afraid to ask questions | 74 (35) | 73 (34) | 52 (25) | 13 (6) |
| Having cultural/religious/language barriers | 68 (32) | 70 (33) | 65 (31) | 10 (5) |

| Family-related barriers | Large N (%) | Moderate N (%) | Small N (%) | None N (%) |
|-------------------------------------------------------------------------------------|-------------|----------------|-------------|------------|
| Having unrealistic expectations about prognosis | 156 (73) | 47 (22) | 9 (4) | 2 (1) |
| Disagreeing with each other about care | 131 (62) | 60 (28) | 20 (9) | 2 (1) |
| Being distressed by unrelieved symptoms (e.g. pain/delirium/respiratory secretions) | 123 (58) | 62 (29) | 24 (11) | 4 (2) |
| Not knowing the patient's wishes | 119 (56) | 64 (30) | 29 (14) | 1 (1) |
| Not understanding 'life-saving measures' | 109 (51) | 79 (37) | 24 (11) | 1 (1) |
| Not having a designated contact person | 86 (40) | 73 (34) | 45 (21) | 10 (5) |
| Being afraid to ask questions | 66 (31) | 84 (39) | 52 (24) | 12 (6) |
| Having cultural/religious/language barriers | 63 (30) | 72 (34) | 66 (31) | 10 (5) |

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TABLE 2: NURSES' PERCEPTIONS OF THE BARRIERS TO PROVIDING OPTIMAL END-OF-LIFE CARE IN HOSPITALS, BY DOMAIN (BARRIERS RANKED IN ORDER FROM MOST TO LEAST SIGNIFICANT BARRIER IN EACH DOMAIN) (CONTINUED)

| Nurse-related barriers | Large N (%) | Moderate N (%) | Small N (%) | None N (%) |
|---------------------------------------------------------------------------------|------------------------|---------------------------|------------------------|-----------------------|
| Being unable to provide sufficient pain relief | 110 (51) | 71 (33) | 30 (14) | 3 (1) |
| Finding it difficult aligning patient/family needs with medical treatment plans | 100 (47) | 74 (34) | 38 (18) | 3 (1) |
| Having inadequate training in end-of-life care | 95 (45) | 69 (33) | 39 (18) | 9 (4) |
| Being too busy | 91 (43) | 84 (39) | 28 (13) | 10 (5) |
| Feeling unable to discuss poor prognosis with patient/family | 87 (41) | 64 (30) | 48 (23) | 14 (7) |
| Lacking involvement in end-of-life decision making | 76 (36) | 72 (34) | 54 (25) | 12 (6) |
| Feeling inadequately supported as new graduates | 66 (33) | 80 (38) | 44 (21) | 13 (6) |
| Equating palliative care with 'terminal care' | 66 (31) | 81 (38) | 45 (21) | 22 (10) |
| Having limited continuity of care from day to day | 62 (29) | 79 (37) | 52 (24) | 20 (9) |
| Finding it difficult to assess needs of patient/family | 59 (28) | 89 (42) | 60 (28) | 6 (3) |
| Having cultural/religious barriers | 48 (22) | 52 (24) | 75 (35) | 39 (18) |

| Doctor-related barriers | Large N (%) | Moderate N (%) | Small N (%) | None N (%) |
|--------------------------------------------------------------|------------------------|---------------------------|------------------------|-----------------------|
| Continuing treatment for too long | 168 (79) | 34 (16) | 12 (6) | - |
| Being unwilling to alter decisions of senior doctors | 143 (67) | 55 (26) | 14 (7) | 2 (1) |
| Having inadequate training in end-of-life care | 142 (66) | 54 (25) | 16 (7) | 3 (1) |
| Not adequately explaining the dying process | 142 (66) | 59 (28) | 13 (6) | - |
| Involving palliative care teams too late or not at all | 141 (66) | 53 (25) | 20 (9) | 1 (1) |
| Avoiding discussions with patients | 139 (65) | 58 (27) | 15 (7) | 3 (1) |
| Providing insufficient/inappropriate pain and symptom relief | 133 (62) | 56 (26) | 25 (12) | 1 (1) |
| Not involving nurses in treatment discussions | 119 (55) | 70 (33) | 24 (11) | 2 (1) |
| Being too busy | 117 (55) | 75 (35) | 18 (8) | 4 (2) |
| Not adhering to Advance Directives | 101 (47) | 48 (22) | 45 (21) | 20 (9) |
| Finding it difficult to predict patient prognosis | 77 (36) | 86 (40) | 48 (23) | 2 (1) |
| Having cultural/religious barriers | 59 (27) | 51 (24) | 76 (35) | 29 (14) |

| Health system-related barriers | Large N (%) | Moderate N (%) | Small N (%) | None N (%) |
|-------------------------------------------------------------------------------|------------------------|---------------------------|------------------------|-----------------------|
| Insufficient private rooms/space (e.g. for dying patients, grieving families) | 122 (57) | 61 (28) | 24 (11) | 8 (4) |
| A lack of specialist palliative care/end-of-life teams | 119 (55) | 53 (25) | 35 (16) | 8 (4) |
| An inadequate system for documenting and communicating end-of-life wishes | 106 (49) | 68 (32) | 33 (15) | 8 (4) |
| Poor access to existing Advance Directives | 95 (44) | 72 (33) | 39 (18) | 9 (4) |
| Uncertainty about who is responsible for end-of-life decisions | 91 (42) | 85 (40) | 32 (15) | 7 (3) |
| Insufficient registered and enrolled nurses | 83 (39) | 67 (31) | 44 (21) | 21 (10) |
| A lack of continuity when patients are transferred between wards | 72 (33) | 81 (38) | 54 (25) | 7 (3) |
| An inability to have family members stay overnight | 49 (23) | 79 (37) | 49 (23) | 37 (17) |
| Limited visiting hours | 41 (19) | 50 (23) | 48 (22) | 76 (35) |

Note: percentages rounded to nearest whole number

Nurses identified the continuation of potentially futile treatment, inadequate symptom control, and poor communication between doctors, patients and their families as the five most significant barriers which, if removed, would lead to the greatest improvements in end-of-life care in hospitals (Table 3).

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TABLE 3: THE TOP FIVE BARRIERS WHICH, IF REMOVED, WOULD LEAD TO THE GREATEST IMPROVEMENTS IN EOL CARE – IN RANKED ORDER OF IMPORTANCE – TOTAL SCORE; (N)

| Item | Rankings – score (n) | | | | | Overall Score (n) |
|----------------------------------------------------------------------------------------|----------------------|---------|---------|---------|---------|-------------------|
| | 1st | 2nd | 3rd | 4th | 5th | |
| Doctors continuing treatment for too long | 55 (11) | 80 (20) | 36 (12) | 42 (21) | 24 (24) | 237 (88) |
| Families having unrealistic expectations of patient's prognosis | 45 (9) | 36 (9) | 39 (13) | 22 (11) | 10 (10) | 152 (52) |
| Patients not having a documented Advance Care Plan | 60 (12) | 36 (9) | 15 (5) | 12 (6) | 15 (15) | 138 (47) |
| Doctors providing insufficient/inappropriate pain and symptom relief | 35 (7) | 36 (9) | 30 (10) | 22 (11) | 7 (7) | 130 (44) |
| Doctors avoiding discussions with patients | 45 (9) | 20 (5) | 27 (9) | 24 (12) | 12 (12) | 128 (47) |
| Doctors involving palliative care teams too late or not at all | 30 (6) | 20 (5) | 24 (8) | 24 (12) | 11 (11) | 109 (42) |
| Doctors having inadequate training in end-of-life care | 30 (6) | 24 (6) | 24 (8) | 12 (6) | 9 (9) | 99 (35) |
| A lack of specialist palliative care/end-of-life teams | 45 (9) | 28 (7) | 9 (3) | 8 (4) | 7 (7) | 97 (30) |
| Families not knowing the patient's wishes | 30 (6) | 24 (6) | 15 (5) | 16 (8) | 3 (3) | 88 (28) |
| Doctors not adequately explaining dying process | 35 (7) | 20 (5) | 21 (7) | 8 (4) | 2 (2) | 86 (25) |
| Doctors being unwilling to alter decisions of senior doctors | 25 (5) | 32 (8) | 15 (5) | 6 (3) | 2 (2) | 80 (23) |
| Doctors not adhering to Advance Directives | 15 (3) | 40 (10) | 6 (2) | 10 (5) | 3 (3) | 74 (23) |
| Patients having unrelieved symptoms | – | 20 (5) | 24 (8) | 12 (6) | 17 (17) | 73 (36) |
| Nurses being too busy | 40 (8) | 4 (1) | 15 (5) | 6 (3) | 6 (6) | 71 (23) |
| Families disagreeing with each other about care | 10 (2) | 32 (8) | 9 (3) | 8 (4) | 3 (3) | 62 (20) |
| Insufficient private rooms/space | 20 (4) | 16 (4) | 12 (4) | 6 (3) | 7 (7) | 61 (22) |
| Families being distressed by unrelieved symptoms | 5 (1) | 32 (8) | 15 (5) | 8 (4) | 1 (1) | 61 (19) |
| Patients being unable to communicate their wishes | 20 (4) | – | 24 (8) | 12 (6) | 3 (3) | 59 (21) |
| Nurses having inadequate training in end-of-life care | 20 (4) | 12 (3) | 15 (5) | 6 (3) | 5 (5) | 58 (20) |
| Nurses being unable to provide sufficient pain relief | 10 (2) | 32 (8) | 9 (3) | – | 2 (2) | 53 (15) |
| Patients having unrealistic expectations about prognosis | 10 (2) | 8 (2) | 15 (5) | 12 (6) | 7 (7) | 52 (22) |
| Poor access to existing Advance Directives | 35 (7) | 12 (3) | – | 2 (1) | – | 49 (11) |
| Doctors not involving nurses in treatment discussions | 15 (3) | 8 (2) | 15 (5) | 6 (3) | – | 44 (13) |
| Nurses finding it difficult aligning patient/family needs with medical treatment plans | 15 (3) | 16 (4) | 6 (2) | 6 (3) | 1 (1) | 44 (13) |
| Doctors being too busy | 10 (2) | 16 (4) | 9 (3) | 4 (2) | 3 (3) | 42 (14) |
| Nurses lacking involvement in end-of-life decision making | 20 (4) | 4 (1) | 9 (3) | 2 (1) | 1 (1) | 36 (10) |
| An inadequate system for documenting and communicating end-of-life wishes | 10 (2) | 8 (2) | 6 (2) | 4 (2) | – | 28 (8) |
| Insufficient registered and enrolled nurses | 5 (1) | 12 (3) | 3 (1) | 4 (2) | 2 (2) | 26 (9) |
| Uncertainty about who is responsible for end-of-life decisions | 10 (2) | – | 9 (3) | 4 (2) | 1 (1) | 24 (8) |
| Patients not understanding 'life-saving measures' | 5 (1) | 8 (2) | 3 (1) | 2 (1) | 4 (4) | 22 (9) |
| Family being afraid to ask questions | 15 (3) | 4 (1) | – | – | 1 (1) | 20 (5) |
| An inability to have family members stay overnight | 5 (1) | 4 (1) | 6 (2) | 2 (1) | 1 (1) | 18 (6) |
| Families not understanding 'life-saving measures' | 5 (1) | 4 (1) | 3 (1) | 2 (1) | 1 (1) | 15 (5) |
| A lack of continuity when patients are transferred between wards | 5 (1) | – | 9 (3) | – | 1 (1) | 15 (5) |
| Families not having a designated contact person | 10 (2) | 4 (1) | – | – | 1 (1) | 15 (4) |
| Nurses feeling unable to discuss poor prognosis with patient/family | 5 (1) | – | 6 (2) | 2 (1) | 1 (1) | 14 (5) |
| Nurses equating palliative care with 'terminal care' | 5 (1) | – | 6 (2) | – | – | 11 (3) |
| Patients having cultural/religious barriers | 5 (1) | 4 (1) | – | – | 1 (1) | 10 (3) |
| Patients being afraid to ask questions | – | 4 (1) | 6 (2) | – | – | 10 (3) |
| Nurses having cultural/religious barriers | – | 8 (2) | – | – | – | 8 (2) |
| Doctors finding it difficult to predict patient prognosis | – | – | 3 (1) | 2 (1) | – | 5 (2) |
| A lack of continuity when patients are transferred between wards | 5 (1) | – | – | – | – | 5 (1) |
| Doctors having cultural/religious barriers | – | – | – | – | 1 (1) | 1 (1) |
| Families having cultural/religious barriers | – | – | – | – | – | – |
| Nurses feeling inadequately supported as new graduates | – | – | – | – | – | – |
| Nurses finding it difficult to assess needs of patient/family | – | – | – | – | – | – |
| Limited visiting hours | – | – | – | – | – | – |

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DISCUSSION

In this study of nurses working in a wide range of acute care settings across rural and metropolitan locations, their perceptions of the patient; family; provider; and health system-related challenges to the provision of optimal end-of-life care in hospitals were identified. Substantial barriers to the provision of high-quality end-of-life care were perceived across all facets of healthcare provision. Nurses in this study considered that important barriers included the continuation of potentially futile treatment, inadequacy of symptom control, and poor communication between doctors, patients and their families. Findings highlight potential areas for improvement as part of a coordinated approach to optimising the provision of end-of-life care in hospitals.

Doctors continuing treatment for too long was perceived to be a barrier to the provision of high-quality end-of-life care by the largest proportion of nurses in this study (40% reported it as one of the five most important barriers). This result is consistent with much of the literature reporting that many patients receive care that is variously described as futile or non-beneficial at the end of their lives.²⁹ Such care is consistently reported to result in sub-optimal outcomes for patients and their families, distress for those providing that care, and place an unnecessary burden on an already stretched healthcare system.^{13,14,30} This study identified a number of factors within other domains that can impact on the provision of unwanted invasive treatments at the end of life. When patients do not have a documented Advance Care Plan, or when family members do not know the patient's wishes, it can be difficult for doctors to provide care that is consistent with the patient's wishes. Equally, when doctors avoid discussions with patients or provide insufficient information about the potential consequences of invasive treatments, patients and their families cannot make informed decisions about those treatments; including their impact on the patient's prognosis. Several of these factors were also identified by a significant proportion of nurses as large barriers to the provision of optimal end-of-life care.

Nurses place a substantial value on effective symptom management at the end of life,²⁶ a view that may be shared by patients and their family members.^{31,32} The provision of insufficient or inappropriate pain relief was endorsed by the fourth highest proportion of nurses as a large barrier to the provision of optimal end-of-life care. There is widespread agreement that when end-of-life care is supported by palliative care teams, symptom management is improved.^{32,33} However, in the system domain the availability of specialist palliative care teams and designated palliative care beds were endorsed by the sixth and eighth highest proportion of nurses as a large barrier to the provision of optimal end-of-life care in hospitals, suggesting that nurses recognise the potential for palliative care interventions to improve end-

of-life care outcomes. Historically, specialist palliative care is generally associated with a diagnosis of cancer, meaning that the acknowledged improvements in end-of-life outcomes are often denied to patients who have a non-cancer related terminal diagnosis.³⁴ The relative lack of these services both in hospital settings and in the community further limits the potential for widespread use of palliative care interventions for dying patients.³⁵ It should be noted that many patients will experience improved end-of-life outcomes when care is shifted from curative to palliative under the guidance of generalist palliative principles, meaning that not all patients actually require specialist palliative care services.³⁶ It is essential, then, that all doctors and nurses are equipped with the skills to provide this care and that they are supported by ongoing education programs.³⁶ Central to this issue is the need for well-developed communication and interactional skills.³⁷ This is not a novel concept; the value of incorporating communication skills in undergraduate medical education has long been acknowledged.³⁸ Though there has been substantial focus on the importance of such skills in the years since, novice doctors and nurses continue to report feeling under-prepared to care for dying patients and their families.^{39,40} Efforts to improve the preparedness of doctors and nurses to provide high-quality end-of-life care should be supported.

In the patient domain, two-thirds of nurses considered not having a documented Advance Care Plan to be a large barrier to the provision of optimal end-of-life care. This was the most significant barrier according to nurses in this study. Advance planning practices encompass far more than the documentation of wishes, so there is a need to examine the extent to which dying patients have communicated their wishes with both their families and their treating teams, and the manner in which that information is provided. Many patients are unwilling to initiate discussions about their wishes as they approach the end of their lives, so providing opportunities for patients to communicate this information is critical.⁴¹ When family members are aware of the dying patient's wishes (either through an Advance Care Plan or as a result of informal end-of-life discussions) this can also reduce conflict among family members and subsequently improve the end-of-life experience for both of them and the patient.⁴²

Approximately half of the nurses in this study considered being unable to provide sufficient pain relief and finding it difficult to align patient and family needs with medical treatment plans to be the two largest barriers in the nurse domain. This result reflects the value nurses place on adequate symptom management and the normalisation of the dying process.²⁶ When nurses are unable to provide care that aligns with the wishes of the patient and their family, they can experience ethical and moral dilemmas and an associated increase in work-related stress.^{43,44}

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Results in the doctor domain were relatively equivocal, with 10 of the 12 items being ranked as a large barrier by more than half of all nurses. More than two-thirds of nurses considered six items in the doctor domain to be a large barrier to the provision of optimal end-of-life care in hospitals. This result is consistent with previous studies,⁴⁵⁻⁴⁷ and is, perhaps, unsurprising as doctors bear the primary responsibility for the management of patients approaching the end of their lives. Strategies to improve outcomes in this domain may have a substantial impact on outcomes within other domains. For example, improvements in doctors' ability to communicate bad news or adequately explain treatment options may lead to an improvement in the expectations of patients and their families, and subsequently an end-of-life experience that more closely aligns with their wishes.

Consistent with much of the existing literature, a lack of private rooms and quiet spaces for patients and their families was considered to be a significant barrier to the provision of high-quality end-of-life care, and it was the top system-related barrier. It is widely accepted that the hospital environment is busy and often noisy, affording patients and their families little opportunity to grieve in private.^{15,26} Acknowledging the importance of maintaining dignity at the end of life and providing a quiet place for families to grieve, a number of projects are seeking novel solutions to this problem.

The Irish Hospice Foundation *Design and Dignity* program transforms little used areas of the hospital into dedicated quiet spaces where families can meet with their doctors, or simply have a quiet moment away from the busy ward environment.⁴⁸ Building on the global *Compassionate Communities* concept,⁴⁹ several local healthcare districts are designing hospital-based end-of-life care programs that optimise the hospital environment for dying patients and their families.⁵⁰ Further efforts to create more 'home-like' environments and equip staff with the skills to provide sensitive and compassionate end-of-life care are to be encouraged.

Religious and/or language issues were not considered to be a barrier to the provision of optimal end-of-life care in the hospitals engaged in this work. Similar results have been reported in previous studies examining nurses' perceptions of barriers to the provision of optimal end-of-life care.⁵¹ Religious and/or spiritual education is limited in many undergraduate nursing programs and nurses often report feeling underprepared to deal with this role,⁵² so it is perhaps surprising that nurses in this study did not perceive it to be a barrier to providing optimal end-of-life.

STRENGTHS AND LIMITATIONS

The inclusion of the views of both rural and metropolitan nurses from six hospitals, and three healthcare services increases the generalisability of the results. Within Australia, legislative requirements for Advance Planning documentation vary from state to state and territory, and this study described the views of nurses from one state. As such, the generalisability of results to hospitals in other regions should be made with caution. The results of this study represent the perceptions of hospital-based nurses at a single time-point and should be studied in conjunction with the views of other stakeholders; e.g. patients/families/doctors. The survey-based design did not permit the inclusion of qualitative data. In addition, it is possible that nurses' responses may differ based on their individual hospital circumstances and experiences. A small number of nurses reported caring for no dying patients in the preceding six months and their responses may not be representative of those who have cared for more dying patients.

CONCLUSION

Nurses perceive a range of patient; family; provider; and health system-related challenges to the provision of optimal end-of-life care in hospital. The most significant barriers related to the continuation of treatment, adequacy of symptom control, and communication between doctors, patients and their families. To achieve sustainable improvement in the quality of end-of-life care provided in hospitals, a multi-factorial approach to designing interventions will be needed. Future goals should include larger-scale, longitudinal studies across various states and territories to inform the development of interventions that can help to address the identified gaps in service provision.

IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

This study has highlighted the complex nature of hospital-based end-of-life care. There is a need to consider the way in which elements in one domain of the end-of-life experience can impact the barriers seen in each of the other domains. To achieve sustainable improvement in the quality of end-of-life care provided in hospitals, a multi-factorial, multi-disciplinary, and collegial approach to designing interventions will be needed, with consideration given to elements from each domain and involving a range of stakeholders. The design of such interventions should consider the findings of existing descriptive studies gathered from other stakeholders (patients, families, and other clinicians). Additionally, there is a need to equip health services with the necessary infrastructure and funding to translate successful large-scale trials into everyday practice.

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DECLARATIONS

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Association between community-based nurse practitioner support, self-care behaviour and quality of life in patients with chronic heart failure

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ABSTRACT

Objective: To evaluate the effects of a community-based chronic heart failure management program, delivered by nurse practitioners, on self-care behaviour, quality of life and hospital readmissions.

Background: Chronic heart failure is a complex condition associated with high rates of hospital readmissions. However, many hospitalisations in patients with chronic heart failure are potentially preventable with better self-management and access to specialised healthcare support. Nurse practitioners have an advanced scope of practice, making them well credentialed to support patients with chronic heart failure.

Study design and methods: This study compared self-care behaviour and quality of life in patients who had attended a nurse-practitioner led chronic heart failure management service (SmartHeart) (n=58) compared with patients receiving usual care (n=58), but no nurse practitioner support. Self-care behaviour was assessed using the Self Care Heart Failure Index and quality of life was assessed using

the Short Form-36 and Minnesota Living with Heart Failure Questionnaire. Hospitalisation records were extracted from medical records using data-linkage.

