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# CONTENTS

## EDITORIAL



## RESEARCH & EVALUATION



## EDUCATION-IN-PRACTICE

# From the Editor

Prof Kichu Nair[1]
Editor-in-Chief

We are delighted to announce the publication of four compelling papers in this volume.

We have many medical professionals working in our health system who are not in a specialised training program. However, they provide essential support in various healthcare settings. Unfortunately, their training and professional development needs are frequently overlooked. Thistlethwaite and colleagues' paper emphasizes the importance of creating professional development plans for physicians. This pilot project illustrates the need to address individual and site-specific needs of this critical clinical workforce.

While healthcare providers focus on taking care of their patients, they often neglect their own well-being. A popular adage states, "Ask your colleagues what matters to them, not what is the matter with them." Reflecting on our experiences helps us learn and grow. In healthcare, team building is critical in reducing stress and preventing burnout, while also improving resilience. Marjoribanks and colleagues employed photoreflection in their paper, "*The Seed Journey*", to enhance team building. Effective teamwork and team building are critical to achieve the best outcomes for our patients and healthcare professionals.

Paramedical staff play an important role in healthcare, as first responders, and it is important that they are culturally competent. Dr Lisa Holmes and her team revised the undergraduate paramedical degree curriculum, incorporating Aboriginal and Torres Strait Islander content and approaches where and when appropriate. This work will go a long way toward closing the gap and making the delivery of care by paramedics culturally safe.

Our patients expect person-centred care. To accomplish this, they require relevant information that is easy to use and backed by evidence. This empowers patients. We must listen to consumers and respond to their needs. In the paper by Elder et al, they describe how they revamped the website for antenatal care, making it more user-friendly. We need to consider similar sites for all other medical specialties.

We are very pleased to present this latest volume to our readership and continue to contribute to the scholarship of health profession education research.

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***Research & Evaluation*** article (double blind peer-review)



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# Developing and evaluating a professional development plan pilot for doctors in unaccredited posts: A pilot study

Jill Thistlethwaite[1, 2], Lara McGirr[1], Toni Vial[1]

## Abstract

***Purpose***

*In Australia, doctors from their third-year post graduation who are not on specialist training pathways frequently work in unaccredited posts with varying amounts of education and support. In 2019, the New South Wales Ministry of Health (NSW Health) and the Health Education and Training Institute (HETI) agreed on a pilot process for these doctors to develop a professional development plan (PDP). The pilot aimed to implement the process and evaluate its feasibility and acceptability.*

***Methodology/approach***

*The process was piloted at four sites in 2021. The evaluation methodology was informed by the non-adoption, abandonment and challenges to scale-up, spread and sustainability (NASSS) framework with data derived from site meetings, interviews with doctors in unaccredited positions and PDP supervisors, and analysis of PDPs and time required.*

***Findings***

*A total of 42 doctors undertook the PDP process, of whom 25 were interviewed. Of the 28 supervisors recruited, 13 were interviewed. Three sites reported successful implementation, with most doctors having a PDP in progress. Despite challenges associated with the diversity of the workforce and workplaces, all sites were supportive of the process being rolled out with appropriate resourcing.*

***Research implications***

*The research findings indicated that embedding a PDP process more widely across the state will be complex due to the diversity of the workforce and clinical workplaces.*

***Practical implications***

*The PDP process, while acceptable and feasible, needs to adapt to local circumstances, including the workforce, supervisory capacity and experience, individual doctor needs and available resources.*

***Originality***

*The evaluation supports the need for a supported PDP process for doctors in unaccredited positions.*

***Limitations***

*The findings may not be transferable to all NSW Health facilities or to other states or territories. Doctors who consented to be interviewed were more likely to be positive*

*about the process than those who did not. The study did not include a cost evaluation or explore cost-effectiveness due to the short time frame.*

Keywords: professional development plans; continuing professional development; junior doctors; service registrars; education evaluation

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## INTRODUCTION

In New South Wales (NSW), Australia, doctors in their first two years after graduation (postgraduate year [PGY] 1 and 2) are referred to as prevocational and undertake an educational program with supervisory support. Following this, doctors are typically either accepted into a vocational specialist structured training program in accredited hospital posts or take up an unaccredited position. In NSW, the former are referred to as registrars, while the latter are known variously as career medical officers, senior resident medical officers or unaccredited trainees. The National Medical Workforce Strategy 2021–2031 refers to doctors in unaccredited positions as service registrars (Australian Government Department of Health 2021). The recent rise in the number of medical students in Australia without a concomitant increase in training posts has led to a rise in the number of service registrars. These include those who plan to apply for a specialist training position, have left a training program, are uncertain of their preferred career or have decided not to enter specialist training. Service registrars may also be international medical graduates.

