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Exploring the SPHERE Nursing and Midwifery Clinician Researcher Career Pathway: A qualitative study[☆]

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ABSTRACT

Background: There is an urgent need to increase the research capability and capacity within the nursing and midwifery workforce, to underpin evidence-based care.

Aim: To explore the perceptions of nursing service leaders and academics of the Sydney Partnership for Health, Education, Research and Enterprise (SPHERE) Nursing and Midwifery Clinician Researcher Career Pathway for acceptability and utility.

Methods: Using a qualitative descriptive design, data were collected via an online focus group and one individual semi-structured interview. Content and thematic analyses were undertaken.

Findings: Data from 22 participants were included in the analyses. Most participants were female (82%), employed within Local Health Districts (LHDs) (29%), universities (24%), and both LHD and university (47%). There was strong support for the SPHERE Nursing and Midwifery Clinician Researcher Career Pathway. Four major themes were identified: (i) Current disintegration of the clinician researcher role, (ii) Implementation, (iii) Balancing a clinical and research role: need for protected time, and (iv) Reintegration of the clinician researcher role: growing and stabilising a generation of clinician researchers.

Discussion: The SPHERE Nursing and Midwifery Clinician Researcher Career Pathway provides a unique opportunity to develop and sustain the future generation of clinician researchers. To succeed, changes to existing perceptions of clinicians, other health professionals, managers, and consumers are required. Leadership, appropriate language and messaging, and a shared vision is required from a unified professional voice. Protected research time remains the greatest challenge, requiring creative solutions that acknowledge diverse models of care.

[☆] For and on behalf of Maridulu Budyari Gumal – Sydney Partnership for Health, Education, Research & Enterprise (SPHERE), Sydney, New South Wales, Australia.

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Conclusion: The SPHERE Nursing and Midwifery Clinician Researcher Pathway provides a vision for the reintegration of the role of clinician and researcher within Australian health services, which may take a generation to transform health service research culture.

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Summary of relevance

Problem or Issue

A strategy to build the critical mass of nurse/midwife clinician researchers (with direct clinical care and research roles) is urgently required to meet the challenge of providing evidence-based care in the context of increasing healthcare burden.

What is already known

Clinical academic pathways for nurses and midwives have existed in the United Kingdom since 2012. Yet, structured, formal, and organised training pathways supported within the clinical setting, for Australian clinician researchers in nursing and midwifery, are lacking.

What this paper adds

- Enhances the understanding of clinical academic pathways for nurses and midwives, promoting advancement of the profession and highlighting opportunities for growth beyond conventional career paths.
- Emphasises the potential of nurses and midwives to act as key change agents to facilitate the integration of research into healthcare practice and make evidence-based care more routine.
- Demonstrates strong support for the clinician researcher career pathways alongside valuable implementation considerations, which if supported effectively, as articulated by several participants, could lead to transformative change to the career trajectories of nurses and midwives.

1. Introduction

High-quality evidence produced from research led by nurses and midwives is critical to improvements in clinical practice and health outcomes. A comprehensive national strategy to build the nurse and midwife researcher workforce is overdue. Integrated academic–health system models, including clinical academic roles and academic–health precinct models, contribute to improved outcomes and are recommended in policy (Boaz, Hanney, Jones, & Soper, 2015; Newington et al., 2021). The transformation of health care, using evidence-based guidelines and policy, is an essential component of many international healthcare reform strategies (Canada [The Chief Public Health Officer, 2021]; United Kingdom [Anderson et al., 2023]) including the Australian National Safety and Quality Health Service Standards (ACSQHC, 2021). For nurses and midwives to engage in evidence-based practice, a critical mass of clinician researchers, providing direct clinical care, with advanced skills to generate new knowledge, implement evidence, and translate research, is required.

Clinical academic pathways for nurses and midwives have undergone substantial development, particularly in the United Kingdom's (UK) National Health Service (NHS) (Finlay, 2012; Westwood, Richardson, Latter, Macleod Clark, & Fader, 2018) but, to date, no national systematic pathway, providing substantial dedicated or protected clinical research time for training within health settings, has been implemented in Australia. Although the term

clinical academic is used extensively in the UK and Europe (Carrick-Sen, Moore, Davidson, Gendong, & Jackson, 2019; Henshall et al., 2021), in Australia, the role is sometimes referred to as 'clinician researcher'. A clinician researcher is defined as a nurse or midwife, registered to practice, who 'conducts research and provides direct clinical services, in any setting, under a formal work arrangement, although not necessarily for the same organisation' National Health and Medical Research Council (NHMRC, 2021, p.3). This study explores the utility of a comprehensive, structured clinician researcher career pathway designed for Australian nurses and midwives, from the perspective of multiple key nurse stakeholders.