Results: Patients who received nurse-practitioner support had better self-care behaviour ($p<0.05$), mental component summary of the Short Form-36 ($p<0.05$) and heart failure specific quality of life ($p<0.05$). All-cause hospitalisations were delayed ($p<0.05$) and length of stay was shorter ($p<0.05$) in the group receiving nurse practitioner support, but there were no differences in chronic heart failure related admissions.

Discussion: A chronic heart failure support program, operating in a community setting and delivered by nurse practitioners, enhanced self-care, improved psychosocial health and reduced time in hospital.

Conclusion: Chronic heart failure management delivered by nurse practitioners can improve self-care behaviour and quality of life, and reduced hospital admissions, compared with usual care.

RESEARCH ARTICLES

Keywords: Chronic heart failure, self-care, quality of life, nurse practitioner, hospital readmissions.

What is already known about the topic?

- Chronic heart failure is a complex health issue requiring disease-specific management that needs to be tailored to the individual. However, many patients with chronic heart failure don't receive adequate support to manage their condition.

What does this paper add:

- A chronic heart failure management service, delivered in primary care by nurse practitioners, improved self-management and quality of life and was associated with a lower rate of hospitalisations compared with usual care alone.

OBJECTIVE

The aim of this study was to evaluate the effects of a community-based chronic heart failure (CHF) management program, delivered by nurse practitioners, on self-care behaviour, quality of life and hospitalisation outcomes derived from linked hospital morbidity data.

BACKGROUND

Chronic heart failure (CHF) is a major public health burden, affecting 2–3% of the population with prevalence rising steeply to over 20% in people aged over 65 years.¹ Episodic exacerbations and rehospitalisation are common in patients living with CHF and contribute significantly to the high healthcare costs associated with the disease.² However, many readmissions are considered preventable with better self-management such as following sodium and fluid restrictions, adhering to evidence-based medication, undertaking regular exercise, and knowing when to seek medical support in the event of changes in clinical status.^{3,4}

Co-morbidities are also common in patients with CHF, and these often complicate care and increase the risk of adverse events, especially in older patients.⁵ For example, the high incidence of concomitant conditions including frailty,⁶ type 2 diabetes, renal dysfunction, anaemia, cognitive deterioration, and depression can all make the management of patients with CHF particularly challenging and contribute to the high rates of hospitalisation.^{6,7}

Many patients with CHF are managed in a primary care setting and may lack a structured system of care to help manage their condition, including effective self-management.⁸ Accordingly, there is a need to design and evaluate strategies, with patient education at the core, to improve self-management behaviour of patients with CHF that targets both CHF and other co-morbid conditions, an approach that has been shown in various settings to improve clinical outcomes.⁷ Patient self-management in community-based disease management programs that monitor patients at regular intervals shows promise in delaying disease progression and improving quality of life for patients with CHF.⁹

Even though self-management is a patient action, it is most effective when implemented with support and education from healthcare professionals.¹⁰ Nurse practitioners are qualified registered nurses who have been trained and completed postgraduate qualifications in clinical practice in a selected specialisation. They are credentialed through registration with the Nursing and Midwifery Board of Australia to apply an advanced scope of practice, including diagnosing and treating a wide range of health conditions; designing and implementing therapeutic regimens; initiating referral to other health professionals; ordering and interpreting pathology and radiology tests; prescribing and reviewing medications.¹¹ Nurse practitioners can play an important role in educating and supporting patients in performing self-care¹² and have prescriptive privileges in Australia including renewing, adjusting or prescribing medications as necessary.¹¹ In the case of CHF, this extends to making decisions about patient management such as medication titration in response to changing clinical status¹³ and supporting patients in a holistic approach to managing their health, including co-morbidities.

METHODS

This study compared the effects of a community-based, CHF management program delivered by nurse practitioners, the SmartHeart Living Well with Heart Failure Service (SmartHeart), with usual care. We undertook a pragmatic trial to compare the effects of SmartHeart, with a control group who received standard post-discharge CHF care but did not have access to a specialised nurse practitioner CHF clinic.

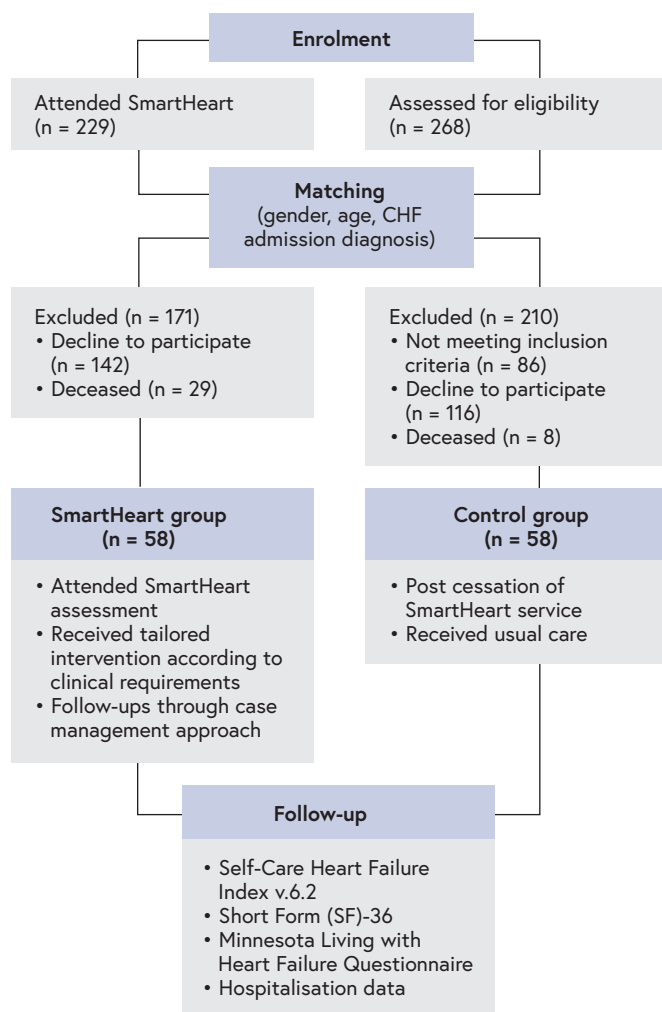
This study was registered with the Australian New Zealand Clinical Trials Registry (Number 12614000421639). Ethics approval was obtained from the Human Research Ethics Committees at Royal Perth Hospital (REG 13–171) and Curtin University (HR12/2014). All participants in the study provided written informed consent.

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PARTICIPANTS

Participants in the intervention group were recruited from patients who attended the SmartHeart service following a tertiary hospital admission and consented to take part in the study. Control participants were patients admitted to the same tertiary hospital following the cessation of the SmartHeart Service (Figure 1). The Control Group received usual care, including follow-up by a General Practitioner (GP) or Cardiologist. Inclusion criteria for both groups were a hospital admission due to CHF as documented by International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnoses codes¹⁴ (Supplementary File 1), a left ventricular ejection fraction of less than 40% and New York Heart Association Functional Class I-III. Patients were excluded from the study if they were unwilling or unable to provide informed consent, had been diagnosed with a terminal illness such as cancer and had an estimated life expectancy of less than one year, or had significant cognitive impairment or physical disability that was likely to impact on their capacity to engage in self-care behaviours.

FIGURE 1. PARTICIPANT ENROLMENT, GROUP ALLOCATION AND FOLLOW-UP



SMARTHEART INTERVENTION

Referral to SmartHeart occurred following tertiary hospital admission for CHF. SmartHeart was conducted in a multidisciplinary university clinic for 12 months and was designed to help patients understand their condition and its treatment to enhance self-care and maximise their utilisation of support services. At the patients' initial appointment, a nurse practitioner conducted a clinical assessment and patients were provided with education in self-management strategies and healthy lifestyle including the provision of an individualised CHF management plan, based on the Cardiac Society of Australia and New Zealand CHF Management Guidelines,¹³ addressing medication adherence, diet, physical activity and maintaining fluid balance. Patients and their families received CHF education to support the patients in establishing an effective self-care regimen including adhering to prescribed medication with a flexible diuretics regime, restricting the intake of fluids and sodium and monitoring and early reporting of signs and symptoms characteristic of clinical deterioration such as weight gain, increased breathlessness and oedema. Co-morbidities were documented and follow up care for these conditions was arranged as indicated. At each visit, the nurse practitioner obtained an interim history and performed a general assessment on the patient including titration of patient medication as required with close monitoring of blood chemistry following medication adjustment in accordance with the advanced scope of practice afforded nurse practitioners. This enabled the nurse practitioners to tailor care according to clinical requirements and arrange subsequent follow-up appointments to suit patients' healthcare needs and goals through a case management approach. This included the option of clinic appointments, telephone follow up, home visits and clinics conducted through a mobile health service.¹⁵ Frequency of visits was determined by the nurse practitioner based on the patient's clinical status. If the nurse practitioner identified that treatment wasn't consistent with guidelines, or there were signs of clinical deterioration (i.e. fluid retention, worsening symptoms), patients' GP and/or Cardiologist were consulted, and treatment was amended in accordance with best practice guidelines. When patients were stable and well informed about self-management, they were discharged from the service for ongoing care by their GP and/or Cardiologist, independent of SmartHeart. Discharge from the service routinely occurred within six months of the initial appointment.

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ASSESSMENTS

Demographic and clinical characteristics were collected from a medical record review.

Several questionnaires described below were administered by an independent nurse researcher after participants in the intervention group had engaged with, and been discharged from, the SmartHeart service approximately 12 months after patients' initial SmartHeart appointment (344.9 ± 79.7 days; mean \pm SD), to evaluate the enduring effect of the program on self-care behaviour and quality of life. In the control group, questionnaires were administered approximately six months after discharge following patients' index hospital admission (181.9 ± 131.4 days).

Self-care behaviour was assessed by the Self-Care Heart Failure Index v.6.2 (SCHFI).¹⁶ This questionnaire contains 22 items measured on a 4-point self-reported Likert scale divided into three subscales: self-care maintenance, self-care management, and self-confidence. The scores for each subscale range from 0 to 100 points. Higher scores reflect greater self-care behaviour and scores ≥ 70 points for each subscale indicate appropriate self-care behaviour.¹⁶

Generic quality of life (QoL) was assessed using the Short Form (SF)-36 questionnaire which provides information about individuals' multidimensional psychosocial health and includes a physical component summary (PCS) and mental component summary (MCS), comprising wellbeing and personal evaluations of health that is suitable for use in CHF trials when used in combination with disease-specific questionnaires.¹⁷ PCS and MCS outcome measures are scored from 0 to 100, with 100 representing optimal health and 0 representing the poorest health on the scale.¹⁷

The Minnesota Living with Heart Failure Questionnaire (MLHFQ) was employed to assess disease-specific QoL. This tool measures the physical, emotional, social and mental dimensions of quality of life as it relates to CHF using a 6-point Likert scale.¹⁸ MLHFQ is a 21-item scale, with a scoring range of zero for no impairment, to 105 for maximum impairment. It provides a total score (range 0–105, from best to worst QoL), as well as scores for two dimensions, physical (eight items, range 0–40) and emotional (five items, range 0–25).¹⁹

CLINICAL OUTCOMES

Hospitalisation data were collected from the Western Australian Hospital Morbidity Database. This health administrative data set records all hospital admissions in private and public hospitals, in both rural and metropolitan areas, in the state of Western Australia, providing a robust method for data linkage. Clinical outcomes included were hospitalisation due to all-causes and due to a primary diagnosis of CHF.

To ensure consistency between the SmartHeart Group and Control Group, patients start date for clinical outcome follow-up was derived from the date of discharge following their index hospital admission. The index hospital admission in the SmartHeart Group was defined as the admission that preceded their referral to SmartHeart. For the Control Group, the index hospital admission was the admission that resulted in the invitation to participate in the Control Group. Hospitalisation data were calculated from 30 days post-discharge of the index hospitalisation in both groups to enable sufficient time for those in the SmartHeart Group to commence the SmartHeart service. Readmission rates, length of stay, and emergency department presentations were subsequently reviewed for the 12-month period commencing at this time point, for both groups (Figure 2).

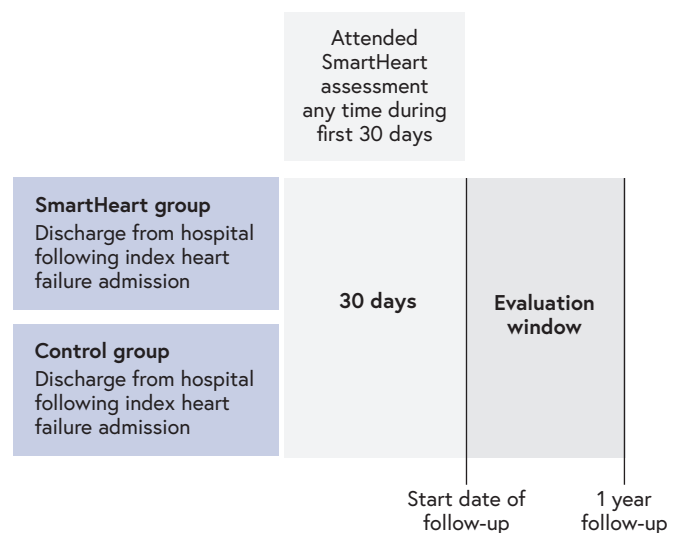


FIGURE 2. TIMELINE OF PARTICIPANT FOLLOW-UP.

STATISTICAL ANALYSIS

Data analysis was conducted using SPSS v25 software. Descriptive statistics were computed for sample demographics and reported using frequency distributions and percentages for categorical variables and mean and standard deviation for continuous variables. Differences between the control and intervention groups' total scores and individual question responses were analysed using paired t-tests. Pearson X² test was used to test for differences in categorical variables and the t-test or Mann-Whitney test for continuous variables. The Kaplan-Meier product-limit method was used to describe time to clinical events (rehospitalisation due to CHF and all causes). The log-rank test was used to compare differences in time to the event between the groups. $P < 0.05$ was considered statistically significant.

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RESULTS

The study sample comprised of 58 participants in the SmartHeart Group and 58 participants in the Control Group. Participants in each group were well matched for gender, age, CHF severity, prescribed medication, and demographics. The majority of participants in each group had at least moderate heart failure (NYHA Class II-III) (Table 1). More than two-thirds of the participants were receiving government benefits (aged-pension, disability or sickness benefits) and over a third in each group lived alone.

TABLE 1: PARTICIPANT CHARACTERISTICS OF THE SMARTHEART VERSUS CONTROL GROUP

| | SmartHeart = 58 | Control N = 58 |
|-------------------------------|--------------------|-------------------|
| Demographic data | | |
| Age | 69.9 ± 13.2 | 67.9 ± 12.2 |
| Female gender | 19 (32.8%) | 20 (34.5%) |
| Social status | | |
| Lives alone | 20 (34.5%) | 25 (43.1%) |
| Lives with spouse | 30 (51.7%) | 31 (53.4%) |
| Lives with children | 5 (8.6%) | 2 (3.4%) |
| Lives with extended family | 3 (5.2%) | 0 |
| Employment status | | |
| Employed | 13 (22.4%) | 8 (13.8%) |
| Unemployed | 4 (6.9%) | 6 (10.3%) |
| Receiving Government benefits | 41 (70.7%) | 44 (75.9%) |
| Medical data | | |
| LVEF | 26.3% | 22.7% |
| NYHA class: 1 | 18 (31.0%) | 17 (29.3%) |
| NYHA class: 2 | 28 (48.3%) | 30 (51.7%) |
| NYHA class: 3 | 12 (20.7%) | 11 (19.0%) |
| NYHA class: 4 | 0 | 0 |
| IHD | 43 (74.1%) | 35 (60.3%) |
| Non-IHD | 15 (25.9%) | 23 (39.7%) |
| AF | 37 (63.8%) | 31 (53.4%) |
| T2DM | 29 (50.0%) | 20 (34.5%) |
| Pacemaker | 10 (17.2%) | 8 (13.8%) |
| ICD | 12 (20.7%) | 10 (17.2%) |
| Medications | | |
| ACE inhibitor | 38 (65.5%) | 32 (55.2%) |
| Angiotensin II blocker | 13 (22.4%) | 12 (20.7%) |
| Beta-blocker | 46 (79.3%) | 37 (63.8%) |
| Loop inhibitor | 40 (69.0%) | 45 (77.6%) |
| Aldosterone antagonist | 24 (41.4%) | 25 (43.1%) |
| Digoxin | 14 (24.1%) | 7 (12.1%) |
| Warfarin | 10 (17.2%) | 11 (19.0%) |

All data presented as n (%) or mean ± SD unless specified otherwise. There were no significant differences between groups.

LVEF = Left ventricular ejection fraction; NYHA = New York Heart Association; IHD = Ischaemic heart disease; AF = atrial fibrillation/atrial flutter; T2DM = Type II Diabetes Mellitus; ICD = Implantable cardioverter defibrillator; ACE = angiotensin converting enzyme.

Awareness of self-care behaviour was significantly higher in the SmartHeart compared with the Control Group for all three subscales; self-care maintenance, self-care management and self-care confidence ($p < 0.05$) (Table 2).

There was a higher rating for the MCS component of the SF-36 in the SmartHeart Group, but no difference in PCS (Table 2).

For the disease-specific MLHFQ, participants in the SmartHeart Group rated their overall QoL significantly better than the Control Group. Similarly, there was a significantly better rating of physical ($p < 0.05$) and emotional ($p < 0.05$) functioning in the SmartHeart, compared with the Control Group (Table 2).

TABLE 2: SELF-CARE AND QUALITY OF LIFE QUESTIONNAIRE OUTCOMES OF PARTICIPANTS IN THE SMARTHEART VERSUS CONTROL GROUP.

| | SmartHeart | Control | t | p-Value |
|-----------------------|-------------|-------------|-------|------------|
| SCHFI | | | | |
| Maintenance | 76.7 ± 10.9 | 52.1 ± 16.1 | 9.68 | $p < 0.05$ |
| Management | 82.0 ± 13.3 | 46.4 ± 16.4 | 10.57 | $p < 0.05$ |
| Confidence | 88.7 ± 14.6 | 40.6 ± 21.0 | 14.11 | $p < 0.05$ |
| SF-36 | | | | |
| PCS | 47.4 ± 12.8 | 45.4 ± 12.4 | 0.93 | NS |
| MCS | 81.7 ± 23.8 | 61.6 ± 22.0 | 3.81 | $p < 0.05$ |
| MLHFQ | | | | |
| Total score all items | 28.4 ± 14.6 | 49.6 ± 21.6 | -6.19 | $p < 0.05$ |
| Physical items | 13.9 ± 7.6 | 22.0 ± 9.6 | -5.07 | $p < 0.05$ |
| Emotional items | 5.4 ± 4.1 | 11.3 ± 6.0 | -6.20 | $p < 0.05$ |

All data presented as mean ± SD. SCHFI = Self-Care Heart Failure Index; PCS = Physical Component Summary; MCS = Mental Component Summary; MLHFQ = Minnesota Living with Heart Failure Questionnaire.

SmartHeart participants had delayed, and fewer overall, rehospitalisation events compared to participants in the Control Group over the 12 month follow up period; 43 participants in the Control Group compared with 36 participants in the SmartHeart Group were hospitalised at least once over 12 months of follow up ($p < 0.05$) (Figure 3).

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Mean length of stay for all-cause hospitalisations was significantly lower ($p < 0.05$) in the SmartHeart Group, leading to a lower total number of days of hospitalisation ($p < 0.05$). Analysis of all-cause hospitalisation, excluding rehabilitation admissions, revealed that mean length of stay tended to be lower in the SmartHeart Group, achieving borderline statistical significance ($p = 0.05$) compared with the Control Group (Table 3).

TABLE 3: HOSPITAL READMISSIONS AND EMERGENCY DEPARTMENT PRESENTATIONS OVER ONE YEAR OF FOLLOW-UP IN THE SMARTHEART VERSUS CONTROL GROUP

| | SmartHeart (n = 58) | Control (n = 58) | p-value |
|-------------------------------------------------|------------------------|---------------------|----------------|
| ED presentations | | | |
| Participants with 0 presentations, n (%) | 24 (41.4) | 26 (44.8) | NS |
| Participants with 1 presentations, n (%) | 12 (20.7) | 15 (25.9) | NS |
| Participants with 2 presentations, n (%) | 7 (12.1) | 8 (13.8) | NS |
| Participants with ≥ 3 presentations, n (%) | 15 (25.9) | 9 (15.5) | NS |
| Total ED presentations | 89 | 93 | NS |
| Hospital admissions | | | |
| Chronic heart failure related | | | |
| Number of admissions, n | 23 | 24 | NS |
| Mean length of stay (days) | 1.8 \pm 6.4 | 2.8 \pm 5.9 | NS |
| Total (days) | 102 | 163 | NS |
| All-cause | | | |
| Number of admissions, n | 131 | 113 | NS |
| Mean length of stay, all-cause (days) | 9.0 \pm 11.5 | 20.1 \pm 21.6 | $p < 0.05$ |
| Total (days) | 416 | 664 | $p < 0.05$ |
| All-cause, excluding rehab. admissions | | | |
| Number of admissions, n | 130 | 106 | NS |
| Mean length of stay (days) | 8.2 \pm 11.2 | 14.9 \pm 16.6 | ($p = 0.05$) |
| Total (days) | 401 | 493 | ($p = 0.05$) |

All data presented as n (%) or mean \pm SD unless specified otherwise. ED = Emergency Department.

There were no differences in the number of CHF-related hospital admissions or length of stay due to a CHF admission. Similarly, neither the total number of Emergency Department presentations nor the number of participants with zero, one, two or at least three Emergency Department presentations differed between groups.

