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

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EDITORIALS

The mental health impact of COVID-19

As we come into the later part of 2020, COVID-19 continues to take lives and threaten health, aged care, and maternity systems around the world.[1] With the focus of attention on the direct impacts of the SARS-CoV-2 virus, it is the combined weight of the real and potential impairment of the capacity and resources of, especially, health and aged care sectors, – as well as the broader economic fallouts impelled by government-imposed restrictions that is fomenting a growing crisis for the less conspicuous issue of poor mental health and wellbeing.

Mental ill health is a serious and growing issue in many countries. Prior to the pandemic, understanding of the size and severity of the burden of mental ill health on individuals, communities, and workforces was beginning to take form. Now, more than ever, we must turn our attention not away from COVID-19, but toward how the conglomerate of challenges the pandemic has emphasised can be addressed with targeted policy, practice, and research. COVID-19 is unlikely to disappear any time soon, but even more durable than the virus itself will be the ongoing impacts on, and because of, the mental health and wellbeing of those most affected by the pandemic. This means that there is also the opportunity to make meaningful and sustainable changes to the way things like mental ill health are addressed.

Our nurse, midwife, and care worker colleagues as well as those from other professions and disciplines are still striving to care for their patients, mothers, babies, and older residents and clients in some of the most demanding contexts while also trying to keep themselves and their own loved ones safe at home. In many cases, workers have not been able to go home – either by choice or necessity – due to fears that they may infect vulnerable family members. Some nurses caring for people with COVID-19 have faced stigma, abuse, and aggression from anxious and frightened members of the public – even their own families – likely fanned by the media's sensationalist and morbid coverage of cases where workers at the frontlines have been exposed to infection, sometimes due to inadequate organisational policies and practices, and lack of access to sufficient personal protective equipment (PPE) and resources.[2] Emerging reports tell us of the serious emotional and psychological impact that working in health, maternity, and aged care is having on our workforces.[2] Not only is going to work dangerous and terrifying, but for those who are removed from the workforce due to potential exposure or infection, insecure work and lack of organisational and government support means that not going to work might be just as stressful due to a reduced income and low future job prospects. Indeed, in some places almost entire workforces have been sent home to self-isolate due to possible exposure. Many workers may also leave their jobs permanently due to stress and burnout caused or augmented by COVID-19 – which would be disastrous especially in contexts with already insufficient nursing workforces such as aged care. It is clear that the emotional and psychological burdens of working during the COVID-19 pandemic are incredibly taxing on our health, maternity, and aged care systems and workforces and that there is a current and ongoing need for effective mental health supports and services to ensure the safety, wellbeing, and sustainability of these essential groups.[3,4]

For staff working in mental health and dementia care fields, COVID-19 has brought with it new and challenging issues. A recent World Health Organization survey has highlighted that treatment for mental health disorders has been disrupted in 61 percent of 105 countries.[1]

Working safely and appropriately with patients with dementia and serious mental health presentations such as schizophrenia while wearing PPE such as a mask or face covering can be extremely challenging as it can cause great distress and fear.[5] Further, for people experiencing chronic, persistent, and severe mental ill health physical and social distancing measures, disinfection and decontamination practices, and engaging in safe interventions in response to violent and aggressive behaviours are all complicated.[6] Severe mental ill health and dementia and the need to adequately care for those who experience them have typically been pushed to the side of policy agendas for many years, and the damage the pandemic could do in this sector has likely not been well quantified or prepared for. People with severe or ongoing mental ill health and dementia are often some of the most vulnerable members of society, come from marginalised groups, and are disproportionately impacted by additional and associated challenges in terms of physical health, housing, social inclusion, and employment.[7] People with dementia and those who experienced pre-existing mental ill health and those that work closely with them are clearly a special needs group that requires considerable attention during and following the pandemic to ensure that the gaps between their health and wellbeing status and outcomes and the broader community do not widen further.[8,9]

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Beyond the health, aged care, and maternity workforce itself and those with pre-existing dementia or mental ill health, the wider community is also facing an almost unprecedented trial in terms of maintaining mental health and wellbeing.[10] While many parts of Australia and the world have moved well along with the relaxation of the government restrictions put in place in an effort to reduce community transmission and the burden on already stretched health systems, some localities such as Victoria Australia remain under heavy lockdown with strict laws governing leaving the house, socialising with people from other households, and what businesses can be open. When these restrictions drag from weeks to months, many people even those who would have felt mentally and emotionally resilient at the outset can begin to struggle with isolation and disconnection from both family and friends as well as their communities.[11] While some people have been able to transition relatively easily to working from home, many others have simply lost their jobs completely and face the stress of potentially not having one to return to. The stress and damage COVID-19 has done include skyrocketing depression and anxiety,[12] domestic violence,[13] substance use,[14] and suicide.[15] There will be a need for drastic and sustained action to ensure that the mental health impact on the community is addressed now and in the future. This is going to take actions not only within health and aged care but across government portfolios from housing, employment, social services, industry, and the environment – because let us not forget about the mental health impact of climate change and the environmental disasters that it has led to most recently. Indeed, it could be argued that COVID-19 mental health and emotional difficulties are happening within the context of continuing climate change and environmental disasters resulting in cumulative negative impacts. In this way, COVID-19 is taxing peoples' resilience and coping within a pre-existing context of cascading disasters and is becoming a tipping point that manifests in mental ill health.

This year, 2020, has brought with it many unprecedented tests and sadly claimed many lives. Many sectors and communities have been stretched to their limits responding to a virus without a cure. Some have been led by governments that provide little in the way of useful leadership or sometimes even factual information or accountability, and many face significant collective and personal challenges on top of already less than adequate access to equitable care and support. Mental health is and will be a pressing issue for a vast number of people across many segments of society and addressing it will take action and cooperation across many contexts and between diverse groups. Now more than ever we need to work collaboratively to help one another – especially our most vulnerable community members who often lack the voice, resources, and platforms to help themselves.

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Recency of practice and emergency registration: preparing for surge capacity in the time of COVID-19

The COVID-19 pandemic has placed a huge strain on the health and aged care workforces globally, with nurses being at the forefront of patient testing, tracking, and care. The World Health Organization (WHO) estimates that 10% of all COVID-19 infections are among healthcare workers (HCWs). With over 20 million infections worldwide, this would equate to two million HCWs infected.[1] The number also varies greatly, ranging from 1% through to 40% of infections.[2] While not fully quantified, the number of nurses who have died as a result of COVID-19 is known to be high. The International Council of Nurses' (ICN) CEO, Howard Catton, has called for accurate reporting of data about nurse deaths, particularly as it appears that nurses may comprise the majority of healthcare workers (HCWs) who have died due to COVID-19 infection. Catton made the observation in a June press release that:

> "[n]*ursing is looking like one of the most dangerous jobs in the world at the moment. We need to get these data for every country and work out exactly what is going on that explains the variations that are evident with even a cursory glance at the figures. Only then will we be able to learn how best to keep our nurses safe and prevent any repeat of these terrible statistics in the future.*"[3(para 12)]

Back in June, ICN's analysis, based on data from the National Nursing Associations (NNAs), official figures, and media reports from a limited number of countries indicated that more than 230,000 HCWs had contracted the disease, and more than 600 nurses had died.[3] Those figures can only have increased since then. In addition, the workforce is depleted, not only through death, but also through illness and the requirement for isolation following potential exposure or infection. As a result, many countries have called for either retired nurses, or nurses who had been out of the workforce, to return and be upskilled to take on clinical work so that currently practising nurses could step up to the COVID-19 front line.[4]

The recently released *State of the World's Nursing Report 2020* showed that, across the world, there is an estimated shortage of six million nurses.[5] The pandemic has put further pressure on an already overstretched health system. Healthcare systems across the world are operating near or above capacity. This will continue for many months, if not years, and the health workforce cannot be readily 'turned on and off' – it takes long periods to educate, train, and equip new staff.

In addition to the risks of sickness and death from COVID-19, there are other physical and psychological tolls that COVID-19 will take on nurses and other HCWs for many, many years to come. Depression is seen in 50% of the workforce in some countries, in addition to high anxiety rates, and moral injury.[6] Those nurses who are stepping up to address surge capacity also need to be prepared for these eventualities.

NURSING WORKFORCE SURGE CAPACITY AND EMERGENCY RE-REGISTRATION TO PRACTISE

As part of the ICN's work in the early stages of the pandemic, and during discussions in a series of webinars and other forms of communication with NNAs, a common theme emerged regarding the need to develop strategies to increase surge capacity within the nursing workforce. Given that different member countries had differing regulatory structures and policies, NNAs requested an informal paper with advice and a potential framework that could be adapted to the varying requirements of different countries.

International evidence suggests that factors such as the degree/level of professional experience, age, and time away from practice appear to impact on the maintenance and decline of competence.[8] Evidence also suggests that clinical practice experience guided by a nurse preceptor within a refresher program can be experienced as beneficial for nurses returning to practice following time away.[9] There is also limited evidence suggesting that it is important to gain consistent practical clinical experience within the year following study completion to support ongoing competence.[10]

Based on this and other evidence, we developed a matrix of interrelated factors that could be taken into account when determining who might be eligible to return to practice, what level of work they might be able to undertake, and what further education or preparation they might require. It was envisaged that suitable practitioners would be granted temporary "emergency registration". This matrix, together with informal advice and a scoring system, was provided to member countries on request as a draft framework that

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might assist their workforce planning (see Table 1). Many countries, including Australia, had already developed emergency registration provisions, so it was felt there was no requirement for formal advice from ICN.

In order to use the framework, firstly, a series of questions should be considered when setting criteria for emergency registration:

1. **Recency of practice**: How long is it since the applicant last practised any form of nursing?
2. **Former scope of practice**: Where did the applicant last work and what level of seniority did they hold in that role?
3. **Level and extent of expertise**: For how long had the applicant practised since registration and how skilled were they considered to be?
4. **Level and extent of education**: What qualifications does the applicant hold and how current are they?

Based on these criteria, a scoring system was developed to support the assessment of appropriate applicants to a suitable role.

TABLE 1: CRITERIA AND SCORING FRAMEWORK FOR COVID-19 EMERGENCY TEMPORARY RETURN TO PRACTICE

	Criteria	Scoring		
1	Recency of practice	<5 years	5–10 years	>10 years
		3 points	2 points	1 point
2	Scope of practice	Clinical front line	Clinical education	Administrative/ non-clinical work
		3 points	2 points	1 point
		Highly skilled clinical nurse	Some clinical nurse expertise	Junior clinical nurse
		3 points	2 points	1 point
3	Level and extent of expertise	+10 years clinical experience	5–10 years clinical experience	<5 years
		3 points	2 points	1 point
4	Level and extent of education	Clinical Masters degree or higher	Post graduate degree less than a Masters degree	Graduate clinical certificate
		3 points	2 points	1 point

Based on the scoring system and documentation to support the scores, it was suggested that differing emergency registration levels could be applied. Applicants would need to demonstrate they had had no previous restrictions on their registration and also that they concurred with the level of registration to which they were allocated. Four levels were proposed and the roles each level might be expected to perform are discussed below.

- Full emergency registration (>12 points) could be granted to applicants who were considered competent to take up registration as frontline clinicians immediately.
- Level 2 emergency registration (9-11 points) might be granted to those applicants who required online education in essential refresher topics such as infection control, resuscitation, manual handling, medications management. These programs could be fast tracked through university and/or employer websites.
- Level 3 emergency registration (7-8 points) might be awarded to applicants who were not considered suitable to work on the front line, either due to recency or physical constraints, but might be able to provide guidance and support to the public under protocol in telehealth and other online services.
- Level 4 emergency (5-7 points) might be awarded to applicants who were not considered suitable to work on the front line, either due to recency or physical constraints, but might be able to provide guidance and support to the public under protocol in telehealth and other online services. However, in order to be able to take up these positions, they would also require online education to be able to update essential clinical knowledge.

We envisaged that the emergency registration would apply for 12 months and, at that stage, and depending on the national requirements for an emergency workforce, all applicants would be given the opportunity to apply for permanent registration with the understanding that conditions might continue to apply until full registration requirements were met. Ideally, these former emergency registrants would be given special consideration and support to meet the requirements.

Additional necessary issues to be addressed as part of the emergency registration process were also considered to include; whether the applicant adequately understands the level of commitment required to serve in this capacity; that there needed only be one system through which emergency registrations are granted; that practising without a licence even during an emergency would still carry legal ramifications such as civil or criminal charges, and that employers would need to address the registration level of applicants and their requirement for professional liability insurance.

The information, whilst informal, has been shared as guidance with nurse leaders in many countries and all WHO regions across the world. Countries have been rapidly re-registering and recruiting nurses who have retired or left the profession. In an effort to protect the public, the nursing profession, and trust in the profession, it is essential that the elements discussed above be considered in developing a framework for emergency registration. The decisions made now will have an immediate impact and one that will be sustained for many years to come.

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RESEARCH ARTICLES

Continuity of care for people with multimorbidity: the development of a model for a nurse-led care coordination service

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ABSTRACT

Objective: To collaboratively develop a model of nurse-led care, within a multidisciplinary team and support continuity of care at the primary–secondary interface for people with multimorbidity.

Background: Existing models of care are frequently based on a medical model, designed to manage a single disease condition, and thus pose a significant challenge to provide healthcare for people with multimorbidity. Particular design elements for models of care affecting the primary–secondary interface have been previously demonstrated, however, these have not been applied to the development of a nurse-led model of care for people with multimorbidity.

Study design and methods: This paper, the first in a series of two, is part of a broader action research study and reports on the development of a model which will subsequently be assessed in terms of feasibility to provide a nurse-led care coordination service for people with multi-morbidity. This paper reports on the first action research cycle and methodology including a literature search, stakeholder engagement forums, validation workshop, team meetings, and professional engagement and validation.

Results: Data from two stakeholder forums were sorted into 257 'structure, process and outcome' statements and 86 goal related statements. These were cross referenced with design elements on models of care from the literature and finally aggregated into themes. The aggregated themes

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were then integrated into a model of care for a nurse–led care coordination service. The model consists of an overarching component, 4 domains and 6 operational areas with underpinning criteria.

Conclusion: Through stakeholder consultation, consideration of the strengths of previous models and building blocks, a new nurse-led model of care that provides a pathway for transitional healthcare management at the primary–secondary interface has been developed. Inclusion of governance and culture within the model's domains enables the approach to be pragmatic and adaptable, contributing to the potential for successful change management and model implementation in the clinical workplace. Further evaluation and refinement of the model is planned and will be reported on, in part 2 of this two-part series.

Implications for research, policy, and practice: These findings provide direction for model implementation and further research required regarding nurse-led models of care. The supporting documents, systems, and processes reported, positions the model to support change and guide clinical practitioners and nursing management working at the primary–secondary healthcare interface. The future success of model implementation could provide evidence for health workforce policy and coordinated healthcare management.

What is already known about this topic:

- Particular design elements for models of care affecting the primary–secondary interface have been previously demonstrated.
- Interventions delivered at the primary–secondary care interface, particularly stepped care and models of shared care are effective for the management of depression.
- Established model design elements and interventions to improve continuity of care at the primary–secondary interface have not been applied to nurse-led models of care for chronic conditions and still require development within research settings.

What this paper adds:

- A new person-centred nurse-led model of care coordination, with healthcare management activities intended to support and enable development of the person's agency in their healthcare optimisation.
- A model with specific domains and criteria with the potential for application to nurse-led services across primary and secondary settings, for a range of patients.
- Inclusion of governance and culture as domains within the model, to enable the best possibility for change, model implementation and continuity of care between the primary–secondary healthcare interface.

Key words: nurses, 'model of care', 'continuity of patient care', 'chronic disease management', 'transition and care'

INTRODUCTION

This article, the first in a series of two, is part of a broader action research study to evaluate the feasibility of a nurse-led care coordination service to improve continuity of care for people with multimorbidity.[1] This paper reports on the development of a model for nurse-led care coordination using stakeholder consultation and validation processes as part of the first action research cycle within a broader study. The second paper in the series reports on an implementation study and evaluates the model as part of subsequent action research cycles. Multiple design elements have previously been identified for models of care both within Australasia and internationally to support care at the primary–secondary interface.[2,3] These elements provide direction for services to aim for continuity of care; however, a medical approach underpins the focus within the elements, and it is therefore timely to explore nurse-led healthcare models at the primary–secondary interface (primary health care–community/general practice and secondary care–acute/tertiary care, outpatient setting).

Continuity of care is recognised as essential to high quality healthcare and relates to an individual's experience of connection, coherence and consistency of care delivered over time.[4,5,6] Continuity of care is relevant across a range of clinical settings, and has different components: informational, management, and relational, which can all be measured by particular criteria within continuity of care measurement indices.[7] The emphasis on each component of continuity differs depending on the type and setting of care.[6] Despite an understanding of continuity of care,[6] it is evident that providing and promoting continuity of care for people with multimorbidity is challenging within current healthcare systems and models of care.[8]

Multimorbidity is commonly defined as the co-existence of two or more chronic health conditions in an individual.[9] Increasing prevalence and complexity of multimorbidity within general populations is a global phenomenon and more coordinated models of healthcare delivery, ones that facilitate continuity of care for people with multimorbidity, are required.[8,10–24] A person-centred, nurse-led approach, rather than a single-disease management program could provide more effective, high-quality care.[25]

BACKGROUND

A healthcare delivery model is underpinned by a theoretical framework that guides the practices and interventions of patient assignment and care which support the underlying philosophy of care.[26] Existing models of care are frequently based on a medical model, designed to manage a single disease condition, and thus pose a significant challenge when considering people with multimorbidity.[24] Due to the complexity of care requirements generated from chronic and multiple disease situations, these people require continuity of care *across* the health sector. When achieved, this is correlated with both improved patient outcomes and satisfaction.[5] A single disease-focused model of care is unsuitable for managing, measuring and improving the health of people with multimorbidity.[24] The literature calls for a move to a patient/person-centred model of care, one that is holistic and able to facilitate coordination and effective management of the multiple complex health and psychosocial needs of the individual person.[27–29]

The chronic care model (CCM) set a precedent to systematically and holistically manage care for people living with chronic health conditions,[27] and provided a foundation for the development of subsequent models that were more consumer focused than traditional medical models. Consumer focused models included: chronic disease integrated care,[28] guided care,[29] partnership,[26] case management,[30,31] transitional care,[32] person-centred care and patient-centred care models.[33,34]

The term ‘patient-centred care’ refers to a model of care that is “respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions”.[35] The literature tracks the evolution of the patient-centred care model and notes the transition to the term *person*-centred.[33,34,36–42]

This move in terminology from patient-centred to *person*-centred care delivery aims to acknowledge the *entirety of a person's* needs and preferences, beyond only the clinical or medical.[33] The concept of a *person* driving their own healthcare decisions is now recognised and considered the gold standard in health care.[33] Two key elements of person-centred care include identification of a lead care coordinator and integrated communication. The former enables one person to be the primary contact for the person, their healthcare team and all service providers to facilitate communication and transitions across settings.[33] The latter requires establishing a system that supports simultaneous access to care plans across settings. Person-centred care has been shown to “advance concordance between care provider and patient on treatment plans, improve health outcomes and increase patient satisfaction”.[36]

The transitional care model (TCM) provides and facilitates time-limited services during episodes of acute illness across settings, and has the potential to be adapted to a range of services.[32] This evidence-based model of care includes a focus on person-centredness, the use of advanced practice registered nurses, care coordination, continuity of care and the use of evidence-based tools and interventions. However, the model does not overtly address organisational culture or governance – two key areas that can pose significant challenges to implementing new services.

A model of care inclusive of positive organisational culture strategies to promote good outcomes between primary and secondary healthcare sector transitions is required. Organisational culture embodies our collective ways of thinking, feeling and behaving in healthcare organisations and is acknowledged as a complex construct with many layers across health sectors.[43] Braithwaite's systematic review on organisational and workplace cultures and patient outcomes found there was a “consistently positive association held between culture and outcomes across multiple studies, settings and countries”,[44] supporting consideration of this concept within a new model of care.

Effective governance at the primary–secondary interface is also critical for continuity of care. Successful governance mechanisms are characterised by clear leadership, built trust, articulation of organizational goals and consideration of the workforce through planning, implementation, and evaluation of change.[45] Nicholson's systematic review of governance models for primary and secondary care provides detail on the necessary elements for effective governance,[46] thus providing sound direction for the application of governance elements to primary–secondary health services. Yet the elements are not positioned within an overall recommended healthcare or nurse-led model. A disruptive innovation is required,[47] a nurse-led care coordination service, specifically designed to influence outcomes at the primary–secondary interface.

The advent of the COVID-19 virus pandemic necessitates the examination of nurse-led models of care with a new sense of urgency.[48] The drastic resource implications of COVID-19 on our existing health system mean there has never been a more suitable time to enact a new way of thinking. Keeping those at greatest risk out of hospital, yet with access to specialist services, whilst still engaged with primary care is imperative. The capacity to manage a traditional approach at the primary–secondary interface is evaporating and change is required. A nurse-led care coordination service could be a disruptive innovation in healthcare delivery that facilitates keeping people safe in the community.[47,49] Nam's blog on disruptors in healthcare notes 'disruptive innovations cost less, and over time, do more'.[47] An innovative and adaptive model of care which includes evidence-based design elements applicable across healthcare sectors is required.[46] The critical element to this disruptive innovation in the current climate is to progress proactively, rather than ad-hoc, particularly when evidence–informed strategy is currently limited.

There is a paucity in nurse-led services providing continuity of care and a person-centred approach for people with multimorbidity. Furthermore, there is no guiding model of care that addresses the significant issues of healthcare culture and governance between the primary and secondary healthcare sectors. Regarding patient needs within a healthcare system, the literature notes that patients' four most pressing requirements are:

1. convenient access to providers (via telephone, internet or in person),
2. clear communication of individualised care plans,
3. support from a single coordinator of care who can help prioritise competing demands and continuity of relationships,
4. providers who listen to and acknowledge patients' needs, appreciate that these needs are unique and fluctuating, and have a caring attitude.[49]

These requirements, clearly articulated by healthcare consumers, can be addressed when contextualised within appropriate organisational cultures, and governed effectively. The development of a nurse-led model of care applied within a multidisciplinary framework, underpinned by a person-centred approach, that addresses continuity of care issues, will seek to address the current problems of care fragmentation for people with multimorbidity, and respond to their most pressing needs.

STUDY DESIGN AND METHODS

AIM

The aim of the study was to collaboratively develop a model of care for a nurse-led care coordination service. A range of stakeholders were engaged, with a view to subsequently implement a pragmatic nurse-led model of care within a multidisciplinary team in an outpatient setting that could support continuity of care at the primary–secondary interface, for people with multimorbidity.

DESIGN

This paper is part of a broader action research study and reports on the development of a model which will subsequently be assessed in terms of feasibility to provide a nurse-led care coordination service for people with multi-morbidity. As part of the broader study, Kemmis and McTaggart's action research approach was used including: planning, action, reflection, observation, and revision planning.[50]

The broader study has 2 phases,[1] the first phase and first action research cycle focused on model development and included a systematic review (PROSPERO registration number: CRD42018095780, submitted), stakeholder engagement forums, validation workshop and clinical team meetings. Reporting on the stakeholder engagement process aimed to capture stakeholder knowledge and experience by combining pragmatism and idealism into a workable model that addressed patient care delivered across the secondary and primary health care sectors.[1] Phase 2 (to be reported in a subsequent paper) included further action research cycles, with a mixed methods approach and multiple data collection points with validated data collection tools.[1] Phase 2 focused firstly on operationalising the model with implementation of service protocols, procedures, clinical guidelines, and the lead nurse care coordinator role, and secondly on evaluation of the nurses', multidisciplinary staff and patients' experiences of the nurse-led care coordination service and model.

SETTING AND PARTICIPANTS

Participants for this study included 44 stakeholders who attended one of two forums. Stakeholders included nurses, medical staff, an occupational therapist and pharmacists from within the outpatient clinic – multidisciplinary ambulatory consulting service (MACS); consumer advocates; 2 Aboriginal women who expressed representation for both the Aboriginal and the Torres Strait Island peoples' voices; healthcare executives from the primary and secondary healthcare sectors; general practitioners; practice nurses; nurse managers; academics and registered nurses. Eight stakeholders attended a follow up validation workshop.

ETHICAL APPROVAL

Ethics approval was obtained by the Human Research Ethics Committee (HREC) (reference number: HREC/17/RAH/552) at the University of South Australia (application ID: 200958) and the Central Adelaide Local Health Network (CALHN) (reference number: R20171204).

DATA COLLECTION

Data were primarily collected through a consultative process in two stakeholder forums and a validation workshop. Consultation data were further refined through meetings and professional discussions with the MACS team who were to implement the model. Data were also validated through a literature search.