Academic–clinical collaborations in nursing and midwifery research have existed within Australia since the early 2000s (Carrick-Sen et al., 2019), within diverse models, although the majority follow a North American approach of a conjoint academic and research role (Albert et al., 2022). Clinical nursing and midwifery professors are still very limited in number and often function as the singular nursing or midwifery professor per health service (a model often where a professor of nursing/midwifery provides expert advice, consultation, research leadership, and local mentorship for a nursing workforce of 3000–5000 nurses working across up to five health facilities across an expansive geographic region). Nursing professors have traditionally been appointed under cost-shared arrangements between health services and universities. The advantages of these models include increased research productivity, increased access to research funding, enhanced dissemination, and translation of research into clinical practice (Albert et al., 2022). Carrick-Sen et al. (2019) recently outlined the challenges of expected (and often unachievable) key performance indicators for Australian clinical professors, often focusing on practice development (or quality improvement)-related projects, while lacking a clinical academic training pathway for joint appointments for early career researchers. These professors, in addition to the other nurse/midwife clinicians engaged in research, often act with limited research and administrative support staff, including lack of funded support from early career researchers and lack of project funding, and remain unable to meet all the demands for knowledge generation and translation required by health services.

The limited research capacity of hospital-based nurses/midwives at all clinical levels, is demonstrated by a recent survey within a single metropolitan health district in New South Wales (NSW) revealing that 36% of medical staff, 18% of allied health staff, and 7% of nursing staff held a higher degree by research (Masters by Research or PhD) (Lee et al., 2020). Conversely, having a research role was described by the participants in relatively similar proportions: medical staff (61%), nursing (47%) (likely to also include clinical research nurses collecting data for industry-sponsored drug and medical device trials [Jones, 2015]), and allied health professionals (41%) (Lee et al., 2020). This disconnectedness of education level and role is concerning. In addition, the self-reported ability of nurses to develop a research proposal (4/10 score) and ethics applications (2.5/10) was poor (Lee et al., 2020). There is a need to increase the number of nurses and midwives with research higher degrees and to increase capacity for clinical research and the capability of nurses and midwives in research activities.

A systematic review of 10 UK research studies identified several existing 'whole' career pathways relevant to nursing (Henshall et al.,

2021). These included clinical academic pathways focused on NHS research priorities (Westwood et al., 2018), Clinical Academic Research Career Scheme with clear progression, including PhD and postdoctoral clinical research fellowships (Upton, Upton, Erol & Penn, 2013), and a clinical academic partnership model with five elements (practice-relevant research aligned with NHS priorities, sustainable collaborations between NHS and higher education institutions, and ‘investment commitment, incremental approaches to developing clinical academic leadership; translation of findings into practice’ [p. 350]) (Westwood et al., 2018). Scotland’s Clinical Academic Research Career (Upton et al., 2013) and Wales’ Research Capability Building Collaboration and Knowledge Economy Skills Scholarships (Hiley et al., 2018; Hiley, Jerwood, Price, Thomas, & Kenkre, 2019), also developed models with similar awards. The National Institute for Health Research (NIHR) manages the ‘Integrated Clinical Academic Programme’, a model for England focused on career development from pre-doctoral, doctoral, and postdoctoral awards with internships (Carrick-Sen, Richardson, Moore, & Dolan, 2016). This model included support programs for bridging between degrees and mentorship (Carrick-Sen et al., 2019). A clinician researcher career pathway was also developed by Australian investigators, which outlined roles (research assistant to clinical professor), qualifications, Australian Qualifications Framework level, and role expectations, and was proposed for national and international application (Smith, Gullick, Ballard & Perry, 2018), however, no systematic implementation has been undertaken.

A recent qualitative review by Newington et al. (2021) focused on the impact of non-medical clinical academic roles (nurses, midwives, allied health professionals, and other non-medical health professionals). Twenty studies were described with ‘impacts for patients, service provision and workforce, research profile, culture and capacity, economic impacts, impacts for staff recruitment and retention’, knowledge exchange, and impacts to clinical academics (p.15–19). A major sub-theme was that of ‘balancing the clinical and academic components of the role’ (p.16), with a need for services to manage time release for research and return to practice after secondments. Clinical academics were required to acclimatise to the diverse tasks of research and clinical work (Newington et al., 2021). The presentation of a career pathway was identified as essential to building research profile culture and capacity and important to staff recruitment and retention (Newington et al., 2021).

In summary, several reviews have provided key elements to inform a clinician researcher pathway for Australian nurses and midwives. The Nursing and Midwifery Implementation Science Academy of the Maridulu Gumal Budyari – Sydney Partnership for Health, Education, Research and Enterprise (SPHERE), has co-designed a Nursing and Midwifery Clinician Researcher Career Pathway (the ‘Pathway’). SPHERE is one of ten, NHMRC-accredited academic–health science research translation centres. It is a collaboration of universities, hospitals, research institutes, community, and primary care centres across Sydney with over 50,000 staff (see <https://www.thesphere.com.au/about#partners>). The Pathway includes a training and research career pathway, applicable to nurses and midwives in any position. This Pathway contains three major awards: Support Programs (Internship, Transitions, and Mentorship), Training Opportunities (Scholarships for Honours, Masters by Research, and Doctoral Studies), and Clinician Researcher Fellowships (Level 1 [early career researcher] to Level 4 [established researcher, Professorial Chair]) (see Fig. 1). Of note, the Pathway differs from previous nursing and midwifery research support initiatives in Australia in that it advocates for fully funded research opportunities with no loss of salary.