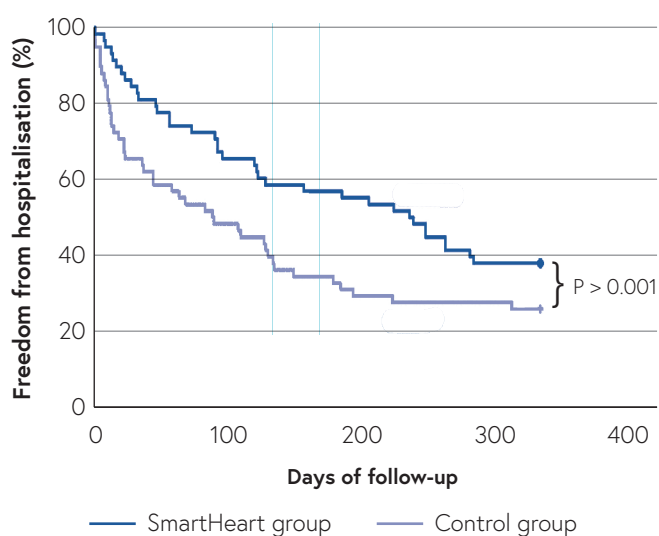


FIGURE 3 ALL CAUSE HOSPITAL ADMISSION IN THE SMARTHEART AND CONTROL GROUPS.

DISCUSSION

In this evaluation of the effect of a community-based, nurse-practitioner led CHF management service, we observed significantly higher awareness of CHF self-management strategies and better quality of life in patients who had received nurse practitioner support compared with a well-matched cohort of patients who did not attend the clinic. While this was not associated with a reduction in CHF-related admissions, participants receiving the SmartHeart intervention had lower all-cause hospitalisations than the Control Group, suggesting improved management of the comorbidities commonly experienced by patients with CHF.

Patients receiving the SmartHealth intervention had better self-care across the subscales of 'management', 'maintenance', and 'confidence'. Education was a core component of the nurse practitioner service and was provided via written material, through face to face consultations and by phone call follow up between nurse practitioners and patients. Patient education is an important facilitator of self-management, through improved awareness of signs and symptoms, and better adherence to a healthy lifestyle and medical treatment.²⁰ Patients with CHF frequently lack the knowledge, confidence, and support to be actively involved in their own care, and their adherence to behaviours important for long-term health is often suboptimal.¹⁵ Notably, in the current study, the higher level of self-care behaviour in the SmartHeart Group compared with Controls, was sustained for at least six months following the completion of the SmartHeart program, highlighting that a time-limited intervention can have ongoing benefits. Improved self-care behaviour has previously been associated with an improved ability to recognise and respond appropriately to adverse signs and symptoms of CHF,²¹ which in turn has been associated with reduced emergency department visits²² and hospital admissions.²¹ In the current

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study, better self-care metrics did not translate to a reduction in CHF related hospitalisations. The lack of a significant effect may reflect the relatively small sample size and limited power to detect a significant difference. We also excluded hospital admissions in the first month following hospital discharge, which is known to be the period that patients are at highest risk of readmitting,²³ which would likely have reduced the sensitivity of the project to detect a change in CHF admissions. Nevertheless, it is apparent that evidence-based strategies should be tailored to patient's individual needs, while communicating best practice standards for CHF disease management.

The study observed that patients with CHF who received nurse practitioner support experienced significantly better psychosocial outcomes and had better self-management strategies than those who did not. These findings are comparable with other studies which have found that patients who have attended a nurse-delivered CHF program feel more capable of dealing with disease-related symptoms and experience a better QoL than those who did not participate in such programs.²⁰ The results of our study validate the contribution of a nurse practitioner-led self-management intervention in attaining better patient outcomes including improved self-care behaviour and QoL. The results also suggest that the community-based intervention encouraged patients' maintenance of self-care behaviours, highlighting the value of nurse practitioner-patient engagement.

While there was no difference between groups in all-cause or CHF specific hospitalisations during the 12 month follow up period, participants who engaged in the SmartHeart program had delayed rehospitalisation, a shorter mean length of stay and lower overall days of hospitalisation due to all causes. Higher self-care maintenance has previously been found to be associated with reduced all-cause hospitalisation length of stay in a nurse-led CHF clinic.²⁴ Together, these findings provide support for community-based CHF clinics as a valuable adjunct to medical care in the management of CHF and that the advanced skills of nurse practitioners are well suited in this context. The lower total days of hospitalisation observed in the SmartHeart Group was due predominantly to lower admissions to rehabilitation settings due to post-fall complications which were more prevalent in the Control Group. The high rate of rehabilitation-related admissions may reflect the mean age of participants in the study (almost 70) who may be at increased risk of frailty due to the effect of long-term chronic illness, impaired mobility, cognitive impairment, and medication.²⁵ CHF and frailty often co-exist and patients with both are likely to have worse outcomes including falls, hospitalisation, and mortality.⁷

LIMITATIONS OF THE STUDY

There are several limitations to this study that warrant highlighting. The objective of the study was to conduct a pragmatic trial to evaluate the efficacy of a 'real world' nurse

practitioner-led CHF program, compared with standard post-discharge care which did not include the provision of formal post-discharge education and support for CHF self-management. The Control Group was recruited post cessation of the nurse practitioner-led CHF program due to time-limited nature of funding for the SmartHeart service. Furthermore, because the SmartHeart program was delivered using a flexible approach according to what the nurse practitioners deemed most appropriate for individual patients, it is not possible to determine which specific aspects of nurse practitioner care contributed to the observed outcomes, nor whether similar outcomes would have been achieved by registered nurses. Another potential limitation relates to the difference in the length of time that had elapsed between the index admission and the evaluation of self-care behaviour and QoL, which was approximately 12 months in the SmartHeart group compared with approximately six months in the Control Group. However, this supports the sustainability of the SmartHeart intervention.

CONCLUSION

The current study shows that a nurse practitioner-delivered model of chronic disease management results in better self-care behaviour, improved quality of life and reduced hospital admissions, compared with usual care in patients with CHF. These findings are particularly relevant to older patients with co-morbidities, many of whom are managed in a primary care setting. Based on these findings, programs of this nature should be more widely available to help address the challenges of managing patients with CHF in primary healthcare.

IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

Nurse practitioner-delivered models of CHF management should be more widely available to help address the challenges of managing patients with CHF in primary care. Future randomised controlled trials, that are adequately powered to evaluate the effects of nurse practitioner support on CHF hospitalisations and mortality, are required to more comprehensively investigate the effects of nurse practitioner management of CHF in a community setting.

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The assessment of knowledge and practical skills of intramuscular injection administration among nursing staff: a cross-sectional study

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ABSTRACT

Aim: This study aimed to assess the level of knowledge and practice of intramuscular injection among nurses and nursing assistants in primary healthcare.

Background: Evidence-based guidelines recommend the use of the ventrogluteal site for intramuscular injection; however, it remains infrequently utilised by nurses.

Study design and methods: Cross-sectional study was conducted using a convenience sample of 200 nurses and nursing assistants employed in one of the largest healthcare centres on the primary healthcare level in Slovenia. The data were collected using a self-reported questionnaire and analysed using descriptive and inferential statistics.

Results: The majority of the participants (88.5%) prefer to use the dorsogluteal site for intramuscular injections, while the ventrogluteal site is commonly used only by 7.5% of the respondents. Participants avoid the ventrogluteal site because of not being used to it (30.5%), unfamiliarity (27.0%), lack of adequate knowledge (19.5%), fear of harming the patient (8.5%), and not knowing how to determine the site (10.3%).

Conclusion: Nursing staffs knowledge and use of ventrogluteal site for intramuscular injection is

limited and are using traditional methods instead of current evidence-based guidelines.

Implications: Improvements are needed in nursing education and continuous training. The nurse administrators in clinical practice should increase awareness of the benefits of using evidence-based practice and re-evaluate how the nursing professionals provide the administration of intramuscular injections and the need for additional education. The education and training about intramuscular injections should be implemented regularly in daily clinical practice of nursing professionals for promoting the safest practice for patients.

What is already known about the topic?

- The administration of intramuscular injections is a commonly performed nursing intervention in clinical practice.
- The technique for delivering intramuscular injection is associated with potential safety risks for the patient when it is not done according to evidence-based guidelines and safe practices.
- The use of ventrogluteal muscle has been recommended in nursing literature for many years now, but nurses still use it infrequently and prefer to use the dorsogluteal site.

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What this paper adds:

- Despite being both legally permitted to administer intramuscular injection, nurses and nursing assistants demonstrated different levels of knowledge and the use of evidence-based recommendations about intramuscular injection administration.
- Nurses avoid using the ventrogluteal side due to lack of knowledge and skills.

- Stronger emphasis on raising awareness about the importance of using evidence-based practices during nursing education and continuous training is needed.

Keywords: Injections, intramuscular; primary healthcare; punctures; evidence-based nursing

INTRODUCTION

Intramuscular injections (IMI) are important and frequently performed nursing interventions.^{1,2} World Health Organization (WHO) defines IMI as a parenteral, preventive, or curative route of administering the drug into muscle tissue by choice of the appropriate size of a needle.³ Although interpreted as simple intervention, it requires critical assessment, skills, and knowledge about choosing the proper site and the safest practice.^{4,5} WHO estimates that out of 12 billion injections administered globally every year, 50% of them are administered unsafely.⁶

IMI can cause various serious complications when evidence-based guidelines and safe practices are not followed. Complications can be a pain, tissue necrosis, abscesses, cellulite, nerve damages, haematoma, granuloma, muscular fibrosis and contracture, infection, vascular or bone injuries and permanent or temporary paralysis of lower extremities.^{2,5,7-9}

There are three main muscle groups identified for IMI administration: the deltoid muscle of the upper arm, gluteal muscles of the buttocks that states for dorsogluteal (DG) (gluteus maximus) and ventrogluteal (VG) site (gluteus medius), and quadriceps muscles in the thigh that include rectus femoris and vastus lateralis.¹⁰⁻¹² The selection of an appropriate site depends on factors, such as the type and the volume of medication, patient's age and health condition.^{9-11,13} Carelessness, inaccuracy, and misperception of appropriate application can cause serious complications.^{2,5,8,14} The most complications occur when the IMI is administered into the DG site, as this area includes a rich intertwining of the vessels, is in the proximity of the sciatic nerve. There is also a thinner layer of subcutaneous tissue.^{8,15} Much of the recent evidence-based literature recommends the use of a VG site, as it is relatively free of large blood vessels, nerves (sciatic nerve) and sealed off by bone; it is also easier to identify, and the layer of subcutaneous tissue there is much thinner than the one on the DG site. Gluteus medius muscle in this site is large and well developed.^{1,16,17} It has been discovered that patients suffered less pain, discomfort, and bleeding when receiving an IMI into the VG

site compared to those receiving it into the DG site. The VG site enables faster absorption of the medication and easier as well as better access to the muscle tissue.¹⁸

Although the use of VG muscle has been recommended, nurses still use it infrequently, due to the fact they instead rely on the traditional approach of IMI administration preferring DG site.^{12,18-20} It is crucial to continuously determine the level of knowledge and the use of evidence-based recommendations about IMI administration among nurses to develop effective education and training.¹⁶

Our study aimed to assess the level of knowledge and practical skills in the area of IMI among nursing staff working in one of the largest healthcare centres in Slovenia.

METHOD

RESEARCH DESIGN AND SETTING

A cross-sectional study was conducted in one of the largest healthcare centres in Slovenia. Health Centre provides primary healthcare and includes general or family medicine clinics, outpatient clinics for preschool and school children, gynaecologist outpatient clinics, emergency service, dental clinics, and community nursing services, clinics of occupational, traffic and sports medicine, clinical laboratories, radiology services, and some specialist clinics. The number of employed healthcare professionals at the time this research was carried out was approximately 197 physicians, 211 nurses and 186 nursing assistants.²¹

SAMPLE

Convenience sampling was used for recruiting nurses and nursing assistants. All nurses and nursing assistants who are administering an IMI to adult patients in everyday clinical practice and working at the selected institution in the Department for Family Medicine Clinics, Community Healthcare Centre, Department of Occupational, Traffic and Sports Medicine, or Emergency Service were invited to fill out the anonymous questionnaire (N=267). The 212 questionnaires were returned after two reminders, giving an overall response rate of 79.4%. Twelve questionnaires were

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excluded due to missing data, resulting in a total sample of 200.

In Slovenia, the nursing education system consists of a minimum four year secondary education (for nursing assistants), three years of the first cycle Bologna higher education (for nurses with a diploma degree), two years of the second cycle Bologna higher education (for nurses with a master's degree) and three years of third cycle Bologna higher education (for nurses with a PhD).²² Nursing assistants are trained in providing basic nursing care and also have competencies for medication administration (per os, intramuscular and subcutaneous therapy).²³ Nurses are independent experts who are responsible for nursing care and independently and autonomously perform nursing procedures and interventions in the nursing process.^{22,23} The current study included 65 nursing assistants (32.5%) and 135 nurses (67.5%).

INSTRUMENT

Data were collected using a self-reported questionnaire, which was developed based on a comprehensive literature review on nurses' knowledge and experiences about the IMI.^{15,16,19,20,24} The questionnaire consisted of 46 questions on nurses' demographic, knowledge and experiences about the IMI and was divided into five sections.

The first section included four questions on participants demographic characteristics (gender, educational status, working service, years of experience).

The second section included three questions with multiple choice questions regarding daily frequency of administering IMI, most frequently used site for IMI and knowledge on the site recommended in the latest literature.

The third section included three questions about education and practice concerning the VG site. Participants have been offered multiple-choice questions.

The fourth section included 19 questions regarding participants habits in their daily clinical practice on IMI. The frequency (never, sometimes, always) of performing specific steps to perform an IMI was evaluated (eg. checking the dose and the date of the medication, the use of gloves, Z-track method, two-needle technique, aspiration technique before administration, considering injection site, weight and size of the patient, the use of different needle sizes, controlling patient's response on medication).

The fifth section included 16 questions related to participants theoretical and practical knowledge of IMI. Seven statements were prepared as correct and nine as incorrect, and the participants were asked to respond to these statements with the options "true", "false" or "do not know". Each correct answer was considered as 1 point, while wrong or "do not know" responses were considered as 0 points. The minimum score was 0 points, and the maximum score was

16, with higher scores indicating better knowledge about IMI administration.

The draft instrument was pilot tested with 10 nurses to evaluate the feasibility of the questionnaire as well as face validity. No further revisions of the questionnaire were identified.

DATA COLLECTION

The data were collected between May and early July 2019. The selected institution gave written permission for the research. No approval from an ethics committee was required because no patients or interventions were involved. Questionnaires were given out with the assistance of head nurses of each department in a paper form. The completed questionnaires were returned in a sealed envelope.

DATA ANALYSIS

Data were analysed using the IBM Statistical Package for the Social Sciences (SPSS) program for Windows (version 27.0). Descriptive statistical methods were employed for descriptions of respondents' demographic characteristics and items scores knowledge (average, standard deviation, percentage), Mann-Whitney U, and Kruskal-Wallis one-way analysis of variance tests. A probability level of 0.05 or less was used to indicate statistical significance.

RESULTS

Out of 267 distributed questionnaires, 212 were returned, and 200 included in the analysis (74.9% realisation). The detailed demographic characteristics are presented in Table 1.

The total average score relating level of knowledge was 5.0 ± 3.020 (points ranging of 0–16). Statistical significance was found between working service and educational level ($p < 0.05$). Participants working in emergency service and participants who had post-graduate degrees had higher average scores (Table 1).

99.5% of participants reported they administer up to nine IMI per day. From Table 2, it can be seen that the majority of participants (41.5%, $n=83$) said DG site is recommended site in the latest literature. While the third (36.5%, $n=73$) of the participants were aware that the VG site is currently evidence-based recommendation, the most frequently used site for IMI remains DG (88.5%, $n=177$), VG site is commonly used only by 7.5% of participants ($n=15$). Some individuals reported that they most frequently use deltoid muscle (2.0%, $n=4$) or the vastus lateralis and rectus femoris muscles (1.0%, $n=2$). 15.5% ($n=31$) participants reported they do not know what the recommended site is in the latest literature (Table 2).

When asked whether participants received any courses about administering IMI into the VG site, 52 (26.0%) answered affirmatively. Others, 148 (74.0%) were not trained or educated on current evidence-based guidelines either in secondary

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or higher education. Sixty one (30.5%) participants were not used to the VG site and therefore avoid it. Other reasons that discouraged participants from selecting the VG site for IMI were unfamiliarity (27.0%, n=55), lack of adequate knowledge (19.5%, n=39) and do not know how to determine the VG site (10.5%, n=21). All these factors could be related to the fear of harming the patient, which was selected by 17 (8.5%) respondents. Statistical significance between nurses and nursing assistants was found for questions related to education about the VG site during studying ($p < 0.005$) (Table 3).

TABLE 1: PARTICIPANTS' CHARACTERISTICS AND LEVEL OF KNOWLEDGE OF INTRAMUSCULAR INJECTION

| Characteristics | n | % | Level of knowledge of intramuscular injection | p value |
|---------------------------------------------------------|-----|------|-----------------------------------------------|---------|
| Gender** | | | | |
| Male | 38 | 19.0 | 5.00 | 0.921 |
| Female | 162 | 81.0 | 5.01 | |
| Working service*** | | | | |
| Department for General Healthcare Services | 89 | 44.5 | 4.53 | 0.037* |
| Community healthcare centre | 53 | 26.5 | 5.32 | |
| Department of Occupational, Traffic and Sports Medicine | 12 | 6.0 | 3.50 | |
| Emergency service | 46 | 23.0 | 5.96 | |
| Educational status*** | | | | |
| Nursing assistants (Secondary vocational education) | 65 | 32.5 | 4.12 | 0.002* |
| Nurses (Diploma degree) | 117 | 58.5 | 5.03 | |
| Nurses (Postgraduate degree) | 18 | 9.0 | 7.72 | |
| Experience in nursing since graduation*** | | | | |
| 1–9 years | 61 | 30.5 | 4.84 | 0.334 |
| 10–19 years | 56 | 28.0 | 5.50 | |
| 20–29 years | 39 | 19.5 | 4.97 | |
| 30–39 years | 38 | 19.0 | 5.16 | |
| >40 years | 6 | 3.0 | 1.33 | |
| Sources of training*** | | | | |
| Seminar, course, etc. | 87 | 43.5 | 4.69 | 0.502 |
| Brochure, book, etc. | 22 | 11.0 | 4.41 | |
| By oneself | 23 | 11.5 | 5.70 | |
| From physicians | 6 | 3.0 | 5.31 | |
| From nurses | 62 | 31.0 | 6.00 | |

n = number

% = percentage

* = Significant level at the 0.05 level

** = Mann–Whitney U Test

*** = Kruskal–Wallis one-way analysis of variance

TABLE 2: FREQUENCY OF USED SITE AND KNOWLEDGE OF RECOMMENDED INTRAMUSCULAR INJECTION SITE

| Answer | n = 200 | % |
|--------------------------------------------------|---------|------|
| Most frequently used site | | |
| Deltoid muscle | 4 | 2.0 |
| Vastus lateralis and Rectus femoris | 2 | 1.0 |
| DG site | 177 | 88.5 |
| VG site | 15 | 7.5 |
| Missing data | 2 | 1.0 |
| Site recommended in the latest literature | | |
| DG site | 83 | 41.5 |
| VG site | 73 | 36.5 |
| Vastus lateralis | 3 | 1.5 |
| Rectus femoris | 2 | 1.0 |
| Deltoid muscle | 8 | 4.0 |
| Don't know | 31 | 15.5 |

TABLE 3: EDUCATION AND PRACTICE CONCERNING THE VENTROGLUTEAL SITE

| Answer | Nursing assistants | Nurses | p value |
|-----------------------------------------------------------------------------|--------------------|--------|---------|
| Education about the VG site during studying?*** | | | |
| Yes | 28 | 24 | 0.000* |
| Not received | 37 | 111 | |
| Have you given an IMI to the VG site in your professional career?*** | | | |
| Yes | 21 | 36 | 0.409 |
| No | 44 | 99 | |
| Reasons for avoiding VG site*** | | | |
| I am not used to it | 19 | 42 | 0.101 |
| Lack of adequate knowledge | 6 | 33 | |
| VG site is too small | 0 | 5 | |
| Fear of harming the patient | 8 | 9 | |
| I cannot locate it | 8 | 13 | |
| I am not acquainted with VG site | 22 | 33 | |

* = Significant level at the 0.05 level

** = Mann–Whitney U Test

*** = Kruskal–Wallis one-way analysis of variance

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More than half of the participants (59.0%, n=118) answered that they take into consideration patient's body mass index (BMI) when selecting the appropriate needle size and injection site (52.0%, n=104). They prefer to use needle size 21 G (24.0%, n=48, »always«, and 40.0%, n=80, »rarely«) in comparison to needle size 23 G (6.0%, n=3, »always«, and 41.0%, n=82, »rarely«). The two-needle technique was most reported to be used (78.5%, n=157). Seventy nine percent (n=158) and participants reported they always wipe the injection site with an antiseptic wipe or alcohol wipe (97.0%, n=194) and wait till the antiseptic solution is completely dry before administering IMI (67.5%, n=135 »always« and 28.5%, n=57 »rarely«). The majority of participants reported »always« to use the technique of aspiration to check the presence of blood before administering prescribed medication (80.0%, n=160). Most were not familiar with Z-track technique and consequently reported they do not use it (68.5%, n=137) (Table 4).

Regarding educational status, statistical significance was found for questions related to checking the dose and use-by date before administering medication, considering injection site, weight and size of the patient when selecting needle

size before administering the medication, the use of a 23 Gauge needle size, assessing the injection site immediately after administrating the medication, controlling the patient's response and possible side effects, adjust the injection site to the prescribed medication, observing the possible occurrence of side effects to medication, aspiration, administering injection at the dry disinfected area ($p<0.005$) (Table 4).

Very few participants were familiar that exercise is recommended after administrating IMI (8.0%, n=16), that VG site is recommended in children over the age of seven months (12.5%, n=25) and that VG site can take up to 4 millilitres of medicine (15.5%, n=31) (Table 5).

Nurses expressed a higher level of knowledge of administering an IMI to the VG site when compared to nursing assistants. Statistical significance was found in questions related to the speed of administrating IMI (quickly, in few seconds), occurring complications in the VG site (damaging sciatic nerve), volume (up to 4 ml of medication), determining injection site (place nurse's left hand on the patient's right hip and palpating bone structures in the VG site) ($p<0.005$).