Stakeholder forum

Two stakeholder forums were facilitated by consumers, academics and healthcare professionals, each of 3 hours duration. On commencement of each forum a presentation was delivered to provide the context and aims of the forum. Four tables each with 5 to 6 participants worked through 5 activities related to the strategy, structure, process and roles required to implement a nurse-led service for people with multimorbidity. A final activity required participants to identify their top 3 goals for a nurse-led service to achieve success. A scribe for each table collected participant responses. The stakeholder forums resulted in a draft nurse-led model of care with an overarching component, 4 domains, 6 operational areas and underpinning criteria.

Validation workshop

The validation workshop was of three hours duration and facilitated by an academic and a health professional. The draft model along with background context and aims for the validation workshop were presented. Participants reviewed the domains and model criteria in table groups, with activities guided by facilitators. Two tables of approximately 4 people each reviewed the model, cognisant of its operational application in a pragmatic outpatient setting. The draft model data were then compared with 'Models of care' literature and a further iteration resulted. To ensure continuity of care for patients transitioning between the secondary and primary healthcare settings, the consequential model domains were then mapped to the Australian Primary Healthcare Nurses Association (APNA) 'building blocks for nurse-led clinics'.[51]

DATA ANALYSIS

The broader study used recognised and validated instruments to collect data in relation to continuity of care, patient-centredness, workplace culture and the nurses' practice role.[1] A concurrent approach to data collection using quantitative and qualitative methods within cycles allowed both sets of data to be interpreted together, providing a richer and more comprehensive response to research questions.[1,52] This study, (Phase 1) focusing on stakeholder consultation and validation, adapted Braun and Clarke's methodology of thematic analysis,[53] to categorise and synthesise data into a workable model that could later guide the implementation of the nurse-led service. Finally, the consultation data and model domains were aligned with literature evidence and preliminary results of the systematic review (PROSPERO registration number: CRD42018095780, submitted). Synthesis of the outcomes from the stakeholder consultation process with the literature search and systematic review were key elements of the analytic process.

RESULTS

STAKEHOLDER WORKSHOPS AND VALIDATION FORUM

Data from the two stakeholder forums were sorted into 257 'structure, process and outcome' statements and 86 goal related statements,[54] and finally aggregated into themes (see Tables 1 and 2). The aggregated themes were again presented in a draft model with an overarching component, 4 domains, 6 operational areas and underpinning criteria. Subsequently, information from the participant validation workshop was integrated into the draft model.

TABLE 1: DEVELOPING THE MODEL FROM PARTICIPANT 'STRUCTURE, PROCESS AND OUTCOME' ACTIVITY:[54] STATEMENTS (INCLUDING NUMBER OF RELEVANT STATEMENTS)

Theme and number of table activity statements	Synthesised Statements	Model: Overarching component, domains and areas
Multi-disciplinary communication and work (12)	A patient-centred approach to care provision within a multidisciplinary team, across the healthcare sector are essential components of a nurse-led model of care	Multidisciplinary, inter-health sector collaboration (overarching component of the model)
Patient-centred individualised care (13)	The processes need to be streamlined into one place/point of contact for the patient, addressing a range of patient conditions with patient-centred care, sensitive to both the Aboriginal and the Torrens Strait Islander peoples' and interpreter needs	The person
Enable patient agency (13)	Patients need to be supported to develop health literacy and agency through provision of information, involvement in care planning, and having a voice within the healthcare system	The person
Care Coordination within a multidisciplinary best practice care model (29)	Provide integrated coordinated care within a multidisciplinary best practice care model to support communication processes from referral to discharge.	Coordination
Model of care supported across the health sector (13)	An integrated patient-centred health system, characterised by engaged partnerships at all levels across the health sector, with contemporary structures, processes and roles	Governance

TABLE 1: DEVELOPING THE MODEL FROM PARTICIPANT 'STRUCTURE, PROCESS AND OUTCOME' ACTIVITY:[54] STATEMENTS (INCLUDING NUMBER OF RELEVANT STATEMENTS) (continued)

Theme and number of table activity statements	Synthesised Statements	Model: Overarching component, domains and areas
Disparate funding mechanisms (6)	Separate state and commonwealth funding models do not support continuity of care	Governance
Essential components of a valuable model of care (9)	A model of care and systems that involve a multi-disciplinary team, develops quality care plans and is integrated across the acute & primary care sectors	Governance
Communication at all levels within the health system (18)	Effective communication and coordination of care require appropriate transition management, good workforce relationships and streamlined health records	Communication
A culture that enables power balance and good relationships across the health sector (10)	The healthcare culture requires balance between nursing and medical leadership with sharing of expertise and an understanding of scope of practice to empower nurses in nurse-led clinic roles	Culture
Skilled systematic health assessment (7)	Nursing assessment and consultations need to be characterised by systematic assessment, conducted by educated and skilled nurses and supported by resources, tools, and software.	Health assessment
Patient-centred care processes within a multidisciplinary team (26)	Appropriate referral, assessment, communication, goal setting, health coaching, self-monitoring, and care optimisation are required as part of the health management process. Care planning and interventions need to be supported by resources, tools, and software. The care process is linked with multi-disciplinary engagement, effective monitoring, and evaluation of care and key performance indicators.	Care processes
Patient and carer relationships (7)	Relationships and support are central to enable patients' agency in their healthcare management	Patient, significant others and carer relationships
Key performance Indicators and best practice (18)	Measurement of key performance indicators within the multidisciplinary team is a valued part of best practice and processes	Clinical best practice
Evaluation and improvement are multi-faceted (12)	Evaluation and improvement processes within the multidisciplinary team are an integral part of best practice	Evaluation and improvement
Streamlined and congruent systems between the primary and secondary healthcare sectors (32)	Systems, processes, and resources that support multimorbidity best practice guidelines, are patient-centred, enable patient flow, and support timely service accessibility are required	Systems, processes and resources
Information technology (22)	Disparate information technology and data management systems do not support effective communication or workflow	Systems, processes and resources
Workforce development (10)	Skilled staff supported by systems that provide access to continuing professional development and education pathways	Systems, processes and resources
Statements subtotal = 257		

TABLE 2: INTEGRATION OF PARTICIPANT GOAL STATEMENTS INTO THE MODEL

Theme and number of goal statements	Synthesised Statements	Model domain/area
Communication and collaboration (13)	Communication and collaboration with all providers and services across the healthcare sector and with the patient	Communication
Patient/person-centred care (27)	Partnership with the patient in quality care that empowers and enables decision-making and involvement	The person
Care coordination for people with multimorbidity (22)	Coordinated model of care that optimises health for people and ensures patient-centred, planned, managed and effective care	Coordination
Systematic process (7)	A systematic person-centred process of care	Systems, processes and resources
Cultural awareness (7)	Culturally competent, skilled (advance practice) nurse-led services	The person
Role (4)	Workplace and nursing role satisfaction along with advocacy and equity are underpinning values	Systems, processes and resources
Service characteristics (6)	The service needs to be sustainable, nimble and value learning	Systems, processes and resources
Sub-total: goal statements	**86**	
Total Statements	**343**	

MODEL FOR A NURSE-LED CARE COORDINATION SERVICE WITHIN A MULTI-DISCIPLINARY CLINIC

Model Aims

The key aim of the model (see Figure 1) developed by the authors is to provide a 'map' or guide for implementing and working in a nurse-led care coordination service within a multidisciplinary team. The model is intended to be implemented from the outpatient setting and enable continuity of healthcare for people with multimorbidity. Additionally, the model aims to facilitate well-co-ordinated transitional care between the secondary and primary healthcare settings; monitoring and keeping patients managed well in the community and reducing avoidable hospital admissions.

FIGURE 1: MODEL OF CARE: NURSE-LED CARE COORDINATION SERVICE

The Model: Overarching component, domains and operational areas

The model contains an overarching component, 4 domains, 6 operational areas and the person at the centre of the model. The overarching component of *Multidisciplinary inter-health sector collaboration* guides and provides cohesion for the domains and operational areas. A multidisciplinary approach to care for people with multimorbidity is supported in the literature and was promoted and validated as an essential component at the stakeholder forums.[56,57] Similarly, inter-health sector collaboration supports health teams to communicate consistently and effectively between the secondary and primary healthcare sectors, to achieve continuity of care.[55]

Inner circle, the person

This represents the person/patient at the centre of the nurse-led care coordination service. All healthcare management is intended to enable support and development of the person's agency in their healthcare optimisation.

Blue outer circle and inner coloured triangles

The outer circle contains four domains with the aim to support patient transitions between outpatient and community/general practice settings. Other models of healthcare delivery do not overtly include culture or governance, domains necessary to enable effective communication, care coordination and overall high-quality service delivery.[44,56] The inner circle is composed of 6 operational areas (represented by coloured triangles). Each domain and operational area include criteria to provide guidance for the development of documents, systems and processes required within a nurse–led service. The domains, operational areas, criteria and supporting documents, systems and processes are further detailed in Table 3.

Operation of the model

The patient is at the centre of the model and the key approach is for the nursing care coordinator to lead care coordination strategies that enable continuity of care for the patient between the outpatient setting and community/general practice.

Continuity of care is important in healthcare delivery and good clinical outcomes.[4,5] Coordination and continuity of care between hospital outpatient services and the community/general practice setting is part of the outpatient nurse's role and work. The nurse within this model will be the central point of contact for the patient and health team. The nurse's role is to facilitate optimisation of the patient's health status, liaise with medical and allied health professionals regarding complex health management, coordinate additional services, provide education or counselling, and support the patient's journey between the secondary and primary healthcare sectors.

TABLE 3: DOMAINS, OPERATIONAL AREAS, CRITERIA AND SUPPORTING DOCUMENTS, SYSTEMS AND PROCESSES

Domain	Criteria	Supporting documents, systems and processes
1. Coordination	Care Coordinator role: • participates in consumer recruitment, referral and triage into service (e.g. patient acuity triage document) • coordinates patient flow, optimisation and discharge from service (e.g. patient flow/journey document) • ensures continuity of care through coordination of inter-health sector transition (e.g. handover or communication protocol with primary health care)	• Care coordinator role and task description • Performance review, measurement and development tools • A range of clinical and management tools to support the care coordinator role
2. Governance	Governance that enables: • clear workplace leadership, structure, management, lines of responsibility, roles, expectations and outcomes (e.g. care coordinator role addresses activities and responsibilities between line managers and health team members) • governance facilitates communication and shared processes between nursing outpatients and community/GP rooms (e.g. documents outline communication and other processes between leadership roles in and accountable for the care coordination service and primary health care)	• Organisation structure • Workplace structure • Reporting lines • Role specifications • Communication plan • Clarity of service role and intersection with the community/general practice
3. Communication	Communication plan that supports: • the care coordinator role and care coordination service, relationship building and health optimisation of the patient	The communication plan identifies key points of patient transition or milestones to trigger systematic communication. Specific communication points and modes are identified: • within the organisation • within the workplace and healthcare team (e.g. procedures and frequency of communication required are documented in nurse-led service communication plan) • with consumers, patients/significant others and carers • with the primary healthcare sector (phone calls, email, letter, fax etc.)
4. Culture	• Processes and systems that support learning, safety, respect, consumer and professional engagement	• Organisation respectful behaviours policy • Governance, leadership and policies supportive of safety and learning culture • Bi-annual workplace culture assessment
5. Health assessment	• The person's story, holistic health situation assessment, including focussed assessments where required e.g. risk of hospital readmission, risk of depression and anxiety, activation level, health literacy	• Evidence-based holistic health assessment and focussed assessment tools
6. Care processes	• The processes required to provide care and support the patient's health optimisation and journey between the secondary and primary healthcare sectors	• Patient waiting room menu • Patient flow and journey chart • Patient categorisation and prioritisation (complexity and acuity) guideline • Referral processes • Multidisciplinary care planning – health optimisation processes – discharge preparation and ongoing care/management – Transition management • Care mapping • Care coordination • Inter-health sector communication
7. Patient and carer relationships	• Consumer/carer/significant other engagement in the care processes – building trust, ensuring time for interactions	• Care conferences • Care planning • Activation level • Self-management – goal setting – health optimisation – health coaching and education • Transition planning, preparation and engagement
8. Clinical best practice	• Provide person-centred care, self-management where possible, and evidence-based clinical procedures and pathways	• Evidence-based nursing clinical policies, procedures and pathways for people with multimorbidity • Audit or other tools to assess effectiveness of clinical practice

TABLE 3: DOMAINS, OPERATIONAL AREAS, CRITERIA AND SUPPORTING DOCUMENTS, SYSTEMS AND PROCESSES (continued)

Domain	Criteria	Supporting documents, systems and processes
9. Evaluation and improvement	• MACS team and person/consumer engaged with evaluation and improvement, embedded quality improvement in the service	• Lead and contribute to quality improvement initiatives, cycle and processes • Lead and contribute to person/consumer engagement with quality improvement cycle and processes • Contribute to and implement nursing research within MACS • Contribute to continuing professional development education and up-skilling • Fulfil nursing key performance indicators • Support medical and allied health key performance indicators
10. Systems, processes and resources	• Support safe skill mix, multidisciplinary work and interactions/flexibility between nursing outpatients and community/GP rooms	• Support effective ongoing systems • Lead, support and design new systems and processes: apply 10 principles of 'good work design' (e.g. patient flow and transition)

DISCUSSION

This nurse-led care coordination service model is evidence-based and relevant to the nursing best practice for management of people with multimorbidity. It incorporates key findings from the literature regarding best outcomes for people with multimorbidity,[8,24,32,57,58] and advances previous significant models of care (see Table 4). The Chronic Care Model and Transitional Care Model are two models that provide best practice management of people with chronic health conditions.[27,32,59] Wagner's model takes a health systems approach, while Hirschman focuses on nurse-led multidisciplinary interventions that target chronically ill and complex adults or patients at risk for poor outcomes after discharge.[27,32] Additionally, the Australian Primary Healthcare Nurses Association has developed a series of building blocks to assist nurses in the primary healthcare sector to successfully initiate nurse-led services.[51] This model is designed to be implemented from the secondary healthcare sector, and through cross referencing with the above models, demonstrates the capacity to effectively intersect with the primary healthcare sector and advance care for people with multimorbidity.

The model places the patient at the centre of care, with the key approach of a nursing care coordinator to lead care coordination strategies that enable continuity of care for the patient between the outpatient setting (secondary care) and community/general practice (primary health care). Continuity of care is important in healthcare delivery and good clinical outcomes.[4,5] Coordination and continuity of care between hospital outpatient services and the community/general practice setting is part of the outpatient nurse's role and work. The nurse within this model will be the central point of contact and 'go to' person for the patient and health team. The nurse's role is to facilitate optimisation of the patient's health status, coordinate additional services, provide education or counselling, and support the patient's journey between the secondary and primary healthcare sectors.

Each domain/component within the model is like the blood circulating from artery to arteriole and eventually cell. The intent being to provide a flow of information and guide the development and provision of more specific resources or systems for implementing the care coordination service (see Table 3); ensuring the right information is available at the right place. For example, within the *coordination* domain, a job and person specification document would be required to guide the effectiveness and outcomes of the care coordinator role. Similarly, as part of the *care processes* area, a waiting room menu was developed for patients to identify the top 3 issues they needed to address with the healthcare team during an appointment.[60] Protocols were also developed for patient triage, acuity, and flow through the service, as well as nursing risk assessment and multidisciplinary care plans and other documents. A key goal of the nurse-led care coordination service is to return the patient to the primary healthcare sector for continued monitoring and management, reducing future avoidable hospitalisations. This new model of care is required because although it overlaps with other evidence-based models, the additional domains of governance and culture have not been overtly included in previous models. The additional domains could enable the best possibility for continuity of care between the secondary and primary healthcare sectors. Table 4 includes a comparison of the proposed model of care with previous models. It is acknowledged that not all aspects of each model are represented in the table below.

Collaborative development of the model with stakeholders such as healthcare consumers, secondary and primary health sector clinical practitioners, healthcare executives, academics and Aboriginal and the Torres Strait Island peoples, has resulted in a model that is both clinically applicable and evidence based. Pragmatism and adaptability were significant considerations when the model was developed, as these concepts prepare the model for use in the 'real world' clinical setting. Similarly, the domains of governance and culture enable the model to be pragmatic and adaptable,

TABLE 4: MODELS OF CARE: CROSS-REFERENCING

Current model (nurse-led care coordination service)	**Model characteristics/domains**			
	Wagner[27]	**Mitchell[2]**	**Hirschman[32]**	**APNA building blocks[51]**
Multidisciplinary inter health sector collaboration	Productive interactions, prepared proactive practice team	Interdisciplinary teamwork	Fostering coordination	Build the team
1. The person	Informed activated patient			Patient engagement
2. Coordination	Community • Resources and policies • Self-management support		Fostering coordination, promoting continuity	Staffing and HR
3. Governance				Staffing and HR
4. Communication	Productive interactions, prepared proactive practice team	Communication and information exchange	Maintaining relationships, collaborating	
5. Culture				
6. Health assessment			Assessing/managing risks and symptoms Screening	Patient pathways, systems and processes
7. Care processes		Access and acceptability	Educating/promoting self-management	Systems and processes
8. Patient and carer relationships			Engaging patients and caregivers	Patient engagement
9. Clinical best practice		Use of shared care guidelines or pathways		Best practice
10. Evaluation and improvement				Evaluation and improvement
11. Systems, processes and resources	Health Systems: • Organisation of health care • Delivery system • Decision support • Clinical information	A viable funding model, training and education	Staffing	A clear plan, systems and processes, location, facilities and funding Staffing and HR

contributing to the potential for successful change management and model implementation in the clinical workplace. Developing a new model of care is significant – but the challenge is to develop a model with valued potential to benefit patient care. In these times of disruption, it is acknowledged that consideration of change is required for successful introduction of a new model of care.[61]

The model developed from a pragmatic consultation process and literature review. It is anticipated that this pragmatic process will continue as implementation of care processes, documentation, systems, procedure development and nursing interventions associated with the domains and operational areas evolve. However, to ensure maximum uptake of the model, planning and preparation for its translation into practice is vital.[62] Implementation will be challenging,[63] and a collaborative process with stakeholders will be required. Identification of the culture within MACS and consultation with the MACS nurses and healthcare team, organisational leadership, primary healthcare nurses and practices and patients all associated with the MACS Unit will be necessary. The feasibility and effectiveness of the model will be assessed in subsequent action research cycles of the broader study. It is anticipated the model will evolve during the implementation of the nurse-led care coordination service. This will take place within the MACS clinic in the outpatient setting.

LIMITATIONS

This study was phase 1 in a pragmatic action research design, intended to engage a broad cross-section of stakeholders and provide clinicians with opportunities to participate and guide model development. However, there are limitations of the study that should be considered. The limitations included lack of a control or comparator group/model within the process, although previous models developed were considered and used as a standard to mitigate this. The setting in which team meetings and professional engagement and some validation took place was geographically limited – being present at one outpatient site only. This study employed a qualitative approach prohibiting validation and reliability testing of the stakeholder forum and validation workshop. This could be a consideration for future studies; incorporating a validated survey tool at workshops could augment data analysis and further validate the model.

IMPLICATIONS

These findings provide a template and model for implementation of nurse-led services to guide clinical practitioners and nursing management from the secondary healthcare setting. The model's focus on person-centredness, coordination and communication augment the possibility of work between the secondary and primary healthcare sectors, providing a future pathway to enable effective health sector patient transition. Patient categorisation, pathways, and resource distribution, nursing roles and care guidelines have also been developed to support implementation of the model. Future systems, processes, education and work are required, but a foundation for change has been established. The collaborative and pragmatic approach to model development and supporting implementation resources, positions the model ideally for positive disruption and implementation rather than the risk of unplanned and unscheduled care delivery.[47]

Although an underlying barrier to effective transitions results from different funding sources for the secondary and primary healthcare sectors, this can be overcome by starting with small steps from local health networks, outpatient departments and primary healthcare practices. Nursing professional and industrial associations, as well as governments all recognise the need for new models of care and new nursing roles to address not only the complex care needs of people with multimorbidity, but also, increasing healthcare funding expenses.[64,65] Changes in professional and structural boundaries are required to address the increasing complex needs of people with multimorbidity; this model provides direction for how this can be achieved.

CONCLUSION

A pragmatic approach drawing upon stakeholder consultation and evidence derived from relevant literature has been incorporated into the methodology of developing this nurse-led model of care. The model is person-centred, with all healthcare management activities intended to support and enable development of the person's agency in their healthcare optimisation. The model also focuses on nursing care coordination within a multidisciplinary approach and inter-health sector collaboration, to enable continuity of care between the secondary and primary healthcare sectors for people with multimorbidity. The model domains and criteria provide the potential for it to be adapted to nurse-led services providing care for a range of patients. Through stakeholder consultation across the health sector, consideration of the strengths of previous models and building blocks within the primary health sector, the model recognises patients' most pressing needs and provides a new pathway for transitional healthcare management. It includes an overarching component (multidisciplinary inter-health sector collaboration), four domains (co-ordination, governance, communication and culture) and six operational areas (health assessment, care processes, patient and carer relationships, clinical best practice, evaluation and improvement, and systems, processes and resources).

Part two in this series will report on the model feasibility and identify barriers and enablers to implementing a nurse-led care coordination service. The paper will report on patients', nurses' and healthcare staff experiences and identify the structures, processes and outcomes required to implement a nurse-led care coordination service. The feasibility of the nurse-led model to support continuity of care across the secondary and primary healthcare sectors for people with multimorbidity will be determined. The successful implementation of this model may provide a future pathway for implementation of nurse-led services both nationally and internationally.

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RESEARCH ARTICLES

"A protracted struggle" – A qualitative blog study of endometriosis healthcare experiences in Sweden

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ABSTRACT

Objective: The aim of this study was to identify and describe endometriosis healthcare experiences based on affected individuals' blog posts.

Background: Endometriosis is a chronic gynaecological disease that often has a negative effect on mental, physical, sexual and social health, resulting in lower quality of life. Endometriosis healthcare experiences have typically been described in terms of normalisation, trivialisation and a lack of knowledge from healthcare professionals. These experiences are often reported via individual interviews or focus group interviews. Studying internet blogs may contribute additional information that might not be disclosed during interviews. Therefore, observing and analysing content from blog posts may present an opportunity to gain additional understanding of how healthcare encounters can be experienced by individuals with endometriosis.

Study design and methods: This is an inductive qualitative study based on blog posts. The blog posts were written in Swedish and posted online without passwords. Sixteen blogs written between 2008 and 2019 by people aged 22-34 were included. The bloggers had been diagnosed with endometriosis one to seven years prior to writing the blogs and lived all over Sweden. Data collection was performed in March 2019 using an online search engine. A combination of different research terms was used to find the blogs. After considering the blogs on the basis of inclusion and exclusion criteria, 12 blogs remained, and another four blogs were included via links from one of the blogs. The analysis was conducted using thematic analysis according to Braun and Clarke.

Results: The results are presented under one main theme, "A protracted struggle", and two subthemes, "The response plays a significant role" and "The value of competence". The bloggers described their healthcare experiences as a long struggle including contact with a large number of different healthcare professionals (HCPs), where the response was significant for their physical and mental health. They emphasised the advantages of person-centredness, competence and continuity in the HCP contact.

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Conclusions and implications for practice:
The results demonstrate that the journey through healthcare was experienced as a prolonged struggle, including normalisation, trivialisation and distrust. The results imply that more improvement work remains to be done within endometriosis healthcare. Taking patients' complaints seriously and providing prompt and effective investigations and treatment may lead to more positive healthcare experiences.

What is already known about the topic?
- Endometriosis healthcare experiences have typically been described in terms of normalisation, trivialisation and a lack of knowledge from healthcare professionals.
- Previous qualitative studies on the subject are interview studies, which may be influenced by the presence of researchers.

What this paper adds:
- The care-seeking behaviours involved a wide range of strategies. The descriptions varied from extensive care-seeking from different doctors and clinics, to refraining from seeking care due to a fear of being treated badly.
- The wording used in the blogs was tougher and more unforgiving, and included mostly negative aspects compared to what has been presented in interview studies. This may be explained by the "diary-like" characteristics of blogs and the free way of presenting narratives in a blog.