The Pathway provides opportunities for nurses or midwives to receive varying proportions of protected research time (20–50%), to conduct a research project under supervision or Internship (Support Programs) (20%), or undertake a PhD with a local university

(Training Opportunities) (50%), or establish a postdoctoral research career (Clinician Researcher Fellowships) (50–90%) (see Fig. 1). The Pathway, once established with a central funding stream, will provide support for the protected research time for nurses and midwives within the program. The major goal of the Pathway is to increase the numbers of nurses and midwives with research higher degrees within Local Health Districts (LHDs) from 6.5% in 2017 to 10% in 2034.

Aim: We explored the perceptions of senior health service nursing leaders, academics, and nurse researchers, of the acceptability and utility of this Pathway.

2. Participants, ethics, and methods

2.1. Design

This research used a qualitative descriptive design (Sandelowski, 2000). Data were collected via an online focus group and one individual semi-structured interview. The reporting of this study is consistent with the COnsolidated criteria for REporting Qualitative research guidelines (Tong, Sainsbury, & Craig, 2007).

2.2. Ethics

Ethical approval was obtained from the local University Health Research and Ethics Committee, Approval Number 2021-175E, 28th July 2021. Written informed consent was obtained from all participants before the session.

2.3. Sampling and participants

Purposive sampling was used to obtain a range of perspectives from a distribution of senior health service nursing leaders, senior nursing academics, and clinician academics (or conjoint appointments) in existing positions across four NSW LHDs that comprise the SPHERE Nursing and Midwifery Implementation Science Academy. A planned Academy forum provided an opportunity to invite senior executives and/or academics to form a focus group. Individual interviews were offered to those who could not attend the focus group.

2.4. Data collection

One 50-min focus group and one individual 25-min interview was conducted by an experienced qualitative researcher, who was known to some of the participants. These were digitally recorded and transcribed verbatim. Initially, the Pathway was described to participants in detail before the interview questions. Topics covered within the interview included impressions of the Pathway, challenges to implementation, perceptions of how the role of the clinician researcher would evolve within health facilities, and how would senior executives or academics facilitate staff engagement in the Pathway. The interview guide is shown in the [Supplementary material](#). A short demographic survey was completed by the participants recording age, gender, roles, years of nursing and post-registration experience, and organisational affiliations.

2.5. Data analysis

Content analysis, the preferred analysis approach for qualitative descriptive studies (Sandelowski, 2000), was used. Although manifest content analysis was applied predominantly, that is, ‘the researcher describes what the informants actually say’ (Bengtsson, 2016) (p.11), some latent analysis was used to understand or interpret the meaning of the text (Bengtsson, 2016; Sandelowski, 2000). Qualitative content analysis is noted by Sandelowski (2000) as the ‘least interpretive’ (p. 338) of the qualitative analysis approaches,