Service registrars have historically worked long hours in public hospitals, carrying out similar tasks to specialist registrars but without the same levels of supervision, education and limits on overtime. The importance of their contribution to healthcare is not always given the recognition and respect it deserves by medical and other health professionals, and service registrars are prone to exploitation (Australian Government Department of Health 2021). Because of concerns about these doctors, in 2008, the NSW Ministry of Health (NSW Health) established the Hospital Skills Program (HSP) through its education organisation, the Health Education and Training Institute (HETI). It was a flexible training and development program designed to provide a structured set of learning outcomes in a set of HSP modules, launched between 2010 and 2012. They were based on authentic clinical contexts and included emergency medicine, aged care, mental health, children's health, hospital medicine, women's health, addiction medicine, rural medicine, sexual health and Aboriginal health. However, uptake has been poor, partly because of its detail and lack of strategic direction for its use. Moreover, the modules have not been updated in line with clinical guidelines or practice over the last nine years. The HSP was also intended to include a professional development process undertaken by the local health districts (LHDs) in which the doctors were employed. This process consisted of each HSP doctor formulating a learning plan, defined as a set of learning outcomes based on their role and educational needs, planned activities to achieve the outcomes and evidence of learning. Evidence of learning incorporated work-based assessment (WBA), comprising observation and evaluation of the doctors' performance during clinical activities.

HETI was aware of considerable concerns about the practicalities of implementing such a process across the state, particularly in accessing appropriate training, supervision and review for doctors working without consistent on-site supervision. In 2013, a pilot professional development plan (PDP) process was undertaken at one hospital, which found that while there was variability in the engagement of the doctors, the process was considered valuable and could be modified for other areas of practice. An essential factor for success was a positive supervisory relationship in which supervisors acknowledged the educational and other needs of the non-specialist doctors. However, the time and resources required for arranging and completing WBA limited feasibility, and there were general misconceptions about WBA. The pilot report recommended trialling the process at more sites before a statewide rollout (Ozolins et al. 2014).

The HSP continued to provide funds for education for all doctors in non-accredited posts in NSW based on their perceived needs. However, this workforce is diverse, with unaccredited posts across multiple specialties and locations. Education has not been tailored to individual needs and career progression. The Australian media has published stories about these doctors' heavy workload (Lindsay 2019; McKinnell 2019). In response, the Australian Medical Association (AMA) of NSW, an independent body representing the state's medical profession, reported that its council was 'concerned about the growing cohort of junior doctors working in unaccredited registrar positions and believes that this is a waste of human capital and may be affecting the provision of safe, high-quality patient care' (AMA NSW 2019).

In 2018, HETI agreed that more support for PGY3 to PGY5 doctors in non-accredited posts was required. These doctors would now be referred to as hospital non-specialist program (HNSP) doctors. In 2019, an agreement was reached to pilot a supported PDP process in the state. In addition, the MBA announced that all registered medical practitioners, with a few exemptions, must have a written and ongoing PDP from 1 January 2023 (Medical Board of Australia 2021).

By definition, a PDP ('trainee' or 'learner' may be substituted for 'employee'):

> gives an overview of the competencies the employee worked on in the past and which competencies the employee is planning to work on in the future … is composed by the employee himself … and is used as the basis for or to structure the conversations with the supervisor or the coach, who provides the employee with feedback and stimulates the employee's reflection. (Beausaert et al. 2011, p. 236)

Before piloting, the process was widely discussed and developed with stakeholders across NSW Health. The consensus was that the NSW PDP process aims to support HNSP doctors in a continuous cycle of improvement and learning by determining their current level of competence and performance and facilitating the identification and achievement of learning outcomes related to their specific needs and career plans. We identified conversations with supervisors as an important part of the process. They offered an opportunity for the HNSP doctors to reflect on the learning needs for their current clinical roles, future roles and career aspirations with their supervisors' guidance. The example template for the pilot included the typical components of PDPs (Challis 2000), but these were not mandatory. It was recommended that learning outcomes be written as specific, measurable, achievable, realistic and timely (SMART) goals (Doran 1981). The supervisor's role included meeting with the HNSP doctor, supporting the identification of learning goals and relevant learning activities to meet the goals, discussing evidence of learning and advising on career progression.