Keywords: Endometriosis, blogs, qualitative analysis, healthcare encounter, thematic analysis

BACKGROUND

Endometriosis is a chronic, inflammatory and oestrogen-dependent disease occurring in around one in every ten individuals of fertile age born with a uterus. It is characterised by the implantation and growth of endometrial-like cells outside the uterine area. The ectopic cells cause inflammation, bleeding and pain, and may result in the formation of lesions, adhesions and cysts. The most common symptoms are pain during menstruation, persistent pelvic pain, dyspareunia, fatigue/weariness, urinary and intestinal complaints and a reduced level of fertility. The symptoms often appear as early as menarche.[1]

Within the field of endometriosis, the literature on healthcare experiences is growing, well cited and presented in meta-analyses and reviews.[2,3] Many individuals with endometriosis report negative experiences when seeking care for endometriosis-related symptoms. They often report experiences of normalisation, trivialisation and a lack of knowledge from healthcare professionals (HCPs).[2–4] The normalisation and trivialisation of one's own menstruation pain, together with normalisation and trivialisation by family members, society and HCPs, is often considered the main reason for delays in diagnosing the disease.[2,5] This delay may cause considerable physical, mental and social damage and often has a negative impact on wellbeing and quality of life.[6–9]

The majority of research on experiences of endometriosis healthcare encounters consists of qualitative interview studies with either individual interviews or focus group interviews. Studying blogs in which patients provide detailed descriptions of experiences without the presence of probing researchers may provide additional information that might not be disclosed during interviews.[10] The blogs give unique access to the blogger's experiences and feelings without the influence of pre-defined research purposes.[11–13] Therefore, observing and analysing content from blog posts presents an opportunity to gain additional understanding of the experiences of healthcare encounters among those affected by endometriosis.

To our knowledge, only a few previous studies have used material from peer-written public domain websites to explore experiences related to endometriosis.[5,14] Krebs and Schoenbauer analysed online narrative postings and revealed two dominant discourses related to the diagnostic delay in endometriosis: the discourse of biological normality that normalises the suffering as "just part of being female", and the discourse of psycho-abnormality, which trivialises the suffering as imagined and "all in the patients' heads".[5] Neal and McKenzie focused on how bloggers presented and valued information sources about endometriosis on their blogs.[14] We have found no studies analysing blog post about endometriosis healthcare experiences.

The aim of this study was to identify and describe endometriosis healthcare experiences based on affected individuals' blog posts.

METHOD

DESIGN

This qualitative inductive study was conducted using blogs as the data source. When reporting on the study and writing this article, we were guided by the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist.[15]

SETTING

This study was based on data from Swedish blogs. In some parts of Sweden, like other Western countries where research on endometriosis healthcare experiences has been conducted, patients have to be referred to a gynaecologist by a general practitioner, while in other parts, they can make appointments directly with the gynaecologist.

SAMPLING AND DATA COLLECTION

A purposive sampling was used, which involved blogs containing posts that responded to the aim.[16] Inclusion criteria were blog posts written in Swedish, by individuals diagnosed with endometriosis, and which included descriptions of healthcare experiences related to endometriosis. Exclusion criteria were blogs protected by passwords, blogs written by individuals with other chronic diseases and blog posts regarding infertility treatment.

Data collection was performed in March 2019. An online search engine was used to find the blogs, using a combination of different research terms. The search generated 98 usable links, of which 26 were blogs. After considering the blogs based on inclusion and exclusion criteria, 12 blogs remained. One blog contained links to other blogs, and four blogs were included via these links. In total, 16 blogs were included in the study. The included blogs were written between 2008 and 2019 by people aged 22-34 (mean age 28). In two blogs, the bloggers' ages were not disclosed. The bloggers had been diagnosed with endometriosis one to seven years prior to writing the blogs (mean four years). They lived in both small villages and big cities all over Sweden. They all identified as female, but their ethnicity was not disclosed.

DATA ANALYSIS

Thematic analysis according to Braun and Clarke was chosen for the analysis of the blogs.[17] To become familiar with the text and to get a sense of the content, the blogs were read through, and thoughts, ideas and patterns were identified. In the next phase, relevant extracts from the 16 blogs were copied into a Word document. Data that did not correspond to the aim was excluded during the process. This resulted in 155 pages (Times New Roman, font size 12) which included 431 data extracts. The document was printed and the data extracts were cut out and then grouped manually. All text writing was performed in Word.

The data extracts were labelled with preliminary codes and organised into 17 subthemes. Once each subtheme had been examined, certain subthemes were grouped together and nine new subthemes were generated. In the next phase, the subthemes were grouped and combined into one main theme and two subthemes. Again, they were labelled as described. Example of the analysis and the relationships between data extracts, codes and subthemes are presented in Appendix A.

Two of the authors (HD and EH) were responsible for the analysis process. To ensure the quality of the analysis process, a pilot analysis of one blog was conducted and discussed with all authors. This analysis was included in the study. The final themes and subthemes were discussed and agreed on within the research team.

ETHICAL CONSIDERATIONS

The study was conducted in accordance with the declaration of Helsinki.[18] As this work was based on existing blogs and the work was conducted within the frame of university education, no ethics committee approval was necessary according to Swedish law.[19] The advisory board for studies conducted within the frame of university education granted oral approval for the study according to standard procedure (date of approval: 21 December 2018). Due to blog-hosting websites declaring that text available on their websites is public and voluntarily published, consent was assumed.[20] To ensure confidentiality and to reduce the traceability of quotations via search engines, the research terms, names of blogs and names of blog writers were omitted. Only short segments from blog posts were used as quotations, and certain words in the quotations were replaced with other words with a similar meaning.[21]

RESULTS

The analysis resulted in one main theme, "A protracted struggle", and two subthemes, "The response plays a great role" and "The value of competence".

As the main theme suggests, having to make repeated visits to healthcare in order to get the proper care and treatment was experienced as a long struggle that often involved contact with a large number of different HCPs and healthcare institutions. The response from HCPs during these encounters was essential to the bloggers' physical and mental health. During the encounters, a person-centred and individually adapted approach, without normalisation, trivialisation and objectification, was warranted. When their symptoms were taken seriously, the bloggers described feeling seen and confirmed. To achieve this, the HCPs had to be competent, they had to have knowledge of endometriosis and they needed to be able to transfer their knowledge. The bloggers stated that gaining knowledge made them feel confident in accepting, understanding and managing the disease. Furthermore, they preferred to meet the same person, as continuity in HCP contact was valuable and made them feel secure. In the following, the main theme and the subthemes are described in detail, and are exemplified using quotations from the blogs. The names attributed to the quotations are aliases.

A PROTRACTED STRUGGLE

The bloggers described their encounters with healthcare as a long struggle for which there was no end in sight. In order to get proper help, they had to seek care repeatedly and they encountered both organisational and personal obstacles. They expressed their frustration at having to wait for “their turn” in a state of acute or chronic pain. The waiting time to see a physician or a nurse who took their problems seriously, and the long journey towards a diagnosis, were described as persistent suffering. The bloggers described having to fight and badger to get the telephone calls, referrals and examinations they had been promised.

> *I wait for telephone calls from the Gynaecology Department and the doctor, and it can be a long week’s wait without any contact at all. When that happens I feel betrayed, because you feel alone in the fight. It is not okay that this happens.* – Anna

The struggle was described as being particularly hard during times of acute pain. The bloggers were disappointed and angry at having to beg for painkillers and care. Encountering the phrases “in a moment” or “soon” was unacceptable, and made them feel forgotten or left behind.

Another aspect of the struggle was the lack of continuity in their contact with HCPs. Many bloggers wrote that meeting new HCPs repeatedly made them feel exposed and vulnerable. They had to undergo many pelvic examinations. They also had to tell new people their life stories and provide them with detailed and sensitive information about areas of their lives that they considered private, such as sexual problems or concerns about fertility. It also somehow took them back to earlier periods of their lives and the struggles they had to endure in the past to get to where they were today. Returning to square one made some bloggers feel despair, while others just felt hopelessness. However, when there was continuity in their contact with the HCPs, the bloggers often felt secure and safe, and seeking care became less of a struggle.

> *How much fun is it to undergo gynaecological examination after gynaecological examination? Gynaecological examinations are something I will never get used to. It is always exposure. The doctor often asks difficult questions, when I lie there in that terrible chair.* – Helene

Several bloggers pointed out that they felt it was time for the HCPs to take responsibility for the care they provide, and to work towards adapting the care to the individuals’ unique needs. They were tired of having to fight for care when the HCPs did not take enough responsibility in trying to help them. In some cases, the bloggers were so dissatisfied that they brought charges against the HCPs based on inhuman treatment and not having their rights to proper care respected.

During their struggles for satisfactory care, some bloggers also felt the need to visit other hospitals or clinics. While the action itself was described as unacceptable, some bloggers also felt relieved and calmed as they could now replace arrogant HCPs with hopefully better ones.

For some, the struggle for satisfactory care had led to burnout, anxiety and depression. They felt that they had lost several years to this battle. Some bloggers even said that they would rather be dead than to continue with this struggle. As Josephine put it: *This struggle is so hard… You kind of have to be healthy to have the strength to fight for proper care.*

THE RESPONSE PLAYS A SIGNIFICANT ROLE

As patients, the bloggers felt dependent on the HCPs and the response they received when disclosing their symptoms to the HCPs. They attached a great deal of value to being seen and confirmed during their healthcare encounters. However, there were many stories of HCPs not wanting to prescribe painkillers, or where the bloggers felt that they had to beg to get proper pain relief. Several bloggers had been told that they were imagining or overstating their pain. Some HCPs had even called them drug addicts, which they found offensive and degrading.

> *I know all too well what it is like to be distrusted by the system, to be called a hypochondriac, an addict, to hear that I am too young to be sick. I am only 27 years old, but I have the body of a 70-year-old. The psyche died a long time ago.* – Sophie

Several bloggers described encounters with HCPs who considered pain to be physically harmless, as pain during menstruation is something “normal”. They also described how stressful it was repeatedly having to hear that their problems were psychosomatic and that they should seek psychiatric care instead. Some bloggers had also been misdiagnosed with a number of different disorders, such as anxiety, irritable bowel syndrome, premenstrual syndrome or sexually transmitted diseases.

The bloggers described situations where HCPs had recommended pregnancy as the best cure for endometriosis. This made them feel hopelessness and fear, as some bloggers did not feel ready to have children, and some of them feared subfertility or infertility.

> *Also, I am starting to get tired of this rant that I should have children as soon as possible. I would love to do so if I was in a good financial situation, but I’m not! My husband is studying and I only work 75%… and some days I can barely take care of myself, so how does a child fit in there too.* – Therese

Taken together, the blogs painted a picture of a healthcare that continually misinterpreted, normalised and trivialised endometriosis symptoms. When the bloggers received a negative response from HCPs, they described feelings of loneliness, violation and disbelief. This appeared to result in low self-esteem, low self-confidence and feelings of anxiety, resignation and despair. Some bloggers described how they stayed at home trying to endure extreme pain instead of seeking care, due to the fear of risking an encounter with a cold-hearted HCP. For Maria, the lack of trust and belief in HCPs had led to a phobia of hospitals:

> *After all my visits to idiot doctors, I now have a phobia about doctor's visits. Even when I go in with sinusitis, I think they will say I am making it up and should seek mental help.* – Maria

While this dark picture of the responses received during their healthcare encounters dominated the blogs, some bloggers also described HCPs who gave them a positive response. Being seen as an individual and not as a body or an object was a key factor for a positive healthcare experience. Bloggers who felt confirmed often described gratitude towards the HCPs. They were filled with joy when they felt that the HCP listened to them, asked the "right" questions, was on their side, and confirmed their pain and symptoms. Furthermore, the bloggers appreciated engaged and interested HCPs who tried to adopt a person-centred approach, i.e. involving them in planning their treatment and care.

> *They have brought food, dried my tears, talked to me in a separate room and encouraged me a lot. Exactly what you need when you have a disease like this. Someone who shows understanding and doesn't judge you. Someone who comes back with a smile even though you have just vomited!* – Linda

> *He started by saying: "Now I've read through your medical journal (!). I understand you've had a tough time. How can I help you?" NO doctor has ever said that to me.* – Linnéa

THE VALUE OF COMPETENCE

In the bloggers' experience, HCPs' knowledge about endometriosis varied. Their expectations of encountering HCPs with competence in detecting, suspecting and treating endometriosis were often dashed. Instead, many bloggers found that HCPs lacked knowledge of the disease, were irresolute when it came to treatments, and spread old myths about endometriosis. This lack of competence led to what the bloggers considered incorrect treatments, and not having their care needs fulfilled. Several bloggers felt violated and frustrated when HCPs claimed to be experts but showed their lack of competence by asking inadequate questions or conveying inaccurate information. Many bloggers expressed their anger and distrust, sometimes with harsh words and profanities.

> *Healthcare in Sweden, damn it, is not as good as it should be, as it could be! We pay very high taxes to ensure good medical care, but instead we get unskilled staff who ignore your needs and do not believe you! Instead, they shrug their shoulders and think "You'll be fine".* – Molly

> *I think it is so terribly awful that many doctors do not even know what endometriosis is and how it works. I have been told incorrect facts about endometriosis by several doctors. However, one of the worst things is that so few people really know about the disease.* – Sarah

There were also instances where bloggers met HCPs whom they considered competent. This often generated feelings of hope, joy and thankfulness. Receiving an explanation for their pain and symptoms made them feel calm and secure. Accurate information was experienced as being important in order to understand what the endometriosis was doing to their bodies and how they could best manage the situation. Sometimes the bloggers were referred to an endometriosis specialist for a second opinion, to a physiotherapist in order to help with non-pharmacological pain relief, for example, or to counsellors who could support them with the emotional consequences of the disease. Being referred to specialists and additional professionals was described in positive words, and the bloggers did not see this as a sign of weakness or incompetence in the HCP. Instead, they considered HCPs' ability to admit their own limits and turn to other professions for help as a sign of competence.

> *"Lisa, does it hurt when you have intercourse?" I nodded. "Okay. Are you in pain when you menstruate? Do you bleed? Do you have any vaginal discharge, and what is it like?" Well. Right. It was as if he was reading me like an open book. I just needed to nod. How strange it felt, suddenly someone understood me. Who knew. Who believed in me. I started to relax. He knew what he was talking about.* – Lisa

DISCUSSION

This study examined the experiences of endometriosis healthcare encounters as described by affected individuals on their own blogs. By examining these blogs, we gained an exclusive insight into the accounts of their life stories. The encounters were thematised under one main theme, "A protracted struggle", and two subthemes, "The response plays a significant role" and "The value of competence". The bloggers described their healthcare experiences as a long struggle including normalisation, trivialisation and distrust in their contact with a large number of different HCPs. There were also positive encounters, which were often characterised by continuity, a person-centred approach and the HCP's high degree of competence.

The experience of healthcare encounters in Swedish settings as both positive and negative has been reported previously,[4,22] and is validated by this study. Hence, the positive encounters seem to be real, and not just something that the interviewees may feel obliged to say when participating in a research project.

However, there were far more blog posts about the negative aspects of healthcare experiences. The struggle of having an "invisible" disease that can have fatal consequences in terms of physical and mental health was an underlying theme in all the blogs. Although this struggle has been described in a number of earlier qualitative studies,[2,3] the findings in this study are unique, since people may be more likely to speak from their hearts in their blogs. Sometimes very harsh language was used in the description of incompetent HCPs, and swearing and calling them names was common. This provides a new dimension of understanding for the bloggers' situation, as unfiltered information was analysed. It could also be explained by the fact that bloggers often seemed to write their blog posts immediately after the experience, compared to retrospective accounts in many interview studies.

One should bear in mind that the distinctly negative or positive experiences could also be related to the diary-like function of blogs. The findings could be interpreted as results of an "online diary", where it is possible that people tend to blog when they feel that they are being treated very badly, or very well.[12] Hence, the blog posts may be representative of only the worst or the best periods in life.

Diary-like or not, there is a growing body of research where information is received from social media, such as blogs, discussion forums or Twitter posts. This is part of what is called the Big Data revolution, [23] and although it may come with limitations as mentioned above, and potential ethical difficulties, there are advantages to hearing the voice of the patient with clarity and immediacy. This type of data can be used to evaluate and improve the quality of healthcare and healthcare encounters.[10] Sharing experiences on social media and blogs may also provide affective support and epistemic experience to others in the same situation.[14]

The bloggers described that they appreciated when their HCP consulted other professions for additional treatment, for example counsellors or physiotherapists. The organisation of endometriosis care into multi-professional teams around the most complex cases is recommended in international guidelines for endometriosis care.[11] The number of professionals involved in the team may depend on resources and organisational or economic conditions, but ideally, the team should involve diverse professions with specialisations in different fields: a gynaecological surgeon, a urologist, a colorectal surgeon, a specialist nurse, a specialist gynaecology radiologist, a pain specialist, and a counsellor or a psychologist. Sometimes, representatives from patient support organisations are included in these teams. The benefits of these teams are multi-layered and lead to higher quality decision-making, standardised person-centred care and improved outcomes.

One possible disadvantage may be that the shared decision-making and patient involvement can be limited, as patients typically do not attend the team meetings.[24] The bloggers in this study who had experiences from multi-disciplinary teams wrote only positive things about them. They appreciated when the gynaecologist involved other HCPs to support them with the emotional consequences of the disease (ie. contact with counsellors), or to provide self-care (ie. contact with physiotherapists). The wish for a biopsychosocial approach was a common theme in the bloggers' thoughts about what was lacking in their current care situation. This corresponds with a recent study, in which we highlighted the gap between physicians' ambitions to take a biopsychosocial approach and the experiences of such an approach among their patients.[25]

Furthermore, the need for person-centred care was expressed in the blog posts. The bloggers wrote that having the HCP decide on medical and surgical treatment without asking for their input was outdated and old-fashioned. They demanded to participate in the planning of their care. The advantages of person-centred care have been described in both endometriosis literature and healthcare literature in general.[26–29] Incorporating patients' needs and perspectives into care delivery is part of a paradigm shift, where the patient's engagement with their care is now considered a key to high quality healthcare and successful outcomes.[27,28]

Rozenblum and Bates argue that patients today are more engaged with their care in general,[30] which may be a reason behind the increase in using the internet to share and rate their healthcare experiences with others. Using online discussion forums and groups is a common way to connect with others in the same situation, to share experiences of treatment and care, and to warn against or recommend treatments, hospitals or even HCPs, to others. Before the internet revolution, patients made choices about where to receive healthcare based largely on factors such as proximity or the recommendations of a friend. Easy access to patients' feedback online may be a way for healthcare organisations and researchers to incorporate patients' perspectives into the organisational quality improvement process.[30] This idea is highly relevant to endometriosis healthcare, where the implementation of person-centredness is an important part of international guidelines.[1,31]

The present study has several strengths, including the methodology whereby bloggers wrote freely and voluntarily about what was important to them during their healthcare experiences. The recall bias that may occur with more traditional methods of data collection, such as focus groups or interviews, can be assumed to be decreased since blogs are often written in real time.[32] The anonymity of the internet may also provide a more spontaneous, unfiltered way of sharing perceptions, thoughts and feelings.[32,33] This anonymity comes with limitations, as we were not able to ask follow-up questions or get a deeper understanding of the stories; we simply had to rely on the text.

Furthermore, as in other studies analysing blogs,[34] due to the bloggers' anonymity, we cannot ensure that they are who they claim to be online and that they had really experienced the situations they described. However, this limitation accounts for many data collection strategies. For example, there is no guarantee that participants are entirely truthful when answering posted questionnaires.

The blogs analysed in this study were all written by people who identified as women. There is a selection bias, as using blogs as a data source can only capture the experience of those who are willing to share their experiences openly in the public domain. The voices of those who do not blog, or who do not want to share their blogs, together with those who do not identify as female, are thus not included in this sample. The bloggers did not write about their ethnicity but the blog posts contained no information about being treated in a different way because of their skin colour.

The results might be transferrable to other contexts where individuals affected by endometriosis live in countries and regions with similar healthcare organisations.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE AND RESEARCH

The journey through endometriosis healthcare was described as a protracted struggle, where normalisation, trivialisation and distrust still seem to characterise a large part of the bloggers' healthcare experiences. However, there were also positive encounters and important aspects including continuity in HCP contacts, a person-centred approach and the competence of the HCP. This implies that a great deal of improvement work remains to be done within endometriosis healthcare, and that taking pain and symptoms seriously should be one of the main points to develop. Future research could focus on examining and improving the management of dysmenorrhea and other early endometriosis symptoms, especially among HCPs who meet these people at a young age, such as school nurses and HCPs at youth centres. If awareness of endometriosis and its symptoms were to be a common theme at every healthcare setting providing care for uterus carriers of fertile age, including young people and teenagers, the protracted struggle could perhaps be shortened.

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Nursing student evaluations on the quality of mentoring support in individual, dual, and group approaches during clinical training: a prospective cohort study

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ABSTRACT

Objective: To examine how Bachelor of Science nursing students evaluate the quality of mentoring support during clinical training using three different types of mentoring approaches.

Background: The mentoring approach and the mentor–student relationship are important factors that determine nursing students' satisfaction with their clinical experience. However, there are significant differences in the approaches to mentoring in nursing, and there is no global consensus around a universal form of mentorship.

Study design and methods: The participants were first-year Bachelor of Science students ($n = 86$) divided into three groups exposed to three different mentoring approaches: Group 1 = dual (two mentors/group of students); Group 2 = individual (one mentor/one student); Group 3 = group (one mentor/group of students). The validated Mentor Support Evaluation Questionnaire (MSEQ) was used to assess the quality of mentoring support.

Results: Students from Group 2 reported a significantly higher level of mentoring support quality ($P < 0.01$; $M = 4.8$; $SD = 0.32$) in comparison to students from Group 1 ($M = 4.1$; $SD = 0.66$) and students from Group 3 ($M = 3.32$; $SD = 1.71$).

Discussion: Nursing students exposed to different mentoring approaches vary in their reported quality of mentoring support. The highest quality of mentoring support was reported by students in the individual approach, and the lowest quality of mentoring support was reported by students mentored in a group of four to six students by a single mentor. In the individual approach, the students highlighted the continuous availability of the mentor, recognition of personal study needs, respect, safety, appreciation, and patience.

Conclusion: The approach to mentoring is an important factor that affects students' satisfaction with their clinical experience, and in return it influences achievement of final learning outcomes and professional development of students.

Implications for research, policy, and practice: The results of this study emphasize the importance individualizing the mentorship process in order to increase students' satisfaction and lead to more successful acquisition of knowledge, skills, and attitudes. These results also indicate the need to continuously monitor student evaluations of the quality of mentoring support and their overall satisfaction with the mentoring approach during clinical training. A future qualitative, longitudinal, mixed-methods study is recommended in order to investigate and describe the specific and (in)direct causes of student (dis)satisfaction in the mentor–student relationship.

What is already known about the topic? There are different types of mentor approaches in nursing education. Comparisons of students' perceptions of mentor–student relationships in different mentoring approaches, such as individual, dual, or group mentoring, represent an under-researched area.

What this paper adds: Findings from this study provide evidence to better understanding the specific advantages and disadvantages of mentor–student relationships in individual, dual, and group approaches from the students' point of view.

Keywords: mentor, mentorship, nursing students, satisfaction, training support

INTRODUCTION

Clinical experience is an essential component of all undergraduate nursing student degrees.[1] The design and duration of clinical training (CT) received during Bachelor of Nursing programs vary throughout the world, [2] and they sometimes even vary within the same country.[3]

Croatia, like most member countries of the European Union (EU), has implemented Directive 2005/36/EC into its education system. This directive defines that during the course of a three-year study and a minimum of 4,600 hours, Bachelor of Science (BSc) nursing students in Croatia should spend at least 2,300 hours in a clinical environment under the supervision of a clinical mentor with a BSc and who is a qualified Registered Nurse (RN).[4,5]

Despite implementation of the EU directive, the mentoring system in the Republic of Croatia has not experienced significant changes. CT is mainly organized as a group mentoring approach, in which an individual approach to each students' needs is not possible. Usually five or six students have one common mentor who has a qualified BSc and is a registered nurse (RN). However, the group mentoring approach is still common throughout the world,[13,25] and many studies have described a number of difficulties reported by students and mentors during this form of mentoring.[1,3,17,42]

In Croatia, the dual mentoring approach, when a student has two mentors for support and assistance, is rarely used except in situations of certain specific clinical exercises, and the individual approach is hardly used at all.[6] A relevant indicator for the importance of the topic being researched is the fact that students spend a large number of hours with their mentor, during which they develop a relationship that is a key element in their satisfaction.[5,7] The literature shows that the satisfaction of nursing students with their mentors is a frequently investigated topic around the world.[1,7–10] However, there is a lack of research and insufficient comparisons of students' perceptions of the mentor–student relationship in relation to different mentoring approaches such as individual, dual, or group mentoring in CT. The purpose of this study is to bridge this global gap and provide data to better understand the specific advantages and disadvantages of the mentor–student relationships in individual, dual, and group approaches from the student's point of view.