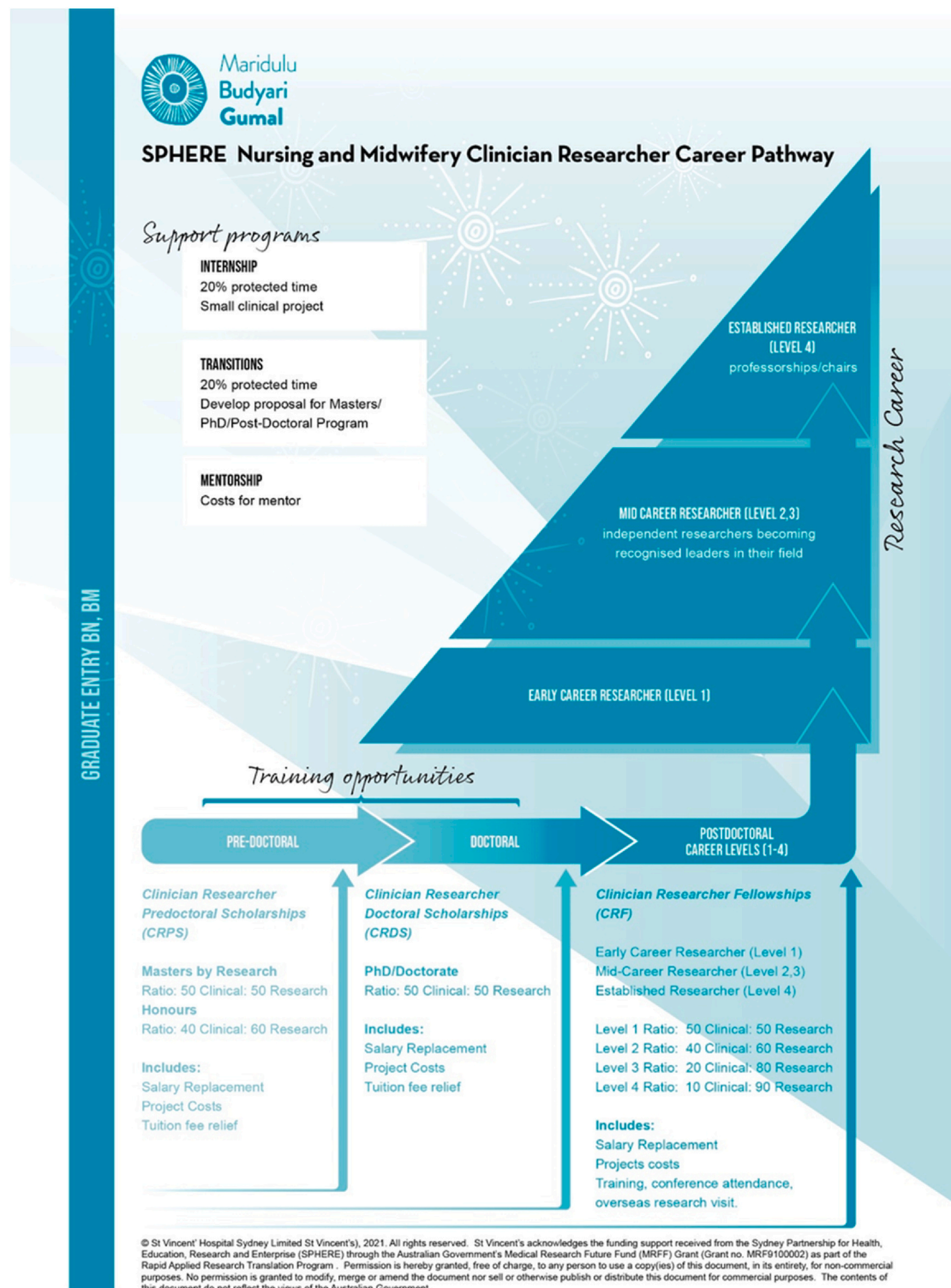


Fig. 1. SPHERE Nursing and Midwifery Clinician Researcher Career Pathway.

with no requirement to create new forms of the data. A specific type of content analysis, a Word Cloud (frequencies of specific words), was also used to deliver a graphic representation of words used by respondents to one specific question relating to Impressions of the Pathway. Word clouds convey enhanced participant meaning beyond frequency counts, that is, the display conveys meaning, rather than counts of words (Bletzer, 2015).

The verbatim transcripts were read several times by the project team. Initial impressions of the data were established and discussed

with four team members to confirm understanding. This was then followed by open coding of meaningful text units, that is, words, groups of words, or sentences. Two investigators coded the data separately, one a nurse very familiar with the context and another unfamiliar, and a non-clinician researcher. On comparison, similarities were evident in the major codes, although labelling varied. These data were then coded using NVivo™ v12 (QSR International, 2022). Clustering of codes (units of text) or categories followed and further shaping of the overall themes/subthemes was undertaken

(Hsieh and Shannon, 2005). These were then reviewed by a further three team members with some reduction in the number of categories, subthemes, and relabelling of themes occurred. Several coding trees were produced throughout the process, which recorded the changes as they occurred, supporting dependability (an audit trail) throughout the process.

Members of the SPHERE Nursing and Midwifery Implementation Science Academy, reviewed initial and final versions of the results and paper, providing member checks. This review resulted in reductions to the text presented but no changes to themes or categories. Members as participants and co-authors minimised potential bias, that is, they reviewed and supported the reporting of what had been said.

3. Findings

3.1. Participant characteristics

A total of 22 Academy members agreed to participate and completed the consent form; however, 5 did not complete the demographics form. Of the returned demographics forms, five were partially completed. Participants were predominantly female (82.4%), with employment within an LHD (29.4%), university (23.5%), and conjoint positions (LHD and university) (47.1%). Participants' roles varied from senior management (35.3%) to researcher and university academic (5.9%). Participants represented an experienced group of nurses and midwives, with the median years of nursing experience 34.5 years and 64.7% held a PhD (see Table 1).

Table 1
Characteristics of participants.

Characteristic	Mean/median/Std. deviation	No. (n) %
Gender		
Female		(14) 82.4%
Male		(2) 11.8%
Not reported		(1) 5.9%
Age (yrs.)		
36–45		(1) 5.9%
46–55		(9) 52.9%
56–65		(6) 35.3%
66–75		(1) 5.9%
Experience in profession (yrs.)	31.14/34.5/9.59	(14) 82.4%
Not reported		(3) 17.6%
Practice Registration in Australia		
Nursing		(14) 82.4%
Both nursing and midwifery		(1) 5.9%
Not reported		(2) 11.8%
Years since registration	31.93/35/5.66	(14) 82.4%
Not reported		(3) 17.6%
Employment		
Local Health Service/Health Facility		(5) 29.4%
University		(4) 23.5%
Both Health Service and University		(8) 47.1%
Role		
Senior management		(6) 35.3%
University academic		(5) 29.4%
Researcher		(2) 11.8%
Both researcher and university academic		(2) 11.8%
Senior management, researcher, and university academic		(1) 5.9%
Not reported		(1) 5.9%
Highest qualification		
PhD		(11) 64.7%
Masters		(6) 35.3%

Note. n = 17.44 members were invited to participate, 22 participated, 5 did not return demographic surveys, and 5 returned surveys were missing some data.



Fig. 2. Word Cloud of impressions of the Pathway. Note: The parameters of the word 'frequency query' included 100 most frequent descriptor words of four-letter length minimum. Stemmed words were grouped under one main word. Then, to edit out non-descriptive words, these sections of text were coded a second time with only one-word descriptions coded. A word frequency query was performed on the one-word codes and a Word Cloud produced as a visual representation of participants' impressions.