## PURPOSE

The aims of the PDP pilot over 13 weeks were to develop, implement and evaluate the process to enhance and sustain the training and satisfaction of the HNSP workforce in NSW. The evaluation focused on the process's feasibility and acceptability rather than longer-term outcomes such as learning achievement, career development and patient outcomes.

## METHODOLOGY AND APPROACH

The development and delivery of the HNSP require a change in management approach. Greenhalgh and Papoutsi (2019) have described the dissemination of

innovation across a healthcare system as challenging but achievable by considering three different logics of change and their underlying theories: mechanistic (implementation science), ecological (complexity science) and social (social science).

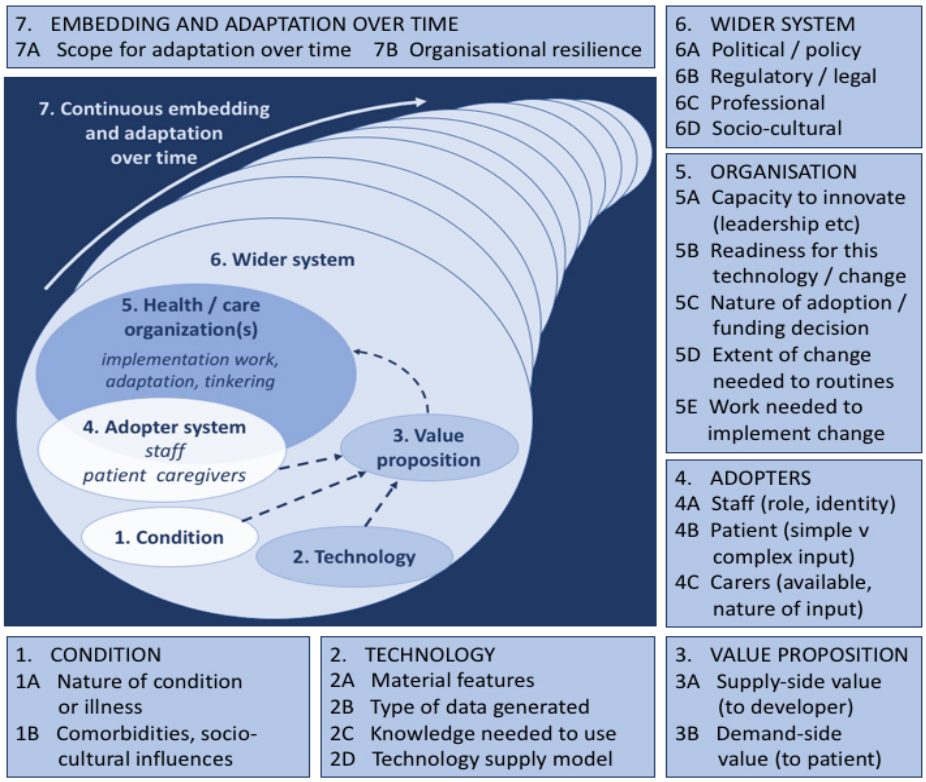
Implementation science focuses on the uptake of evidence-based practices into routine practice (Nilsen 2015). In the case of the HNSP, evidence-based education must inform the program. The intervention (the PDP process) must be clearly defined and implemented, considering how individual and organisational behaviour may be changed. Ideally, a small-scale trial in a few settings is evaluated (i.e., a pilot process).

Complexity science studies complex systems that are uncertain, unpredictable and emergent (Greenhalgh & Papoutsi 2019). Healthcare settings are complex in nature and dependent on diverse groups of health professionals, educators and administrators. To succeed in implementing the HNSP, the unpredictability of the workplace and the need to modify the program for local contexts must be recognised.