TABLE 4: NURSES' PRACTICE ON INTRAMUSCULAR INJECTION IN THEIR DAILY CLINICAL PRACTICE

| Question | Answer | Nursing assistants | Nurses | Mann-Whitney U-test | p value |
|--------------------------------------------------------------------------------------------------------------------------|--------|--------------------|--------|---------------------|---------|
| 1. Do you wash and disinfect hands before every IMI? | Never | 0 | 0 | 4637.5 | 0.210 |
| | Rarely | 9 | 11 | | |
| | Always | 56 | 124 | | |
| 2. How often do you check the dose and use-by date before administering medication? | Never | 6 | 0 | 4750.5 | 0.032* |
| | Rarely | 2 | 6 | | |
| | Always | 57 | 129 | | |
| 3. How often do you use gloves when administering IMI? | Never | 15 | 34 | 4739.0 | 0.320 |
| | Rarely | 38 | 58 | | |
| | Always | 12 | 42 | | |
| 4. How often do you consider the injection site when administering an IMI based on the medication being given? | Never | 16 | 5 | 5446.0 | 0.002* |
| | Rarely | 18 | 42 | | |
| | Always | 31 | 88 | | |
| 5. How often do you consider the weight and size of the patient when selecting needle size and length to administer IMI? | Never | 14 | 10 | 5552.5 | 0.001* |
| | Rarely | 23 | 35 | | |
| | Always | 28 | 90 | | |
| 6. How often do you consider the weight and size of the patient when selecting the site to administer IMI? | Never | 17 | 19 | 5199.5 | 0.020* |
| | Rarely | 21 | 39 | | |
| | Always | 27 | 77 | | |
| 7. Do you administer IMI to the patient in the standing position? | Never | 28 | 57 | 4301.5 | 0.871 |
| | Rarely | 35 | 77 | | |
| | Always | 3 | 0 | | |

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TABLE 4: NURSES' PRACTICE ON INTRAMUSCULAR INJECTION IN THEIR DAILY CLINICAL PRACTICE (CONTINUED)

| Question | Answer | Nursing assistants | Nurses | Mann-Whitney U-test | p value |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------|--------|---------------------|---------|
| 8. How often do you use the Z-track method of administration? | Never | 52 | 85 | 4848.0 | 0.143 |
| | Rarely | 5 | 27 | | |
| | Always | 3 | 9 | | |
| | Missing | 19 | 0 | | |
| 9. When giving an IMI, do you swab the site with an alcohol wipe before administering the injection? | Never | 0 | 2 | 4291.5 | 0.397 |
| | Rarely | 1 | 3 | | |
| | Always | 64 | 130 | | |
| 10. How often do you use a 21 G needle (green colour. for administering IMI)? | Never | 20 | 52 | 4231.5 | 0.664 |
| | Rarely | 31 | 49 | | |
| | Always | 14 | 34 | | |
| 11. How often do you use a 23 G needle (blue colour. for administering IMI)? | Never | 44 | 68 | 5210.5 | 0.014* |
| | Rarely | 21 | 61 | | |
| | Always | 0 | 6 | | |
| 12. How often do you use a two-needle technique to give an injection, which means, using one needle to draw up the medication and another needle to administer the medication? | Never | 7 | 9 | 4796.5 | 0.136 |
| | Rarely | 11 | 16 | | |
| | Always | 47 | 110 | | |
| 13. How often do you assess the injection site immediately after administering the medication? | Never | 10 | 6 | 5661.5 | 0.000* |
| | Rarely | 17 | 11 | | |
| | Always | 38 | 118 | | |
| 14. Do you control patient's response and possible side effects to medication 30 minutes after administering medication? | Never | 0 | 3 | 5418.0 | 0.000* |
| | Rarely | 23 | 12 | | |
| | Always | 42 | 120 | | |
| 15. Do you aspirate for blood before administering the medication? | Never | 1 | 6 | 5520.0 | 0.000* |
| | Rarely | 24 | 9 | | |
| | Always | 40 | 120 | | |
| 16. Do you wipe the injection site with an antiseptic wipe in a circle of 5 cm diameter from the injection site? | Never | 0 | 13 | 4612.0 | 0.409 |
| | Rarely | 17 | 12 | | |
| | Always | 48 | 110 | | |
| 17. How often do you give an injection after the antiseptic solution has completely dried? | Never | 6 | 2 | 5734.0 | 0.000* |
| | Rarely | 28 | 29 | | |
| | Always | 31 | 104 | | |
| 18. When locating the injection site, do you specify anatomical structures? | Never | 11 | 12 | 4498.5 | 0.729 |
| | Rarely | 11 | 34 | | |
| | Always | 43 | 89 | | |
| 19. How often do you massage the injection site after the injection? | Never | 29 | 69 | 4012.5 | 0.288 |
| | Rarely | 18 | 38 | | |
| | Always | 18 | 28 | | |

* = Significant level at the 0.05 level

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TABLE 5: KNOWLEDGE OF ADMINISTERING AN INTRAMUSCULAR INJECTION TO VENTROGLUTEAL SITE

| Question | Correct answer | Nursing Assistants | Nurses | Mann-Whitney Test | p value |
|--------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|--------|-------------------|---------|
| 1. Injection to the VG site may be difficult in very overweight patients because the greater trochanter cannot be found. | True | 23 | 44 | 4195.0 | 0.573 |
| 2. The tissue at the injection site is bunched between the thumb and the forefinger. | False | 22 | 29 | 3782.5 | 0.054 |
| 3. Medication is injected in a few seconds, quickly. | False | 38 | 122 | 5288.5 | 0.001* |
| 4. After administrating IMI it is recommended to exercise. | True | 11 | 5 | 4716.5 | 0.260 |
| 5. IMI is safer at the VG site since it is away from large blood vessels and nerves. | True | 25 | 69 | 3863.5 | 0.128 |
| 6. The most common complication in the VG site is damaging the sciatic nerve. | False | 6 | 60 | 5234.0 | 0.019* |
| 7. Complications, such as pain, infection, necrosis, nerve damage, fibrosis, do not occur at the VG site. | True | 8 | 53 | 3310.5 | 0.002* |
| 8. VG site is not recommended for injecting oily solutions or irritants. | False | 18 | 16 | 4369.0 | 0.951 |
| 9. It is harder to reach the muscle tissue at the VG site because of the thickness of the subcutaneous layer. | False | 11 | 45 | 4323.5 | 0.855 |
| 10. VG site can take up to 4 millilitres of medicine. | True | 4 | 27 | 3213.0 | 0.000* |
| 11. In order to determine the injection site, the nurse has to place her right hand on the patient's right hip. | False | 16 | 28 | 3457.5 | 0.009* |
| 12. The VG site is palpated using imaginary lines, DG site by the use of bone structure. | False | 15 | 31 | 3089.0 | 0.000* |
| 13. Patients are advised to lay on their back or on the right/left side. | True | 30 | 76 | 3874.5 | 0.135 |
| 14. Use of the VG site is recommended in children over the age of seven months. | True | 11 | 14 | 4154.5 | 0.435 |
| 15. VG site can be used only with adult patients. | False | 18 | 40 | 4103.0 | 0.416 |
| 16. The risk of contamination is very high at the VG site. | False | 11 | 74 | 4055.0 | 0.341 |

* = Significant level of $p < 0.05$

DISCUSSION

We found that participants' knowledge about evidence-based recommendations regarding IMI administration is limited. Nurses with a post-graduate degree working in emergency service reported the highest level of knowledge. Differences in education between nursing assistants, nurses with diploma degree and post-graduate degree may account for the findings. Although Bajracharya found the level of education had no statistically significant relationship between knowledge and practice regarding IMI,²⁵ it was later found to influence the selection of the VG site for administering IMIs.¹⁸ Nurses with a post-graduate degree also tend to have better knowledge and attitudes towards evidence-based practice.²⁶ In Slovenia, most subjects or modules on evidence-based practice are offered in master's nursing programmes.²⁷ Findings could also be influenced by the frequency of administered IMIs. In the emergency service, IMIs are frequently administered, especially for pain relief, or even for faster therapeutic results.²⁸ From 12,594 IMIs administered in a selected healthcare centre in 2019, most were administered in the emergency service.

Although the VG site for IMI is suggested in evidence-based nursing literature, the DG site was the most common choice for application of IMI. Others report similar results.^{16,18,20,29} Most also reported the DG site is recommended in the latest literature; almost one-tenth did not know what the recommended site is. It seems nursing staff did not get adequate education and have therefore rarely administered IMI to the VG site. Almost three-quarters of participants reported they did not receive education about the VG site during their studies. According to Floyd and Meyer,²⁹ the theory about injections into the VG site are taught in some nursing schools. Our findings suggest the opposite, and there is a need to evaluate curriculums not only at secondary vocational education level but also in higher education to confirm these findings. Despite the more significant percentage not receiving education, nurses expressed better knowledge about site determination, complications concerning site selection, speed and volume of IMI when compared to nursing assistants. However, nurses' knowledge about volume VG can take and appropriateness to use the VG site in children also was limited. Nurses have also expressed better adherence to current guidelines and knowledge of

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administering an IMI when compared to nursing assistants. It could be they receive education and training on IMI and other skills, as well as biology, anatomy, pathophysiology, and pharmacological theory when nursing assistants receive more limited theoretical education.^{30,31} Further research is therefore needed to evaluate nursing student's knowledge and practice on evidence-based recommendations concerning IMI. Emphasis should not only be placed on theoretical education but also clinical training and clinical mentors. Some suggest nursing students rarely have the opportunity to observe the application of IMIs into the VG site in clinical practice.²⁹ The level of knowledge could also decrease if not used constantly in clinical practice.

We found that nursing staff, although being informed about the VG site, avoid using it mostly as they are not used to it, followed by not being acquainted with it, and not having enough knowledge. A few have also expressed fear of harming the patient when administering an IMI to the VG site. Not used to giving injections at the VG site was also reported as the main reason for not using it by Turkish nurses working in hospitals.¹⁹ Others have listed other possible reasons for avoiding the VG site, such as age of nurses,⁸ insufficient knowledge about the advantages of using the VG site, small surface area for injection, lack of confidence,^{14,16,32} and concern about harming the patients.³³ Further studies in Slovenia should evaluate whether there are some factors that influence possible reasons for avoiding the VG site.

When evaluating daily clinical practice, most participants reported adherence to hand hygiene in terms of washing and disinfecting as well as to disinfect the injection site. Findings are not surprising, as there is a strong emphasis on five moments for hand hygiene and preventing infections not only in education but also in clinical practice.³⁴ What is concerning, is the poor practice of wearing gloves when administering IMI. Findings are in contrast to the results, where a vast majority of participants reported they often or always wear gloves.^{35,36} Nursing assistants also do not allow the skin to dry during the process of disinfection of the injection site. Further research is needed to determine the reasons for this poor practice, not only quantitative but also qualitative research. For more than two decades nursing students in Slovenia have been educated on using gloves and the disinfection process when administering IMI.³⁷ Nurses and nursing assistants are also working in accordance with the same institutional standards, and standards in a healthcare centre are in line with international recommendations which suggests wearing gloves,³⁸ even though WHO recommended not to use gloves for routine IMI.³⁹ Nonetheless, nursing standards in all healthcare institutions should be reviewed to determine if institutions have different standards and whether they are following current recommendations.

Also, several other practices are not in line with evidence-based recommendations. More than half of the participants in this research always consider the BMI of patients when choosing the needle size, its length and the injection site. A tenth of participants have never adjusted the needle size or choice of the injection site to the patient's gender, weight or BMI, thus increasing the risk of administering the IMI to the subcutaneous tissue or outside the muscle tissue.³² When locating the injection site, only two-thirds of our participants have specified anatomical structures.

On the other hand, the majority of participants have reported consistent use of the aspiration technique to check the presence of blood before administering the prescribed medication. However, more recent recommendations from WHO and the Centers for Disease Control and Prevention's (CDC) report, the practice of aspiration during IMIs is premature and is expected to be eliminated. Aspiration only makes sense in areas with large vascular structure, such as the DG site.¹¹ If nurses succeeded in completely eradicating the use of the DG site as the chosen site for IMI, aspiration could be removed from routine nursing care.⁷

Also, the two-needle technique was well respected by participants. We have found that three-quarters of participants regularly use the two-needle technique, 13.5% use it occasionally, and 8% never, which is similar to other research.^{20,40,41} The two-needle technique seems to be firmly rooted in our nursing practice. Probably as in rare specific medical areas, pre-filled syringes are not common. Also, nurse educators put a strong emphasis on using the two-needle technique, when IMI of drug includes preparing and administering medication.³⁷

Nurses and nursing assistants reported they are not familiar with the Z-track method and therefore never or rarely use it, which is similar to other findings.^{24,36,40} Although Z-track method is more commonly used in psychiatry,⁴² it is recognised as the most appropriate technique for IMI.³⁶ Most probable reason for unfamiliarity is the lack of knowledge as this technique is not included in nursing textbooks.

LIMITATIONS

The main limitation of this study is sampling. The generalisation of the results is limited due to convenience sampling. The data have been gathered only in one healthcare centre, so they may not apply to other healthcare centres. The analysis of non-respondents was not conducted as their answers were not collected. Social desirability should also be taken into consideration.

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CONCLUSIONS AND IMPLICATIONS FOR NURSING

Despite the limitations, the study shows that nurses and nursing assistants most frequently use the DG site, do not follow evidence-based recommendations and work on the traditional methods learnt from older colleagues due to a lack of knowledge and skills.

Results of this study could help nurse educators and nurse managers to increase awareness of the benefits of using the evidence-based practice guidelines of using the VG site. It is recommended to ensure adequate theoretical and practical education and training for nursing students, as well as proper training of nurses already working in clinical practice and especially for clinical mentors. Students are continually learning on clinical placements, not only from their clinical mentors. Only by that, can we provide a safer and more efficient delivery of medication into the muscle. Additional studies are needed to determine the level of knowledge and practice among all nursing students and all other nursing employees in primary, secondary, and tertiary healthcare organisations.

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Bathing wipes, a valuable hygiene option for frail older persons at home: a proof-of-concept study

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ABSTRACT

Objectives: To explore experiences and attitudes of frail older persons to using bathing wipes as a hygiene option at home.

Methods: A descriptive, exploratory study was conducted with older clients who required hygiene assistance post hospital discharge and consented to trial bath wipes. Client participants or their carer completed a verbal questionnaire administered via telephone. Descriptive statistics summarised the quantitative data and closed-ended questions were analysed using content analysis.

Results: Thirty-seven of the 49 consented participants used the bathing wipes at home. There was high level of agreement that bathing wipes were fit for purpose and participants indicated that they were suitable to use to supplement assisted showers.

Conclusion: The use of bathing wipes provides an acceptable hygiene option and can support autonomy of frail, older persons, while reducing the risk of falls from wet floors. Bathing wipes are of use to persons who have not yet regained independence with showering and/or are awaiting bathroom modifications installed.

What is already known about the topic?

- Wet floors associated with showering unassisted, can be a falls hazard to elderly persons attempting to regain independence.
- Transition care programs offered for elderly clients returning to their own home post hospital discharge are limited in scope and duration.
- Falls in frail, older people are common, with adverse consequences for the individual and the health system.

What this paper adds

- Bath wipes were well accepted by elderly clients as an alternative to showering without assistance.
- Bath wipes can be used by the individual on a short-term basis while they regain independence with hygiene, while they wait for bathroom modifications, or they can be used longer term.

Keywords: Personal hygiene; falls prevention; frailty; transitional care

RESEARCH ARTICLES

BACKGROUND

Following discharge from Australian hospitals, many frail older clients receive assistance with personal hygiene three times weekly for a short-term period supported by a Commonwealth-funded Transition Care Package. This is consistent with the Government's and society's preference for supporting people to age in home rather than go into residential aged care.¹ People have different personal hygiene preferences and practices, related to their wish to feel refreshed, society's expectations, and to regain independence.^{2,3} In hot, humid tropical regions personal hygiene requirements can escalate. However, not all people have someone to assist with hygiene on days when Transition Care is not provided, nor can they necessarily afford additional in-home care, expensive medical aid equipment and/or bathroom modifications to enable independence with showering.

Bathing wipes are pre-packaged disposable washcloths that contain a quick drying cleansing emollient and may be a safe, cost-effective alternative to showering. No other equipment is required, and personal hygiene can be undertaken anywhere convenient to the user. They are suitable for fragile skin,^{2,4} their use may reduce the significant falls risk of elderly persons living in the community,⁵ and the specific falls risk associated with wet bathroom floors for people with gait or balance deficits.⁶ Whilst one goal of the Transition Care Package is to optimise clients' self-management skills,⁷ bathing wipes are potentially available on an ongoing basis for individuals who do not regain independence with showering. Whether such a change in bathing practices is acceptable to older persons in community settings is unknown. Groven et al. recommended that future research about bathing wipes should explore patients' perspectives, satisfaction and experiences in order to support patient centred quality care.⁴ This study aimed to explore enablers and barriers to frail older persons using bathing wipes to assist with their hygiene in the community setting.

METHOD

STUDY DESIGN

A descriptive, exploratory study design using questionnaires was employed.

STUDY OBJECTIVES

The study objectives were to:

1. Explore Transition Care Program clients' experiences and attitudes to using bathing wipes; and
2. Explore whether these clients intended to continue using bathing wipes at the conclusion of the Transition Care Program.

SETTING AND PARTICIPANTS

The study took place in the community setting of a regional city in north Queensland, Australia. The client participants were frail, older people recently discharged from hospital on a Transition Care Program. These individuals had been assessed as requiring hygiene assistance and had consented to trial the bathing wipes at home. Other inclusion criteria were that they resided within the local community and were contactable by telephone. A carer could answer the questions on their behalf. After consenting to participate, clients were provided with a package of bathing wipes and education. Additional bathing wipes were provided by the community service for the Program. A copy of the questionnaire was given to clients prior to their discharge so that they were familiar with the questions that would be asked via telephone. Organisational ethics approval was obtained (HREC/18/QTHS162).

THE INTERVENTION

The intervention was a packet of disposable bathing wipes ('Bath in bed wipes', Reynard Health Supplies). Each packet contained eight wipes, the equivalent of one bath. Each bath wipe measured 33cm by 23cm; the packet could be heated or cooled prior to use.

DATA COLLECTION

The researcher telephoned the clients at the nominated time, approximately three weeks post hospital discharge, and asked the questions from the previously provided questionnaire. The questionnaire comprised a combination of 5-point Likert scale and questions using free text; it took less than 10 minutes to complete.

DATA ANALYSIS

Binary and categorical data were summarised using frequencies and percentages. Free text responses were analysed using content analysis.

RESULTS

Fifty-two clients (from a potential 73) were recruited over a 12-month period (February 2019 – January 2020). Three were excluded from data analysis because they were either discharged to a residential aged care facility (1), declined the Transition Care Package after consenting (1), or declined to answer the questions by telephone (1).

All participants had some type of bathing support such as grab rails or shower chairs, and 20 (40.8%) expressed concerns about falling. Three quarters (37/49, 75.5%) participants used the bathing wipes following hospital discharge. Reasons for not using the bathing wipes (12/49) were mixed and the most common included: contented with having second-daily support through the Program, family assistance provided

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TABLE 1: RESPONSES FROM PARTICIPANTS (N=30): LEVEL OF AGREEMENT WITH STATEMENTS ABOUT THE BATHING WIPES

| Statement | Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly disagree |
|-----------------------------------------------------------------------------|----------------|-------|----------------------------|----------|-------------------|
| The bathing wipes were easy to use | 7 | 23 | 0 | 0 | 0 |
| I liked using the bathing wipes | 7 | 21 | 2 | 0 | 0 |
| I felt clean after using the bathing wipes | 7 | 23 | 0 | 0 | 0 |
| My skin felt moisturised after using the bathing wipes | 6 | 19 | 5 | 0 | 0 |
| I think the bathing wipes are a satisfactory alternative to having a shower | 7 | 18 | 3 | 2 | 0 |

on alternate days, or clients regained their independence quickly. The reasons why seven participants could not provide responses about their experience were: used the bathing wipes in the same way as they would use a facecloth/washer in the shower (5); inadequate supply (1); unsuited to telephone interview (1).

From the responses to the Likert-scale statements, it is evident that participants who used the bathing wipes were satisfied with their attributes. There were no 'strongly disagree' responses to any of the statements. Participants reported: they liked using the wipes; they were easy to use; they felt clean and their skin felt moisturised after using the wipes; and the wipes were an acceptable alternative to showering (for all but two participants). (Refer to Table.) Most respondents' (22/30) prior hygiene routine was daily showers.

When asked about the most favourable aspects of using the bathing wipes, responses included: convenience (11); a fantastic alternative when not feeling up to showering (5); ease of use (4); easy to heat (3); and refreshing (2). The majority of those who used the bathing wipes (23/37, 62%) could not identify anything they did not like about the product. Seven participants offered comments that indicated a level of dissatisfaction with the product: the packets were difficult to open (3); even though the bathing wipes were effective, they were still not as good as water (2); it would be preferred if the wipes could be flushed down the toilet (1); the wipes were twice as big as they needed to be (1).

Two-thirds (24/37, 65%) participants said they received adequate supplies of the product. One participant who had received insufficient supply did not think bathing wipes were an appropriate alternative to showering. All participants said they would use the product in the future if they were unwell or not able to access their shower. They were unsure as to how much they would be prepared to pay for bathing wipes, with answers ranging from "no idea" to up to \$4.00 per packet.