3.2. Acceptability and utility of the Pathway

Strong support for the *intention of the Pathway* from senior nursing executives and academic researchers was evident and voiced as follows:

"We feel very strongly as nurse managers and leaders that we need [this] framework. I totally believe that the preparation of nurses to undertake research and to implement evidence in practice [is] just a fundamental underpinning, for now, and the future" (P 5).

"It's absolutely essential. It's overdue and if it's not implemented, nursing is going to get even more left behind in terms of developing and building and expanding research capacity" (P 4).

Prominent words in participants' comments in relation to the design of the Pathway confirmed the acceptability of the Pathway: *impressive, fabulous, forward thought, great, detail, integrated but also complex and complicated*. Viewing of the graphical display of the Word Cloud confirmed an overall positive position (see Fig. 2).

An understanding of the Pathway as being a vision of a new world for clinician researchers within LHDs, emerged, and was captured best by one participant, with the Pathway potentially addressing what was 'dreamed of':

"I've always dreamed of having a model where there is the professor [who] might oversee or multiple professors, then there's the associate professors, then there's CNCs (Clinical Nurse Consultants), post-doctorates or the CNCs undertaking their doctoral degrees. That real integrated career pathway just doesn't exist" (Participant [P] 14).

This Pathway, with its multiple levels of support, had the *potential to meet this vision for health facilities*.

The Pathway was perceived as being *comprehensive* and inclusive of many levels of staff, including middle mentors who were perceived as absent currently. "there's no middle mentoring or support" (P 6).

Table 2

Major and minor themes/categories.

Major themes/categories	Subcategories/subthemes
Current disintegration of the clinician researcher role	Challenges
Implementation	Existing perceptions of Health consumers Other health professionals Other clinicians Managers and executive staff Universities
	Strategies
	Shared vision for health services and universities Harnessing existing champions Language and messaging that connects research to practice Start early with student nurses
Balancing a clinical and research role: need for protected time	
Reintegrating the clinician and researcher role: growing and stabilising clinician researchers over a generation	Vision unfolding Research experiences transform clinicians' attitudes to research Others acknowledging research engagement Steadfastness in believing in this new reality

Note. Data saturation 63.6%.

The value of *enacting the 'whole trajectory' of the Pathway* (i.e., internships, training, and fellowships), rather than components, was also noted by one participant with there is a “better chance of turning [the Pathway] into something that is sustainable and actually will [work]” (P 20). This need for a comprehensive approach, as demonstrated in the Pathway, addressing all levels of staff concurrently, was essential.

3.3. Themes

The participants often referred to the need for the integration of the clinician researcher role that was perceived as currently disconnected or fragmented. The Pathway was believed to have the potential to reintegrate these roles within health services. Although participants were also circumspect, noting the considerable difficulties of balancing of clinical and research roles and changing existing cultures with implementation. Nonetheless, participants believed the Pathway could lead to real change over an extended period.

Four major themes emerged: (i) Current disintegration of the clinician researcher role, (ii) Implementation, (iii) Balancing a clinical and research role: need for protected time, and (iv) Reintegration of the clinician researcher role: growing and stabilising clinician researchers over a generation (see Table 2).

3.4. Current disintegration of the role of the clinician researcher

Participants described how the clinician researcher role had become disconnected noting that historically the clinician researcher was inherent in the professional role.

“research and clinical work they're separated, yet Florence Nightingale was one of the greatest researchers ever. The whole research and evidence-based practice and the fact that they were so integrated, just seems to be lost” (P 12).

Participants described that no clinician researcher role exists now (referring to bedside clinician researcher level), although participants felt that other disciplines (allied health and medicine) had not experienced this disconnect (P 1, 5).

“I started in my clinical research role, I assumed – ... that I would have so many days in practice and undertake research it was not

possible via the unions to work as a clinician – and it was not okay by the university either and yet all the doctors did. They all had clinical roles and did research” (P 1).

One participant described how they had been told by a manager that research is not required in the clinical area; ... it's got nothing to do with [your current clinical role]” (P 10).

3.5. Implementation

The broad nature of the cultural change required, and the perceived length of time required to achieve such cultural change was daunting. The participants' concerns about the magnitude of the issues to be overcome were embodied in Participant 1's statements, “it's in the implementation, I can see a million stumbles, and later I'm sure we can overcome whatever obstacles arise”. Similarly, another Participant identified the long-term nature of the Pathway vision, “you can't change a culture overnight. It takes a generation” (P 18).

3.5.1. Challenges

Participants described the challenges ahead when implementing this Pathway with an emphasis on *professional practice and inter-professional relationships* (P 20) and perceptions of the role of the nurse. Connected to these relationships, was the need to change existing perceptions of the nurse as a clinician researcher, for health consumers, other health professionals, other clinicians, managers at the ward or executive level, as well as engaging the university (P 1, 6, 8). In addition, workload models and how they are understood by all health professionals were of concern:

“The concept of our model of care at the bedside is very poorly understood by key players in LHDs who make decisions about how people might manage their workload” (P 8).

Workload models that provided constant face-to-face care were unlikely to provide opportunities for focused research work or protected research time away from the bedside. Similarly, changing existing perceptions of managers, other health professionals, of the need for time away from the bedside, was a substantial hurdle if larger numbers of nurses and midwives were to engage in the Pathway.