Social science aims to explore what people believe, why they work the way they do, how they interpret others' actions and what they draw on to achieve their (or a program's) goals. Staff work differently in different contexts; they work around problems in diverse ways and adapt innovations to their needs and resources. Thus, attempting to standardise a program as a rigid 'one size fits all' model is unlikely to be feasible or acceptable.

These three approaches informed the methods of implementation and data collection to capture the contextual factors underlying the adoption of the HNSP pilot PDP process. The framework for the evaluation was the non-adoption, abandonment and challenges to scale-up, spread and sustainability (NASSS) framework of Greenhalgh et al. (2017) (Figure 1). The NASSS framework was developed as an evidence-based, theory-informed and pragmatic framework to help predict and evaluate the success of implementing a new technology-supported health or social care program. We considered it appropriate for predicting and evaluating the implementation of other programs—in this case, the PDP process for the HNSP. The adoption and diffusion of innovations are not solely affected by individual factors such as finance, technology, staff and learners considered separately but by the dynamic interactions between them. It is these interactions that were explored in the pilot. The seven domains of the NASSS informed the evaluation of the pilot to help predict the feasibility of the process and provide recommendations to enhance the likelihood of adoption, given the current climate of doctor shortages and increased workload pressures due to the ongoing COVID-19 pandemic. The pilot evaluation questions are listed in Table 1.

Figure 1: The NASSS framework




Source: Greenhalgh T, Wherton J, Papoutsi C et al, 2017, 'Beyond adoption: A new framework for theorizing and evaluating nonadoption, abandonment, and challenges to the scale-up, spread and sustainability of health and care technologies', J Med Internet Res, vol. 19(11): e367. doi: 10.2196/jmir.8775.



Table 1: Evaluation questions informed by the NASSS domains

| | Domain | Questions |
|---|---|---|
| 1 | Condition<br>(Lack of structure and support for the hospital non-specialist medical workforce) | How is this condition perceived by participants?<br>What are the socio-cultural factors to consider in this context? |
| 2 | Innovation (intervention)<br>(The professional development process) | What are the important features of the process?<br>What is required in terms of technology?<br>What knowledge and skills are needed to take part? |
| 3 | Value proposition | What is the business case/rationale for implementation? |

| | Domain | Questions |
|---|---|---|
| | | What are the desirable outcomes, the effectiveness and cost-effectiveness of the process? |
| 4 | The adopter system | What changes are implied for staff (HNSP doctors, supervisors, support staff)?<br>What is expected of these individuals? |
| 5 | The healthcare organisation | How does the structure of the organisation (NSW Health) in each local context affect the capacity to implement?<br>How ready is it for change?<br>What are the implications for the wider health team?<br>What work is needed to implement? |
| 6 | The wider system | What is the political and policy context underpinning the implementation?<br>What are the regulatory or legal hurdles?<br>What inter-organisational work is required? |
| 7 | Embedding and adaptation | Is this process likely to be sustainable?<br>What affects the likelihood of sustainability?<br>What differences might be expected in different locations? |

During the planning and implementation phases of the pilot, we used appropriate evaluation methods to determine whether the domains were simple, complicated or complex, as defined in the NASSS framework. A domain is simple if it is straightforward and predictable, complicated if it has multiple interacting components or issues and complex if it is dynamic and unpredictable: 'The more complex an innovation or the setting in which it is introduced, the less likely it is to be successfully adopted, scaled up, spread, and sustained' (Greenhalgh et al. 2017).

## ETHICAL APPROVAL

Hunter New England Research Ethics Committee provided ethical approval for this project (2019/PID15113). Site-specific permission was also given.

## SETTINGS AND PARTICIPANTS

Information on the pilot was shared with LHD chief executives. Expressions of interest were invited towards the end of 2020, and the panel selected four sites including metropolitan and rural areas. Funding was provided for a clinical lead and an administrator at each site, who were responsible for selecting and inviting HNSP doctors and supervisors to take part. We provided resources including guides for HNSP

doctors and supervisors and the example PDP template (Figure 2), although we advised that other PDP formats could be used.