DISCUSSION

Despite initiatives to reduce falls, fall-related injury remains a major public health concern, with significant older persons who fall at home requiring hospitalisation.^{3,8,9} A fear of falling, as expressed by many participants can increase fall risk.¹⁰ Although clients still preferred showering, they provided many examples of situations when the bathing wipes would be safer and more convenient. It is important to design systems which incorporate the variation in preferences for personal hygiene options.^{11,12} Bathing wipes could be an autonomous and sustainable option for meeting basic hygiene preferences long-term, or in the shorter term while clients wait for permanent bathroom modifications or regain their independence.³ Lack of adequate supplies of the product was a barrier during the study period, and continued usage may be limited due to difficulties for frail older people purchasing bathing wipes. The cost to the general public for the brand of bathing wipes used in this study is slightly higher than it was to the hospital, however, the bathing wipes are now available online, within the upper price limit clients indicated they would be willing to pay. A limited range of comparable products is available in select pharmacies and medical supply stores as well as online, although some older people may still find it difficult to purchase them.

From the perspectives of the participants, some practical difficulties were experienced using the wipes. However overall, the wipes were favourably received. For the one-third of frail older Australians who fall each year,⁵ the bathing wipes option may be a viable, low-cost, safe option for personal hygiene.

IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

This is novel research, exploring the experiences of frail, older persons' use of bathing wipes to assist with personal hygiene in their own homes. Future research needs to explore the acceptability of bathing wipes across different health settings and patient groups and explore the long-term impact of the use of bathing wipes on the incidence of falls and on skin integrity.

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Nurses and carers, who are aware of bathing wipes and how to instruct patients as to their correct use, can inform clients about choices which may improve their independence with personal hygiene. With broader awareness, similar products could provide an alternative, safe, cost effective hygiene option for people living in the community longer-term, and providers of subsidised aged-care packages.

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Impact of the COVID-19 pandemic on the Australian residential aged care facility (RACF) workforce

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ABSTRACT

Objective: We conducted a survey to understand the challenges faced by the staff of residential aged care facilities (RACF), during the COVID-19 pandemic.

Background: In the current pandemic, the RACF workforce has been required to work under stressful conditions, with immense mental and physical pressures, resulting in anxiety and stress felt towards their jobs.

Study design and methods: We electronically surveyed both clinical and non-clinical staff at public and private RACFs in Australia in June and August 2020. The survey asked a mix of open-ended and closed questions about preparedness for the pandemic, information flow, experience with personal protective equipment (PPE), management of suspected COVID cases, restrictions on visitors, and impact on RACF staff personal and home life. Quantitative data were analysed in SPSS; qualitative data using content analysis.

Results: We received 371 responses: 198 from clinical staff and 168 from non-clinical staff. Respondents were between 20–71 years old, and 87% were female most commonly from Victoria (28%) or New South Wales (28%). The majority (80%) felt that Australian

RACFs were well-prepared for the pandemic and 87% agreed that relevant healthcare authorities were contactable for information needed. A total of 37% reported challenges in estimating and ordering appropriate quantities of protective equipment. Ninety percent of facilities reported screening residents for possible symptoms and 77% introduced precautions or quarantine measures to protect residents. Most participants (98%) reported their RACF implemented restrictions on visitor access and 43% reported unfair or abusive treatment by family or friends of the residents. Commonly reported personal impacts included: workload increase, stress, emotional toll, family issues and fatigue. Support from colleagues as well as training, de-brief sessions and frequent meetings were identified as helpful facilitators during this time.

Conclusion: We identified a wide range of practices and coping strategies among Australian RACFs. Whilst a majority of respondents reported coping well, a large proportion reported struggling both mentally and physically. Factors reported as helpful by the respondents may assist RACFs in planning for future pandemics.

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Implications for research, policy and practice:

Understanding the challenges faced by all levels of staff within RACFs may aid decision-makers on a range of different levels – researchers, aged care providers, local/regional/state health departments and national leaders within government to help inform the development of interventions that may help the sector to recover, as well as prepare for potential future outbreaks. Of particular importance, are interventions or initiatives that focus on supporting the physical and mental health of staff i.e. those that prevent or minimise worker fatigue, emotional burnout and stress.

What is already known about the topic?

- Nursing staff in Australian RACFs did not feel prepared for the COVID outbreak in their workplace.
- Early in 2020, RACF nurses experienced a greater overall workload and some had their staff hours reduced by their employers due to financial constraints caused by the outbreak.

What this paper adds

- This paper offers a comprehensive insight into how RACF staff coped both individually and as part of the facility overall during the COVID crisis.
- It identified that a commonly reported source of stress was first-hand verbal abuse from family or friends of residents in response to visitor and lockdown restrictions implemented by the authorities.
- The paper highlighted that whilst the majority of respondents felt that RACFs were well prepared for managing residents during the pandemic, some facilities experienced significant problems with workloads, PPE and human resourcing.
- Furthermore, the survey showed that on an individual level, some staff experienced significant mental and physical stress during the outbreak.

Keywords: nursing homes; homes for the aged; workforce; COVID-19

BACKGROUND

The COVID-19 pandemic has proven to be a significant challenge for healthcare systems worldwide.¹ The aged care sector in particular has been affected, with residential aged care facility (RACFs) residents making up 65% of all COVID related deaths in Australia.² According to the most recent National Aged Care Workforce Census and Survey as many as 220,000 older people live in RACFs across Australia, with a corresponding total workforce of 230,000 of which 154,000 are direct care workers.³ Australian RACF staff are at the frontline of the COVID pandemic response, balancing the provision of an appropriate level of care to high-need residents with personal, family, staff, visitor and resident safety.

A report released by the Australian Nursing and Midwifery Federation (ANMF) found that 43% of nurses surveyed in May 2020 did not feel prepared for an outbreak of COVID in their workplace and nearly a fifth (19%) indicated their facility had in fact made cuts to staff hours in response to the COVID-19 outbreak.⁴ Respondents were experiencing significantly increased workloads, felt undervalued and unrecognised and were doing their best to adapt to a changing environment.⁴

OBJECTIVE

Our aim was to understand the impact of the COVID-19 pandemic on the RACF workforce, including clinical, administrative and auxiliary staff. The survey aimed to identify the challenges faced during the COVID-19 pandemic

including the level of preparedness to deal with the pandemic, amount of information provided by state and federal health departments, experiences with PPE, as well as impact on workload and personal obligations. This research will assist in determining whether the RACF workforce was adequately supported by the aged care sector during the outbreak of COVID-19 and will also identify areas of practice that would benefit from further attention to better aid and equip the workforce for future pandemics.

STUDY DESIGN AND METHODS

This study received ethics approval from the Bond University Human Research Ethics Committee (Approval Number: AS200602).

PARTICIPANTS

We surveyed all members of the RACF workforce, regardless of work status (i.e. full-time/part-time) or roles (clinical/non-clinical). Participants were contacted through the publicly available GEN Aged Care Data website, which generates a list of all registered RACFs in Australia and their corresponding contact details. One email address per facility was listed and surveys were sent to this email address with a request for the receiver to circulate the survey among staff members within their workplace.

A survey was electronically distributed to members of the RACF workforce between June and August 2020. Participants

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were assured of confidentiality and were informed that their responses would be de-identified.

A sample size calculation was performed for survey questions using a margin of error of 5%, a significance level of 5% and a confidence level of 95%. The target sample size needed was found to be 341 respondents in total.

SURVEY

The online survey (in SurveyMonkey Inc) was self-administered by participants. A total of 54 questions were adapted from a previously developed research instrument being used to understand the challenges faced by Australian GPs during the pandemic.⁵ The majority of questions required answers based on a fixed 'yes/no/not applicable' scale, and were supplemented by open-ended questions. The questions sought information on; how prepared respondents were to deal with the COVID pandemic, how they were dealing with the challenges brought on by the pandemic, what information they received (or did not receive), their experiences with personal protective equipment, impact on workload and impact on personal/home obligations. All questions were pre-coded for data entry. The full survey instrument is provided in Appendix A.

The survey was pre-tested for intelligibility of content and design by four Australian healthcare professionals and researchers.

Reminders were emailed to participants two weeks and one week before the end of the study period. Surveys that were answered by respondents beyond the demographic data were included in the analysis. Incomplete responses were considered as missing values.

DATA ANALYSIS

Descriptive statistics (percentages, frequencies) were used to analyse quantitative data via the Statistical Package for the Social Sciences (SPSS) Version 22. The Chi-square test was applied to test the association between independent categorical variables (e.g. participant age, role, state, type of RACF) and dependent variables (e.g. PPE use, level of information/training provided, physical and mental impacts etc.). Statistical significance was accepted at a P value of <0.05.

Data obtained from open-ended questions relating to challenges and facilitators during the pandemic were analysed following content analysis procedures, using manual inductive coding.⁶ A list of initial codes was created from the data guided by the survey questions. Significant statements were identified from participant responses and were assigned an initial code; new codes were added when data did not fit existing codes.⁷ The codes were then grouped into broader categories with similar content, and these categories were grouped into themes around the study objectives.⁸

RESULTS

A total of 2,855 surveys were sent out (corresponding to the number of facilities listed on the GEN Aged Care Data website) with 285 bounces. To maximise the potential number of respondents, we asked the receiver of each email to forward the survey to staff members within their facility. An accurate response rate is difficult to ascertain as it is not known how many surveys were forwarded among colleagues within each RACF. The response rate was calculated with the denominator being the number of surveys sent out electronically by researchers. A total of 425 responses were received and of these 371 respondents completed at least 50% of the survey questions, yielding a response rate of 13%.

TABLE 1: DEMOGRAPHIC CHARACTERISTICS

| | | |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------|
| Age (n = 350) | Range | 20–73 |
| Gender (n = 369) | Female | 320 (87%) |
| | Male | 48 (13%) |
| | Other | 1 (0.3%) |
| Number of residents in the RACF where you are currently employed (n = 370) | Fewer than 50 | 98 (27%) |
| | 50–100 | 179 (48%) |
| | Over 100 | 93 (25%) |
| Type of RACF (n = 368) | Private-for-profit | 94 (26%) |
| | Religious | 21 (6%) |
| | Community-based | 20 (5%) |
| | Not-for-profit/charitable | 178 (48%) |
| | State and territory government | 49 (13%) |
| | Local government | 6 (2%) |
| Role in the RACF (n = 366) | Nurse | 160 (44%) |
| | Assistant in nursing (AIN) | 16 (4%) |
| | Other care assistant | 10 (3%) |
| | Allied health i.e. occupational therapist, physiotherapist, pharmacist etc. | 12 (3%) |
| | Administrative personnel | 131 (36%) |
| | Quality and compliance staff | 35 (10%) |
| | Cleaning staff | 1 (0.3%) |
| | Kitchen staff | 1 (0.3%) |
| | | |
| State (n = 369) | VIC | 104 (28%) |
| | NSW | 102 (28%) |
| | QLD | 75 (20%) |
| | WA | 32 (9%) |
| | TAS | 24 (7%) |
| | SA | 22 (6%) |
| | ACT | 7 (2%) |
| | NT | 3 (0.8%) |

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A total of 87% of respondents were female, ranging between 20 and 71 years of age. The largest groups of respondents were direct care staff (51%) and administrative personnel (36%). Over one-half were from Victoria and New South Wales (28% each). Respondents were most commonly employed in not-for-profit RACFs (48%) followed by private-for-profit (26%) and state and territory government owned facilities (13%). Just under half (48%) were employed in mid-sized facilities caring for between 50–100 residents. Table 1 shows the demographic characteristics of respondents.

RACF PREPAREDNESS FOR THE PANDEMIC

According to 80% (n = 290/365) of respondents, at the beginning of the COVID-19 pandemic, their RACFs were well-prepared for the outbreak. When considering the availability and use of PPE, over one-third of respondents indicated that they found it challenging to estimate and order appropriate quantities of PPE for their facility (37%, n = 135/366). However, over half of respondents felt that their RACF had received enough PPE to look after patients appropriately (59%, n = 219/369). A significantly greater proportion of private-for-profit and state/territory RACFs compared to not-for-profit/charitable RACFs felt that they had received a sufficient amount of PPE (p < 0.05). Approximately 66% (n = 244/371) of respondents felt that they had enough individual supplies on hand in the event of an outbreak, but the majority of respondents (84%, n = 312/371) knew where they could obtain PPE and received sufficient information on how much PPE they needed (95%, n = 353/371). See Appendix B for a response distribution (%) for all items.

However, there were some concerns about PPE expressed in respondents' qualitative answers, with many stating that PPE was unavailable at some facilities at the beginning of the outbreak and continued to be unavailable in some cases for 10 days, which caused stress around working conditions. Furthermore, it was noted that any suppliers with available PPE had increased prices substantially (Appendix C).

“Initially supplies of PPE were very hard to find and when you could procure it, the price had in most cases tripled.” R185

TESTING OF SUSPECTED CASES

Over half of respondents (63%, n = 232/368) indicated that RACFs had adequate access to testing of residents (either in-house or domiciliary collection) and 81% felt that an appropriate level of testing for COVID-19 had been undertaken in their facility (n = 281/349). However, a significantly greater proportion of participants from state/territory government run RACFs compared to not-for-profit RACFs felt that they had a satisfactory level of access to tests (p < 0.05).

PROVISION OF INFORMATION TO RACF WORKERS

A total of 92% (n = 339/368) of respondents agreed that their facility had received sufficient amounts of information on dealing with suspected cases and 66% (n = 243/368) indicated that their facility had received clear instructions from official bodies about the testing of residents. Furthermore, approximately 87% (n = 322/371) of respondents agreed that relevant healthcare authorities were easily able to be contacted for further information when needed (see Table 2 for a complete list of the healthcare authorities contacted by the RACF workforce).

TABLE 2. HEALTHCARE AUTHORITIES CONTACTED BY THE RACF WORKFORCE

| Level of authority | Types of organisations |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Facility-level | Management, head office or corporate offices of aged care facilities, head office infection control hotline, infection control nurse and team |
| Local level | GP services, public health units, local health departments, local disaster management group (LDMG) |
| Regional | Hospitals and their associated in-reach teams, ACE – aged care emergency service, primary health network |
| State | Departments of Health from ACT, NSW, QLD, SA, VIC and WA |
| Federal/national | Commonwealth Department of Health, COVID hotline |
| Aged care leading bodies | Aged Care and Community Services Australia (ACSA), Leading Age Services Australia (LASA) and the Aged Care Quality and Safety Commission |

Over 90% (n = 349/370) of respondents stated that they had received instruction on how to use personal protective equipment (PPE) and the majority received sufficient information on the type (95%, n = 353/371) and quantity of PPE (84%, 311/371) needed. There were no significant differences noted between clinical and non-clinical staff perceptions of each of the questions associated with their individual work experiences (p > 0.05).

However, some respondents in the open-ended questions noted that they had experienced significant communication issues with certain health authorities. Several were unable to make contact with particular information services, whilst others had received conflicting information from different authoritative bodies. (Appendix C).

“You could not reach the helpline as it was too busy. We were completely on our own.” R43

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CONTROLLING THE SPREAD OF THE PANDEMIC

To mitigate the risk of an outbreak, most respondents reported that at their facilities, residents were screened for possible symptoms (90%, $n = 316/352$) and approximately 77% ($n = 272/353$) indicated that their facility had introduced precautions or quarantine measures to ensure residents did not come into contact with suspected cases. Under one-third of participants (30%, $n = 107/352$) identified that their facility experienced difficulties isolating residents with suspected/confirmed COVID due to specific medical conditions including, dementia, short term memory loss or other cognitive impairment conditions, behavioural and wandering issues, as well as facility-based problems including shared rooms and bathrooms and staff shortages. A higher proportion of staff from private-for-profit and religious facilities compared to state/territory RACFs reported difficulties with isolating patients ($p < 0.05$).

Only 8% ($n = 28/349$) of respondents indicated that their RACF had employed forms of enforced isolation to quarantine residents with suspected or confirmed COVID-19. Respondents listed the following types of enforced isolation that were used: chemical restraint ($n = 1$), locked doors ($n = 1$), transfer to other wings or acute hospitals ($n = 2$), use of a barn door ($n = 2$), 1:1 nursing ($n = 2$), and isolation rooms ($n = 6$).

Several respondents, from open-ended questions, noted that extra staff were required to help manage patients with suspected COVID-19 who also had dementia or cognitive impairments as a 'special' on a 1:1 basis.

"Residents with dementia were very difficult to isolate and staff were constantly redirecting. At times, a 1 to 1 staff was required." R126

"Limited single rooms in our facility. Difficulty isolating wandering residents--extra staff put on to help manage." R4

PROTECTION OF RACF STAFF AND DECREASED NUMBER OF POTENTIAL CONTACTS

Most respondents (90%) felt that facility staff followed appropriate procedures when experiencing symptoms of COVID-19 (90%) and only 2% reported that staff had been sent home early due to the lack of PPE in the facility. Approximately 43% of respondents ($n = 150/352$) indicated that at least one staff member at their facility who identified as being at an increased risk of COVID-19 (as they belonged to a vulnerable group e.g. pregnant women, older employees) ceased working during the outbreak.

The majority of respondents noted that their facilities had imposed infection control procedures (99%, $n = 348/352$) and restrictions on visitor access (98%, $n = 344/351$). In response to these restrictions, 43% ($n = 150/351$) of respondents reported that they had been unfairly or abusively treated by family or friends. Subsequently, approximately 62% ($n = 217/351$) of respondents highlighted that their facility had received official complaints from family or friends of friends because of issues related to the pandemic. In comparison, only 15% ($n = 51/352$) of respondents felt that they had been mistreated or abused by residents themselves. Interestingly, a significantly higher proportion of respondents from private-for-profit and not-for-profit facilities compared to state/territory government-run facilities reported experiencing pandemic-related abuse from family members/visitors ($p < 0.05$).

The implementation of visitor restrictions, as well as restrictions limiting residents' regular activities within and outside of the facility (including exercise and shopping trips) had a significant impact on resident's emotional wellbeing – particularly for residents with cognitive impairments and for palliative patients. The inability for these residents to be with their family during their time of need was very distressing for all parties involved – residents, family/friends and staff.

"I noticed that some residents with dementia or on low incomes, or with diagnosed mental health conditions have become extremely depressed throughout this period of lock down. The sense of disconnection from family and friends appears to have increased and the sense of self-worth has declined and is expressed in their unkempt appearances. Some have found it difficult to adjust to home-based activities and a new set of rules. Some have missed being connected with sporting and physical activities. A small group of carers experienced significant grief and anger issues at having restricted access to their partners. They experienced significant grief and a sense of loss." R146

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FACILITIES WITH POSITIVE COVID CASES

A total of two respondents from two different facilities reported that a resident or staff member at their workplace had received a positive COVID-19 result: a private-for-profit and a not-for-profit/charitable facility. Similar responses were obtained from both respondents for most questions. Both had been instructed how to use PPE, had received sufficient information on the type of PPE needed, where to source PPE and how to deal with suspected cases. However, there were some differences noted in relation to testing and PPE supplies. The respondent from the not-for-profit facility felt that they did not receive enough information on how much PPE they needed and also observed that the facility did not have enough PPE supplies on hand to look after residents appropriately. Furthermore, this respondent also reported that they did not receive enough information on the testing of residents, or have satisfactory access to testing, and overall judged the facility as being unprepared for the pandemic. In comparison the private-for-profit respondent was satisfied with each of these measures. Both respondents noted an increase in workloads during the pandemic, with the not-for-profit reporting a 'very high' and the private-for-profit a 'high' workload.

PERCEPTION OF PERSONAL RISK

The majority of respondents were not concerned that they would contract COVID-19 from residents (87%, $n = 304/349$). A significantly higher proportion of AINs than registered nurses were afraid of contracting COVID-19 from a resident ($p < 0.05$). Half of respondents were worried about unknowingly infecting residents (52%, $n = 181/348$), and over one-quarter were concerned about infecting close family or friends (27%, $n = 95/349$).

PERSONAL IMPACT

Overall, 63% ($n = 219/349$) of respondents reported that they had suffered from work-related stress resulting from the COVID-19 outbreak. Importantly, over half (53%, $n = 185/347$) had been offered mental health support from their workplace. However, 28% ($n = 97/349$) indicated that they were concerned about the continuing impact of the pandemic on their mental health. A significantly higher proportion of registered nurses than other care assistants felt that they had experienced additional work-related stress because of COVID-19 ($p < 0.05$). See Table 3 for the list of reported personal impacts as a result of the pandemic.

TABLE 3. PERSONAL IMPACT OF PANDEMIC ON RACF WORKFORCE

| I suffered from one or more of these because of the pandemic: | |
|---------------------------------------------------------------|-----------|
| Burnout | 123 (33%) |
| Anxiety | 116 (31%) |
| Insomnia | 98 (26%) |
| Depression | 21 (6%) |
| Grief | 11 (3%) |

Approximately 51% ($n = 172/335$) of respondents felt that they had experienced a 'very high' workload since the outbreak of the pandemic in March 2020, 31% ($n = 103/335$) felt that it was 'high', and 16% ($n = 53/335$) felt that it was 'moderate'. A higher proportion of non-clinical (comprising administrative, quality and compliance, kitchen and cleaning staff) than clinical staff felt that they had faced a 'very high' workload since the beginning of the pandemic ($p < 0.05$). Furthermore, a higher proportion of respondents from private-for-profit and not-for-profit/charitable facilities in comparison to state and territory government facilities reported a 'very high' workload ($p < 0.05$). A significantly higher proportion of AINs compared to registered nurses reported that they looked after more residents because other staff were less available ($p < 0.05$).

In their qualitative answers, several respondents also noted that keeping up with the directions from the government and implementing their recommendations was time-consuming. Workload increases were particularly associated with monitoring and documentation processes, screening staff and visitors, and providing additional communication and support to residents and their families. Some respondents were working 12+ hour days and taking work home with them to catch up with the load. (Appendix C)

"Work-related stress due to daily new updates which had to be implemented immediately and additional workload due to COVID-19 restrictions and safety measures." R158

Human resourcing was highlighted by respondents as an important challenge during the outbreak. Staff cuts and absences due to sickness, home-based obligations (i.e. home-schooling children) and quarantine after suspected COVID-19 meant that some RACFs were struggling with the workload and were unable to source more staff because of financial issues or a lack of available staff.