BACKGROUND

CT is a vital component of a nursing student's study program.[1] It gives the student an opportunity to achieve competence in nursing practice. Despite recent definitions,[11] Nowell et al. state there is global confusion in defining mentorship and the role of a mentor in nursing.[12] There are different types of nursing CT programs around the world,[3,12,13] but there is no single universal form and no agreement on how nursing students should be mentored. A similar situation is also present in the supervision of nurses. There is insufficient evidence to directly inform the selection of a specific model or way of supervising clinical training.[14] Many differences in mentoring approaches exist.[14–16] Numerous authors state that the level of satisfaction of nursing students depends on the quality of CT as well the mentor–student relationship and the quality of their interaction.[1,17–21] Students list their mentor's support and encouragement among the most important of their mentor's activities.[22] This is especially important for nursing students during their first year of study who are at the initial stages of acquiring competency and need significant mentor assistance in most activities during CT.[23]

According to the literature review conducted on different mentoring approaches, to date, the highest level of satisfaction is expressed by students who have a one-on-one mentor–student relationship.[18,24] Research conducted by Warne et al. shows that the most important element in CT experience is the supervisory one-on-one relationship.[18] Furthermore, in relevant research conducted on a sample of 418 nurses students, with the aim of assessing the level of nursing students' satisfaction with different mentoring approaches, researchers found that the mentoring approach significantly influenced the students' level of satisfaction, while variables such as age, gender, year of study, and duration of CT did not significantly influence their level of satisfaction.[25]

Nursing students' satisfaction in the present CT system is, an important factor to achieve expected learning outcomes and excellence in clinical education,[5] as well as retention in the profession.[1] A mixed-methods study from Australia also found differences in students' satisfaction depending on demographic characteristics,[1] which imposes the need to adjust mentoring practices. Research conducted in Malaysia in 2017 listed student satisfaction among six important factors of CT.[26] It is important to emphasize that nursing student participants in a previous mixed-methods study conducted in Croatia stated unfulfilled expectations from their mentor and the feeling of dissatisfaction during CT had a significantly negative effect on their behavior and demotivated them in terms of effectively performing CT tasks.[5]

Continuous examination of students' expectations and experiences during CT can improve the socio-educational environment and assist in creating, sustaining, and attaining the educational goals of students,[27] in turn, this has a significant, positive impact on patient safety during CT.[23] The need to improve upon mentoring systems is apparent.[18] Despite numerous studies conducted around the world in the field of nursing education and mentoring, it is necessary to apply new studies and teaching strategies based on the new evidence.[28,29] This study will investigate factors which ensure the best-valued elements in student–mentor relationships are potentially applied to other forms of mentoring work, which can be transferable in nature and have implications in the broader concept of mentoring in nursing education. This article intends to better understand student perceptions of the quality of mentoring support depending on the mentoring approach, and it will identify the factors and mentor behaviors that contribute to student satisfaction during CT.

Therefore, the main aim of this study was to examine how BSc students evaluate the quality of mentoring support during CT with respect to individual, dual, and group mentoring approaches.

METHODS

PARTICIPANTS

The participants in the study were first-year undergraduate nursing students (n=86) in the 2018/2019 summer semester from a Higher Nursing Education Institution in Croatia, EU. First-year BSc nursing students were selected because they were in the initial phase of acquiring specific knowledge, skills, and attitudes, had high expectations of their mentors, had a lower level of independence than students in later years of study, required thorough mentoring guidelines and demonstrations of clinical procedures and techniques, and they had significant and complete mentoring support and assistance in some activities during CT.[23] Out of the total of 86 participants in this study, 8 (9.3%) were male and 78 (90.7%) were female. Participants were 18 to 24 years old, and the average participant age (mean) was 20.3 years (SD=1.2).

STUDY DESIGN

This prospective cohort study was conducted during 60 hours of regular CT in hospital teaching departments. The selection criteria for departments to be included in the study stated they should not be an intensive care unit, and they had to be a clinical educational department where regular CT was performed.

Purposive sampling, based on research objectives, was performed according to the defined criteria. Hence, during the study, three groups of nursing students were examined (further referred to as Group 1, Group 2, and Group 3). Formation of groups and subgroups (SG), as well as their schedules in the clinical departments, was done based on regular training groups of first-year BSc students (Fig 1). Thus, given this was a homogenized sample of students, and given the effort to make the results of this study as close to reality as possible, students were divided into groups and subgroups according to an alphabetical list of surnames. This method is a common procedure for dividing students into exercise groups. Regular rotation of groups ensures that all students have the opportunity to clinically train in all departments during a particular course, semester, and academic year. Students from all three groups were exposed to different mentoring approaches. Group 1 had dual mentoring support (two mentors) during clinical training, Group 2 had individual, one-on-one mentors, and Group 3 had one mentor for the group of students.

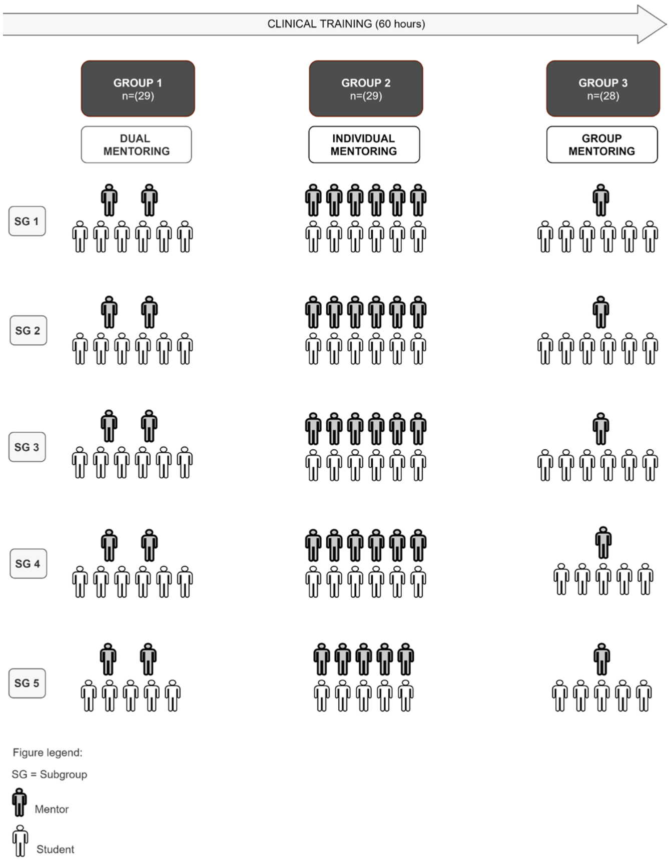

FIGURE 1: DESIGN OF STUDY – DISTRIBUTION OF GROUPS AND SUBGROUPS OF STUDENTS AND THEIR MENTORS DURING CT

The mentors in the study (*n*=44) were BSc nursing graduates who were qualified RNs employed in the faculty base as head nurses and were also employees at the University. The mentors performed their regular work assignments in clinical departments (work organization and patient care) in the presence of students. Mentors assigned a patient to each student for continuous monitoring, planning, performing, and evaluating health care, as well as keeping clinical records. During execution of their work assignments, mentors simultaneously demonstrated the procedures to assigned students and provided them with explanations.

Participants in Group 1 (*n*=29) performed their CT in a group of five to six students. They were mentored by two official mentors (dual mentoring approach) (Fig 1). Both mentors were involved in all phases of CT and worked according to a written CT operating plan. Mentors simultaneously participated in the preparation of students for CT, assessment of the condition and needs of patients, health care planning, demonstration of clinical skills, implementation of immediate patient care, evaluation of care, preparation of health care documentation, providing feedback to the student, and evaluation of cognitive, psychomotor, and effective student achievement according to defined elements and evaluation criteria.

The second group (Group 2) of participants (*n*=29) was composed of students who performed their CT one-on-one with a faculty mentor (individual mentoring approach) (Fig 1). According to the aforementioned steps of the CT Operational Plan, mentors used an individualized and holistic approach of working with their students, beginning with individual preparation of the student for CT as well as working with and continuously monitoring their student to prepare them for the final evaluation of the student's knowledge, skills, and attitude. This kind of individualized supervision model has proven to be a crucial factor determining students' total satisfaction during their clinical training periods.[25,30]

Participants from Group 3 (*n*=28) performed CT in a group of five to six students under the guidance of a single official mentor (group mentoring approach) (Fig 1). The mentor, while performing regular department assignments, conducted occasional joint meetings with the students. Thus, the mentor worked independently with all students in the group regarding the CT operating plan, from the preparation phase to the final evaluation phase, for all students. This mentoring approach is consistent with current regular CT curricula and is implemented at most Croatian nursing facilities.[17]

DATA COLLECTION PROCEDURES

Questionnaires with thorough explanations of all study details were forwarded through joint student e-mails (Group 1, Group 2, and Group 3) in the form of an online survey. Study participants filled their assessments/questionnaires immediately after 60 hours of CT, and they sent their filled Google Forms questionnaires to the researchers anonymously via their student e-mail. All 86 (100%) students completed the questionnaires voluntarily and completely.

INSTRUMENT

Following written consent from the original author of the questionnaire, the statements from the standardized Mentor Support Evaluation Questionnaire (MSEQ) were used to validate the mentoring support, as observed in another study.[31] The instrument was originally designed by the *Croatian Institute for Social Research* primarily to support all participants in the mentoring process and to prevent the risk of poor-quality mentoring. Poor mentoring is very often a consequence of insufficient competency to perform mentoring duties.[31,32] MSEQ is based on the Croatian Qualifications Framework document, which regulates the entire system of qualifications and occupational standards at all education levels in the Republic of Croatia.[33] The questionnaire explicitly focuses on the mentor's competencies and relationship with the students, and it is primarily intended to measure the level of student satisfaction with mentoring support and their general relationship with mentors.

The original MSEQ consists of 39 statements in total, 25 of which are related to students' satisfaction with mentoring support and the mentor–student relationship during CT, while the 14 remaining statements relate to students' satisfaction with the delivery of academic courses/theoretical classes. Regarding the aim and focus of this study (mentor–student relationship in the clinical environment), the 14 statements related to academic courses/theoretical class were removed from the questionnaire.

Principal component analysis with varimax rotation was performed with the remaining 25 statements from the original questionnaire in order to check the factoring structure. Using this procedure, one factor was extracted which explained 18.23% of the variance. The average intercorrelation among items was 0.73, and Cronbach's alpha, measuring the internal consistency of the questionnaire, equaled 0.98.

For the purposes of this study, a team of three nursing experts (two associate professors in nursing and one senior lecturer) was formed to verify the validity of the MSEQ. Responses to the questionnaire were evaluated on a rating scale (from 1=I completely don't agree to 5=I completely agree), in which a higher number represents a higher level of agreement with the statement in question as well as higher student satisfaction with the provided support and the mentor–student relationship. Along with the aforementioned 25 items taken from the original questionnaire, the participants responded to questions related to general demographic information (e.g., gender and age).

STATISTICAL ANALYSIS

Statistical analyses of the acquired results were performed using Statistica 13 (TIBCO Software Inc., 2017). In the first phase of processing, the latent structure of the questionnaire was checked using principal component analysis with varimax rotation and with the Gottman–Kaiser criterion of factor extraction with a characteristic value greater than 1. The reliability of the questionnaire was verified by Cronbach's alpha coefficient. In further analyses, descriptive data (arithmetic mean, standard deviation, and percentages) were calculated. Due to significant deviations in the distribution of total satisfaction of mentoring support and relationships with the mentor (as well as individual elements) among the three different groups, and with respect to a normal distribution, Kruskal–Wallis tests were used with post-hoc Rank tests.

ETHICAL APPROVAL

The ethical committee of the University approved the study at their regular meeting (IRB approval number: 2198-1-79-37/19-02). All participants were informed of the aim of the study and other study details, and all voluntarily agreed to participate. Participants were able to stop participating at any time without any consequences. Anonymity of the participants during and after the study was guaranteed.

RESULTS

STUDENT EVALUATIONS ON THE QUALITY OF MENTORING SUPPORT WITH RESPECT TO THE MENTORING APPROACH

Since the psychometric characteristics of the applied MSEQ questionnaire were confirmed to have a single-factor structure and a very high level of reliability, the difference between the mean values of the total levels of satisfaction among the three examined groups of students was initially tested.

After analyzing student evaluations, the results indicated that students belonging to Group 2, mentored on the one-on-one approach (one mentor per student), ranked the quality of mentoring support as very high (mean=4.8; SD=0.32), and they were significantly more satisfied with their mentor support ($H_{(2)}$=33.69, P<0.01; the Kruskal–Wallis test) when compared to students in Group 1 (mean=4.1; SD=0.66) and Group 3 (mean=3.3; SD=1.17) (Figure 2).

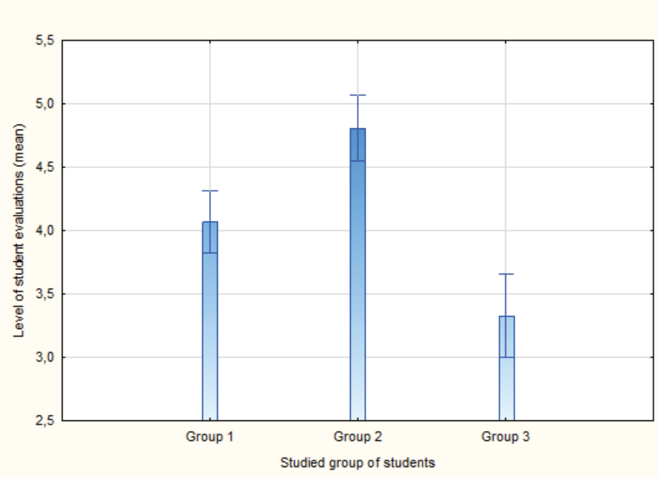

FIGURE 2: OVERALL LEVEL OF STUDENT EVALUATIONS OF MENTORING SUPPORT AMONG THREE GROUPS OF STUDENTS CONSIDERING THE MENTORING APPROACH (N = 86)

SPECIFIC DIFFERENCES IN NURSING STUDENT EVALUATIONS ON THE QUALITY OF MENTORING SUPPORT WITH RESPECT TO THE MENTORING APPROACH

Specific aspects of the evaluations and detailed differences among the three examined groups of students with regard to all 25 elements of the questionnaire are presented in Appendix A.

Quality of mentoring support among students in the first, second, and third groups was analyzed, and statistically important differences (P<0.05, Kruskal–Wallis) were found for all 25 questionnaire items (Appendix A).

Further pairwise examinations between the mean values of student evaluations for the examined groups showed significantly higher satisfaction among Group 2 students when compared to Group 3 students for all 25 questionnaire items ($P<0.05$, post-hoc rank test) (Appendix A).

The post-hoc rank test indicated a significantly higher satisfaction level among Group 2 students when compared to Group 1 students for 22 out of 25 questionnaire items ($P<0.05$); exceptions were for item number 6, "I arranged deadlines for certain tasks with my mentor" ($P=0.244$), item number 14 "The mentor followed my work and gave me feedback" ($P=0.117$), and item number 24 "I did not feel that my mentor was neglecting me due to other activities" ($P=0.130$) (Appendix A).

In contrast to the previous results, post-hoc analyses of Group 1 and Group 3 student satisfaction levels indicated that Group 1 students were significantly more satisfied in only 4 out of 25 questionnaire items. These items included number 2, "The mentor allows me to follow his/her work and explains his/her professional procedures and decisions" ($P=0.014$), item number 6, "I arranged deadlines for certain tasks with my mentor" ($P=0.039$), item number 14 "The mentor followed my work and gave me feedback" ($P=0.047$), and item number 24 "I did not feel that my mentor was neglecting me due to other activities" ($P=0.024$) (Appendix A).

DISCUSSION

The results of this study clearly indicate that the three groups of nursing students exposed to different mentoring approaches significantly differed in the reported quality of mentoring support, which is in accordance with other research.[8,13,25,34]

The highest-quality level of mentoring support (average = 4.8) was found in Group 2 students, who were mentored by a single official mentor. The lowest grade in Group 2 (4.5) was higher than the highest grade in Group 1 (4.4), and especially in Group 3 (3.9). Students were very satisfied with the one-on-one mentoring approach (4.8). In the individual approach, students experienced continuous availability of their mentor, recognition of personal study needs, respect, safety, appreciation, and patience. These results were also confirmed in recent international studies, in which only 25% of the sample had an individualized supervisory relationship and stated that these students were most satisfied with the individual mentor–student relationship.[25] The highest student satisfaction in the individual mentoring approach has also been confirmed by other studies around the world.[8,10,34,]

Previous studies have emphasized that the one-on-one mentoring approach is the most effective in clinical practice.[25,30] In the Crawford qualitative study, results showed that students perceived their relationship with their mentor as pivotal to their development as a nurse.[8] They developed supportive and caring relationships, which resulted in students expressing deep respect for their mentors and vice versa. Saarikoski states that the individual mentor–student relationship is a key element in satisfaction and professional socialisation, and they describe positive effects of individual mentoring such as continual feedback, respect, and confidence regarding student satisfaction and the learning outcomes.[24,35]

The next group of students according to the quality of mentoring support (mean=4.1) was Group 1, where students were mentored by two employees of the faculty base. Students from Group 1 gave the lowest scores for guided learning and critical thinking. In addition, they did not perceive their mentor as a role model. On the other hand, Group 1 participants emphasized the possibility of following their mentor's work, common agreement and adherence to the agreement, feedback information, and the feeling that they were not being neglected. Dual mentoring may be an appropriate solution to meet the needs of the students, including additional academic and psychosocial support and promoting a positive attitude.[36,37] The importance of these student statements were described in the Crawford study, in which students reported common agreement and appreciation in their relationships with mentors. The importance of feedback was also emphasized by a student's statement "no news is bad news".[8] The same results in the literature review state that feedback has a purpose to improve nursing students in their practice.[38] The results in our study can be explained by the fact that two mentors had regular work commitments and, therefore, did not have enough time to provide individual support to students, but they were able to pay enough attention to procedures and student behavior, which is extremely important according to students' expectations.[5]

The lowest quality of mentoring support (mean=3.3) was found in Group 3, where students were mentored in a group of four to six students by a single official mentor. Group 3 students indicated very low levels of satisfaction with mentoring support and that students did not acquire the necessary skills, were unable to think critically, and did not perceive their mentor as a role model. Clinical training in real environments needs to provide students the possibility to integrate theory and practice and to help them acquire necessary clinical competencies and skills in decision making, critical thinking, ethical reasoning, and professional communication.[39,40] Salamonson et al. conducted their studies in four universities in Australia and also confirmed students showed some negative experiences during CT such as lack of time to teach, excessive nursing workload, and lack of engagement, and they expressed dissatisfaction with the mentors' focus on learning rather than their needs.[1] Therefore, mentors as clinical and pedagogical professionals should encourage critical thinking and be a role model to their students.[5] Finally, students in this study were not satisfied with this form of mentoring. Similar results were shown in another study where group supervision was dominant in the sample.[25] Antohe et al. stated that it is necessary to shift the group supervision model towards individual supervision. Group mentorship models in nursing pose a significant challenge worldwide since mentors simultaneously have to perform dual roles.[23] The assumption is that, in group mentorship, the mentors do not have the capacity to develop satisfactory interpersonal relationships with their students, which has proven to be, in many studies conducted so far, the most important characteristic as well as the most demanding category in mentorship.[41] In a systematic review, Jokelainen et al. also reported students want to be treated as individuals during placement learning.[15]

From the aforementioned results, it is clear that the main detractors of a more effective mentorship were the mentor's regular workload, lack of time, and the number of students assigned to a single mentor.[1,3,42]

Post-hoc rank tests of the differences among participants from all three groups also recognized significantly higher-quality mentoring support for all 25 questionnaire items in Group 2 participants, when compared to Group 3 participants, and for 22 questionnaire items when compared to Group 1 participants. The absence of a significant difference in the three mentioned items can be interpreted by the notion that the mentor from Group 2, despite their individual approach, did not have enough time for the students because of their regular work assignments at the department. Moreover, both mentors in Group 1 had more time dedicated to students, but the results from other questionnaire items suggest that it was still insufficient. Group 1 participants gave significantly higher ratings than the participants from Group 3 in only four items, which can be interpreted by the overload of a single mentor from Group 3 with his own work assignments and group of students. It is evident that the pairwise test between Group 2 and Group 1 identified a single mentor in a group of students as a key deterrent for a more effective mentorship, i.e., in this case, a form of mentorship which would provide a higher level of student satisfaction.

The results clearly indicate that students cannot be seen as a group, but rather as individuals.[43] Mentor duties, when incorporated with the regular duties of a nurse, receive insufficient dedication during regular working hours, especially when it comes to a group of students.[23,44] Previously quoted research confirms that the level of student satisfaction depends on their perception of dedication and monitoring of their mentor. Students with mentors that continuously monitor them have a higher level of satisfaction in comparison to the students without continuous monitoring.[25] The results give clear recommendations to tailor education according to students' needs.[7] D'Souza et al.psychomotor, and affective skills in the Middle East. Objective: The aim of the paper is to assess the satisfaction with and effectiveness of the clinical learning environment among nursing students in Oman. Design: A cross-sectional descriptive design was used. Setting and Participants: A convenience sample consisting of 310 undergraduate nursing students was selected in a public school of nursing in Oman. Methods: Ethical approval was obtained from the Research and Ethics Committee, College of Nursing in 2011. A standardized, structured, validated and reliable Clinical Learning Environment Supervision Teacher Evaluation instrument was used. Informed consent was obtained from all the students. Data was analyzed with ANOVA and structural equation modeling. Results: Satisfaction with the clinical learning environment (CLE stated that mentors need to change their educational strategies and reorganize CT for nurses in order to provide better mentoring support and learning opportunities, thus increasing the level of student satisfaction.[34] In circumstances where it is not possible to provide individual mentoring approaches to meet the needs of students, it is necessary to pay special attention to ensure efficient use of mentors' time. In addition, mentors should take into account the fact that good teaching preparation is important, but it is more important to recognize their students' needs.

STUDY LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study included only a sample of nursing students at the University in the Republic of Croatia in order to facilitate implementation and ensure more effective control of the study.

In Group 2, only one mentor was included in the mentoring process, and this might be considered negative given the students dependence on the knowledge and competencies of only one person.

Future work should identify occasions where the individual approach is not possible, and should identify how the most valued elements from the individual mentoring approach might be applied to other mentoring approaches.

A qualitative, longitudinal, mixed-methods study monitoring the same participants is being planned, which will provide student interviews that will describe the specific and (in)direct causes of student (dis)satisfaction in the mentor–student relationship and mentor support in more detail.

IMPLICATIONS FOR RESEARCH, EDUCATION AND CLINICAL TRAINING

Results of this study offer new insights, which can help clinical facilities and educational institutions understand student expectations during clinical training and identify and moderate the factors that impact their satisfaction during CT. Continuous examination of the expectations and experiences of students during CT can improve the socio-educational environment and assist in creating, sustaining, and attaining the educational goals of students, which, in turn, has a significant, positive impact on patient safety during CT. This study investigated factors that can ensure the best-valued elements in student–mentor relationships are potentially transferred to other forms of mentoring work, which can be transferable by nature and provide implications in the broader concept of mentoring in nursing training. This article provides a better understanding of students' perceptions of the quality of mentoring support depending on the mentoring approach, and it identified the factors and mentor behaviors that contribute to student satisfaction during CT.

CONCLUSIONS

This study found that students who experienced a one-on-one mentoring approach were most satisfied with their mentoring support. According to evaluations on the quality of mentoring support, the next group of students ranked were those mentored as a group by two mentors. The least satisfied with their mentoring approach and support were the students mentored as a group by a single official mentor. The results of this study indicate that having to perform regular department duties along with mentoring a group consisting of more students detracted from the quality of mentorship, and what surfaced as a key problem was mentor overload caused by multiple simultaneous duties. Therefore, the results of this study emphasize the importance of individualizing the mentorship process in order to increase student satisfaction and promote successful acquisition of knowledge, skills, and attitudes. These results indicate the need to continuously monitor student evaluations regarding the quality of mentoring support and their overall satisfaction with the mentoring approach during CT.

The results indicate very low satisfaction in the quality of mentoring support in the dual and group mentoring approaches. The students were not satisfied, they did not acquire the necessary skills, they were unable to think critically, and they did not perceive their mentor as a role model. All of the above can have a negative impact on the achievement of learning outcomes, student competencies, and the quality of patient care.

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Conflicts of Interest: none.

Ethical Approval Details: Ethical committee of the University of Zadar approved the study. All participants were informed of the aim of the study, and voluntarily agreed to participate in the study. Anonymity of participants during and after the study was guaranteed.

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RESEARCH ARTICLES

Happy, Healthy, Ready – working with early childhood non-government organisations for developmental surveillance for vulnerable children

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ABSTRACT

Objective: This study sought to improve: (1) knowledge of child development among non-health child and family workers; and (2) identification and referral of children from culturally and linguistically diverse (CALD) backgrounds at developmental risk, by partnering child health services with non-government early childhood education and family support services in two suburbs with high numbers of families from CALD backgrounds.