Figure 2: The suggested PDP template

| | **Examples** |
|---|---|
| Date | |
| Learning outcome(s)<br>SMART (specific, measurable, achievable, realistic and timely) | |
| Rationale: why do I need to achieve this outcome?<br>How do I know I need to achieve this outcome?<br>How will this improve my performance? | New post<br>Patient's unmet needs<br>Significant event audit<br>Supervisor advice<br>Review and planning meeting<br>Interest<br>Relevant college curriculum<br>Career intentions |
| How will I achieve this outcome?<br>How will I learn?<br>Activities | Online learning<br>Reading<br>Workshop<br>Departmental education<br>Observation and feedback<br>Practice<br>Paid course |
| Date achieved (partial/full) | |
| What have I learned? | |
| How do I know I have learned?<br>Evidence of learning | Formal certificate/assessment<br>Observation in practice such as mini–clinical evaluation exercise, direct observation of practical skills, multi-source feedback,<br>self-assessment<br>supervisor feedback |
| Current post<br>Application to current post | |

## DATA COLLECTION

The pilot process began in January 2021 and lasted 13 weeks (one term). A wide range of data were collected during the pilot and in the following weeks from:

- transcripts of Zoom meetings with pilot sites and the steering committee
- copies of PDPs
- supervisor and administration staff time logs
- transcripts of one-to-one Zoom interviews with supervisors and HNSP doctors
- end-of-pilot reports from each site.

Interviews were semi-structured with areas for discussion based on the NASSS framework domains (Figure 1). They were iterative in that additional topics were informed by analysis of previous interviews. Questions for further exploration also arose during the interviews themselves. Interviews lasted from 20 to 45 minutes and were conducted by the lead author.

## DATA ANALYSIS

Interview transcripts were analysed, synthesised and organised under the seven domains of the NASSS framework. Content analysis (Liamputtong 2020) was suitable for this study as it was not designed to develop new knowledge but to evaluate the feasibility and acceptability of the PDP process, describe the implications of the findings and develop recommendations for NSW Health. Thus, there were specific questions the text needed to answer. The study looked for patterns in the data rather than quantifying responses. Data were analysed in Taguette, a basic qualitative data software package. The content of the PDPs was quantified and described according to the suggested areas to be included in the plans. Quantitative data were extracted from time logs and reports and tabulated.

## FINDINGS

Of the 42 HNSP doctors who undertook the PDP process, 25 were interviewed. Two additional HNSP doctors at Site C who were not in the pilot were interviewed for comparison. Two at Site D who were not allocated a supervisor to start the process in time were also interviewed. Of the 28 supervisors who participated, 13 were interviewed (Table 2). This convenience sample was drawn from participants who responded to our invitation, signed a consent form and were available to be interviewed during the evaluation period. The study analysed 31 PDPs and all time logs from each site. Three of the pilot sites reported successful implementation of the PDP process with good engagement by HNSP doctors and supervisors. The team at Site D, two hospitals in a rural and remote area, was delayed in recruiting staff to the pilot director and administrator positions. This led to late dissemination of information about the pilot to hospital staff, including HNSP doctors, and no orientation event at the start of the term, resulting in minimal uptake of the process. The PDPs contained from two to 30 learning outcomes; eight had SMART goals.

Table 2: Four pilot sites and participant data

| Site | A | B | C | D |
|---|---|---|---|---|
| Description | New critical care rotation with 15 HNSP positions in one district metropolitan hospital | HNSP doctors in different departments in one major metropolitan teaching hospital | LHD with four hospitals involved, HNSP doctors in intensive care unit and emergency departments | Rural and remote LHD with two hospitals involved and multiple departments |
| Number of HNSP pilot doctors | 14 | 18 | 19 | 20** |
| Interviewed | 8 | 7 | 9 + 2* | 3 |
| Number of pilot supervisors | 10 | 14 | 4 | |
| Interviewed | 3 | 3 | 3 | 4 |

*At Site C, nine HNSP doctors in the pilot were interviewed and two HNSP doctors not in the pilot were interviewed to compare.

**At Site D, there were 20 eligible HNSP doctors, only one of whom started a PDP with supervisor support. Three HNSP doctors and four potential supervisors were interviewed.

Participants' quotations are identified by the site letter (A, B, C or D), followed by 'S' for supervisors or a PGY number for HNSP doctors. For example, BS006 indicates a supervisor at Site B, and B3009 indicates a PGY3 HNSP doctor at Site B.