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QUALITATIVE ANALYSIS – CHALLENGES, FACILITATORS, AND RECOMMENDATIONS FOR CHANGE

A summary of the challenges perceived by respondents during the pandemic is presented in Table 4. Respondents also identified several factors perceived as being important support structures for the workforce during the outbreak, which are summarised in Table 5.

TABLE 4. CHALLENGES REPORTED BY RACF WORKERS DURING THE PANDEMIC

| Overall theme | Subtheme | Description | Supporting quotations |
|-------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal challenges | Burden of providing high-level emotional support | The isolation of residents from their families and friends, in some instances, led to staff needing to provide additional high-level emotional support to meet residents needs as well as being primary caregivers. | <ul style="list-style-type: none"> "Whilst residents were isolated to the facility, hence not having family and friends visiting to support them, I became their only emotional and spiritual support. I felt like a 'sponge' absorbing all their anxieties, sadness and grief. Although I endeavoured not to bring this home to my family, it did have an impact. I would spend time readying and preparing myself mentally to enter the facility each morning to ensure I had a 'happy face' and the same again at the end of the day prior to entering my home. I found myself waking throughout the night and waking early thinking of ways to bolster the residents and staff." R249 |
| | Managing family responsibilities | Due to long work hours, respondents consequently experienced challenges around managing family responsibilities. Some respondents noted difficulties with arranging childcare whilst they were working. Others stated that, overall, they spent significantly less time at home with their own families, which was particularly difficult for families with children who were home-schooled for a period of time. | <ul style="list-style-type: none"> "My biggest challenge was organising suitable care for my young children." R289 "Finding the time to work and home school with a senior and primary child at home." R74 |
| | Fatigue/exhaustion | Respondents reported feeling physically exhausted due to increased workloads and longer workdays. Respondents reported not being able to take any leave or having to come to work as a necessity due to other family members losing their jobs during this time, leading to fatigue. | <ul style="list-style-type: none"> "The whole thing has been exhausting and extremely stressful. We had an exposure in the nursing home and that was the worst two weeks of my career. No-one contracted COVID-19 but I was working over 12 hours a day for the two weeks to ensure everyone was ok." R23 |
| | Financial issues | Several respondents reported losing work hours and subsequently were experiencing financial issues. | <ul style="list-style-type: none"> "As an Agency nurse I was out of work for eight weeks and this impacted on my financial status." R379 "I lost work hours – to give to casual staff." R277 |
| Work-related challenges | Pressures related to management roles | Respondents in managerial and CEO roles reported experiencing extra stress, increased workloads and work hours leading to issues with sleeping and burnout. Some felt that they were not provided with adequate support or assistance from their own facilities or the government during this time. | <ul style="list-style-type: none"> "Working in management role give me extra pressure and get to the level of burnout. No extra funding even make it harder to run the place." R93 "As a manager I was told to cut staff at the peak of the pandemic. This created extra stress so I took on extra work hours to reduce stress on others and this has led to burnout and stress." R244 "As the facility manager I had some sleepless nights concerned about how I could keep my residents and staff safe with the issue of getting PPE." R315 |
| | Visitor abuse | Experiencing first-hand verbal abuse from family or friends of residents in response to visitor and lockdown restrictions implemented by the facilities and authorities. Restrictions relating to mandatory temperature checking, flu vaccination, PPE use, and as the virus spread, subsequent closures of facilities, lead to increases in angry and aggressive confrontations as well as documented complaints. | <ul style="list-style-type: none"> "Abusive families, demanding proof of legislation supporting restrictions." R50 "Several relatives took out their frustrations on the Admin team, making work life a little difficult to not take home and think about." R38 "The anger and fear of families during this time was particularly distressing and time consuming and was often generated by the conflicting statements coming from State and Federal governments." R315 |

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TABLE 4. CHALLENGES REPORTED BY RACF WORKERS DURING THE PANDEMIC (CONTINUED)

| Overall theme | Subtheme | Description | Supporting quotations |
|-------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work-related challenges | Keeping up with policy and practice changes | Respondents found it particularly challenging to keep up with the perceived overload of information that was provided by authorities. Often, this information was found to be conflicting between different authoritative bodies, leading to confusion. Finding consistency in the policy and procedure changes requested by the government, relaying this information to staff as well as residents and their families and implementing the correct changes and restrictions was felt to be particularly challenging. | <ul style="list-style-type: none"> • "Lack of clear instructions from government/Health department." R386 • "Keeping staff, residents and families informed. I received multiple emails and newsletters each day from various government bodies and agencies. Each need to be read and information passed to relevant areas." R185 |
| | Feeling undervalued by the community | Feeling unappreciated and unsupported by the media, general public, government and by the board of directors of their own facilities. The media in particular was highlighted as a source of discomfort for many, due to reports 'demonising' RACFs, 'sensationalising' issues and 'over-stimulating' the public, when the general feeling was that the workforce was doing their best to follow procedures and policies imposed by the government. Respondents stated staff morale was already low, and the criticism and lack of appreciation was a difficult aspect of the job. | <ul style="list-style-type: none"> • "I feel unappreciated by my government and by the community who's loved one's we have tried to keep safe. We received constant criticism." R357 • "Aged care facilities have been demonised in the press with staff leaving because of the pressure and negative attitude from the government and press. We do a fantastic job with one of the lowest wages in healthcare but are constantly being asked to do more with less. Aged care is burning out staff to not return to the sector." R8 |
| | Resourcing issues | Some respondents experienced issues with the telephone/pager and technology systems in their RACFs. In order to connect residents with the families, staff members were having to walk to and from rooms with portable phones, impacting on workloads and fatigue. Owners of RACF facilities also reported difficulties in running their businesses due to large price hikes for PPE and consumables, and a lack of funding or support from government. | <ul style="list-style-type: none"> • "Lack of consumables available PPE, continence products, stoma and catheter products." R164 • "Staffing cuts by owner: inability to replace sick Team members: Lack of casual pool RNs as they worked in Hospital environment and had to self-isolate due to cluster in acute care setting." R308 • "Not enough funding to support the amount of extra work required e.g. paperwork, policies and procedures, etc." R386 |

TABLE 5. FACILITATORS REPORTED BY RACF WORKERS DURING THE PANDEMIC

| Theme | Description | Supporting quotations |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Support from team and management | Support from managers and head office was acknowledged as being important and working together as a team was perceived as being very helpful. | <ul style="list-style-type: none"> • "I have been very well supported by my manager and clinical leader with daily updates with any changes and ongoing restrictions." R30 • "Support was given by management to all staff to deal with these matters." R50 • "The concerted support from management team of the service as well as the inherent cooperation among staff members. Strong teamwork and can-do attitude. Willingness to put in the extra hours to ensure that residents care needs are thoroughly met." R56 |
| Training and frequent meetings | Training sessions, de-briefing sessions in the form of daily meetings or counselling sessions, or walks and informal chats and simply thanking staff for their work was observed as being an effective morale booster and helped staff regain their confidence in their roles. | <ul style="list-style-type: none"> • "We set up a staff action team and this promoted strength and support and all staff were included and their concerns and ideas actions which showed respect and we were listening. Staff and residents banded together, daily morning tea updates, afternoon tea updates, their ideas and voices also heard. Residents also were coming up with novel ways to beat COVID-19." R213 • "Updating and training staff on a regular and timely basis, making sure infection control measures are taken timely and appropriately." R67 • "Constantly reinforcing and thanking staff for the great job they are doing." R45 |

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TABLE 6. RECOMMENDATIONS FOR FUTURE CHANGES

| Theme | Description | Supporting quotations |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Access to resources and embracing technology | Adequate supplies of PPE, and access to portable phone and paging systems, and technological devices such as large screen iPads and tablets were viewed as essential elements for facilitating satisfactory working conditions during the outbreak. | <ul style="list-style-type: none"> • "PPE available from suppliers." R28 • "Having access to basic consumables and infection control needs." R217 • "Additional iPads and portable phones were provided to facilitate facetime/over the phone communication with families." R205 |
| Staffing | Adequate staffing of RACFs was perceived as being of particular importance with additional staff required to manage the communication, documentation and implementation of restrictions requested by authorities, as well as cleaning staff, and nursing staff to manage workloads. | <ul style="list-style-type: none"> • "More staff need to be employed." R90 • "An increase in staffing levels to share the load." R249 • "More hours for staff so someone could have been allocated to the monitoring of temperatures and wellbeing of staff and consumers and visitors." R165 |
| Supportive media coverage | Respondents felt that there was a need for more positive media coverage of RACFs and the workforce. | <ul style="list-style-type: none"> • "Continual support for aged care restrictions/visits through advertising and media." R16 • "Greater media publicity explaining the restrictions that were developed were at the instruction of federal and state government and not the facility." R311 • "Less negative news about aged care from the media." R29 |
| Teaching the public on proper face mask use | To assist visitors with the implemented restrictions, respondents suggested providing more training on appropriate infection control procedures. | <ul style="list-style-type: none"> • "Educating families about infection control, how to put on masks and proper disposal." R177 |
| Support from the government as well as industry bodies and advocacy groups | Government support in the form of funding to help with resourcing (both staff and PPE) as well as physical human resource assistance. Several respondents highlighted a need for an RACF-specific point of contact at state and federal level from whom staff would be able to request more information and ask questions. Furthermore, respondents also highlighted a need for more verbal support from key political leaders, who they felt up until now had not been good advocates for the RACF workforce. | <ul style="list-style-type: none"> • "To be supported by government officials to protect our vulnerable elderly during the pandemic instead of telling us that they will 'name and shame' those facilities for not letting in visitors." R59 • "Support from the federal government instead of shaming and blaming." R8 • "Greater financial assistance and recognition. Recognition that all residential care staff are front line workers – catering, cleaning, laundry, administration, finance, lifestyle management..." R129 |
| Clear communication, direction and guidance | Respondents called for consistency and the streamlining of communication from state and federal departments and for the development of clearer instructions in the form of regular updates that were specifically tailored to RACFs. | <ul style="list-style-type: none"> • "Unified information from our governing bodies that are enforced to ensure providers are supported better." R50 • "Clearer updates on restrictions, often state and federal guidelines caused some confusion." R236 |

DISCUSSION

Responses for 371 clinical and non-clinical staff from Australian RACFs provide an important insight into how the RACF workforce has managed during the COVID-19 outbreak and clearly demonstrates how widely practices and coping strategies differ among Australian RACFs.

The most commonly reported problems faced by respondents related to issues with family members and friends of residents, a lack of clear messaging from the government about appropriate protocols, a lack of PPE at the beginning of the pandemic as well as an increase in staff workloads resulting in emotional and physical fatigue. Several studies have reported similar results, with RACF staff worldwide experiencing challenges including: burnout due to high workloads, emotional exhaustion, fear of contagion, exposure to high degrees of suffering, PPE shortages, and lack of testing.⁹⁻¹¹ Despite these negative working conditions, one Spanish study reported that nursing home staff had very high levels of professional satisfaction during the COVID-19 crisis.⁹ However, as the RACF workforce was already under pressure and vulnerable pre-COVID-19, there is a need to implement

practical and effective support strategies to ensure their short and long term wellbeing as this pandemic continues to evolve.

Overall, a significantly higher proportion of respondents from non-profit RACFs reported experiencing family/visitor abuse, as well as issues with adequate access to PPE and COVID testing. This was also reflected in the response from the facility that had a confirmed COVID-19 case. The respondent from the not-for-profit facility reported issues with PPE supply and testing, compared to a private-for-profit respondent who was satisfied with the level of facility preparedness. Furthermore, a higher proportion of respondents from private-for-profit and not-for-profit facilities also reported experiencing a 'very high' workload since the pandemic outbreak. This indicates that state/territory run RACFs seemed to manage better during the outbreak and were better resourced. This may be attributed to staffing and organisational differences across facilities. A study by the Royal Commission noted that state-run RACFs in Victoria and Queensland have minimum resident to staff ratios, however these requirements did not apply to the private sector.¹² In this same report, government-run facilities

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had the best average results for 31 indicators across four domains, including clinical, workforce, resident feedback and restraints, assaults and missing resident indicators.¹² As such, these inherent differences may have also had an impact on the COVID response efforts, based on facility type.

Interestingly, there were no significant differences noted between clinical and non-clinical staff perceptions for the majority of questions asked ($p > 0.05$). Only one major difference was found with a higher proportion of non-clinical staff reporting a 'very high' workload compared to clinical staff. This may be attributed to the significant administrative burden that RACFs have been faced with including understanding, implementing and documenting often conflicting recommendations from authoritative bodies around infection control measures and visitor restrictions. A US-based study by White et al. confirmed these findings, highlighting that administrative roles continued to grow with the pandemic and involved coordinating data systems for federal reporting requirements, maintaining communication with residents' families, managing staff shortages and coordinating appropriate responses to state and national policies.¹¹

The changes to clinical staff workloads has also been significant, as described in qualitative responses. Direct care staff were also filling multiple roles, particularly as emotional-based supports, to ensure resident quality of life during periods of enforced visitor restrictions and dealing with subsequent pressures from residents' family and friends.¹³

It is important to note that there were observed discrepancies among participant qualitative and quantitative responses. Most respondents indicated positive responses to quantitative questions, however the majority of answers provided to the corresponding qualitative questions highlighted significant issues. The motivating factors driving these discrepancies are unclear. The differences may indicate that respondents who did experience issues during the pandemic were most vocal and expressive than other respondents in the qualitative questions. Another potential factor may be that respondents who responded negatively in their qualitative responses may not feel that they can provide this feedback directly within their organisation, and feel more comfortable expressing their experiences and opinions anonymously through this study. Overall, a small proportion of respondents from the whole survey answered the open-ended questions, and as such the opinions expressed here cannot be generalised to the whole population.

It is also important to consider that whilst the majority of respondents indicated that they had managed well in working during the outbreak, a large proportion felt that they had struggled both mentally and physically. This indicates that there is a need for supportive interventions to be implemented and maintained. Measures, such as having

debrief sessions after the shift or having a close colleague to speak to was appreciated by staff. These results are reflected in the preliminary findings from the Impact of COVID-19 on the Nursing and Midwifery workforce (ICON) study; a UK-based survey.¹⁴ The UK findings indicated that there was a need for the provision of interventions that supported the psychological and physical needs of the workforce both during and after the pandemic. As the pandemic carries on, with continued waves, it is important for future planning to address these concerns to prevent burnout and mental health issues.¹⁴

A strength of this study is its inclusion of both clinical and non-clinical staff, which allows for a fuller insight into the impact of COVID on the RACF workforce. The surveying of non-clinical staff in particular is not as common, and as such the study adds an additional perspective to the management of RACFs during the pandemic. Another strength is that the study exceeded the calculated sample size, with a total of 371 respondents.

LIMITATION OF THE STUDY

The study findings are subject to some limitations. First, the extremely low response rate is a clear limitation.

The surveys were distributed electronically to the email address listed on the GEN database. The authors assume that most of these email addresses were directed to an administrative team/leader. This may have had an impact on response rates as well as the types of responses obtained as the study relied on the email being forwarded among staff within each facility.

The assessment of RACF preparedness and self-competence during the pandemic is highly prone to self-report bias. Therefore, the findings may be overestimated due to the potential for social desirability bias.

The survey was completed by a proportion of the RACF workforce in Australia (approximately 0.1% of the total potential workforce), and as such may not be representative of this population. The majority of direct care respondents were registered nurses, with AINs and care assistants making up 7% of respondents. Further analysis was done to compare registered nurse responses to AIN and other care assistants. Overall, there were no statistically significant differences between groups for the majority of questions, with similar responses for PPE training and perceived preparedness. However, a higher proportion of AINs than registered nurses felt that they looked after more residents than other staff during the pandemic and were also worried about catching COVID-19 from a resident. In the RACF environment, AINs and personal care workers tend to have the highest level of one-to-one contact with patients (i.e. bathing, dressing and meal time) and their experiences may differ to those of registered nursing staff, whose roles are more focussed on clinical duties including medication administration, nursing

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care and leading/overseeing infection control and emergency response procedures.^{15,16} Therefore, the results obtained from the clinical care group may not be representative of the AIN and personal care assistant population. Due to these limitations results should be interpreted with caution.

CONCLUSION

We identified a wide range of practices and coping strategies among Australian RACFs. Whilst a majority of respondents reported coping well, a large proportion reported struggling both mentally and physically. Respondents from non-profit RACFs in particular reported experiencing a higher proportion of issues with access to PPE and testing, and very high workloads in comparison to state/territory run facilities. Factors reported as helpful by the respondents may assist RACFs in planning for future pandemics.

IMPLICATIONS FOR RESEARCH, POLICY AND PRACTICE

The findings of this study provide a practical insight into the challenges faced by both individuals and facilities during the pandemic. The experiences of respondents have helped to identify areas that were well-resourced and helpful in assisting RACFs in managing patients, as well as areas that require more consideration to better support RACF staff.

These findings can be used and applied by decision-makers on a range of different levels – researchers, aged care providers, local/regional/state health departments and national leaders within government to help inform the development of interventions that may help the sector to recover and cope with ongoing changes i.e. vaccination roll-outs, as well as prepare for potential future outbreaks. Of particular importance are interventions or initiatives that focus on supporting the physical and mental health of staff i.e. those that prevent or minimise worker fatigue and stress. The World Health Organization (WHO) promotes the development of a national pandemic preparedness plan, comprising procedures and protocols that would ensure the consistent provision of resources, essential medicines, and patient management as well as support services and programmes including financial, social and mental health support.¹⁷ There is potential for future research or policy to consider the development of a tailored RACF-specific plan to prepare the workforce for any future events.

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Nursing in the time of COVID-19: exploring nurse preparedness early in a global pandemic

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ABSTRACT

Objective: To obtain Australian nurses' perspectives regarding COVID-19 preparedness early in the pandemic.

Background: In March 2020 Australia experienced a rise in COVID-19 cases and was bracing itself for the worst, having witnessed China, Europe and America's earlier exposure to the outbreak. On 14 March 2020 an Australian nurse set up a Facebook page called "Nursing in the time of COVID-19: A clinical forum" allowing colleagues to share information about COVID-19. This presented an ideal opportunity to survey nurses' preparedness for the pandemic.

Study design and methods: Anonymous web-based survey disseminated between 9 April–4 May 2020 via the Facebook page.

Results: A total of 214 nurses responded to the survey of whom 85% were direct care clinical staff and 29 (13.5%) had cared for a COVID-19 patient. Prevalent feelings regarding COVID-19 were anxious, overwhelmed, vulnerable, engaged and interested. The strongest sources of information regarding COVID-19 were published academic articles, WHO/CDC and similar authorities, employer leaflets/guidance and Facebook. The strongest needs/

expectations identified by the respondents were education and information, access to mental health counselling, provision of additional health workers to support nurses, and supplemental pay rise. Respondents identified work-related training specific to COVID-19, revision of skills and competencies and upskilling to do tasks previously not familiar to the participant of particular benefit. Nurses who had cared for COVID-19 patients expressed a stronger interest in receiving a supplemental pay rise for risk exposure, a stronger sense that they and their employer were ready to care for COVID-19 patients yet expressed less appreciation for mental health counselling compared to nurses who had not yet cared for COVID-19 patients.

Discussion: The perspectives of Australian nurses are generally similar to nurses in other countries. However, we report some variations between nurses who have and have not cared for COVID-19 patients. We identify the levels of concern as well as those supportive actions that are most appreciated by nurses responding to COVID-19 specifically, these same findings could be applied to other major events generally.

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Conclusion: The timing of this survey allowed us to explore the perspectives of Australian nurses during the early pandemic vulnerability period without the benefit of hindsight. Despite thinking the Australian experience was going to be worse than it was, Australian nurses showed relative confidence in their own and their employers' readiness and this was most obvious in nurses who had cared for COVID-19 patients.

What is already known about the topic?

- Nurses around the world have voiced anxiety and concern about the COVID-19 pandemic and the impact it may have on them personally and professionally.
- Nurses have access to informal networks, social media, media, employer guidelines and other professional and academic sources of information

to stay informed and up-to-date with current information on COVID-19 that may help to allay their concerns.

What this paper adds

- The perspectives of Australian nurses early in the development of the COVID-19 pandemic in relation to how prepared they felt at the time and where they were obtaining information to help guide their thinking and their practice.
- A synopsis of the role and benefits of a social media platform to allow nurses to share thoughts, articles of interest and experiences of COVID-19.
- Opinions vary based on whether a nurse had already cared for a COVID-19 patient or not.

Keywords: COVID-19, nurse, social media, disaster preparedness, pandemic

INTRODUCTION

The emergence of COVID-19 (also known as Coronavirus and SARS-CoV-2) cases in Australia in late January 2020 captured mainstream media and social media attention and forced all health authorities to move quickly to prepare for what could be a major outbreak of the disease in the context of a global pandemic. Experiences from China, Europe and America indicated Australian health authorities and professionals should prepare to deal with a rapidly spreading and very deadly form of Coronavirus. A major concern was the limited clinical and scientific experience and evidence to inform exactly how this disease might play out in Australia.

Despite the best efforts of government officials, scientists and health experts to inform the community of the situation, the lack of experience and knowledge of this particular virus strain caused fear, anxiety and panic in some parts of the Australian community.¹ By the second week of March, Lifeline (a crisis-support and suicide prevention phone service in Australia) were receiving 3,000 calls per day of which 23% were COVID-19 related (normal call rate is about 2,200 per day).²

Healthcare professions were also unsure of how they would need to act and react to the emerging scenario in Australia, prompting the Nursing and Midwifery Board of Australia to issue an announcement on 12 March 2020 stating that: The NMBA recognises that as health practitioners, you may be feeling anxious and concerned about decisions you may need to take to provide the best care in these challenging and uncertain circumstances, especially if the coronavirus becomes more widespread.³ The Australian Nursing and Midwifery Federation (ANMF) also presented media releases challenging government and employer approaches to, among other things, manpower decisions, including the

use of newly graduate nurses and students.⁴ These were unprecedented times with unprecedented announcements and responses throughout the healthcare community. The level of uncertainty and lack of clear guidance and occasionally incorrect information from some authorities in the early phases caused concern for many nurses and other healthcare providers as the numbers of confirmed cases and deaths started to mount throughout the month of March.