Background: Children from CALD backgrounds have increased risk of developmental problems going undetected prior to school entry, thereby missing early intervention.

Study design and methods: This was a quality improvement project. The model comprised: (1) co-locating a child and family health nurse CAFHN in a non-health setting or visits by early childhood health staff to undertake developmental surveillance and (2) training non-health staff on child development and New South Wales (NSW) developmental surveillance tools. Evaluation used a mixed methods design analysing qualitative data from parents, early childhood workers, CAFHNs, and paediatricians and de-identified activity data from CAFHNs, and other early childhood health services.

Results: Non-health workers increased their referrals of children at developmental risk to CAFHN or other child health providers. In Rockdale, 44% (n=62) and Botany 41% (n=98) of children screened had one or more significant developmental vulnerabilities. CAFHN reported developmental surveillance for families who were not accessing traditional clinic-based services.

Discussion: This study tested a model of developmental surveillance and entry into the child and family health system in a non-health setting, thus providing a 'soft' entry for parents who might not otherwise engage with these services.

Conclusion: The project demonstrated a new way of working for CAFHNs and facilitated identification of developmental risk in children from CALD backgrounds, who would otherwise have been missed.

Implications for research, policy, and practice: This relatively small-scale model of practice change has resulted in improved access for a marginalised population, but further research is needed to refine the model and test it for scalability and replicability.

What is already known about this topic?
Our team undertook a systematic review of outreach developmental surveillance occurring in non-health settings. Eight studies across high, middle and low income countries have been identified with a total of 150,047 children aged 18 months to five years, the majority from low socioeconomic backgrounds. Only one study has been based in Australia[10] in a regional area in Victoria which showed increased detection of children who were developmentally vulnerable. No studies have had a specific focus on CALD populations in Australia or have been based in the context of the NSW health and developmental surveillance system.

What this paper adds:
This paper describes the outcomes of a quality improvement project implemented in Rockdale and Botany – two disadvantaged areas of South Eastern Sydney – to increase access to developmental surveillance and early intervention for children from culturally and linguistically diverse (CALD) backgrounds attending supported playgroups and early childhood education services.

Key words: Developmental screening, detection, child development, Child and Family Health Nurse (CAFHN), culturally and linguistically diverse (CALD), migrant, refugee, interagency, multi-agency

INTRODUCTION

One in five Australian children starting school are developmentally vulnerable, which means that they do not have the skills (learning, socio-emotional, physical) to flourish at school.[1] Developmentally vulnerable children are at increased risk of poor long term adverse academic, health and vocational outcomes.[2–5]

Children from non-English speaking homes, who are not proficient in English at school entry and/or socioeconomically disadvantaged, are 1.5 times more likely to be developmentally vulnerable compared to their English speaking and/or more affluent peers.[3,6] Given the potentially adverse long-term consequences of developmental vulnerability, children who are developmentally vulnerable need to be identified as early as possible so that they can be referred for early intervention and receive support prior to school commencement.[5,7,8]

Unfortunately, only 18% of children who are developmentally vulnerable receive early intervention in the preschool years.[1] This is despite the fact that in New South Wales (NSW) there is a program of universal early childhood developmental surveillance throughout the early years, starting at birth (the zero to four weeks check) and continuing to age four, prior to enrolment in school. Traditionally the model of early childhood developmental surveillance through NSW public health services is through a single universally offered home visit in the first few weeks after a baby's birth (the 0 – four week check) by a child and family health nurse (CAFHN), with parents then invited to visit local child and family health centres for the remaining checks, also undertaken by a CAFHN. Child and family health nurses provide a universal 'soft' entry point into the health system supporting access to early intervention. Generally speaking, CAFHNs work in child and family health centres in a centre-based setting, other than when undertaking the universal home visit.

Centre-based CAFHN services are universally available but may be harder to access for vulnerable families. Research in disadvantaged areas of Sydney found that socioeconomically disadvantaged families from CALD backgrounds were not attending child and family health centres and were therefore missing developmental checks.[4]

Services should consider how they invest their resources to specifically target those families whose cultural, locational or economic context create social determinants that adversely affect their long-term health outcomes.

There has been increasing interest in models of early childhood developmental surveillance that address poor access to mainstream services and subsequent long-term disadvantage for vulnerable families, including those from CALD backgrounds.[9]

These sites were chosen due to documented disparities in the performance of children from Rockdale and Botany on the Australian Early Development Census (AEDC) compared to the NSW average. For Rockdale and Botany, the proportions of children identified in the AEDC as developmentally vulnerable on one or more domains were 22.2% and 23.1% respectively, compared to 20.2% NSW average. In addition, child and family healthcare providers, including CAFHNs, and staff in non-government organisation (NGO) early childhood services were noting under-representation of CALD families in early childhood developmental surveillance. Children might be referred to a supported playgroup because of familial vulnerabilities but this does not automatically equate to a referral to a CAFHN or other providers of early childhood developmental surveillance. As a response, a model of practice for CAFHNs in a non-health setting was designed and tested, the elements of which, if successful, might be replicated or adapted in other locations.

Our objectives were to:

(1) Investigate the effect of a training program on the knowledge levels relating to child development among non-health child and family workers.

(2) Identify if there had been an improvement in identification and referral of children at developmental risk from CALD background when the model was implemented.

(3) Ascertain the views of service providers, parents or grandparent caregivers on the suitability of the model for the participating families.

In Rockdale, CAFHNs were fundamental to the study and testing of the non-health setting model of practice.

METHODS

MODEL

The model comprised: (1) co-locating a CAFHN or regular visits by early childhood health staff (community child health doctor, paediatrician, speech pathologist) to undertake early childhood developmental surveillance in NGO providing early childhood services, supported playgroups or family support services; and (2) training NGO early childhood staff on child development and use of the Parents' Evaluation of Developmental Status (PEDS), which was the NSW Health developmental surveillance tool at the time. This tool has now been replaced by the "Learn the Signs – Act Early" parental self-assessment tool.

The PEDS is an evidence-based screening tool in the form of a 10-item questionnaire that elicits and addresses parental concerns about children's development, health and wellbeing. It is completed by the parent individually or in consultation with their healthcare provider, usually a CAFHN. This tool was used by NGO early childhood staff in discussion with parents. Early childhood health providers score the PEDS form to identify concerns that predict issues if identified at particular points in a child's development (predictive or non-predictive concerns). The PEDS Interpretation Form assists early childhood healthcare providers, such as CAFHNs, to make the decision to refer, further screen, keep a watch, advise parents or reassure.

Parents identified by NGO early childhood service staff as having concerns (via PEDS) or identified as having not attended scheduled early childhood health checks were referred for a developmental screen with a CAFHN or community child health doctor. Staff in the participating supported play group and family worker program described 'warm transfers' where they walked a parent in to the CAFHN for an appointment.

If required, children were referred by the CAFHN for further specialist assessment to a Developmental Assessment Service. The team from the Developmental Assessment Service visited the site as well and this was identified as an enabler for some families to take the step to additional assessment and support.

The Botany project entailed visits to supported playgroups from Community Child Health Doctor and Speech Pathologist, with some assessments conducted in local and familiar locations (e.g. shopping centre). A CAFHN became part of the team during the study and visited playgroups to meet parents and discuss child development.

EVALUATION DESIGN

A mixed-methods design was used to evaluate this quality improvement project. The qualitative study included focus groups, interviews with service providers, parents, and grandparent caregivers to understand the suitability of the model components for participating families. The quantitative study entailed a retrospective review of the Community Health and Outpatient Care (CHOC) activity database for the Rockdale and Botany areas and descriptive analysis of the data.

DATA COLLECTION

In Rockdale, 45% of children lived in a home where English was not the language spoken at home. After English, Nepali was the most frequently spoken language at home, followed by Mandarin and Cantonese.

The table below describes the data sources and data collection methods:

TABLE 1: DATA SOURCE AND COLLECTION METHOD

Data source	n	Data collection method
2 x English-speaking parent/ grandparent focus groups with mixed participants from different ethnic backgrounds. 1 x Nepali speaking parent/ grandparent focus group 1 x Bengali speaking parent/ grandparent focus group	n = 30 (approx.)*	Collected during NGO supported playgroups in Botany and Rockdale attended by parents and/or grandparents with their children/ grandchildren
Interviews with NGO and health providers in Botany and Rockdale.	n = 13	Collected in the participant's workplace or by telephone
Results from pre and post training survey of NGO attendees to assess changes in knowledge as a result of the training.	n = 16	Provided by survey author
Results from previously administered parent survey in Rockdale (English speaking only)	n = <50	Provided by survey author
Activity data collected by Sydney Children's Hospital (SCH) and South Eastern Sydney Local Health District (SESLHD)	n = 149	Provided by SCH and SESLHD
* Parents joined/left the group in response to child needs so exact numbers are not available.		

QUANTITATIVE DATA COLLECTION

Knowledge: Pre and post-training surveys were administered to attendees to assess changes in knowledge as a result of the training. A total of 22 staff attended the training, with 21 (95%) completing the pre-training survey and 16 (76%) completing the post-training survey. The survey was completed by attendees prior to completion of the training and re-administered two months post-training by the project officer (LS) and project lead (SW).

Retrospective audit: The de-identified data collected by the project officer (LS) or project leads (VS; DP; JS; SW) covered the period from commencement of the model in 2014 up to June 2018 and included age of child, country of birth, language spoken at home, and country of birth of parents (if collected) as well as developmental vulnerabilities identified and service contacts with CAFHN.

QUALITATIVE DATA COLLECTION METHODS

Focus groups: Parents and grandparents were invited by participating NGO services to take part in focus groups to gather their views of the model and their perception of how it has affected them and their families. English speaking focus groups were moderated by the English-speaking research assistant (KE). Two language groups were planned to be homogenous to enable culturally specific discussion. One of these groups was moderated by a Nepali-speaking facilitator, and the other by a Bengali-speaking facilitator using the interview guide in Figure 1. Both facilitators were trained in group facilitation, were briefed by the research assistant (KE) prior to the focus groups and debriefed afterwards by KE. English-speaking focus groups were audio recorded and transcribed verbatim using a transcription service.

Parent/Grandparent Focus Group Guide	
1	What does child development mean to you?
2	How has your understanding of child development changed since you first started coming to (playgroup, childcare, family support, CAFHN clinic)?
3	What do you think helps or hinders a child's ability to develop? Why do you say this?
4	How do you get information if you have questions about your child's development?
5	What did you think of the (playgroup, childcare, family support) worker talking to you about your child's development?
6	Was it appropriate to discuss your child's development during (playgroup, childcare, family support)? Why do you say this?
7	What do you think CAFHN do?
8	What was it like seeing the CAFHN or the paediatric doctor at the (Centre name)?
9	What was it like seeing the paediatric doctor from the DAS (if appropriate)?
10	How do you think things would have gone if you had not seen the CAFHN and/or the paediatric doctor? Why do you say this?
11	What would you do now if you were worried about your child's development?
12	What would you like to see done differently? Why do you say this?

FIGURE 1: PARENT /GRANDPARENT FOCUS GROUP GUIDE

Telephone/face to face interviews: Participants were nominated by their organisations and invited to take part in an interview. Interviews were conducted by phone or face to face with NGO and health providers to understand the impact of the model on their work practices and the perceived impact on participating families using the interview guide in Figure 2. Interviews were recorded and transcribed. Interviews were conducted by KE.

Provider interview guide

1. Can you please describe "Getting in Early – Getting it Right" to me?
2. Why do you think your service is part of "Getting in Early – Getting it Right"?
3. How has taking part in "Getting in Early – Getting it Right" changed your relationship with the other services? Why do you say this?
4. How has "Getting in Early – Getting it Right" changed how you work?
5. What did you think of the training you received for "Getting in Early – Getting it Right"?
6. What sort of feedback do you get from referrals you make as a result of "Getting in Early – Getting it Right"?
7. What do you think has worked well so far in "Getting in Early – Getting it Right"?
8. What do you think could work better in "Getting in Early – Getting it Right"? Why do you say this?
9. What have families told you about what they think of "Getting in Early – Getting it Right"?
10. Would you remain engaged with the program if it continued? Why do you say this?

FIGURE 2: PROVIDER INTERVIEW GUIDE

Additional reports: Reports from a previous survey of parents in the Botany area, regarding barriers and enablers to accessing early childhood developmental surveillance were reviewed.

DATA ANALYSIS

Qualitative data was analysed by the research assistant (KE) using NVivo$^{\text{TM}}$ 10, against the expected outcomes of the projects and applying emergent themes approach within grounded theory. Analysis identified emerging themes related to processes and unintended consequences. Analysis continued until all major themes were identified.

Descriptive analyses of the quantitative data was undertaken by the project officer (LS) and project leads (TR; SW) in conjunction with the Centre for Research in Nursing and Health, University of Wollongong (RF), using the Statistical Package for the Social Sciences (SPSS$^{\text{TM}}$ version 24.0). Frequencies, means and their standard deviations were calculated for quantitative data. All quantitative activity data was de-identified. Pre and post training survey results used simple descriptive statistics to measure increase in knowledge, undertaken by the project officer (LS) and project leads (TR; SW).

ETHICS

Ethics approval was gained from the SESLHD Human Research Ethics Committee (HREC)[1], with Site Specific Approval from Sydney Children's Hospital Network HREC[2]. Information and consent forms for Nepali and Bengali-speaking participants were provided in English and in Nepali or Bengali. Translation was provided through the NAATI accredited SBS Translation Service.

RESULTS

QUANTITATIVE DATA

Identification and referral

Data for 149 children were analysed (Rockdale n=90*; Botany n=59**) (Table 2)

TABLE 2: SAMPLE SIZE OF CHILDREN RECORDED (ROCKDALE AND BOTANY)

	Rockdale	Botany
Male	42	41
Female	48	18
Age Range	Two months – 62 months	12 months – 64 months

* Total families offered PEDS.
** Children for whom PEDS referral was sent to SCHN (out of total of 98 screened) by SECC and The Deli Women & Children's Centre. Data not available Botany Family & Children Centre.

Of the 55 clients who saw the CAFHN, 43 were existing clients and 12 were new clients. Of the clients recorded as known to CAFHNs (n=41), 63.4% (n=26) were not up to date with their scheduled child development checks. These checks are the means by which developmental issues can be identified early within a universal child health system, reducing the risk that delays in parental perception of developmental concern may delay identification and early intervention. The diagram below (Figure 3) describes the number of families offered PEDS, and those who accepted in the Rockdale project.

In Rockdale, 45% of children lived in a home where English was not the language spoken at home. After English, Nepali was the most frequently spoken language at home, followed by Mandarin and Cantonese. A record was kept of the number and proportion of parents requiring an interpreter for their initial and ongoing contact with Child and Family Health Services. Of the 88 parents recorded for this characteristic, 5.7% (n=5) required an interpreter.

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[1] 17/264 (HREC/17/POWH/542)

[2] SSA/18/SCHN/3

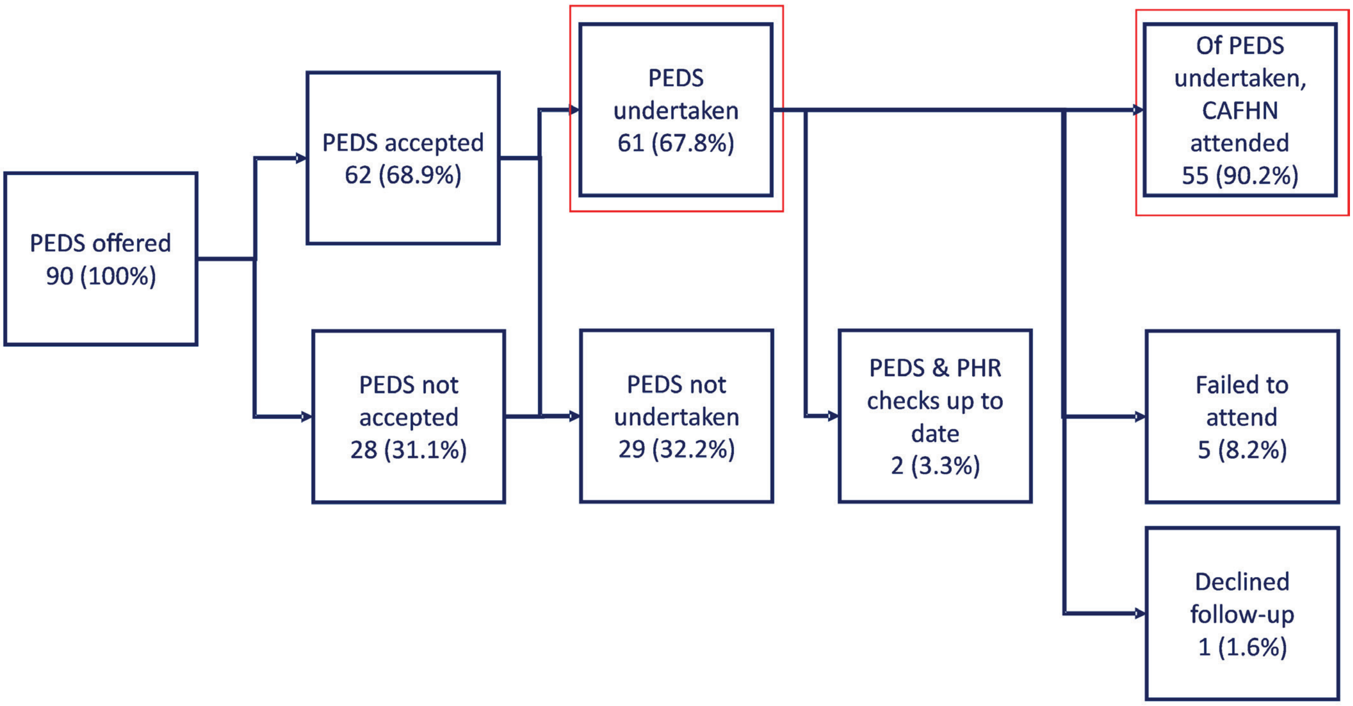


FIGURE 3: ROCKDALE NUMBERS UNDERTAKING PEDS AND REFERRED TO CAFHN

Note: This data was available for Rockdale only and not for the Botany arm.

TABLE 3: CHILDREN IDENTIFIED WITH ONE OR MORE PREDICTIVE CONCERN BY LANGUAGE (ENGLISH/NON-ENGLISH) SPOKEN AT HOME (ROCKDALE)

PEDS Outcome Pathways	English		Other than English		Total
	n	%	n	%	
A – two or more predictive concerns	7	58%	5	42%	12
B – one predictive concern	5	46%	6	54%	11
	12	**52.2%**	**11**	**8.7%**	**23**

TABLE 4: NUMBERS OF CHILDREN PREVIOUSLY KNOWN TO THE CAFHN, WHO RECONNECTED AND WERE IDENTIFIED AS HAVING ONE OR MORE PREDICTIVE CONCERNS (ROCKDALE)

PEDS Outcome Pathways	PHR child development check NOT up to date	PHR child development check up to date
A – two or more predictive concerns	9	1
B – one predictive concern	2	3

PREDICTIVE CONCERNS (ROCKDALE AND BOTANY)

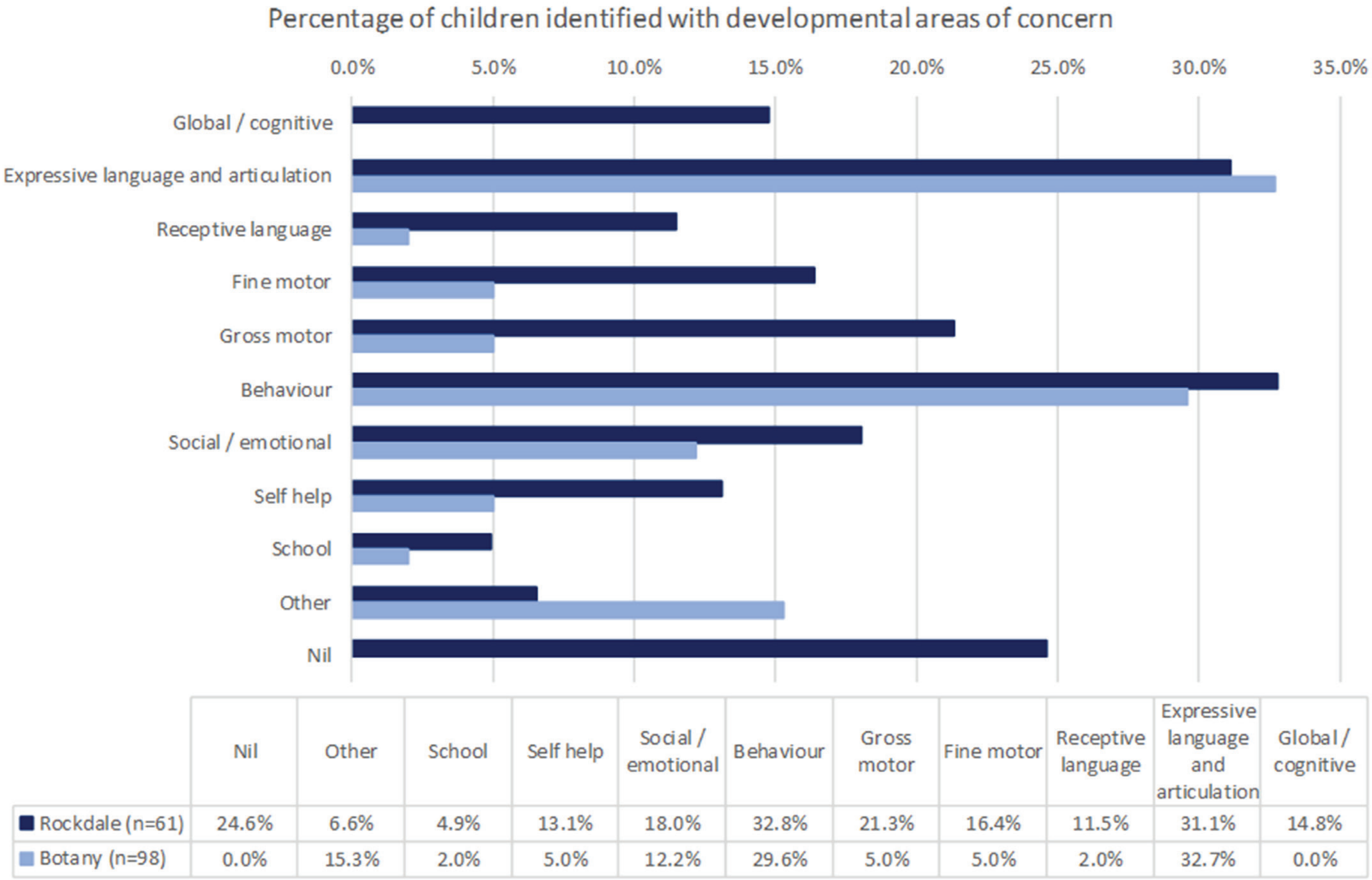
Of the 61 Rockdale families and 98 Botany families who undertook the PEDS, 37.7% and 40.6% were recorded with one or more predictive concerns on the PEDS, indicating developmental vulnerability and requiring further assessment and referral.

The Rockdale project recorded the number of children with predictive concerns identified by the CAFHN, by home language, and the results are shown below for the top language groups.

Children identified as having two or more predictive concerns were more likely to be not up to date with their PHR child development check. Of 10 children identified as having two or more predictive concerns, who were previously known to the CAFHN and had reconnected with the service, nine were not up to date with the PHR child development checks (see below).