3.5.2. Strategies

Strategies to support implementation of the Pathway were numerous, including:

creating a shared vision for health services and universities, harnessing existing champions, language and messaging that connects research to practice, and starting early with student nurses. Participants believed that the ‘hardest’ initial part of implementation was to

“get the LHD Directors of Nursing and the Heads of Schools together and get a commitment around the Pathway”... “we have to have a [the] same shared vision” [P 16].

Similarly, sectors need to use limited resources wisely: “Universities and hospitals really do have to work together harder and smarter to make our limited resources go further” [P. 9].

Participants also felt that there were major roles in the change process for most levels of health service staff. Health service leaders believed that other key leaders within the health services could implement the Pathway, such as “operations managers, the managers of the CNCs and NPs [Nurse Practitioners] and CNSs [Clinical Nurse Specialists] group and beyond” (P 16). The role and responsibility of clinicians were also emphasised with “having the clinicians on the ground influence the change [being] critical” (P 6).

Participants described harnessing existing champions within the health service:

“across the system there’s a range of people [who] do understand this and I think we need to harness them and work with them to help us move this kind of approach forward...building confidence...learning how to put evidence into practice,” (P 5).

Other strategies described by participants related to language and messaging that connects research to practice. This strategy was described as being needed to target consumers, different patients, and settings, noting that the:

“core part of every nurse’s role [is] to provide appropriate person-centred care with evidence-based practice as [part] of that conversation” (P 9).

This participant also described how mixed messaging (supporting and not supporting research) occurs, where the “amazing [nursing research] work” being done is not being “celebrated” (P 9). Further to this, whatever messaging is used, it “has to be anchored on improving patient care and outcomes as an endpoint” (P 9).

Although most of the narrative related to the health service, introducing a zeal for research and the potential of the role of clinician researcher to student nurses during their undergraduate program or starting early with student nurses was also emphasised. Participant 2 noted the importance of “teaching of research and letting young undergraduate nursing students know about the possibilities to come.” One participant noted it was essential to have nurses or midwives with research experience teaching research rather than teaching ‘from a textbook’: “When you start talking about the real-life examples of research...the students come alive...” (P 1).

3.6. Balancing a clinical and research role: need for protected time

Considerable discussion focused on the difficulties of balancing a clinical and research role, emphasising the critical aspect of protected time. Participants recalled examples of how protected research time was difficult to maintain when clinical needs existed:

“Most CNCs [Clinical Nurse Consultants] don’t get 20% protected time to do research and the clinical side of it always takes priority.” (P 6).

“I can’t tell you how many times I know of people who, on established secondments into so called protected time, are back on the wards taking a patient load. If you’re doing data collection, it’s very difficult to suddenly do caseloads when you have interviews booked” (P 20).

Others described how securing protected time was an important first step to supporting the Pathway, and how working with managers was essential:

“...trying to find some of that protected time for CNCs now as an initial step in trying to work through the rationale around that with their managers and support them to take the day a week and help the manager understand what benefit that’s going to be to the clinical setting and the patient and the nurses in that team” (P 5).

One participant described the difficulties nurses have in taking time to undertake a PhD:

“[Nurses] really want to do a PhD and they have a really good idea; it’s clinically based from what they have encountered in their work. the thing that stops them is funding. Practically speaking how would they do this on top of an already busy workload?” (P 2).

The difficulties of balancing the roles were further highlighted in existing conjoint positions with two employers:

“What I’ve found in this role is as a joint university and health service position, ...different managers have different expectations and different things they want you to achieve and they’re all probably valid, but it actually puts a lot on the person who’s in that role” (P 2).

“...not least practicalities of two different software systems, two different platforms, two different absolutely everything” (P 20).

“it is about managing two masters and the nature of the roles are always going to have some level of tension we can be more creative than the traditional model” (P 14).

3.7. Reintegrating the clinician and researcher role: growing and stabilising clinician researchers over a generation

The Pathway was viewed as providing a vehicle to create new clinician researchers over time and integrating the practice and research role:

“I think this model lends really nicely to that and the long term would be that you end up getting this whole army of researchers across a broad spectrum, not just in little pockets” (P 6).

“it gets back to that real integration of research and practice at the frontline which I think this framework starts to reconcile” (P 5).

Participants noted that existing research internships (a stream in the Pathway) have been found to change attitudes to research or that research experiences transformed clinicians’ attitudes to research positively. Another participant noted that other research administrators were noticing that nursing and midwifery were increasing their research engagement:

“So, we are now seconding [nurses] to our [research] department but once they go out back into the clinical setting after they’ve finished their rotation, they’ve got a totally different [implied positive] view of research” (P 7).

Similarly, other key stakeholders were identified by participants as accepting the research achievements of nursing and

midwifery and their potential or others acknowledging research engagement.

"I've got some really good results and the Director of Research now has met with me twice because... nursing and midwifery is getting organised. We're moving forward and ... [he said], I want to jump on that because I'm struggling getting medical engagement in some areas, but you're moving forward and you're going to be at the table and they're going to come behind because you're getting organised, you're getting grants, you've got studies now" (P 16).