Cognisant of this concern, a variety of online and social media-based forums were established to provide access to information, and an opportunity for discussion and interaction, as well as an avenue to address the escalating professional and social changes presented by the spread of COVID-19. A Facebook page was established on 14 March 2020 by one of the authors of this article (AG) for her nursing and midwifery colleagues to start sharing their experiences and information they could find on the disease: *Nursing in the time of COVID-19: A clinical forum (AGsFP)*. Within one month the page had attracted 37,000 contacts worldwide, mostly in Australia.⁵

In order to better understand why so many nurses (and midwives) requested to join this FB page, a brief online questionnaire was developed to explore their perspectives and concerns with the unfolding COVID-19 scenario. The purpose of the survey was to find out what resources and support mechanisms were working for them and what else could be done to support them and finally, how the page was assisting them in their understanding of the disease and consequences for them as nurses.

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METHOD

An online survey tool was developed to explore the perspectives and concerns that AGsFP users were facing. The survey was designed by the authors and reviewed by two academics experienced in survey design and face validation. Iteratively the survey was refined to capture the information required from nurses, the emerging and final findings were discussed, and consensus derived. A previously validated tool was not sought as this was a relatively unique study and audience, however questions asked were similar to many exploratory surveys of nurses in other contexts. Questions were all written in a positive manner to make Likert test scoring and analysis easy. A purposive convenience sample was used by providing an open invitation to members of the AGsFP to participate. Two separate reminder notices were sent to try and maximise participation. Participants were encouraged to ask colleagues to join the survey pool in a quasi-snowballing approach.

The final survey comprised six sections. Section one asked general questions about participant characteristics including age, gender, years in nursing, the speciality area of practice and the setting of practice. Sections 2–6 used Likert scales 1–5 where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree. Section 2 asked about their domestic and professional setting. Respondents were asked to indicate how supportive and understanding the other people in their household were towards their professional responsibilities at work and how their work colleagues were towards their personal responsibilities at home. Section 3 required respondents to indicate their agreement with statements about their general wellbeing, feelings and experiences during this time of COVID-19 compared to before the outbreak. Section 4 required respondents to indicate their agreement with statements about how helpful various sources of information, training, education and other resources regarding COVID-19 had been. Section 5 asked participants to indicate how ready they thought they were to care for COVID-19 patients and also how ready they thought their employer, community and country were. In section 6 participants were asked to indicate their agreement with various statements about the FB page, and to estimate the final positive cases and deaths they expected from COVID-19 in Australia (so as to gauge their sense of optimism or pessimism with the impending pandemic).

The authors provided a detailed cover letter informing potential participants of the purpose and nature of the study and clarified that ethics approval had not been sought. We further explained that all responses would not be identifiable, and results aggregated and published. Knowing the emotional situation for some nurses involved in the pandemic response we made the following important statement: “If at any time during the filling out of the survey you have negative feelings, please stop. Go for a walk or do something else for a while. Come back and complete it if you

feel up to it, but if not, no problem. Your wellbeing is our priority, so don't feel bad if you do not wish to participate”.

The link to the final survey was distributed via the Facebook page to all members of the group; participation was both anonymous and voluntary. The survey was released on 9 April and closed on 4 May.

DATA ANALYSIS

A description of participants was produced using simple counts and proportions. For Likert questions, the number of respondents was tallied for each question, and the proportion responding to each response was calculated. A score was assigned to each response with values ranging from 5 (strongly agree) to 1 (strongly disagree). An overall average weighted score was created by multiplying the number of respondents for each response by the response value, then summing these products, and then dividing by the total number of respondents for that question. Free text statements were collated, themed and summarised by two authors. Comparisons of the proportion of respondents agreeing or strongly agreeing with each statement were made between nurses who had cared for a COVID-19 patient and those that had not using the Fisher's exact test and the statistical program Python. To avoid multiple-testing issues, only the questions or statements that were most discrepant between the two groups were tested for statistical significance. A p-value of <0.05 was considered statistically significant.

RESULTS

A total of 214 nurses eligible to practice nursing in Australia responded, of which 90% (n=192) were female and 86% were direct care clinical staff. The average age of nurse respondents was 48.6 years, with only six nurses (3.0%) aged less than 30 years old. More than 85% of responses were received in the first 10 days of the survey period. Respondents had been aware of the threat of COVID-19 for an average of 67 days at the time of the survey. At the time of surveying only 29 respondents (13.5%) had cared for a COVID-19 patient, of which 55% worked in Critical Care or Emergency areas. The remaining characteristics of participants are shown in Table 1 (Supplementary files).

Twenty-four nurses did not answer any of the statement questions. Of these, three had cared for COVID-19 patients.

The distribution of responses to each survey question, weighted averages, and medians and interquartile ranges are available in Table 2 (Supplementary files).

Overall nurses perceived people at home to be slightly more understanding of their work responsibilities (Question 1, 2, 3 average score 4.42, 4.03, 2.25) compared to work colleagues understanding of their family responsibilities (Question 4, 5, 6 average score 3.83, 3.72, 2.52).

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Feelings and experiences towards the COVID-19 situation as perceived by the participants when they completed the survey were mixed. Rank ordered from most to least using a five-point Likert scale (where 1= strongly disagree and 5 = strongly agree) were anxious (3.85), overwhelmed (3.78), vulnerable (3.76), engaged and interested (3.76), frightened (3.56), difficult to sleep or to stay asleep (3.48), exhausted (3.4), morbidly curious (3.35), positively challenged (3.33), angry (3.13), and relaxed (2.35).

Venues participants use for information regarding COVID-19 at the time of the survey using the same five-point Likert scale were: published academic articles (4.14), World Health Organization (WHO)/ Center for Disease Control (CDC) and similar authorities (3.99), employer leaflets and guidance (3.69), Facebook (3.58), radio news (3.47), TV news (3.45), Google (3.25), word of mouth (3.22), other social media (3.18).

Work-related training specific to COVID-19 (3.69) and revision of skills and competencies (3.69) were considered equally valuable by the respondents followed closely by upskilling to do tasks previously not familiar to the participant (3.59), while employer sponsored mental health lectures/support (2.72) received the least recognition of the options provided (Table 2, Supplementary file).

Participant's perception of readiness for COVID-19 in Australia was further explored. The respondents thought Australia as a country was somewhat ready (3.02), their employer was next most ready (2.72), the participants themselves (2.42) were next and the community was least ready (2.39). However, 65% (17/26) of those who had cared for COVID-19 patients stated personal readiness compared to 47.2% (67/157, $p=0.53$) of those who had not yet cared for COVID-19 patients (Table 3, Supplementary files).

Participant's perceptions of supports most valuable to them identified that timely education and information was the most important (4.24) followed closely by access to mental health counselling (4.02) and provision of additional health workers to support nurses (4.01). A supplemental pay rise was supported but came fourth among the options provided (3.79). At the time access to PPE had not been raised as a concern in Australia and was omitted as an option. Participants who had cared for COVID-19 patients identified a supplemental pay rise as 4.2 compared to those who had not 3.73 (Table 3, Supplementary files). Also, those who had cared for COVID-19 patients gave a combined score for access to mental health counselling and support as 3.85, compared with those who had not cared for COVID-19 patients 4.05 (Table 3, Supplementary files).

Finally, comments towards the provision of AGsFP are summarised at the end of Table 2 (Supplementary files). At the time of the survey AGsFP had approximately 38,000 members. Of the participants who responded 82% agreed or strongly agreed that AGsFP was useful, 85% agreed or strongly agreed that the site helped them realise they were not

alone in their thoughts and feelings as a nurse, that the site provided messages from other nurses that were reassuring, that it was an essential resource and for many it also provided entertaining relief!

Table 3 (Supplementary files) shows the differences in responses by whether the participant had already cared for a COVID-19 patient or not. Although none of the proportions differed to a statistically significant amount, nurses who had already cared for a COVID-19 patient more frequently agreed that they (65.4% vs 42.7%, $p=0.052$), and their hospitals (65.4% vs 50.3%) were ready to care for a large number of COVID-19 patients. However, they were less likely to agree with their community being ready (26.9% vs 41.4%).

In a final question we asked participants to estimate the number of confirmed cases of COVID-19 in Australia and the number of COVID-19 related deaths by the end of 2020. The median number of confirmed cases estimated by the participants was 20,000 (Range: 100 – 5,000,000) and the estimated median number of deaths was 929 (Range 8 – 150,000). Of the 17 nurses who disclosed the number of COVID-19 patients they had cared for at the time of the survey they averaged six each (Range 1–30).

One hundred and seventy-five (175) nurses provided an open-ended suggestion on the FB site. The two main themes in the comments section were 1. Encouragement to continue to provide relevant and supportive information on the FB site (no change, $n=100$ (57.1%)) and 2. Filter and remove any comments or articles that are not evidence based or are unprofessional ($n=13$, (eg. “Debunk fake news”, “Effective filtering of misinformation”). Of the remaining, recurring responses included: provide links to clinical resources ($n=8$) (eg. “Post sites with free CPD for up-skilling”, and “what nurses can legally do if they do not have the appropriate PPE”), provide links to educational resources ($n=10$) (eg. “More scientific paper links”, “COVID case studies of various degrees of the disease”), provide links to mental health resources ($n=5$) (eg. “links to mental health services, counsellors for the people with ongoing issues”), and provide local and/or rural-specific information ($n=9$). Seven respondents found the site overwhelming or anxiety-inducing and two recommended adding more comedy.

DISCUSSION:

This was a very early study of nurses at the beginning of the Australian pandemic experience and lacked the opportunity to refer to other published surveys relevant to COVID-19 in Australia. At the time of writing (June 2020), Australia had a little over 7,000 confirmed cases of COVID and 100 deaths associated with the disease, significantly less than most developed countries of the world. Australia had reached its peak active COVID-19 cases of almost 5,000 on 4 April and the survey was released five days later on 9 April 2020.⁶ The participants were asked to estimate the confirmed

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COVID-19 cases and deaths by the end of 2020. Based on data as of 26 May 2020, they had over-estimated confirmed cases (median estimate = 20,000, actual 7,100) and deaths (median estimate 929, actual 102). However following revision of this manuscript at 31 December 2020, and the impact of a second deadly outbreak of COVID-19 in the state of Victoria, the total case number was 28,408 and the death count 909.... very close to the median estimates of the participants back in April!

Nurses comprise the largest portion of the Australian healthcare workforce.⁷ Studies of nurses personal and professional wellbeing have shown that they are a resilient workforce, capable of coping in a variety of stressful and chaotic situations, while undertaking shift work.^{8,9} Many of the feelings expressed by Australian nurses coming into the COVID-19 pandemic were very similar to those expressed by nurses in other surveys around the world. A survey of 3,500 UK nurses conducted by *Nursing Times* showed that compared with before the start of the COVID-19 pandemic 33% now felt a little more anxious and 55% felt a lot more anxious; and when asked to describe their mental health right now 26% stated bad and 7% stated very bad.¹⁰ A similar study conducted by the Royal College of Nursing (UK) found that of the 2,600 nurse respondents 33% reported severe or extremely severe depression, anxiety or stress and 74% feel their personal health is at risk.¹¹ Feelings of anxiety and being overwhelmed were strong in our findings whilst concurrently feeling engaged and interested at the stage we had surveyed the group.

In a survey conducted by National Nurses United (Union) in the US from 15 April to 10 May 2020, 23,000 nurses responded. Of the responding nurses who had provided care to confirmed COVID-19 patients 27% reported having been exposed without the appropriate PPE and 33% reported that their employer required them to use their own sick leave, vacation, or paid time off if they contracted COVID-19 or were exposed to COVID-19 and needed to self-quarantine.¹² In a similar study of critical care practitioners in the US in late March 2020, over 50% had already cared for COVID-19 patients and 65% identified their ICU facility was inadequately prepared to care for COVID-19 patients. Further, 94% anticipated PPE shortages, 59% anticipated staff shortages, while 54% stated a lack of clinical guidance/treatment protocols as a concern and 33% stated concerns receiving pay/benefits during periods of quarantine.¹³ By contrast the participants in this survey gave a sense of reasonable readiness at the individual and employer level. However, what was notable in the Australian context was the differing opinions from those nurses who had cared for COVID-19 patients and those who had not. Those who had cared for COVID-19 patients were slightly more inclined to believe they and their employer were ready for COVID-19 than nurses who had not yet cared for COVID-19 patients. It is postulated that once nurses care for a COVID-19 patient, their confidence may increase compared with those who have not. Also, those with

COVID-19 patient exposure were less inclined to call for access to mental health support (at this stage) but more inclined to want a supplemental payment for risk/stress exposure. Interestingly the French Prime Minister announced that front line healthcare workers would receive a one-off financial bonus and a “significant” pay rise.^{14,15}

The Australian participants identified work-related training specific to COVID-19 and revision of skills and competencies were equally valuable followed closely by upskilling to do tasks previously not familiar to the participant. By contrast the RCN study of UK nurses found that 62% said their redeployment training was either non-existent or inadequate and 52% said they lacked confidence about COVID-19 infection control or had received no training.⁹ Early training and preparation for new skills or refreshing knowledge of skills pertinent to the COVID-19 situation are necessary to give staff the skill and confidence they need to manage in trying situations such as a COVID-19 pandemic.

For years governments and health departments have been asked to prepare for major health emergencies and have witnessed SARS, Ebola and a range of Influenza epidemics triggering the importance of pandemic readiness.¹⁶ It is therefore troubling that many well-developed health systems were unable to support and prepare their nursing workforce to the level necessary for this pandemic. Training, education, competency and readiness, are all critical to nurses' feelings of confidence and personal wellbeing and can never be under-estimated or ignored. Our study showed nurses preference for published academic and authorised (WHO/CDC) articles and guidance (Table 2, Supplementary files) however it is also essential that employers guide how such information is to be applied in the context of their health service as this appears to be the area where confusion and concern can arise. It is important that employers are quick to provide clear and consistent instructions that are aligned to the evidence giving nurses the confidence to approach the challenge with sufficient knowledge and skill.

Although sometimes criticised as a less trusted source of news in Australia and the US,^{17,18} we found in this survey that Facebook was a venue where participants in this survey are more likely to source information than other media with respect to COVID-19 and was slightly stronger than radio and TV news services and other social media outlets. However, in the verbatim comments relating to AGsFP participants did ask to remove any comments or articles that are not evidence based or are unprofessional. Studies examining the use of social media as a source for news and information in the US cite Facebook as being four times more prevalent than any other social media platform despite scepticism about content reliability.¹⁷ In addition to AGsFP, many other professional nursing groups were posting information regarding COVID-19 and directing readers to pertinent and substantial academic and authorised sources. In our subsequent resubmission we have discovered a number

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of studies using Facebook and other social media to better understand the experiences and concerns of the nursing and the broader community. Abuhammad et al.¹⁹ for example analysed nine Facebook sites in Jordan to discover that nurses in Jordan perceived these sites to be constructive and positive and were supporting and advocating for the sick and their families¹⁹.

The importance of Facebook sites is to build communities who have a shared interest and need. Our community were nurses interested in knowing more about COVID-19 from a nursing care perspective and were willing to share their opinions, experiences and findings from other sources to this community who were then able to filter and/or pursue such leads to study and share them further. The feedback regarding AGsFP suggests it to be valuable to those who used it and a “passion hobby” for the initiator (AG).

This was a relatively early study of the needs and perceptions of Australian nurses during the COVID-19 outbreak and was fast-tracked to ensure we were able to receive early feedback that could help the AGsFP site and its initiator and also to inform the profession of what nurses were feeling and saying before they had the benefit of hindsight. There were few other studies relevant to COVID-19 in Australia from which to leverage and reference which may have led to gaps in the approach taken.

LIMITATIONS

Our survey aligns with the timing of the first surveys conducted in the UK and US being late March-early April 2020. Although we did not use previously validated tools (eg. Anxiety scales), we chose to use some similar questions to these other surveys, we also wanted to keep our survey relatively brief to encourage responses. We did not have the benefit of a formal external review process however this did allow us to capture early opinions and thoughts among the Australian nursing community. The low response rate (214 Australian nurses and incomplete responses), possibly associated with the intensity of the ongoing pandemic suggest it is not possible to generalise these results to the population. Nevertheless, the results represent a cross section of Australian nurses which can add to the broader discussion about COVID-19 from a nursing perspective, with a particular emphasis on first impressions as it was unknown at the time of survey how the pandemic would unfold in Australia. Responders were members of AGsFP and likely Facebook-savvy users and may have a bias towards Facebook and other social media sources for their information, although the majority stated that academic and other officially authorised sources and employer leaflets remained a higher order resource than Facebook and other media/social media.

CONCLUSION

In hindsight we can now see that comparisons between the US and UK and Australian studies of nurses' experiences with COVID-19 are difficult as the UK and US experiences were more widespread, deadly and chaotic compared to the Australian experience. Nevertheless, there are common early findings relevant to nurses on the frontline of this pandemic and potentially other future outbreaks. These include showing and providing support to nurses on the frontline; giving them accurate and authenticated information early in all clinical settings; providing education, training, upskilling/cross training and support to nurses early and ensuring anyone being asked to undertake unfamiliar tasks in unfamiliar environments is given sufficient support to be confident, competent and safe. Acknowledging the important emotional and practical role that family and friends play in supporting those nurses on the frontline and encouraging other nursing colleagues at work to acknowledge and support their colleagues who may have the dual challenge of family and social problems also playing on their mind while at work is important.

We have gained a new appreciation for the value of Facebook sites devoted to specific communities of practice. The *Nursing in the time of COVID-19: A clinical forum* Facebook site proved to be a frequently accessed resource to help a community of Australian (and other) nurses during a difficult time and an added resource to give many Australian nurses the additional support and guidance they were looking for in the early weeks of the Australian experience of the COVID-19 pandemic.

IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

- Larger and more detailed studies of the needs and readiness of nurses preparing for major events and pandemics are required.
- Policy makers and healthcare management need to be mindful and inclusive of the perspectives of frontline nurses and their representative organisations to ensure appropriate targeting of resources and training to those nurses in greatest need.
- Nurses need to prepare themselves and their families and friends for inevitable “system shocks” such as pandemics and other major events that will test the profession and the health system generally. Family and friends of nurses play an important role in supporting nurses' during times of professional and work stress. The importance of a nurse's family and friends has been identified in this study and is worthy of further exploration.
- Ensuring contingencies and mitigations are in place to support staffing numbers, equipment requirements, changes in practice and protocols, rapid upskilling and scaling up of human and material resources are vital to avert secondary casualties of such events.

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Conflicts of Interest: The authors have no conflicts of interest to declare.

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Group clinical supervision for nurses: process, group cohesion and facilitator effect

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ABSTRACT

Objective: This qualitative research project set out to explore how, and by what means, participation in group clinical supervision might impact nurses. It aimed to describe participant perceptions of the processes within a long running reflective practice group for intensive care nurses and explore these in relation to relevant theory.

Background: Interpersonal aspects of care are central to the nursing role, however, the associated emotional labour can develop into moral distress, compassion fatigue and burnout. Australia's peak nursing and midwifery bodies have released a joint position statement on the importance of supervision for nurses. Group supervision interventions, such as reflective practice groups, mitigate stress, promote learning and support interpersonal aspects of nursing.

Method: Twenty-two intensive care nurses from a reflective practice group that had been running for 10 years, participated in focus groups convened by an independent researcher. Thematic analysis identified key perceptions relating to process and outcomes.

Results: Group identification, voluntary participation and skilled facilitation created an enabling environment for nurses to self-disclose. The sense of universality experienced by participants, along with increased empathy, enabled reflection and self-evaluation relevant to the group prototype of the ideal nurse. Authentic emotional expression was seen to provide respite from emotional labour, thereby regenerating resources for nurses to cope with job demands.

Discussion: Key themes can be aligned to social psychology constructs of group identity, task interdependence and homogeneity, supporting earlier studies that suggest group cohesion is comprised of measurable factors. By developing and aligning with these constructs, the facilitator assists the group to establish a safe space whilst conceptualising and aspiring to a model for the professional and compassionate nurse.

Conclusion: Social psychology constructs can help develop practice and research of group supervision for nurses. In clinical nursing settings, group identity is particularly salient and facilitator interventions should aim to strengthen this. The development of a

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sense of universality, when combined with voluntary participation and a focus on intra-group process, can enhance cohesion and create a safe space for self-disclosure. This enables nurses to explore actions and responses to clinical situations and explore emotions incongruent with the ideal nurse prototype, thereby promoting restorative and formative benefits.

Implications for research, policy, and practice:

This study adds to our understanding of processes in group clinical supervision for nurses and suggests that it is appropriate to apply social identity theory to improve practice and research. It will be of interest to nurses and nursing leaders who wish to develop supervision programs.

What is already known about this topic?

- Compassion fatigue, emotional labour and moral distress contribute to nurse burnout.
- Group Clinical Supervision can help mitigate stress, enhance learning and support interpersonal aspects of nursing care.

- The supervisory alliance is an important factor in effective clinical supervision whilst group cohesion is an important factor in the effectiveness of group work.

What this paper adds:

- Reflective Practice Groups (RPG) are defined as a form of Group Clinical Supervision that utilise social support as a resource.
- RPG facilitation principles are aligned with social psychology constructs of group identity, task interdependence and homogeneity.
- Alliance with the facilitator and cohesion within the group, enhanced by voluntary participation and facilitation techniques, allow group members to access restorative and formative benefits whilst prompting self-evaluation against the group ideal nursing prototype.

Keywords: Group clinical supervision, reflective practice, group cohesion, nursing, social psychology, stress

INTRODUCTION

Many nurses choose to enter the profession from a desire to provide care to others and for some it is viewed as a vocation.^{1,2} Within contemporary healthcare environments, this social identity prototype of the holistic, caring nurse can be difficult to realise, especially in the face of time constraints, administrative demands and mounting task requirements.^{1,3} A growing focus on the role of technology and the biomedical model may further limit opportunities for contact with patients.⁴ It is unsurprising that work-related stress for nurses can be closely related to difficulties in realising their caring role.