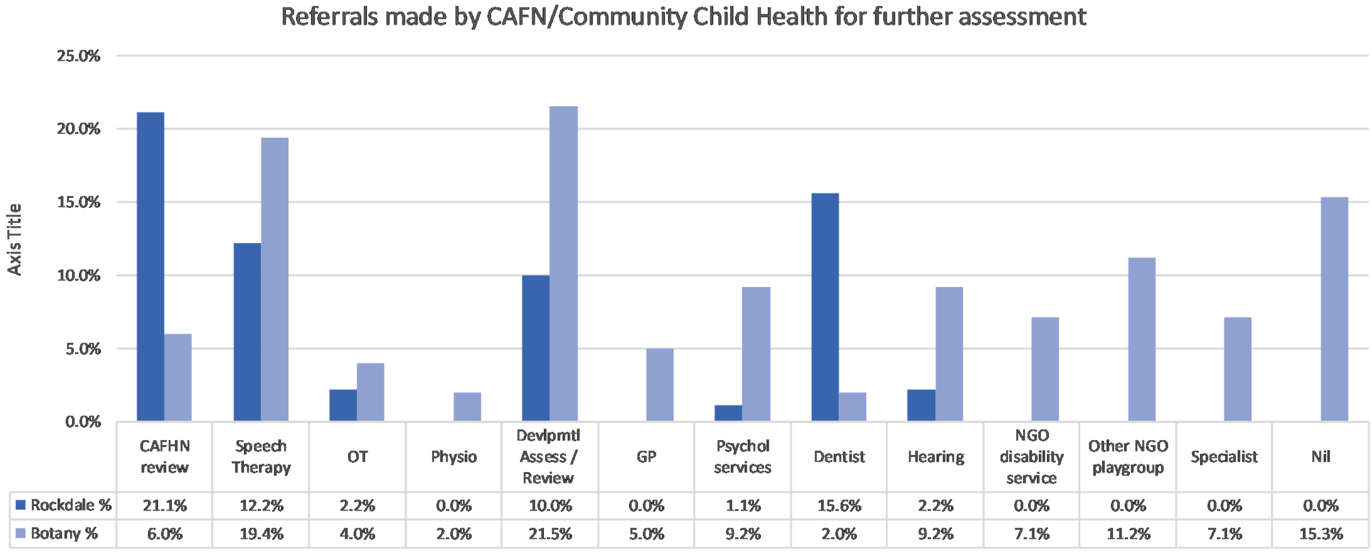
DEVELOPMENTAL AREAS OF CONCERN (ROCKDALE AND BOTANY)

Figure 4 describes the developmental areas of concern identified in assessments. The highest proportion of identified concerns was in expressive language and articulation and in behaviour.



	Nil	Other	School	Self help	Social / emotional	Behaviour	Gross motor	Fine motor	Receptive language	Expressive language and articulation	Global / cognitive
■ Rockdale (n=61)	24.6%	6.6%	4.9%	13.1%	18.0%	32.8%	21.3%	16.4%	11.5%	31.1%	14.8%
■ Botany (n=98)	0.0%	15.3%	2.0%	5.0%	12.2%	29.6%	5.0%	5.0%	2.0%	32.7%	0.0%

FIGURE 4: IDENTIFIED DEVELOPMENTAL AREA OF CONCERN (ROCKDALE AND BOTANY)



	CAFHN review	Speech Therapy	OT	Physio	Devlpmtl Assess / Review	GP	Psychol services	Dentist	Hearing	NGO disability service	Other NGO playgroup	Specialist	Nil
■ Rockdale %	21.1%	12.2%	2.2%	0.0%	10.0%	0.0%	1.1%	15.6%	2.2%	0.0%	0.0%	0.0%	0.0%
■ Botany %	6.0%	19.4%	4.0%	2.0%	21.5%	5.0%	9.2%	2.0%	9.2%	7.1%	11.2%	7.1%	15.3%

FIGURE 5: REFERRALS MADE BY CAFHN/COMMUNITY CHILD HEALTH FOR FURTHER ASSESSMENT (ROCKDALE AND BOTANY)

REFERRALS FOR FURTHER ASSESSMENT (ROCKDALE AND BOTANY)

Referrals were made to a range of child and family services as a result of initial assessment. Figure 5 (below) shows the variation in referrals across the two projects. Both projects had similar rates of referral to Developmental Assessment Services.

More families were referred to speech pathology services from Botany, where a speech pathologist was a member of the project team. A higher proportion of children in Botany were referred for developmental assessment/review, which may reflect the team being led by community paediatricians and community child health doctor in the early stages.

A higher proportion of Rockdale families were referred to dental services, driven by CAFHNs including "Lift the Lip" (oral health check) in their child development check and the health service dental service providing an on-site screening visit.

QUALITATIVE DATA

IMPROVED KNOWLEDGE AND REFERRALS BY NGO PROVIDERS

In questionnaires administered pre and post-training, non-health staff who attended the training reported a gain in knowledge and/or confidence relating to early childhood development and surveillance from 68.4% to 71.4%.

In interview, Developmental Assessment Services (DAS) reported a change in the level of need in referrals they were receiving, as well as a perceived increase in the range of families from CALD backgrounds being referred for further assessment.

INCREASED FAMILY COMFORT WITH AND ACCESS TO CAFHN

Focus groups with families in Rockdale and Botany revealed that few of the participants distinguished between the services provided by the on-site CAFHN and accessed through the supported playgroup, and the activities provided in the supported playgroup itself. This was particularly noticeable in the English-speaking focus group where questions regarding CAFHNs were answered in terms of the parents' overall experience with the supported playgroup that they attended.

> *"…all of us different cultures, different kind of things here, so we don't know what to do. So at least if we have professional help, it will make – leave us in peace."*
> Parent from English-speaking group

Where parents in focus groups differentiated between services provided by the playgroup and those provided by the CAFHN, they described the support they received from CAFHNs as including advice about eating and sleeping, establishing routines, dental care and tips for playing with children.

> *"It was good. It was good. She's the one who told me that just, like, she said, she's the one who told me that I need to brush his teeth, because I thought, we should have started brushing his teeth at around two or something, because I just usually use my hand, but then, now we starting to brush his teeth…"*
> Parent from English-speaking group

> *"Child and Family Health Nurses give tips during consultations; give us helpful tips and guide us in case we are ignorant about certain things and so on. Therefore, it is good to discuss with Child and Family Health Nurses as we get guidance from them to teach our children as they are experienced and have qualifications."*
> Parent/Grandparent from Nepali-speaking group

The regular contact with early childhood health professionals was viewed by health service early childhood health professionals, participating CAFHNs, and NGO services as a strong enabler in encouraging parents to follow up referrals and remain engaged.

> *"…it has been really good to be able to say this is a person you might need for your process of assessment. So… really having that soft entry point has been most helpful."*
> Botany Early Childhood Service Provider

A TEAM-BASED APPROACH

Several participants from NGO services emphasised the importance of supporting families to follow through on referrals and attend assessments. They saw the projects as a team effort, with each agency involved providing a specific element of the overall project. In both Botany and Rockdale, interviewees commented on the value they gained from the ongoing relationship with child and family health services and CAFHNs. They reported increased confidence that their opinions were respected and families seen in a timely manner. Similarly, health professionals, including CAFHNs, commented on the importance of engaging with NGO early childhood/family support services and building good relationships.

> *"I think it's the personal contact, I think it's knowing the people. Them knowing us and us knowing them, I really think that makes a big difference that people know who you are."*
> SESLHD Health Professional

DISCUSSION

This is the first study to examine models of care which specifically address access for culturally diverse and socioeconomically disadvantaged communities to early childhood developmental surveillance and CAFHNs by partnering with community organisations. Consistent with the emerging evidence on these models we found that these outreach models are more effective in engaging families of low socioeconomic background in participating in developmental screening, with earlier detection of neurodevelopmental vulnerabilities.[10,11]

A key component contributing to the model's success is training of non-government organisation staff in early childhood development. Understanding developmental risk and the steps that can be taken to address this has helped staff in the participating NGO services to identify children who will benefit from further screening, and to more effectively use the existing universal developmental surveillance provided through early childhood health services. Although NGO staff generally reported a good baseline knowledge of child development prior to training, their reported confidence in being able to apply this knowledge when talking with families about early childhood development and concerns improved following the training.

A similar result was found in Victoria, Australia, where The Wodonga Early Years' Service Coordination Framework tested the PEDS with childcare workers, pre-school teachers and primary school teachers, as well as child and maternal health services. The PEDS was reportedly easy to use across these different service providers and was also well-received by parents. There was increased capacity for early childhood service/education providers and child and maternal health services to appropriately refer.[10]

In terms of the significance for nursing, this study has demonstrated the utility of a model of developmental surveillance and entry into the child and family health system in a non-health setting.

Co-location of a CAFHN on-site at the Rockdale NGO service was recognised as an enabling factor in parents attending initial assessments and further developmental assessments if required. CAFHNs noted the ability to observe children and families in the supported playgroup as of added value in the assessment process.

In this study, by having regular contact with a CAFHN in a safe, supportive and familiar environment, families who might otherwise not attend child and family health clinics were introduced to CAFHNs, developmental surveillance activities and provided with ongoing support if developmental vulnerabilities were identified.

Consistent with previous literature we demonstrated that those children who are most likely to be developmentally vulnerable were the least likely to have had developmental surveillance done in their health checks.[5,12] In our study, we also found that children identified with one or more predictive concerns were less likely to be up to date with their child health checks. In other words, our new model of care has found children who might not have been identified as having a developmental concern until they were attending primary school, and ensured that they are linked into essential early intervention.

CONCLUSION

The Botany and Rockdale models of care have demonstrated the potential for improving access to CAFHNs and other early childhood developmental health services, developmental surveillance, detection of developmental concerns and early intervention for children from culturally and linguistically diverse backgrounds. We have shown that child health services and CAFHN services can change their practice, can successfully provide developmental surveillance in locations apart from child and family health centres, and can work in collaboration with the NGO sector. Our next steps are to scale up these models across multiple sites and with different priority populations.

Acknowledgements

The authors would like to thank the parents and grandparents who generously shared their time and experiences with the project. We would also like to acknowledge the CAFHNs who worked on this project and embraced a new model of working with their vulnerable clients and the non-government services who willingly adapted their services and venues to accommodate these models of care.

Conflict of interest

K Edwards was contracted to undertake the independent evaluation of the project, on which this article is based.

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1) 20172018 Sydney Children's Hospital Foundation – Early Childhood Development – Getting it Right, Getting in Early
2) 20172018 NH&MRC Advanced Health Research and Translation Centre, SPHERE Improving access to developmental surveillance, Early Life Determinants of Health (ELDoH): Invest Early To Make a Difference

Author contributions

SW TR DP RS and LS contributed to the design of the study. RF, KE, TR and SW undertook the analysis. All authors contributed to the writing of this article. Primary author was KE and senior author SW.

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REVIEWS & DISCUSSION PAPERS

Implications for bachelor of nursing programs when using student experience survey findings as an indicator of course quality

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ABSTRACT

Objective: To discuss the implications of using student experience surveys to improve the quality of teaching and learning within bachelor of nursing programs in Australia.

Background: Australia's recent independent review of nursing education suggests that not all graduates are sufficiently prepared for their registered nurse role, indicating problems with program quality. Student experience surveys are widely used in course development processes.

Discussion: A reliance on student experience survey findings for course development may contribute to course changes based on student satisfaction that place overall graduate capability at risk. Because student experience surveys have design limitations, satisfaction only partially aligns with learning and learning outcomes, and students' subjective beliefs about self, nursing and learning potentially influence their survey responses, the exclusive use of student experience surveys in course development and teacher evaluations is contested.

Conclusion: Using student experience survey findings as an indicator of course quality has unacknowledged implications for bachelor of nursing programs. Findings from student experience surveys should be situated within a context of other elements or factors when making curriculum decisions. Teacher and course evaluations based primarily on student satisfaction can have unintended consequences for course content, course delivery, student learning and learning outcomes and ultimately impact on the reputation of the university.

What is already known about the topic?

- Student experience surveys are used widely in higher education in Australia.
- Universities monitor student satisfaction as an indicator of course quality through student experience surveys.

What this paper adds:

- The relationship between the characteristics of course quality and student satisfaction require further exploration in practice-focused programs such as nursing.

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- The governance of course quality using student experience as a primary indicator may unintentionally limit course development, catering to student preferences rather than focusing on learning experiences that are required for graduate capability.

Keywords: student experience, satisfaction, nursing, course evaluation

INTRODUCTION

Graduates of bachelor of nursing programs must be able to meet the complex healthcare needs of a diverse and ageing population. A recent review into nurse education in Australia suggested that there was a belief amongst stakeholders that not all graduates are adequately prepared for a registered nurse role, recommending the development of external mechanisms to manage this issue.[1] However, issues relating to the quality of nursing graduates can, and should, be addressed within bachelor of nursing programs.

While focused on quality graduates, Australian universities are interested in high student enrolments and associated revenue. As such, satisfied students, including nursing students, are important. In a competitive higher education environment, universities rely on students reporting positively on their educational experiences to enhance the reputation of each institution and to attract both local and international students.[2,3] Further, with government funding linked to student enrolments, attracting future students is critical for university survival.[4] Understanding students' satisfaction with their teachers and courses is important to enhance university business.

In writing this article, the authors intend to provoke debate around the dominant use of student satisfaction as the indicator of quality in bachelor of nursing programs. A post-structural approach was adopted to explore the unintended effects of student satisfaction as a primary indicator of bachelor of nursing program teaching and learning quality.[5] A post-structural perspective challenges knowledge as absolute and focuses on re-thinking dominant discourses.[6] In this case, the privileging of student satisfaction within the discourse of program quality.

STUDENT EXPERIENCE SURVEYS IN AUSTRALIAN HIGHER EDUCATION

Student experience surveys enable universities to acquire information on student satisfaction. 'Student satisfaction refers to the favourability of a student's subjective evaluation'[7(p.3545)] in relation to their higher education experience overall or to components of the degree. While the terms 'course' and 'program' and 'course' and 'subject' or 'unit' may be used interchangeably,[8] for the purpose of this paper the Australian Nursing and Midwifery Accreditation Council (ANMAC)[9] approved terminology will be used. A 'program' refers to the degree in its entirety and 'courses' refer to components of a program.[9] Courses are embedded within programs.

Three main student experience surveys are used in Australian universities: Student Experience Survey, the Course Experience Questionnaire (part of the Graduate Outcomes Survey) and internally administered student experience surveys.[10] Each of these surveys will be discussed next.

STUDENT EXPERIENCE SURVEY

The Student Experience Survey is a national survey of all university undergraduate programs and is conducted annually. It assesses students' satisfaction with the overall quality of the educational experience, teaching quality, learner engagement, learning resources, student support and skills development, using Likert scales. All students in all programs in all universities respond to identical survey items. The percentage of students providing positive feedback is reported on the national Quality Indicators of Learning and Teaching website.The results, in the form of a star system, are also used to rank universities in the Good Universities Guide. A high star ranking is considered desirable for attracting future students and as a quality education indicator.[11]

COURSE EXPERIENCE QUESTIONNAIRE

The Australian government also promote the Course Experience Questionnaire, which is a measure of student satisfaction with the overall program. It is circulated to all recent university graduates, noting that not all graduates complete the survey. The Course Experience Questionnaire includes one question on overall satisfaction with their program, six questions on teaching, and five questions on generic skills.[11]

INTERNALLY ADMINISTERED STUDENT EXPERIENCE SURVEYS

Australian universities commonly use internal survey tools to measure the students experiences of teaching and courses although how this is done varies across institutions.[10] Instruments consist of mandatory fixed questions, which are the same across the institution; and open-ended questions to identify what works well and what could be improved. Some institutions enable academics to select optional additional items from a database.

Internal student experience surveys are commonly administered centrally, with data provided to academic staff following the assessment period in each semester. These instruments are invariably used for routine evaluation to assure the University and Program Director that the course is contributing to learning in the program as intended, to encourage academic staff to engage in scholarship of teaching through reflection on feedback, to link student feedback to academic staff promotion, and provide a mechanism for students to provide input into quality of teaching and learning.

DISCUSSION

In addition to established concerns about adequate sample size to reduce response bias,[12] student experience surveys have other limitations. Three limitations are identified: student experience surveys may not be fit for purpose; alignment between student satisfaction and learning is partial; and student satisfaction is influenced by personal beliefs and values. Due to the limitations of student experience surveys, when academic staff make changes to their courses based on survey results, there may be unintended consequences for student learning.

STUDENT EXPERIENCE SURVEYS MAY NOT BE FIT FOR PURPOSE

Student experience surveys were designed to gauge student perspectives of the educational environment at the program level.[2] However, core questions from national surveys are used for internal surveys.[10] While in some universities academics may be able to add additional questions, the core questions may not be relevant to unique disciplinary course requirements.

Generic measures tend not to capture student experiences achieved in non-university, ie. workplace, settings. The assumption inherent in student experience surveys is that students learn predominantly in the university environment.[13] Bachelor of nursing programs require students to learn in both the university and the nursing workplace with students spending at least 800 hours in a variety of healthcare settings.[14] Health settings are varied and include, but are not limited to, hospitals, rural and remote clinics and community settings.[14] Different measures for nursing student experience on work-based placement exist,[15] but are not automatically included in centrally managed surveys. How nursing students' placement experiences impact on their responses to internal university and national surveys is unknown, suggesting an area for future research.

In summary, nursing is a practice-based program, with placement experiences constituting a large part of the program. The usefulness of the findings of student experience surveys for nursing courses is dependent on nursing students' perceiving the survey as relevant to their learning. The standard surveys are not fit for purpose. Even if the lecturer is able to selects additional questions on workplace experiences from a databank, the survey findings may not accurately indicate the alignment between the course and program expectations and outcomes. It is timely for nurse academic leaders to partner with education leaders to develop student experience surveys that are more sophisticated and able to capture students' placement as well as classroom experiences.

ALIGNMENT BETWEEN STUDENT SATISFACTION AND LEARNING IS PARTIAL

There is partial alignment between student satisfaction and learning, with potential implications for nursing student graduate outcomes. Learning requires student engagement, often through emotions such as excitement and high interest or frustration and difficulty, with 'disorienting dilemmas' considered important to facilitate learning.[16] Negative feelings of frustration may facilitate learning but translate to students' feeling unsatisfied in surveys. If effective learning requires a degree of psychological discomfort, then some degree of dissatisfaction may be necessary for learning to be effective.[17]

In the example of bioscience, a systematic review of interventions to improve learning found that the focus on student satisfaction with supportive learning interventions was inadequate and recommend refocusing evaluation on acquisition of bioscience knowledge and understanding at graduation.[18] In an in-depth study of nursing students' learning experiences, students indicated that course content, which is perceived as complex, such as bioscience, may result in dissatisfaction with their learning.[17] Dissatisfaction on surveys may indicate that students find the content complex, rather than accurately reflect their learning.

Satisfaction may also be low when nursing students perceive content to be less relevant. A systematic review of pedagogical strategies to teach nursing students evidence-based practice found that those students who had difficulty understanding the relationship between research findings and nursing practice may indicate dissatisfaction with research courses.[19] Students may fail to understand how certain knowledge will assist them in their future role as a registered nurse and become dissatisfied with their learning.[17] Students must gain knowledge of both research and other areas fundamental to nursing if they are to be prepared for their future role as a registered nurse,[14] but may not realise the value of learning complex knowledge and skills until later in the program or after they graduate.

Personal perceptions of satisfaction with learning may not align with external assessments of performance. In an evaluation of a nursing communication skills training course, researchers found that self-rated ability and satisfaction were linked, but that neither was linked to objective assessment by an educator.[20] Nursing students who were most satisfied tended to rate their communication skills more highly, but on objective assessment were found to perform no better than students who rated their communication skills lower.[20] Therefore, the alignment between student satisfaction and learning is partial at best.

In summary student satisfaction with their experiences may only be partially aligned with student learning. Where evidence-based teaching and learning strategies lead to students learning complex content or material that is not perceived as relevant, this learning may reflect negatively in teaching or course experience scores.

As indicated earlier, one purpose of conducting internal university experience surveys for teaching and courses is to engage staff in the scholarship of teaching, providing material for reflection and course development. When student satisfaction does not align fully with learning, the risk of making changes to teaching strategies and course content based on survey results only may lead to unintended consequences for the curriculum and graduate outcomes. Generic academic skills courses for new nurse academics should address the social and political practice, as well as pedagogical, elements of curriculum design in higher education. While a scholarship of teaching exists in universities, the unique elements in nursing programs require academic nurses to be critical of the alignment of student experience surveys and learning. There is no national community of nurse academics, where new academic nurses can enter into scholarly debate about the merits of student experience surveys and other higher education policies.

STUDENT SATISFACTION IS AFFECTED BY PERSONAL BELIEFS AND VALUES

Satisfaction is a highly subjective concept, and therefore influenced by factors unique to each individual. As student diversity increases,[21] their personal backgrounds and expectations about nursing and nursing knowledge will impact how they experience satisfaction with the program.

In a grounded theory study of nursing students' satisfaction with learning, learning was conceptualised as a journey, where student satisfaction was not stable or directly related to a teaching strategy or course.[17] Rather, satisfaction ebbed and flowed, with intense emotional experiences of joy, irritation, fear and hope.[17] Through each student's unique nursing journey, their experiences of satisfaction, dissatisfaction or ambivalence with learning were also unique.[17] Factors that may influence student satisfaction include available time to study, in the context of work-life balance and personal beliefs about historical models of nursing education.[17]

Nursing students who need to work while studying may be less satisfied with their learning experience. For example, in a study of student learning in the workplace, researchers found that nursing students who worked more than 16 hours per week were less satisfied with their placement than students who worked less.[22] While satisfaction with placement may be negatively affected by working, it is not clear whether students learned valued knowledge, understanding and skills while on these placements. Further research into the relationship between personal characteristics, such as the need to work, satisfaction, and learning are required.

Student satisfaction may be influenced by personal beliefs about the kind of nurse they want to be.[17] In Australia, nursing continues to be conceptualised in the traditional way, as a practical profession, where nursing education privileges 'the pragmatic over the esoteric, the practical over the theoretical and character over intellect'.[23[p115]] However, in today's climate of continuous change and development, graduates are expected to be flexible, responsive and innovative in response to changing community need.[14] Students who expect pragmatic, may be dissatisfied with esoteric, and this may be reflected negatively in experience surveys.

In summary, students' personal situation, life experience, beliefs and expectations influence their satisfaction with learning. With an increasingly diverse student population, nursing academics seeking career promotion are expected to design multiple teaching strategies to support students' diverse situations and learning preferences, while at the same time trying to pursue their own research. For academic staff, the challenge of balancing the triumvirate of teaching, research, and service in order to progress their careers, can be overwhelming.[24]

IMPLICATIONS FOR TEACHING AND LEARNING IN BACHELOR OF NURSING PROGRAMS

While nationally administered surveys for student and course experience are recognised as important for benchmarking the higher education sector, internally administered student experience surveys have implications for teaching and learning in bachelor of nursing programs. Providing students an opportunity to provide input into the quality of teaching and learning is laudable but carries inherent, and implicit risks. Surveys not being fit for purpose, partial alignment between student satisfaction and learning, and the impact of personal beliefs and values on satisfaction raise implications for teaching and learning.

Generic survey questions in internal surveys are not fit for purpose when used within courses. Rather, the inclusion of these questions is to align teacher practice with the university goal of higher student satisfaction scores. When using questions based on the Course Experience Questionnaire as the fixed questions in the internal surveys, alignment is achieved. When student satisfaction at course level is low, academic staff and their managers become focused on how to address the low scores. The implication for curriculum design is that academic staff may undertake course re-design to enhance appeal of the courses for future students. However, making the course appealing and improving learning may not be the same. Further investigation into how academic staff use internal survey findings in curriculum design is required.

While it is widely accepted that student satisfaction can indicate learning, the alignment is partial rather than complete. Focusing on evidence-based teaching when students may be more satisfied with less challenging approaches to learning can pose dilemmas for staff aiming to improve student satisfaction. Higher education experts suggest that satisfaction surveys have placed pressure on academics to gain high ratings but without necessarily focusing on doing so by increasing teaching standards, assessment and learning outcomes.[10] Avoiding these negative consequences of student satisfaction surveys can result in nurse academics continuing with traditional teaching approaches and avoiding innovative ones.[25]

In addition to the partial alignment between student satisfaction and learning, there is widespread evidence of low response rates to surveys, with associated bias.[12] Given these examples, and their implications for learning, we suggest that nurse academics and university management should ensure that student satisfaction data is used in combination with other evidentiary sources such as student grades, engagement in course related learning activities, and performance in work-based experiences.

Students are diverse in their backgrounds, experiences, beliefs, values and expectations, and as such will have unique experiences of satisfaction. However, nurse academics are held to account for student satisfaction. Evidence of positive student attitudes and satisfaction are often required for staff promotions, awards, performance review and contract renewal.[10,25] Therefore, in order to remain employed, or progress their careers, staff are highly motivated to ensure students are satisfied with their educational experience.

Retaining courses, or course content, in the curriculum where students have indicated low satisfaction can pose a dilemma to staff interested in enhancing student satisfaction. It might enhance student satisfaction, and therefore more positive responses to surveys, if course content that students perceived as less important was reduced or removed from the curriculum. For example, how to manage low satisfaction scores on more problematic courses, such as complex courses in bioscience and or esoteric nursing research/evidence-based practice theory. In this situation, there is conflict between an action that may enhance student satisfaction, i.e. remove courses with low satisfaction, and one that might enhance learning, and ultimately nursing practice following graduation, i.e. keep the course despite low satisfaction scores. Rather than removing the course, nurse academics may benefit from collaborative reflection with more experienced academic mentors,[24] in order to identify changes that can leave the overall curriculum intact.