Participants articulated how the vision of an implemented Pathway would evolve at the ward level (vision unfolding), when 1 in 10 nurses or midwives have a higher degree in research (target for 2034):

"I think nurses would stop complaining about problems and start coming up with more solutions" (P 5).

"I think once that happens in terms of those clinical nurses having those higher degrees, they will then have the confidence to really drive that kind of translation of evidence into practice. I think that in some ways with that confidence, they won't be asking for permission, they will just be moving forward... – not just competence, but confidence to do that kind of work" (P 17).

"As long as they're supported and it's a good experience for them and it's productive, it's a good experience for the ward in what they generate. Then that gets the ball rolling, keeps it rolling" (P 20).

"We give them examples that will interest them, that are do-able and practical, and you give them a Pathway to achieve things, give them examples and you show them people who have done it. You show them where it can go" (P 20).

Finally, the need for continuing support for this major undertaking within the profession was well-articulated by one participant (steadfastness in believing in this new reality):

"There are an awful lot of things in professional practice where people do not actually believe that things have a chance of being a reality, until you have come back to them and come back to them, because anyone can turn up with a brilliant idea and beautiful documents. But things that appear quickly also disappear just as quickly. I think sometimes what you have to do is just accept that you will have to keep going – and that gets you the credibility, that this is something that is professionally important" (P 20).

4. Discussion

In this study, we sought to explore the opinions of senior nurse managers/executives, academics, and clinician academics about the acceptability and utility of a newly developed Pathway to increase the capacity and capability of nurses and midwives to undertake research, and develop new knowledge and implement evidence-based practice within health services.

The Pathway was perceived as both acceptable with strong utility, and to represent a vision that could ultimately deliver increased numbers of clinician researchers, at all levels, within nursing and midwifery. The comprehensive nature of the Pathway, allowing all nurses and midwives access to initial research opportunities, formal training, and then career opportunities, was believed to meet an urgent need within health services. Both the health and university sectors were supportive of a collaborative vision, and subsequent use of limited funds. This Pathway was modelled on the Integrated Clinical Academic Programme (Carrick-Sen et al., 2016), which is managed by the NIHR, and offers all levels of positions. The

requirement to offer all components of the Pathway, rather than selected awards, was emphasised.

Components of the Pathway have already been found to be effective, while others were urgently required. The current practice of 'seconding' clinicians into research centres to undertake research was found to transform beliefs and instil interest in research, reflecting the internship category, which has been well-described (Olive et al., 2022). Whilst secondments can be highly valuable, they are usually only available to a limited number of individuals and do not result in a large volume of new clinician researchers. The need for funding to support clinicians to undertake higher degrees in research, such as partial or complete PhD scholarships, was highlighted by these researchers and others (Cowley, Diver, Edgley, & Cooper, 2020). Payment of complete salaries should provide this opportunity.

Although the aim of the study was to determine Pathway acceptability and utility across two sectors, the narrative did unfold, connecting the Pathway, if enacted, to the potential to transform the perceived disconnection (*Theme 1: Current disintegration of the clinician researcher role*) between the clinician and researcher role. Participants believed that this loss of the dual role had occurred, while other health disciplines such as medicine and allied health have retained this combined role and its expectation. We acknowledge that some Clinical Nurse/Midwife Consultants and Nurse Practitioners may hold this position currently (in a partial or complete form), as well as Senior Conjoint Professors and Senior Research Fellows. Participants perceived that the introduction of the Pathway was supportive of the *Reintegration of the clinician and researcher role; growing and stabilising clinician researchers over a generation* (*Theme 4*). It was important to understand that change of this nature would require 'a generation' to occur.

With this strong support for introducing the Pathway, there was also awareness of the *Challenges* and also *Strategies* available during *Implementation*. The narrative largely focused on the need for cultural change within existing health professionals, as well as health consumers. Aspects of the Normalisation Process Theory (May & Finch, 2009; May et al., 2022), a sociologically-based implementation science theory, frequently used with complex clinical interventions, may provide a framework, with some adaptation, for the introduction of this Pathway within complicated organisations such as health services and universities. The process of implementing a Pathway across two sectors – health services and universities – will require considerable effort and evaluation throughout the implementation phase. Nonetheless, there is an Australian focus on the development of clinician researcher positions across all health professional groups, which is likely to drive this development from a Federal and State health perspective (Australian Academy of Health and Medical Sciences, 2022). Implementation has commenced with a small cohort across the SPHERE Nursing and Midwifery Academy members, using Pathway Ambassadors within health services and universities, and supported by communication tools such as videos presenting the Pathway and clinician stories, soon to be embedded within a dedicated website.

Finding tangible solutions to the problems of the *clinical and research role balance* was described by participants in this study and others (Avery, Westwood, & Richardson, 2022; Baptiste, Whalen, & Goodwin, 2022). After introducing the Integrated Clinical Academic Programme, this obstacle remained prominent (Trusson, Rowley, & Bramley, 2019). The facilitation and management of protected time remain a critical point for the long-term sustainability of the Pathway. The point of difference between nursing, medicine, and allied health is nursing often delivers 24-h direct clinical care. Nursing's use of caseload models (e.g., team nursing) that are fragmented (different carers within a 24-h period) or task allocation service approaches (Fernandez, Johnson, Tran, & Miranda, 2012), continue to restrict the potential development of clinician researchers. Clinical Nurse Consultants without direct caseload

responsibilities, while retaining development of groups of patients/consumers, continue to provide the best opportunities for managing clinical and research work. Without local or indeed national solutions to this vexing issue, growth in the clinician researcher workforce will be restrained. The participants believed that addressing this issue should commence immediately with the current cohort of Clinical Nurse Consultants who sometimes struggle to receive or protect 20% research time. Perhaps, a National Summit for nurses and midwives and their stakeholders, is required to find innovative solutions and achieve consensus on these matters.