Compassion fatigue,⁵ emotional labour,⁶ and moral distress have been found to contribute to nurse burnout.^{7,8} Various interventions have been developed to try and reduce workplace stress for nurses. Some, such as Group Clinical Supervision (GCS), draw on social support as a resource,⁹ however most research into GCS has focused on the impact of the intervention rather than group dynamics and processes.

In the context of the 2019 joint position statement by Australia's peak nursing and midwifery bodies advocating clinical supervision for nurses,¹⁰ this paper explores group process mechanisms in a longstanding reflective practice group (RPG), a form of GCS for nurses.¹¹ We examine how these mechanisms relate to existing theoretical frameworks and how they inter-relate with the role of the facilitator. There are a number of precedents for Consultation Liaison (CL) mental health clinicians providing supervision to nurses

and this paper explores one such relationship,¹¹⁻¹³ supporting the idea that the CL nurse may be particularly well positioned to facilitate RPG for intensive care nurses.¹⁴ On the other hand, RPG's could occur in a range of clinical settings, and be facilitated by appropriately trained individuals from a range of other nursing backgrounds and other disciplines.^{12,28} Consequently, the underpinning principles, considerations and strategies outlined in this study are proposed to have validity and utility for RPG/GCS facilitation in general.

BACKGROUND

The literature on clinical supervision for nurses contains a number of ambiguities.¹⁵ Interventions such as support groups, reflective practice groups and other forms of GCS can use similar formats, and labels are used interchangeably.^{16,17} In this climate, one of the most enduring frameworks for nursing supervision is the Supervision Alliance Model which proposes three main functions of clinical supervision: formative, normative and restorative.¹⁸ Emphasis can be given to each of these three functions depending on group needs,^{12,19} with recent research indicating that nurses often value the restorative aspects of GCS above the normative and formative.^{12,20} Butterworth and colleagues demonstrated the effectiveness of stress reduction for nurses attending GCS in a randomised controlled trial in the United Kingdom and other recent empirical research has also highlighted restorative benefits.^{12, 21,22} Despite these studies, research findings are not consistent and some even indicate that GCS can have detrimental effects such as personal and professional

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estrangement.^{15,23,24} Studies also identify that the benefits of GCS might be undermined when a lack of organisational support results in reduced attendance or when participant values are incongruent with those of the health system.^{25,26}

The literature describes key factors for effective GCS as consistency in approach, dedicated timing, sharing of emotions and constructive feedback from the supervisor.²⁷ These factors are promoted and enhanced by the provision of a safe environment and by effective supervision skills.^{28,29} Some models draw on psychoanalytical frameworks or discuss GCS in terms of Freudian transference.^{16,30} Others utilise Yalom's group psychotherapy model that identifies 11 therapeutic factors: instillation of hope, universality, imparting information, altruism, the corrective recapitulation of the primary family group, the development of socialising techniques, imitative behaviour, interpersonal behaviour, interpersonal learning, group cohesiveness, catharsis, and existential factors.^{31,32} These factors are inter-related, with some being more salient for certain groups than others.

Group cohesiveness is a dominant focus of clinical and research literature with Yalom defining it as an essential but more complex form of the therapeutic alliance essential for individual therapy.^{16,31,33,34} Literature on nursing GCS also identifies trust, cohesion and a safe environment as important factors,^{14,28,29} however, there have been challenges defining the factors that determine group cohesion and therefore, there is inconsistency in its measurement.³⁵ Hornsey, Dwyer, and Oei attempt to articulate group cohesion using a social psychology lens and offer three explanatory constructs: group identification, homogeneity, and task interdependence.³³

Group identity provides a schema for the appropriate emotions and behaviours of group members in context.³⁶ In group therapy research, group identity has been linked to increased trust among members.^{37,38} Although strong identification can lead to conformity and lack of dissent in group interactions,³³ Haddock suggests that for nurses, supportive reflection in a group setting encourages disclosure of emotions and behaviours that are inconsistent with nursing social identity.³⁹ While this is a challenging experience, if appropriately facilitated in a safe environment, it can lead to increased self-awareness, tolerance, clinical insights and emotional working through.¹¹

Homogeneity is the perceived similarity of group members and is proposed to assist the formation of group identity.³³ In group therapy settings, homogeneity of group members is associated with increased levels of empathy and perspective taking.⁴⁰ Task interdependence is defined as how much an individual needs other people to meet self-interests.³³ In a group therapy setting, participants help others while also meeting their own needs, providing a sense of social competence, self-esteem, mutual interest and caring.^{16,41}

Helping others is consistent with the key value of caring embedded in the social identity of nursing and can help promote self-disclosure as a form of altruistic but mutually rewarding experience, enabling the group and its individual members to move towards the common goals of GCS.^{18, 42,43}

There is a growing appreciation of social identity theory in contemporary nursing literature and a corresponding understanding of the importance of professional identity,^{44,45} so a social identity framework for cohesion in nursing GCS seems particularly relevant.³³

METHODS

DESIGN

Data were generated through three semi-structured focus groups conducted in mid-2018 with a cohort of intensive care nurses. Data collection preceded an extensive literature review to minimise the risk of preconceived hypotheses and reduce the potential for bias.

Thematic analysis methods were consistent with Braun and Clarke with a focus on process during analysis, helping to identify repeated patterns of meaning as well as relationships between RPG interactions and outcomes.^{46,47}

PARTICIPANTS

Participants were recruited from 120 nursing staff working in the intensive care unit (ICU) of an Australian regional tertiary hospital. Participation was voluntary and based on convenience. Focus groups were held during the allocated time and usual location of the RPG to replicate the safe space. The criterion for inclusion in the focus groups was previous attendance at the RPG. Participants (N = 22, female = 19, male = 3) were aged 23 to 60+ years ($m = 36$) and had two to 32 years of nursing experience ($m = 12$), on average attending the RPG for five years. Three focus groups were held, with eight, 10 and four participants, respectively.

DATA COLLECTION

The focus group convenor was a female psychology honours student who had no previous association with focus group participants but who did have prior experience in health and human services (Author 1). Conscious that emerging themes might reflect the interaction between researcher and participants, flexibility in the questioning aimed to encourage participant driven discussion. This semi-structured approach allowed analysis to evolve from a series of initial questions that informed subsequent questions.⁴⁷ Questioning began by asking participants to describe to a new colleague how the RPG functions, secondly whether participants would encourage the colleague to attend the RPG and why, third how the safe space in the RPG was created, fourth how issues of conflict were resolved in the RPG and finally to explain the role of the facilitator.

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DATA ANALYSIS

Consistent with Braun and Clarke's thematic analysis approach, six steps of coding took place; familiarisation with the data generated from the focus groups, generating initial codes, searching for themes among codes, reviewing themes, defining and naming themes, and producing the final report, including retrospective comparison to the literature.⁴⁶ Theoretical saturation was achieved after the second focus group, with the third group used to test and confirm findings.

FINDINGS

The themes that emerged had a hierarchical relationship. Shared professional group identity and voluntary participation were prerequisites for a safe space, which was then maintained throughout sessions by effective facilitation skills. These were called 'Enabling Factors'. The establishment of a safe space enabled participants to self-disclose, leading to an increased sense of universality and empathy, providing respite from emotional labour. These have been termed 'Outcome Factors'. Results are illustrated as a flow chart in Figure 1 and expanded on in the section below, including direct quotes from the focus groups.

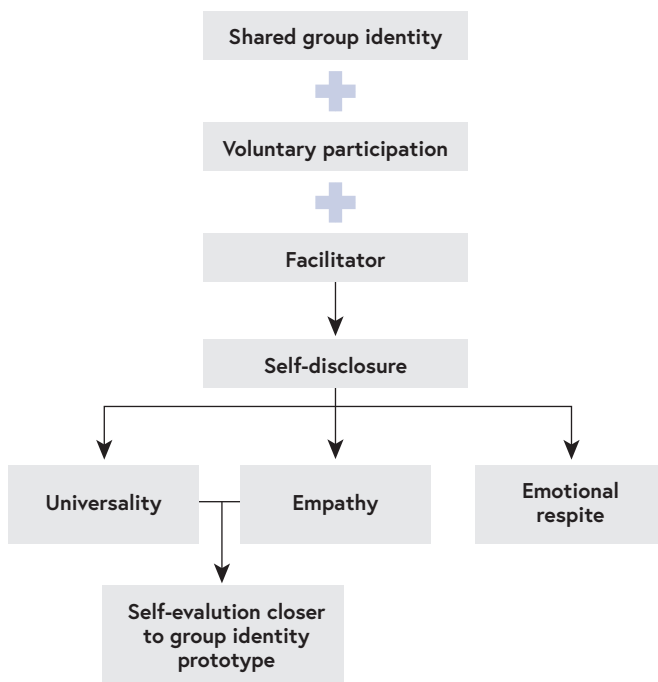


FIGURE 1: FLOWCHART SHOWING HOW ENABLING FACTORS, THROUGH SELF-DISCLOSURE, RESULT IN OUTCOMES AND CRITICAL REFLECTION AGAINST THE IDEAL NURSING PROTOTYPE

ENABLING FACTORS

Homogeneity/shared group identity.

Although the RPG met fortnightly, attendance varied dependent on rosters. This means it was not a closed group, so professional homogeneity provided an important uniting factor in the creation of a safe space. That is, the group was comprised of ICU nurses with similar clinical experiences. The number of group members was not important to group outcomes as the following speech sample suggests: "...not always the same people ... and there are always different numbers, sometimes five and sometimes 17. So you can't call yourself a group. ... a group would be the same people all the time, whereas we are people that come to reflective practice." (Nurse, 60+)

The decision of who attended was a deliberate and evolving process for the group.

"We actually talked about having [nurse unit managers] ... we weren't happy with that... [they] are administrative." (Nurse, 35)

Voluntary Participation

One emergent theme that was seen to contribute to homogeneity, appreciation of diversity and mutual respect, was the importance of voluntary participation.

"... You want people to come along to the group because they want to be there, because if they don't want to be there, my concern is that they ... might not get anything out of it, or they may not contribute to the group, and may not say anything anyway, and that's fine, but you certainly don't want to force people into this kind of environment, where certain things might be discussed that they don't want to take part in" (Nurse, 47).

"We all know why we are here, and we are all different but respect each other" (Nurse, 60+).

At times, the clinical material raised during the RPG might be challenging and the focus groups identified that participants needed to be willing to process difficult topics and emotions.²³

"... Something that is said might be quite confronting and you really have to choose to be here" (Nurse, 60+).

RPG homogeneity, enhanced through voluntary attendance, allowed the establishment of a set of group norms that further helped define the group's identity.

"[RPG] is more of a process than a group [but] it is the group setting, and you need to follow the rules" (Nurse, 32).

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Facilitator Effect

The facilitator was a Consultation Liaison Mental Health Nurse working within the agency. The facilitator assisted the group to explicate group rules and norms in the form of a 'contract' which was reiterated during sessions and contributed to the maintenance of group identity.

"There is definitely a clear set of expectations as well, [the facilitator] manages the room, pulling people up if they were maybe crossing a line and starting to get a bit [angry]. . . no one was going to chew your head off, because [the facilitator] was there. You felt like you could talk and that it was OK" (Nurse, 44).

One key RPG rule was confidentiality, which was viewed as essential to establishing trust. Furthermore, the facilitator's ability to represent and enact these principles and processes within the RPG was seen to enhance the sense of safety within the group. The facilitator was viewed as "someone very relatable, someone very trustworthy, you cannot have just anyone" (Nurse, 35).

"... It's like this activity that you do with [the facilitator]. [The facilitator] makes us all really safe" (Nurse, 26).

Focus group participants identified three further factors contributing to facilitator credibility: relationship to the group through their professional role, genuine commitment to the group, facilitation style and technique. A pre-existing clinical relationship appeared to enhance group identification with the facilitator and contribute to facilitator credibility.

"[The facilitator] actually comes to ICU . . . and understands the environment we work in. . . He is clinical, he walks the talk." (Nurse, 49)

"He's one of us, but not too close to home. And I think that works, because we are not seeing [the facilitator] every day, he's not too close" (Nurse, 60+)

"We respect [the facilitator] because we see [the facilitator] in action. He is calm and so intuitive. . . [the facilitator] just has this calm about him that can put you at ease." (Nurse, 60+)

Participants believed the facilitator genuinely cared about the welfare of nurses and really wanted to be there, complementing the voluntary nature of their participation.

"... You get the feeling that he wants to be here, and he understands the importance and value of it. . . that he is not just here because it's his job. He does it because he understands people, particularly in this area". (Nurse, 37)

The facilitator helped the group remain focused so issues could be examined from a range of perspectives.

"There is a lot of reading between the lines, he will come back and revisit and explore further and tease it out a bit." . . . "[the facilitator] tries to. . . keep on that topic so that you actually get something out of it" (Nurse, 47).

However the facilitator was seen to enlist the group to explore the issues raised:

"to throw it back to the group to find the answer. . . [the facilitator] doesn't need to have the answer" (Nurse, 35).

The facilitator was seen to manage the process when emotions or conflict arose within the group:

"So [the facilitator] kind of just worked through the conflict and brought it back down a level and I see [the facilitator] practice the things that he teaches us to do with our patients; like mirroring, bringing down the volume, giving people a minute to breathe before coming back to them. [The facilitator] is good at using the room, to let that person have a break from their emotions for a minute." (Nurse, 26)

The facilitator also reframed participant statements, to increase understanding, validate nurse's experience and promote critical reflection whilst maintaining a supportive space.

"If you have an opinion and you don't quite have the words to say it well, and someone gets defensive, [the facilitator] will say, 'well, did you mean it like this'. . . you don't have to be concerned about upsetting someone just because you can't communicate well." (Nurse, 33)

"You might deal with a really hairy situation or a really hard family or something like that, and you'll talk about it in here and [the facilitator] will sort of give you a new perspective. From what you've said to me this is what it sounds like what was happening. This is why they may have reacted this way". (Nurse, 44)

The less formal, more facilitative style of reflecting in the RPG was valued as being different to that practiced in academic settings.

"... when you do it at [university], it is very regimented, it's like here is the [formal] reflective cycle. Use it with a bunch of references to tell me how you feel, it is not necessarily an intuitive way to reflect on your practice, or I didn't find anyway. . . These reflective groups are a little more free form . . . you can bounce a few ideas off each other. It's just a bit more intuitive, and you've actually got some real patients to do it on. . . it's you know real life that goes on in here." (Nurse, 26)

Self-Disclosure

"[RPG] is an opportunity to talk about actual patient cases and in our job we really don't have the opportunity to do that. We can't go home and tell the husband about it because of patient confidentiality, so this is a chance to openly talk about things from work. It is a safe space" (Nurse, 24).

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Participants felt they could express honest emotions without judgement.

“This is one of the unique spaces where you can be more vulnerable, and not be so worried about being as confident in the situation that you’d like to be... it’s ok for people to see you that way”. (Nurse, 32)

Self-disclosure by one participant increased the confidence of others to express emotion, fostering mutuality.

“If someone is willing to take the risk and expose themselves, then I think ... that is exactly what I felt. That is when the respect that I have for someone increases. And that may be the breaking point for someone, but that is actually OK, as it means I am more willing to take the risk to expose myself. When I feel personally affected, then this is a positive outcome from someone exposing themselves.” (Nurse, 30)

OUTCOME FACTORS

Universality

By sharing emotions and issues, group members gained a sense of universality, that is, they were not alone in their experiences or responses.

“The best thing, whether people realise it or not is to realise that we are all going through the same thing”. (Nurse, 47)

“When you don’t know if what you are feeling is normal or not. I remember one time when [a colleague] had been through the exact same situation, and felt the exact same way, and it was really comforting to know that this was completely normal.” (Nurse, 42)

“Often a colleague brings things up anyway, and you realise you’ve been holding on, and you’ve forgotten about it and all of a sudden in that space you just let go and find camaraderie and realise that you are not the only one”. (Nurse, 26)

Empathy

By sharing experiences of difficult patients, families and colleagues, the group and the facilitator could provide insight into what patients and families might be experiencing, potentially building empathy with patients, families and colleagues.

“I think there is a greater understanding of personalities and situations and how to handle it and empathy and support subconsciously... just hearing what others are going through, and the different things about colleagues is helpful. Sometimes coming to reflective practice can make you realise what someone is going through. It makes you realise that you work with actual people. It can help to start a conversation with them, especially as I am not here often enough to know people well”. (Nurse, 30)

Emotional respite or unburdening

A product of sharing difficult experiences and emotions was a sense of release; that issues shared were no longer as much of a burden.

“If someone had just gone through a really [bad] shift and there has been something bad, then they need to just blah” (Nurse, 49)

“It’s about releasing those feelings or subjects that you may not have felt comfortable to in a different space”. (Nurse, 23)

Different group outcomes can depend on the participants in the RPG on the day and the needs of the group at the time

“There are two different types of blowing off steam, there is one that’s just catharsis, and the other that is seeing a solution to whatever issue you’ve got, and so there are two different types of groups, those wanting to let off steam and not really caring about trying to fix things or actually seeking feedback, and those wanting to work through whatever issue you’ve got” (Nurse, 47)

DISCUSSION

Two key structures have emerged from the focus groups: enabling factors (group identity, voluntary participation, facilitation, self-disclosure) and outcome factors (universality, empathy and respite from emotional labour). In turn we infer that through this process, the group develops an ideal nurse prototype that is consistent with their lived experience of the nursing role. The enabling factors align with social psychology constructs of group identity, homogeneity and task interdependence whilst outcome factors are proposed to correspond with the Supervision Alliance Model’s restorative, formative and normative functions of supervision.^{18,33-35} Respite from emotional labour is a restorative benefit. The development of empathy can be seen as a formative process with both emotional and cognitive elements linked to the development of awareness and insight. Universality is considered both normative and formative; allowing nurses involved in RPG to evaluate their actions and reactions, then modify them. Whilst this interpretation of normative does not necessarily address managerial perspectives and benchmarks, it does relate to professional quality assurance and best practice in nursing care.

Developing the perception of homogeneity within the RPG was a deliberate process that capitalised on existing social frameworks. Initially this occurred through acknowledgement of the clinical and workplace subculture, as nursing identity is particularly salient at work-unit level,⁴⁵ then enhanced by voluntary participation. The resulting sense of group ownership and empowerment both required and engendered reciprocity and mutual respect that was significant in enabling self-disclosure and unburdening.²⁸ Participants shared common issues and experiences, which

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were explicated and explored in the group to enhance shared understanding. Although Hornsey and colleagues suggest that homogeneity can lead to conformity and reduce therapeutic effectiveness,³⁵ in this occupational setting homogeneity was seen to allow self-evaluation and move participants closer to prototypical nursing ideals. Professional homogeneity provided the foundation upon which group rules (e.g. confidentiality and respect) were established. Rather than being a set group of people, the RPG was able to develop its own identity based on a negotiated set of rules, processes and norms.⁴⁸ The facilitator played a key role in this process;^{24,28} reiterating these rules and modelling norms, as well as periodically reviewing these with the group to allow its identity to evolve. This assisted in creating a safe container within which the group could process work related stresses and challenging situations.^{11,12}

Voluntary participation was seen to enhance task interdependence. Group and individual objectives were aligned within the RPG and the group provided the permission and mechanisms for participants to emotionally unburden, build empathy for others, achieve a sense of universality and thereby feel 'normal';^{48,49} something they believed they could not achieve alone. At times this could be a difficult process however, so nurses made an informed choice to attend. The resulting self-disclosure in group was seen to enhance both self-comparison and self-compassion. Universality has been identified as a key theme in previous research on GCS for nurses.²⁷ Confirmation of nursing attitudes and actions and the normalising of experiences in a peer context can provide a catalyst for constructive self-evaluation and movement towards the group identity prototype of the professional, caring nurse.^{18,50}

The relationship between the group and the facilitator was based on professional identification and a perception of credibility; enhanced by facilitation style and technique,^{24,28} allowing for social modelling of the desired nursing prototype. The facilitator demonstrated interpersonal skills associated with this prototype, and was perceived to value nurses, their welfare, and the RPG. Whilst the mental health nurse was well positioned to facilitate RPG for ICU nurses, facilitators may come from a range of disciplines and clinical backgrounds.^{12,13}

The cohesive, well performing group can have a homeostatic function; helping to contain and process the emotional material brought into the reflective space.^{11,48,51} The relationship between facilitator and group, plus the cohesion developed within the group, comprises a complex and important alliance as important in supervision as it is in therapy.^{31,34}

LIMITATIONS

Given the exploratory nature of this study we chose a convenience sample, one not necessarily representative of all nursing clinical or supervision environments. An ICU is not representative of all nursing environments, however, the study involved nurses from a range of ages, experience, and duration of RPG attendance.

This study represents a moment in time for a particular group. Given that there are stages of group development,⁵¹ it must be acknowledged that this RPG and its processes have evolved and will continue to evolve. This is particularly pertinent as the longevity and success of the group is noted to be inter-related with the continuity of the facilitator.

This study drew exclusively on the perspectives of the RPG participants. Future research could explore the social psychology of group processes from the facilitator's perspective, building on the descriptive work of Miller and Scanlon.^{16,52}

CONCLUSION

This study supports key facilitation principles outlined in the RPG model,^{11,28} framing them within a social psychology construct for cohesion in groups.³³

The study elucidates factors that contribute to facilitator credibility and effectiveness and raises awareness of processes that can enhance the outcomes of RPG. The longevity and success of the RPG in this study involves the relationship between facilitator and group, and the cohesion developed within the group. This alliance, enhanced by voluntary participation, enables the formation of a group identity based on homogeneity, universality and interdependence. Facilitation style and techniques prompt self-evaluation against the group ideal nursing prototype, and create a safe, supportive, but sometimes challenging space for members to self-disclose and access restorative, formative and normative benefits.¹⁸

Social psychology theory can assist in the development and evaluation of RPG/GCS frameworks and guide research. Whilst this study focuses on intra-group processes, a future phenomenological study might explore intra-personal processes.

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