Enabling students with complex lives and multiple personal commitments to acquire sufficient learning to provide effective nursing care on graduation while also ensuring they respond positively to student satisfaction surveys has implications for teaching and learning. Any expressed dissatisfaction is potentially problematic for nurse academics when it impacts on their career opportunities and progression. Balancing the need for students to be satisfied with their education and learn what is required for nursing practice provides nurse academics with serious challenges in the current higher education environment.

CONCLUSION

In preparing this argument for collegial consideration, we have aimed to be provocative, providing an alternative discourse for the use of student experience questionnaires in course development. The quality of nursing graduates is dependent on the quality of the course and how that quality is determined requires continual review. This argument is inductive in nature, reflecting the purpose of providing an alternative discourse. As an inductive argument, it can be considered an educated opinion piece, which adds to the rich discourse of course development in nursing education.

Using examples from nursing literature, we argue that using student experience surveys in undergraduate nursing programs may result in unintended outcomes for learning with unanticipated consequences for employers of nursing graduates and consumers of care. Graduates of bachelor of nursing programs are not simply consuming a program of education, they are preparing themselves for practice as a registered nurse. The current use of student satisfaction as an indicator of course quality is not producing graduates that are meeting industry requirements.[1] While the transfer of nursing education into the higher education sector was widely supported by nursing's professional bodies, it is timely for the profession's leaders to review the use of student satisfaction in course quality and find innovative ways to support nurses who are also academics – a specialty of its own.

RECOMMENDATIONS

In light of the discussion above, we recommend the following actions be implemented to address the use of generic internally administered student experience surveys for courses within a bachelor of nursing:

1. Australian Nursing and Midwifery Federation could explore a partnership with the National Tertiary Education Union so that the implications of university policy on nurse and midwifery curricula can be more specifically addressed.

2 Deans of Nursing and Midwifery could consider how to manage student satisfaction related tensions between studying in an academic context while maintaining a program that requires placement in healthcare services to enhance learning and graduate outcomes.

3 Generic academic skills courses provided for nurses who are new to the academy must address the socio-political, as well as pedagogical, elements of curriculum design and development in order to critically evaluate higher education policy.

4 Australian College of Nursing could develop an academic nurse interest group, where nurse academics can develop collegial relationships, undertake collaborative research into educational practices and policies, and enter into scholarly debate about the merits of higher education policies, such as student experience surveys.

5 Further research into the value of generic student surveys within the broader context of a capable nursing graduate is required.

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REVIEWS & DISCUSSION PAPERS

The importance and value of reporting guidance for scoping reviews: A rehabilitation science example

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ABSTRACT

Objective: Scoping reviews use a systematic approach to synthesize a body of knowledge. The use of scoping review methodology is increasingly common. Despite recommendations to guide the conduct of scoping reviews, inconsistencies exist with regards to their methodology and reporting. In this case-study, we reflect on our experience using the PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation to improve reporting for a scoping review we initially conducted prior to the release of the PRISMA-ScR reporting guidelines.

Study Design and Methods: We evaluated the scoping review against 22 criteria included in the PRISMA-ScR. For each criterion, we provided a rating representing the degree to which we felt the scoping review met the individual criterion in the PRISMA-ScR. We also provided comments to substantiate our ratings, along with recommended revisions for the scoping review and considerations for future scoping reviews.

Results: We identified a number of strengths in the initial reporting of our scoping review , as well as opportunities for improvement. The most substantial areas for improvement included the protocol registration, data items and data charting process. Based on our evaluation, we made revisions to the scoping review manuscript to improve our reporting.

Conclusion: Our evaluation helps to highlight the value of using reporting guidelines to improve reporting of scoping reviews, while also exposing several challenges. In future, we recommend consulting the guidelines during the initial preparation of the scoping review manuscript rather than retrospectively.

What is already known about the topic?

- The use of scoping review methodology is becoming increasingly common.
- While recommendations to guide the conduct of scoping reviews have been published, inconsistencies exist in both scoping review methodology and reporting.

What this paper adds:

- Despite some challenges, we found the PRISMA-ScR to be an effective tool to guide a structured reflection on our scoping review reporting.
- We encourage authors completing scoping reviews to make use of the PRISMA-ScR to guide their own scoping review reporting.

Keywords: Rehabilitation Research; Interdisciplinary Research; Research Design

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OBJECTIVE

In this case study we reflect on our experience using scoping review guidelines – at the time recently published – to improve reporting for a completed but unpublished scoping review we had conducted. Specifically, we outline the process used to objectively evaluate our scoping review reporting using the PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation, share improvements that resulted from this process, and comment on our PRISMA-ScR user experience. In doing so, we highlight the value of using these reporting guidelines to improve reporting consistency for scoping reviews, while also exposing several potential challenges.

BACKGROUND

Scoping reviews use a systematic approach to synthesise a body of knowledge. Scoping review methodology lends itself to exploring the extent and nature of research in a given area, establishing the need for a systematic review, providing a means of summarizing and disseminating a range of research findings, and identifying gaps in knowledge.[1] Within the past decade, there has been a rapid increase in the number of scoping reviews being conducted.[2]

Our scoping review, focusing on competence assessment for airway suctioning, was initially guided by Arksey and O'Malley's seminal framework for the conduct of scoping reviews, and incorporated additional recommendations proposed by Levac et al.[1,3] Airway suctioning is one technique used by nurses and other health care professionals to remove retained pulmonary secretions. While it can be a necessary element of patient care, caution must be used when performing this technique to avoid causing harm.[4] In our scoping review, we examined the nature and extent of research on the assessment of clinical competence for health care professionals who perform airway suctioning in adults.[5] We specifically selected a scoping review methodology given the broad nature of the review, the lack of previous reviews in this area, and the expected methodological variability across relevant studies.[6]

Despite published recommendations to guide the conduct of scoping reviews,[1,3,6] inconsistencies have been reported with regards to both scoping review methodology and reporting.[2,7] The 2009 PRISMA statement provides a detailed checklist of items to include for the reporting of systematic reviews and meta-analyses.[8] When we first conducted our scoping review in early 2018, similar guidelines for scoping reviews were not yet available. However, shortly after preparing a copy of our scoping review manuscript, but prior to its submission to a journal, the PRISMA-ScR was published.[9] Included in the 27-item PRISMA-ScR are 20 essential items for reporting on scoping reviews and two optional items; the remaining five items are from the original PRISMA checklist and are not applicable to scoping reviews. In the interest of striving to improve reporting in our own scoping review, we took the opportunity to use the newly published reporting guidelines as a tool to guide a structured reflection on our work, and have documented this process.

METHOD

An objective evaluation of our scoping review was conducted against the 22 relevant criteria included in the PRISMA-ScR. For the evaluation, we used a version of the manuscript we had prepared for submission to a peer-reviewed journal. For each item, we provided a rating representing the degree to which we felt our scoping review met that individual criterion. To do this, the lead scoping review author (EM) considered each of the criteria in the reporting guidance against the reporting in our review. The assigned score for each item ranged from 1 to 5, with 1 representing poor alignment with an individual criterion and 5 representing excellent alignment. In addition, author EM provided comments to substantiate each rating, along with recommended revisions to improve the consistency of our reporting. The draft ratings, comments and recommendations were presented to an interdisciplinary group of health care professionals as part of the oral defense for a doctoral level comprehensive exam. This interdisciplinary group included two physical therapists, one nurse and one occupational therapist, all of who hold university level faculty appointments and had experience in the conduct of scoping reviews. Two members of the group had been involved in conducting the original scoping review, while two had not. All group members had the opportunity to review the proposed ratings, comments and recommendations in detail, pose questions, provide feedback and voice concerns or disagreements. After making minor modifications to the recommendations, the group achieved general agreement. Based on our findings from this evaluation, we revised our scoping review manuscript prior to submitting it for publication in a peer-reviewed journal.

RESULTS OF OUR EVALUATION

We identified ten items with opportunity for improvement (i.e. that were assigned a rating less than 5/5). Of these items, five were assigned a rating of 4/5, two were assigned a rating of 3/5, two were assigned a rating of 2/5 and one was assigned a rating of 1/5. Eleven out of the 12 remaining items were found to be in excellent alignment with criteria detailed in the PRISMA-ScR and were assigned a rating of 5/5. The exception was item #19: *Critical appraisal of sources of evidence (results)*; this is an optional item that was not applicable to our scoping review. Based on our evaluation, we identified nine recommended revisions to our scoping review, as well as several considerations for future scoping reviews. Our evaluation is summarized in Table 1.

TABLE 1: ALIGNMENT OF OUR SCOPING REVIEW WITH ITEMS FROM THE PRISMA-SCR

	Item	Rating	Comments
TITLE			
1	Title	3/5	We identified the report as a scoping review in the title and described the concept but the population and context of interest were missing. **Recommended revision:** Revise the title to reflect the population (health care professionals who perform airway suctioning) and context (suctioning performed with adults). Revised title: *Assessing the clinical competence of health care professionals who perform airway suctioning with adults: A scoping review.** *Note: The final manuscript title was further revised at the request of the publishing journal and differs slightly from the title included here.
ABSTRACT			
2	Structured summary	4/5	We provided a comprehensive abstract but the date of the literature search was missing from the abstract. **Recommend revision:** Add the date of the literature search (March, 2018) to the abstract.
INTRODUCTION			
3	Rationale	5/5	We provided a thorough rationale for the review, as well as the reason the research objectives lent themselves to a scoping review approach (i.e. lack of previous comprehensive reviews conducted in this area and anticipated heterogeneous nature of the evidence).
4	Objectives	5/5	We included an explicit statement about the objectives and questions being addressed, with reference to key elements (population, concept and context).
METHODS			
5	Protocol and registration	2/5	We developed a protocol a priori, but the protocol was not registered and we did not provide details about how to access it. **Recommended revision:** Add a statement indicating the protocol is available upon request from the corresponding author. Consider options for registering future protocols.
6	Eligibility criteria	5/5	We clearly stated the eligibility criteria and provided a rationale for these criteria.
7	Information sources	4/5	We described sources of information in detail. We provided a search date for the scientific database search but not for the gray literature search. **Recommended revision:** Add the date for the gray literature search.
8	Search	4/5	We presented the full electronic search strategy for at least 1 database (presented in sufficient detail to be reproducible) and provided a detailed account of our gray literature search. We explicitly stated the role of the librarian in developing and refining the search strategy; however, we did not explicitly state who performed the search. **Recommended revision:** Explicitly state that the lead author (EM) performed the search.
9	Selection of sources of evidence	4/5	We explained the process for selecting sources of evidence but did not specify the software used for screening. **Recommended revision:** Add a statement indicating that the online software Covidence was used for screening.
10	Data charting process	2/5	We stated that a data extraction form created by the authors was used and that it was piloted/calibrated. We lacked detail in our description of the process and did not specify what software was used or who completed the final data extraction. **Recommended revision:** Add that Excel was used for data extraction. Two authors (EM and LB) independently extracted data from the first 5 included studies and compared the results for accuracy. The primary author (EM) then completed the final data extraction.
11	Data items	1/5	We did not list the variables for which data were sought. **Recommended revision**: List and define the variables for which data were sought.
12	Critical appraisal of individual sources of evidence (optional)	5/5	We included a rationale for why this was not done in our scoping review.
13	Summary measures	N/A	---
14	Synthesis of results	4/5	We clearly explained the method of handling and summarizing the charted data; however, it would be beneficial to provide additional detail regarding the process used for qualitative content analysis. **Recommended revision:** Provide a more detailed description regarding the process used for qualitative content analysis.
15	Risk of bias across studies	N/A	---
16	Additional analyses	N/A	---

TABLE 1: ALIGNMENT OF OUR SCOPING REVIEW WITH ITEMS FROM THE PRISMA-SCR (continued)

	Item	Rating	Comments
RESULTS			
17	Selection of sources of evidence	5/5	We stated the number of sources of evidence screened, assessed for eligibility and included in the review with reasons for exclusions at each state presented using a flow diagram.
18	Characteristics of sources of evidence	5/5	We provided a descriptive summary (table format) and citations for all included studies.
19	Critical appraisal of sources of evidence (optional)	N/A	---
20	Results of individual sources of evidence	5/5	We summarized the results of the individual sources of evidence using a table, as well as in the written results section of the scoping review under the heading *Descriptive summary.*
21	Synthesis of results	5/5	We included the figure *A Map of Elements Commonly Included in the Assessment of Knowledge, Skills and Judgement Related to Suctioning,* as well as presenting a written summary of results related to each of the three themes that emerged.
22	Risk of bias across studies	N/A	---
23	Additional analysis	N/A	---
DISCUSSION			
24	Summary of evidence	5/5	We summarized the main results and discussed the implications, linking back to the main objective and questions.
25	Limitations	5/5	We discussed the limitations of our scoping review in detail.
26	Conclusions	5/5	We provided a general interpretation of results with respect to objective and questions. We also discussed potential implications and next steps.
FUNDING			
27	Funding	3/5	We listed the sources of funding for our scoping review. We did not extract data or report on the sources of funding for the included studies. **Recommended revision:** No revision to the current scoping review. Consider capturing this data for future scoping reviews.

DISCUSSION

Using a retrospective reflective approach guided by the PRISMA-ScR, we identified a number of strengths in our scoping review reporting, as well as multiple opportunities for improvement. In our discussion, we elaborate on these opportunities for improvement and reflect on our PRISMA-ScR user experience.

OPPORTUNITIES FOR IMPROVEMENT

We initially titled our scoping review manuscript *Assessing competence for airway suctioning: A scoping review.* This title identified our manuscript as a scoping review and included the concept of interest (i.e. the assessment of competence for airway suctioning), but the population (i.e. health care professionals who perform airway suctioning) and context of interest (i.e. airway suctioning performed in adult populations) were not clearly articulated. The concept, population and context of interest serve as the basis for developing the inclusion and exclusion criteria in a scoping review and should be stated concisely in the title.[6] Following our guided reflection, we revised the scoping review manuscript title to include these important descriptive elements. The final manuscript title was then further revised at the request of the publishing journal. The published title *Assessing the clinical competence of health care professionals who perform airway suctioning in adults* does not identify the article as a scoping review. This negatively impacts the quality of our scoping review reporting and in retrospect was a missed opportunity for us to engage in further dialogue with the publishing journal advocating for the consistent application of scoping review reporting guidelines.

Our evaluation also identified several other essential details that were missing from the scoping review. For example, while we provided a comprehensive abstract for our scoping review, we failed to include the date of the literature search within the abstract. We also neglected to include the date of our gray literature search in the body of the manuscript. These methodological details were subsequently added in order to facilitate the reader's ability to assess the extent to which the scoping review is up-to-date.[9]

One of the most substantial areas for improvement that we identified concerned our scoping review protocol and registration. Publishing a systematic review protocol can improve methodological transparency and reduce the unintended duplication of a review.[10] In planning our scoping review, we developed a detailed protocol a priori.

We initially intended to register this protocol, but struggled to find an appropriate platform to do so. In the end, we proceeded having neither published nor made the protocol publicly available. In our manuscript we made reference to our protocol but did not provide direction on how to access it. To better align with the PRISMA-ScR, we revised our manuscript to include an explicit statement that the protocol would be provided upon request from the corresponding author. This strategy was able to partially mitigate the issues we identified concerning our protocol. However, in the interest of promoting greater transparency and rigor in the conduct of scoping reviews, in future we would endorse a more proactive approach to register or disseminate the protocol in advance of conducting a scoping review. One possibility for this, provided as an example within the PRISMA-ScR, would be to register the protocol with Open Science Framework, a free publicly accessible on-line platform.[11]

Another key area where we identified our scoping review reporting as lacking was with regards to the data items and the data charting process. Levac et al. recommend that two authors independently perform data extraction for the first five to ten records, then convene to ensure their approach is consistent with the aims of the scoping review.[3] Similarly, Peters et al. propose the potential need to trial the data extraction form across several studies.[6] In our own review, two authors independently extracted data from the first five included records, then met to discuss the findings and make minor modifications to the data extraction form. However, we did not list and define all of the variables for which we sought data and failed to describe the full data charting process. Upon reflection, it was clear that neglecting to include this information obscured important methodological details in our review and would impede the reproducibility of our results. Following our guided reflection, we subsequently included these details within our scoping review.

PRISMA-SCR USER EXPERIENCE

In our situation, the majority items included in the PRISMA-ScR were found to be clear, concise and easy to apply. One area where we felt that further explanation would have been helpful was with the 'funding' item. Under that item, only minimal explanation and elaboration is provided to support the recommendation to describe funding for the included sources of evidence. The Joanna Briggs Institute (JBI) reviewer's manual takes a less definitive approach, stating that sources of funding for the included studies may be included.[12] We acknowledge that capturing this data and reporting it could be valuable; for example, if the funding sources for the included studies would conceivably bias their results. For our own scoping review, we did not extract this data or report it as we did not feel that it would impact the interpretation of our findings or add substantial value to our results.

Despite the existence of a wide variety of reporting guidelines [e.g. the CONsolidated Standards of Reporting Trials (CONSORT),[13] the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement,[14] etc.], adherence to reporting guidelines remains suboptimal.[15,16] Widespread adoption of the PRISMA-ScR guidelines by authors should help improve reporting in scoping reviews, but does not fully address the issue. Adoption of the PRISMA-ScR guidelines by research funders, journals, journal editors and peer-reviewers is also important.[17] Without this, scoping review authors may continue to experience tensions between reporting guidelines and feedback received during the publication process (e.g. as we did with regards to the title of our scoping review). Finally, because the PRISMA-ScR had not yet been published when we initially conducted our scoping review, we made use of it only after a copy of our manuscript had been completed. A more efficient and practical approach would be to consult the guidelines during initial preparation of the scoping review manuscript.[18]

Given that we evaluated our own scoping review, we acknowledge the lack of author independence. Despite this potential limitation, our evaluation and user commentary help to highlight the value of using reporting guidance to improve the reporting of scoping reviews.

CONCLUSION

Overall, we found the PRISMA-ScR to be an effective tool to guide a structured reflection on our scoping review reporting. Through this process, we uncovered both areas of strength and opportunities for improvement within our scoping review, strategies to consider for future scoping reviews, and several potential challenges. We would encourage other authors completing scoping reviews to make use of the PRISMA-ScR reporting guidelines.

Implications for research, policy and practice
Improving consistency and transparency in the reporting of scoping reviews is an important step in promoting scientific rigor across this growing methodology. In discussing our experience using the PRISMA-ScR, we hope to encourage others completing scoping reviews to make use of these reporting guidelines.

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REVIEWS & DISCUSSION PAPERS

The non-medical surgical assistant and inequity in the Australian healthcare system

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ABSTRACT

Objectives: The objective of this discussion paper is two-fold. The first is to quantify if the non-medical surgical assistant increases access to surgery by investigating what percentages of cases these clinicians undertake in the private sector surgical units where they work. The second is to examine procedural and distributive justice and how they impact on private sector surgical care.

Aim: The aim of this paper is to investigate if the non-medical surgical assistant increases equity via access, for the patient, to private sector surgical care; and if government policy has an impact on equity in the form of access.

Background: The private healthcare sector completes approximately two-thirds of all elective surgery in Australia; without this contribution, there would be more pressure on the public healthcare sector. In the private sector, recognition and federal funding of the surgical assistant differs depending on whether this clinician has a medical or non-medical, eg. nursing, qualification. The role of the non-medical surgical assistant is well established internationally and this role has been practiced in Australia for more than 20 years.

Discussion: Inequity; as a result of the procedural injustice of government funding policy, impacts the private sector surgical patient causing distributive injustice. This distributive injustice results in an out-of-pocket expense to the patient. Rising out-of-pocket expenses has started a trend of patients moving away from private health insurance and into the public sector. The registered nurse and nurse practitioner are qualified to practise as a non-medical surgical assistant and provide increased access to care, and effective care compared to the medical surgical assistant. The nurse practitioner is an eligible provider of Medical Benefits Schedule services but restricted from accessing the intraoperative assisting item numbers.

Conclusion: The non-medical surgical assistant; or at least the nurse practitioner as non-medical surgical assistant; require access to the Medical Benefits Schedule intraoperative item numbers. Access would alleviate the out-of-pocket expense incurred by Australian patients when a non-medical surgical assistant assists with their surgery. Lack of access to these item numbers means patients may have their surgery delayed until an appropriately skilled medical surgical assistant is available, or the public healthcare sector can accommodate them.

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Implications for research, policy and practice:
This paper illustrates a need for change in Australian government policy to reflect contemporary, evidence-based practice.

What is already known about the topic?

- The international literature reports that advanced practice nursing roles increase access to healthcare.
- The nurse practitioner role in Australia is now well established, and the Australian literature illustrates increased access to care.
- The Medical Benefits Schedule Review Taskforce was formed to investigate a system that is not consistent with contemporary, evidence-based healthcare.

What this paper adds:

- The nurse practitioner and registered nurse, in the role of non-medical surgical assistant, increase access to private sector surgical care.
- Australian government policy limits access to private sector surgical care through its inequitable policies that contravene the spirit of fair trade.
- According to peak professional bodies' policy and position statements, the nurse practitioner and registered nurse are legitimate providers of surgical assisting services.

Key Words: Australian private healthcare sector, nurse practitioner, Australian government health policy, procedural justice, health insurance, distributive justice

INTRODUCTION

Whether due to political policy, social differences, geographical location or the ability to economically fund care; inequity in healthcare is an unfortunate, but persistent, division in the promotion of social justice.[1] This paper investigates inequity, in Australia for both patients and clinicians considering the principles of justice and access.[2] The two types of justice of interest are distributive justice (sometimes called economic justice) which addresses fairness regarding decision outcomes and advocates that equal work should equate to equal pay.[3] The second is procedural justice which refers to fairness about how decisions or policies are made and suggests that decisions should be fair and based on fact.[4,5]

The objective of this paper is two-fold. The first is to quantify if the non-medical surgical assistant (NMSA) increases access to surgery by investigating what percentages of cases these clinicians undertake in the private sector surgical units where they work. The second is to examine procedural and distributive justice and how they impact on private sector surgical care. Figure 2 illustrates the salient points of this argument.

The aim of this paper is to investigate if the NMSA increases equity via access, for the patient, to private sector surgical care; and if government policy has an impact on equity in the form of access. This topic of equity and the NMSA sits within a larger body of research investigating the NMSA in Australia from the perspective of effectiveness, legitimacy, and equity. These three descriptors form part of the conceptual framework of the pillars of quality, as outlined by the father of quality in healthcare, Avedis Donabedian.[6–8] The relevance of Donabedian's pillars of quality was illustrated in the United States of America (USA) in 1990 when the Institute of Medicine released two reports known as the Quality Chasm Series. The individual reports were, *"To Err is Human: Building a Safer Health System" and "Crossing the Chasm of Quality"*.[9,10] These reports were pivotal in moving the conversation regarding quality in healthcare into the mainstream media, the corporate forum and, most importantly, into public healthcare policy. Donabedian's conceptual framework of the pillars of quality was the source material for these reports which investigate the provision of care that is safe, effective, appropriate, equitable and optimises the healthcare dollar.[10,11]

Donabedian's pillars of quality are relevant to the Australian healthcare system as they align with the Australian government's commitment to delivering healthcare that is *consumer centred, driven by information, and organised for safety*[12]; informed by the objectives of the Australian Government's strategic framework of *achieving a safe, equitable, effective and sustainable health system.*[13]

Previous research has quantified that the NMSA is a safe and effective provider of surgical assisting care using the comparator of the medical surgical assistant (MSA).[14] Similarly, it has been established, through surveys of key stakeholders, the examination of peak professional bodies' position statements and a review of the law that the nurse practitioner (NP) and registered nurse (RN) are legitimate clinicians to perform the role of NMSA in Australia.[15–17]

Due to inequity in the delivery of healthcare many first-world countries currently report differing access to healthcare.[18,19] In the United States of America (USA) the National Advisory Council on Nursing Education and Practice said that a diverse nursing workforce is essential for the development of equity in healthcare. The need for diversity in the nursing workforce is supported by the notion that advanced practice nurses (APNs) improve the quality and accessibility of care which increases patient satisfaction.[20]

The Australian literature informs that the APN and NP enhance access to healthcare.[21–28] Nurse Practitioners were first endorsed in Australia in 2001. To date some 1,839 NPs practice in Australia, however, despite being eligible providers with access to the Medical Benefits Schedule (MBS), NPs in the private sector of the Australian healthcare system are only able to access four consultation, six telehealth, and no procedural MBS item numbers.[29,30] This significantly curtails NP private practice.[22,30]

As many patients have multi-morbidities, medical care is increasingly complex, and even routine surgical procedures can involve significant risks. The optimal surgical team should be assembled for all surgical procedures. Surgical assistants work closely with the principal surgeon to maximise safety and efficiency. Surgical assistants are an essential part of the surgical team and make a vital contribution to the high standards of surgery available to Australian patients.[31]

Historically surgical assisting in Australia has been undertaken by medical practitioners called medical surgical assistants (MSA). These clinicians are readily available in the public healthcare sector in the form of doctors-in-training. Medical surgical assistants in the private sector are either doctors whose only role is a surgical assistant or general practitioners (GP) who work a dual role.[32] General practitioners that work a dual role may be unavailable for urgent or emergency procedures; similarly, as specialty-specific, surgical techniques evolve a specialist assistant may be required.