For conjoint positions, the tensions between different health and academic priorities and expectations, are ongoing, and well-articulated (Albert et al., 2022; Carrick-Sen et al., 2019) and require creative solutions, such as agreed workload indicators across sectors.

Participants were able to describe how the Pathway once introduced – vision unfolding – would transform practice. Nurses and midwives with higher research degrees and experience in research would be both capable and confident and would lead important innovative change in practice, that other clinicians and ward managers would acknowledge as beneficial to patient outcomes and practice. The snowballing of this effect across an organisation was believed to deliver evidence-based practice, developed by local clinician researchers, for health consumers.

The participants in this study represented Phase 1 of a series of exploratory interviews. Further research engaging health consumers and other nursing designations (Nursing Unit Managers, Clinical Nurse Consultants/Specialists, Nurse Practitioners, and Clinical Nurse Educators) is planned. Most participants held a PhD, and therefore the findings may reflect a positive bias to the Pathway. The importance of having senior nursing and academic support for a research career pathway has been well documented (Gerrish & Chapman, 2017). This work was conceptualised by the group and some authors were also participants. These qualitative findings may have limited transferability. Investigator bias was minimised by using extended direct quotes. We also acknowledge the complex and important issues of industry awards and role descriptions within varying organisations, which are beyond the scope of this study (Rickard et al., 2011; Smith et al., 2018).

Although the Pathway was developed for the SPHERE network, we acknowledge the importance of this development to NSW and the wider Australian nursing and midwifery profession. Our intention is to initially implement the Pathway within the SPHERE member organisations as a first step.

5. Conclusions

The SPHERE Nursing and Midwifery Clinician Researcher Career Pathway was found acceptable with good utility by these participants and provides direction for reintegration of the role of clinician and researcher noting this may take a generation to transform the culture within our health services. The Pathway is well aligned to national priorities to develop clinician researcher capacity, and to support knowledge translation. To succeed, many challenges need to be overcome, including changes to existing perceptions of clinicians, managers, other health professionals, and consumers. Leadership, appropriate language and messaging, and a shared vision and voice are required from universities and health services. Protected research time remains essential to success, requiring creative solutions using diverse models of care. The Pathway has the potential to grow a nursing and midwifery workforce that can meet the challenges of delivering evidence-based care to health consumers.

Authorship statement

All authors agreed: that the article is their original work. The article has not received prior publication and is not under

consideration for publication elsewhere. They have seen and approved the paper being submitted. They abide by the copyright terms and conditions of Elsevier and the Australian College of Nursing.

CRediT authorship contribution statement

Maree Johnson: Conceptualization, Data acquisition/collection, Formal analysis, Investigation, Methodology, Visualization or Interpretation of data, Supervision, Writing of paper, Writing – review & editing, Writing – original draft. **Caleb Ferguson:** Writing – original draft, Funding acquisition, Conceptualization, Supervision, Investigation, Resources, Writing – review & editing. **Anna Thornton:** Conceptualization, Writing – review & editing. **Joylynn Israel:** Data acquisition, Analysis, Visualization, or Interpretation of data, Writing – original draft, Conceptualization, Writing – review & editing. **Marilyn Cruickshank:** Conceptualization, Writing – review & editing. **Debono Deborah:** Conceptualization, Writing – review & editing. **Ritin Fernandez:** Conceptualization, Writing – review & editing. **Margaret Fry:** Conceptualization, Writing – review & editing. **Louise D Hickman:** Conceptualization, Writing – review & editing. **Annmari Hosie:** Conceptualization, Writing – review & editing. **Sally C Inglis:** Conceptualization, Writing – review & editing. **Gemma McErlean:** Conceptualization, Writing – review & editing. **Elizabeth McInnes:** Conceptualization, Writing – review & editing. **Lin Perry:** Conceptualization, Writing – review & editing. **Suzanne Sheppard-Law:** Conceptualization, Writing – review & editing. **Rochelle Wynne:** Conceptualization, Writing – review & editing. **Mark Parsons:** Conceptualization, Writing – review & editing. **Sandy Middleton:** Writing – original draft, Funding acquisition, Conceptualization, Supervision, Investigation, Resources, Writing – review & editing.

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Ethics approval

Australian Catholic University HREC, Approval Number 2021-175E.

Ethical statement

Ethical approval was obtained from the Australian Catholic University Human Research Ethics Committee Approval Number 2021-175E. Approval was granted on the 28th July 2022. The research conforms to the Declaration of Helsinki.

Conflict of interest

All authors report no conflict of interest related to this paper. No author was involved in the editorial management of this paper.

Declarations

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.colegn.2023.06.002.

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