The NMSA is a clinician who is not a medical practitioner, who provides care to the perioperative patient. In Australia, the role of the NMSA is predominately undertaken by an RN or the NP.[33] This role has been practised in Australia for more than 20 years, and RNs and NPs who practice as NMSA fulfil the requirements of peak professional bodies to act as a surgical assistant.[34] Brennan suggested in 2001 that the advanced practice of perioperative nurses as surgical assistants could provide cost-effective patient care in the Australian healthcare system.[35] Supporting this; a 2011 Parliamentary research paper investigating "*What are we doing to ensure the sustainability of the health system?*" suggested investigating role substitution from the medical practitioner to the NP could be a potential cost-saving strategy.[36]

All MSAs within the private sector of the Australian healthcare system have access to surgical assistant MBS item numbers.[37] The MBS is for the payment of services for the patient. Access for the MSA means the patient is entitled to a rebate for the MSAs' intraoperative services. Currently, only MSAs can access a surgical assistant MBS rebate. Lack of access to the MBS for the NMSA is not an issue of the NMSA not being paid enough due to lack of an MBS rebate; it is an issue of the NMSA (in some cases) not being paid at all. The broader point is the distributive injustice of MBS funding not being available to all clinicians who are qualified to perform a role. Distributive injustice is not restricted to the NMSA but affects many NPs in other specialities of private practice in Australia.[30]

Regarding the NMSA, the process of allowing access to the MBS is a cost-neutral exercise for the government and private health insurers; as an MSA or an NMSA is used, not both. The NMSA would cost the same as the MSA if given access to the current MBS surgical assistant item numbers. Initially, the role of the NMSA evolved because it was sometimes difficult for a surgeon to obtain an MSA for procedures in the private sector.[16] However, some surgeons choose to use an NMSA due to the specialised nature of particular surgery. Examples of this are cardiac surgery or robotic surgery, which requires specialised skills.[32]

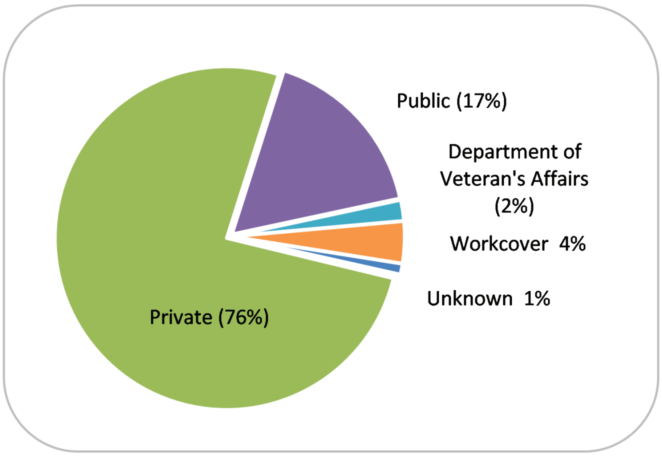

FIGURE 1A: NON-MEDICAL SURGICAL ASSISTANT PROCEDURES BY PATIENT TYPE IN 2016.

Source: Constructed with data from, and permission of, the Australian Association of Nurse Surgical Assistants.[38]

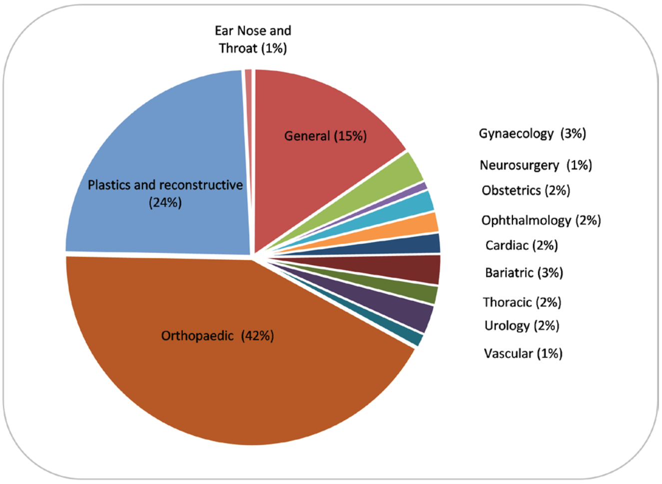

FIGURE 1B: NON-MEDICAL SURGICAL ASSISTANT PROCEDURES BY SURGICAL SPECIALTY IN 2016.

Source: Constructed with data from, and permission of, the Australian Association of Nurse Surgical Assistants.[38]

Due to doctors in training in the public sector, the role of the NMSA is predominately within the private sector.[15,16,33] In 2016, 76% of operations supported by NMSAs took place within the private sector across a range of surgical specialties.[32]See Figure 1a and 1b

THE FOUR TIERS OF INEQUITY

Figure 2 uses a hierarchical pyramid model to illustrate how the relationships between inequitable access, remuneration and costs, can ultimately interact to affect the attainment of equity for NMSAs and their patients in the Australian healthcare system.

INEQUITABLE ACCESS

Access is a term used in academic literature and government policy to describe the receipt of treatment. This concept is underpinned by an individual's medical condition and not their ability to pay.[1] For this reason, the Australian healthcare system has a public and private sector. The public healthcare sector services patients who are unable to pay for care. The median waiting time for a surgical procedure in the public sector in 2016-17 was 38 days; however, if the surgery was non-life threatening (elective), e.g. total hip replacement the median waiting time was 250 days. Due to private health insurance, 67% of all elective surgery in Australia is performed in the private sector.[39,40] By Australians investing in private health insurance, there are shorter waiting times in the public sector and less demand on public sector beds.[40]

Due to the nature of the system, waiting times are not readily available for the private sector; however, they are reported to be shorter than in the public sector.[41] Securing an MSA for procedures in the private healthcare sector can be difficult. In a survey of Australian surgeons in 2015-2016, 27.5% revealed they had postponed or cancelled cases as an appropriate surgical assistant was not available. Further, 22.7% of surgeons said it was difficult or very difficult to secure a surgical assistant, irrespective of their geographical location, for urgent or emergency private sector procedures.[16]

In this situation, the NMSA can increase access to surgery; however, the current lack of government remuneration can restrict this access. An example of this is the Department of Veteran's Affairs (DVA) patient. Access to surgery is limited as the DVA patient does not pay out-of-pocket expenses in the private sector. This means if an MSA is unavailable, the DVA patient may have their procedure postponed until an appropriately skilled MSA is available instead of using an NMSA and paying an out-of-pocket expense.

A situation which illustrates increased access occurred when a group of NMSAs fulfilled the role of surgical assistant for a contract of 110 public beds in a private sector hospital.[42] Cost and availability rendered the MSA, not a feasible option. The six operating theatre unit was regional, and the NMSA also fulfilled the role of surgical assistant for many private, surgical patients.[43]

Inequitable access to surgery exists in many regional centres. Similar to Canada, Australia struggles with doctor shortages outside of metropolitan areas.[44] While the government has a migration program to procure overseas trained doctors (some of whom may act as an MSA) to regional areas, this program has failed due to cultural difficulties; and lack of training for overseas doctors to function in regional and remote areas without significant support.[45] To demonstrate how the NMSA increases access to surgery in private sector regional Australia, data from four regional hospitals, defined by postcodes,[46] was collected over three months from 1 April 2018 – 30 June 2018 (see Table 1).

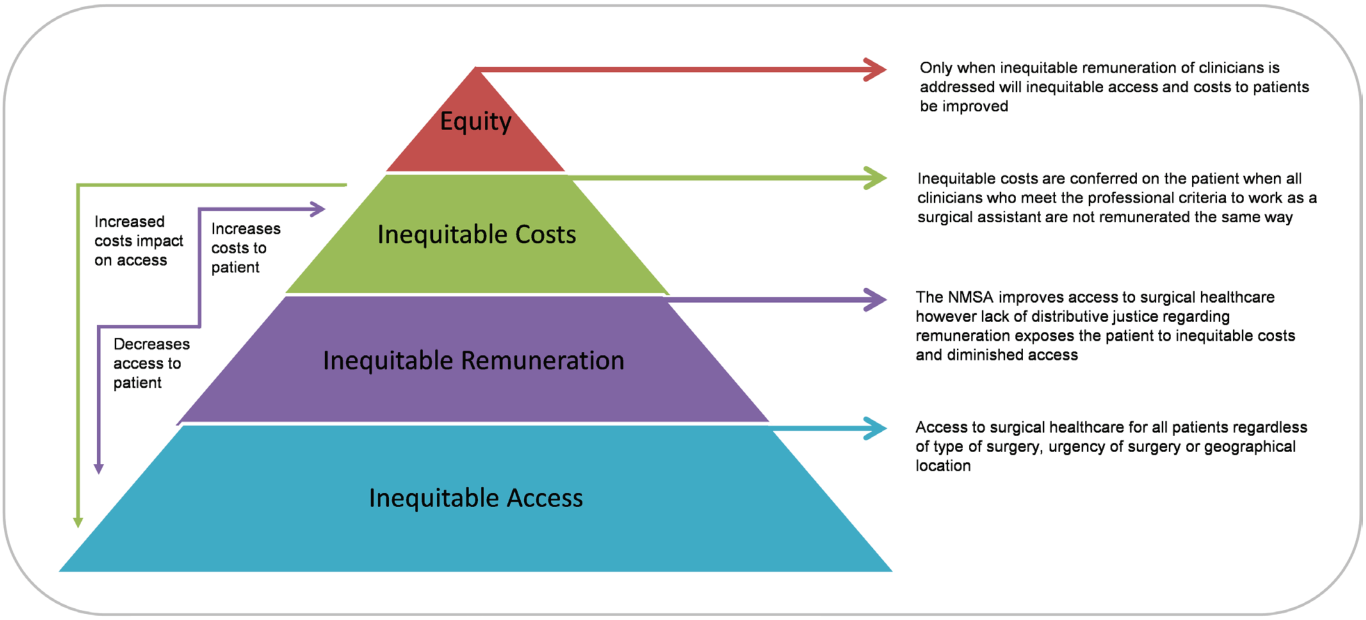

FIGURE 2: PYRAMID OF INEQUITY: AUSTRALIAN NON-MEDICAL SURGICAL ASSISTANTS AND PATIENTS.

TABLE 1: REGIONAL HOSPITALS SURGICAL ASSISTANT BREAKDOWN (THREE MONTH PERIOD 1 APRIL 2018 – 30 JUNE 2018).

Surgery Type*	**Hospital 1 – 190 bed facility**	**Hospital 2 – 137 bed facility**	**Hospital 3 – 200 bed facility**	**Hospital 4 – 16 bed facility**
General	Total Cases – 186 MSA – 120 (64.5%) NMSA – 66 (35.5%)	Total Cases – 273 MSA – 173 (63.37%) NMSA – 20 (7.33%) Nil – 80 (29.30%)	Total Cases – 811 MSA – 407 (50.19%) NMSA – 330 (40.96%) Nil – 74 (9.12%)	Breakdown of specialties not available
Orthopaedic	Total Cases – 247 MSA – 83 (33.6%) NMSA – 164 (66.4%)	Total Cases – 218 MSA – 131 (60.09%) NMSA – 67 (30.74%) Nil – 20 (9.17%)	Total Cases – 913 MSA – 349 (38.22%) NMSA – 535 (58.6%) Nil – 29 (3.18%)	
Gynaecology/Obstetric	Total Cases – 93 MSA – 52 (55.9%) (Caesars 37%) NMSA – 41 (44.1%) (Caesars 63%)	Total Cases – 87 MSA – 27 (31.04%) NMSA – 21 (24.14%) Nil – 39 (44.82%)	Total Cases – 22 MSA – 7 (31.82%) NMSA – 0 (0%) Nil – 15 (68.18%)	
Urology	Total Cases – 4 MSA – 2 (50%) NMSA – 2 (50%)	Total Cases – 302 MSA – 4 (1.33%) NMSA – 6 (1.99%) Nil – 292 (96.68%)	Total Cases – 307 MSA – 28 (9.12%) NMSA – 0 (0%) Nil – 279 (90.88%)	
Plastic/Reconstructive	N/A	Total Cases – 118 MSA – 11 (9.32%) NMSA – 1 (0.85%) Nil – 106 (89.83%)	N/A	
Ear, Nose and Throat	Total Cases – 11 MSA – 0 (0%) NMSA – 0 (0%) Nil – 11 (100%)	Total Cases – 127 MSA – 32 (25.20%) NMSA – 0 (0%) Nil – 95 (74.80%)	Total Cases – 360 MSA – 0 (0%) NMSA – 0 (0%) Nil – 360 (100%)	
Robotic	N/A	Total Cases – 16 MSA – 0 (0%) NMSA – 16 (100%)	Total Cases – 12 MSA – 12 (100%) NMSA – 0 (0%)	
Cardiothoracic/Vascular	N/A	Total Cases – 55 MSA – 8 (14.55%) NMSA – 0 (0%) Nil – 47 (85.45%)	Total Cases – 59 MSA – 56 (94.92%) NMSA 3 (5.08%)	
Total procedures	**1,198**	**2,179**	**2,484**	**530**
Procedures requiring an assistant	**530**	**517**	**1727**	**113**
NMSA assistant %	**51.50%**	**25.33%**	**50.26%**	**56.63%**

Permission to access data was received from each hospital and data was retrieved from the electronic hospital records

* Surgical procedures performed in theatre but not requiring an assistant at these hospitals ie. Endoscopy, Dental, Electroconvulsive therapy (ECT), Cardioversion and Pain procedures etc. are not listed.*Surgical procedures performed in theatre but not requiring an assistant at these hospitals

Of note here is that some of the private surgical procedures in this data are unavailable in the public hospitals in these regions. This means patients without private health insurance or unable to pay out-of-pocket expenses for the NMSA, would need to travel to a metropolitan hospital to receive their surgery. This is costly for the patient, may cause delays for their procedure and potentially compounds public-sector pressure.

In Hospital 1, the NMSA assisted for 51.5% of cases, in Hospital 2, the NMSA assisted for 25.3% of cases. Hospital 1 and 2 represent all private surgery undertaken in a regional town with a population of approximately 115,000. The NMSA assisted for 38.5% of all private surgery in this town, carried out during the data collection period. Surgeons, in this region, are also training the NMSAs to assist for Robotic surgery as this will provide a consistent service. The NMSA assisted with more Caesarean Sections; often an urgent procedure conducted out-of-hours. The NMSA assisted for 63% compared to the MSA who assisted for 37%.

Hospital 2 has records of perioperative staff, i.e. scrub and scout staff, acting as a surgical assistant for some of the procedures. It is anticipated that this practice occurs in many hospitals. This practice is contrary to the Clinical Guidelines of the Australian College of Operating Room Nurses and exposes these non-designated staff to medico-legal consequences should patients experience intraoperative or postoperative complications.[15] In a recent survey of perioperative staff, 17% said they performed the impromptu role of surgical assistant daily, and 18.7% performed the position once a week.[15] The practice of improvised use of perioperative staff as surgical assistants, coupled with the fact that an NMSA assisted for a quarter of the surgery conducted at this hospital reinforces the notion that a need exists in Australian for the NMSA.

In Hospital 3, the NMSAs assisted for more than 50% of the orthopaedic procedures. For this hospital, orthopaedic procedures represented over a third of all surgical procedures for the data collection period.

Hospital 4 is located in a regional town with a population of 42,000 and is the only private hospital in the area. Mainly operating on day procedures, the hospital has a 16-bed capacity. Over 50% of procedures needing a surgical assistant, were undertaken by the same single NMSA.

As was evident at the inception of the role of the NP in Australia, advanced practice nurses are one strategy to improve access to medical services in regional or rural Australia yet they lack the private sector remuneration to sustain this.[28,47–50]

INEQUITABLE REMUNERATION VIA AN MBS PATIENT REBATE

According to peak professional healthcare organisations (Royal Australasian College of Surgeons, The Australian College of Operating Room Nurses, The Australian College of Nurse Practitioners, and The Australian Association Nurse Surgeon's Assistants) the NP and RN are legitimate clinicians to undertake the role of NMSA.[34,51–53] Similarly, the Australian Health Professional Regulation Agency (AHPRA) does not specify any requirements or place any limitations on which clinicians can undertake the role of a surgical assistant. However, in the private sector, Medicare via the MBS will only remunerate the medical practitioner as a surgical assistant.[54] Medicare is not the law but the government's interpretation of the law.[55] Given this, the government can alter the MBS rules as they see necessary. The rules that exclude the NMSA to funding is not a discrete issue of private sector funding but a broader issue of distributive justice which advocates equal work should equate to equal pay.[3] The concept of distributive justice also leads to the notion of anti-competitive restriction of activity that some professionals have benefited from since the creation of the MBS in 1975.[56]

According to the Australian Government's website on the topic, "Fair Trading" is Australian commonwealth and state/territory laws that protect the worker, their business and their customers from unfair trading practices.[57] The role of the Australian Competition and Consumer Commission (ACCC) is to uphold fair trading, encourage competition and regulate national infrastructure.[58] Paragraph six of the ACCC website elaborates that, *Competitive, informed and (when necessary) well-regulated markets lead to lower prices, better quality products and services, and more choice. This increases the prosperity and welfare of all Australians*. The ACCC takes action to improve consumer safety, protect competition or stop conduct that is anti-competitive or detrimental to consumers.[58]

As the NMSA cannot access the MBS for an assisting rebate for patients, a lack of distributive justice for both the NMSA and their patient is demonstrated. This would appear not to protect the worker who may not be paid if the patient reneges on the out-of-pocket. The out-of-pocket expense causes financial harm to the consumer of the surgical service, a form of procedural injustice due to government policy. Additionally, physical harm may come to the patient who cannot pay the out-of-pocket and therefore may have to wait for their surgery. Delayed surgery increases hospital length of stay and complication rate.[59] Anti-competitive MBS rules supported by the government allows the MSA a monopoly on access to the MBS for surgical assisting services.

Similar to the MSA, the NMSA must satisfy credentialing requirements at each clinical site where they practice and; specific to NP, have a collaborative agreement with a surgeon which includes a surgical assistant scope of practice. The NP also has an MBS Provider Number yet is denied access to the surgical assistant Item Numbers. However, there are international and Australian data that demonstrates the NMSA has equivalent patient outcomes to the MSA.[14,58–63] Patient outcomes investigated in the Australian data considered six dependent variables; time in the operating theatre, intraoperative time, admission to Intensive Care, length of stay, discharge destination and readmission within 28 days. The results showed no statistically significant difference and no clinically relevant difference between the MSA and NMSA.[14]

While the RN working as an NMSA satisfies hospital credentialing and peak professional bodies' criteria; the NP offers those in government an uncomplicated opportunity to regulate the role of the NMSA. The NP model of care has a principal goal of improving access to high-quality care, yet provisions under the MBS for this eligible provider have not been reviewed regarding relevance to the patient and functionality of the role for a decade.[22] As Bryant outlined, combining the NMSA and NP roles achieves:

1. Standardised education – with a Master's Degree approved by the Nursing Midwifery Board of Australia;
2. National competencies, ie. Standards for Practice;
3. Identification on the AHPRA register separate to Registered Nurses; and
4. Title protection[60]

Nurse Practitioners working in the private sector of the Australian healthcare system are an underused resource and remain curtailed by the small number of MBS Items for which the patient receives a rebate. While patients support healthcare delivered by the NP, limited access to the MBS for NPs increases costs borne by the patient and reduces accessibility to private NP care.[25,61–63] A practice audit of clinicians in the role of NMSA in Australia, revealed that all NPs in the NMSA role but one possessed a NMSA qualification in addition to their Nursing and Midwifery Board of Australia recognised Master's Degree.[33]

INEQUITABLE COSTS

The Australian Government was predicted to spend $87.9 billion on health in 2017-18.[64] Approximately 47% of the Australian population chooses to also pay for private health insurance in addition to the assurance offered by Medicare.[65] In 2014-15, 4.5 million of the 10.6 million admissions to public (14% of admissions to public hospitals) and private hospitals (83% of admissions to private hospitals) were funded by private health insurance.[39] It is essential to the functioning of the public healthcare sector that Australians maintain their private health insurance and utilise the private healthcare sector for surgical procedures, however; due to rising costs of health insurance premiums and an additional overall 3.3% rise in out-of-pocket expenses, the number of Australians with private health insurance dropped by 0.9% from June 2017 – June 2018.[39]

Patients in the private sector of the Australian healthcare system pay taxes to Medicare and private health insurance premiums to cover the costs of their care while undergoing surgical procedures in the private sector. These costs include the payment of a rebate to the patient for the surgical assistant. Topical in Australia at the moment is the significant out-of-pocket expenses that the patient incurs from private clinicians such as surgical assistants who charge the patient a gap above the rebate they receive for services related to surgery.[32,66] While the MSA may choose to charge the patient an out-of-pocket expense in addition to the rebate they receive; the NMSA charges an out-of-pocket fee as their only form of payment.

The surgeon will use an MSA or an NMSA; the NMSA is not a duplication of services for the healthcare sector but is a duplication of payment for the patient who has already paid their taxes and health insurance premiums and must also pay an out-of-pocket expense for the NMSA's clinical services. In these circumstances, the patient is being exposed to procedural injustice by the Commonwealth Government who sets the rules for the MBS.[37] The definition of procedural justice states that decisions should be fair and based on fact.[4] Limiting access to the MBS assisting Item Numbers is not fair, and as the NMSA has equal patient outcomes to the MSA, this limitation is not based on fact.

The MBS Review Taskforce is currently evaluating "*Proposed changes to remuneration arrangements for surgical assistants*" and released a document on 4 September 2018 for stakeholder consultation. The proposal is to change the process for the remuneration of those with access ("medically qualified") to the Assistance at Operations Item Numbers TN9.1. 51300-51318. While this document does not outline the NMSA as an alternative to the MSA, it has created an opportunity for peak professional bodies to suggest the NMSA as an eligible provider of this service.

The MBS Review Taskforce has also released a document, "*Report from the Nurse Practitioner Reference Group 2018*" for stakeholder consultation on 6 February 2019. This report outlines 14 recommendations. Eight of the recommendations focus on increased access to the MBS for patients treated by the NP. Recommendation 10 says, "*Enable patients to access MBS rebates for procedures performed by an NP.*"[22] Neither of these processes was finalised at the time of publication of this paper in 2020.

CONCLUSION

Government policies negatively impact on the private sector surgical patient, when the NMSA does not have access to the MBS surgical assisting item numbers. This lack of procedural justice afforded to patients to achieve improved health through private sector surgery limits the access or causes an extra financial burden.

There has been a consistent move away from patients investing in private health insurance, due partly to the cost of insurance premiums and secondly to large out-of-pocket expenses. A move away from private health insurance increases the waiting times in the public healthcare sector.[67] Those patients who make the financial sacrifice to invest in private health insurance are penalised by government policy restricting a rebate for some clinician's clinical services.

In the context presented here, access to surgery for the patient in the private sector is most limited when the operation is highly specialised needing an experienced surgical assistant; when the procedure is urgent or an emergency; or when the procedure is in a regional location. Access is limited when no MSA is available, and the patient cannot pay the out-of-pocket expense for the NMSA.

As outlined in the MBS Review Taskforce – Report from the Nurse Practitioner Reference Group, "*Inequity in funding mechanisms should not prevent people from receiving comprehensive, evidence-based care*".[22] The lack of distributive justice imposed on the NMSA and particularly the NP as an eligible MBS provider does not reflect contemporary NP practice. The question here is not "should NPs be undertaking this role?" but "why are NPs not funded when undertaking a role for which they meet the professional criteria?" Until the NMSA; or a least the NP as an NMSA; is given access to the MBS assisting item numbers patients will continue to have restricted access, be economically penalised or have their surgery delayed until an appropriately skilled MSA is available or the public healthcare sector can accommodate them.

RECOMMENDATIONS

The Australian government is committed to achieving a safe, equitable, effective and sustainable health system, but this is not happening.[13] Likewise, it was the MBS Review Taskforce's mission to align the MBS to contemporary healthcare practice. This has not occurred in relation to the NMSA.

To allow patients equitable access to private sector surgical care, the MBS must align with contemporary perioperative practice. While access to all RNs and NPs in the role of NMSA would enhance patient access to surgery; as a minimum, the Australian government via the MBS must enable the NP to access the Category 3 TN.9.1 51300-51318 surgical assistant item numbers.

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