## DOMAIN 1: THE CONDITION

The nature of the condition is a lack of structure and support for service registrars, compared to doctors on specialist training programs.

> So, their progress is not really tracked or measured, and they often don't get much feedback in terms of where they are compared to their colleagues and what's expected of them and what they can do to improve. (BS004)
>
> I don't think I expected [in PGY3] to feel quite so unguided as to what to study or what to work on. (A4005)

The diversity of the individuals within this group is high, adding to the complexity of the condition. The pilot cohort included graduates from nine Australian medical schools and international medical graduates from countries including the United Kingdom, China, Pakistan, India, Nigeria and Brazil. The HNSP doctors reported varying levels of support depending on their department, the number of trainees, the availability of supervisors or mentors and their working rotas.

## DOMAIN 2: INNOVATION AND TECHNOLOGY

While the intervention (the PDP process and documentation) is not innovative in its conception or adoption in many settings, including healthcare, it is novel for this cohort. Many interviewed reported having no experience setting their own learning goals or developing individualised learning plans or PDPs. PGY4 doctors and above were more likely to report self-directed learning experience, either individually or facilitated.

> Not like this where you meet with someone more experienced to help and really organises [sic] a plan. Of course, we all make plans in our minds, but that's different. So, I haven't had one before. No. (C3019)

> I think I've done them before but not for a whole year, it's more just like as a junior doctor, you often work in terms of 10 weeks. Quite a few times at the start of 10 weeks, if your consultant has time, they'll sit down and be like, what do you want to get out of this term? So yeah, I think I have done them before but they're quite informal. (D3001)

Interview data strongly indicate that a timely orientation package is required to brief and support HNSP doctors before starting a PDP. Supervisors offered differing levels of support depending on each doctor's engagement with the process and ability to set, monitor and provide evidence of learning.

> They were, I mean even when we introduced the PDPs at our orientation day, they said well who's going to give that to us … [we said] no, this is your chance to develop it yourself. (AS015)

Site A recommended that HNSP doctors use the My Osler application for PDP development (https://www.oslertechnology.com) and site B used Microsoft Teams rather than the paper-based template. While My Osler was well liked, particularly due to its portability, Microsoft Teams was found clunky and hard to master. Interviewees identified what a suitable platform needed.

> Easily accessible by everybody. Functional. Not so many buzzwords, just really down-to-earth, simple type of stuff where you can document your roles, your plans and your outcomes and whether you achieve it. I think that's all you need. (BS006)

## DOMAIN 3: THE VALUE PROPOSITION

The aim of supporting HNSP doctors is to improve patient outcomes and safety by realising the full potential of each doctor in the NSW Health system. It will be difficult to show a direct link between the introduction of the PDP process and patient care without an in-depth long-term evaluation. Thus, the return on investment is difficult to measure. However, support for doctors is likely to improve performance, and the doctors in the pilot had positive feedback about the process and its necessity. The value will need to be clear to all, including funders and all staff, prior to statewide adoption, which highlights the importance of advertising the benefits of the process. These were identified as support, structure, development guidance, career advice, mentoring and enhanced wellbeing.

> I think a big positive is actually seeing – keeping a record of it, actually seeing the work you're putting [in] and what you're achieving. Because I think I've always done things before but never really recorded it and so never really felt like I was accomplishing anything. So, I think it's positive reinforcement when

> you see what you're accomplishing, you feel more motivated to continue. (A4005)
>
> They get something out of it from a career perspective, but I think they also get something out of it from a wellbeing perspective. (CS001)
>
> I do like that there's a bit more structure and the fact that the whole department's aware that I'm trying to progress with something and I'm not just trying to cruise through the year, and that's been really helpful. (B3005)

For some, the PDP process was seen as of essential value in principle, but problematic in practice, due to local difficulties with staffing levels and the senior workforce having to take on additional supervisory tasks.

## DOMAIN 4: THE ADOPTER SYSTEM

Most HNSP doctors stated that they would continue the process if support was provided. However, expectations need to be realistic, and there could be a danger of losing the educational value.

> Yes. I think so. Absolutely. Especially because I feel that the supervisors, they are willing to help any time (C3019)
>
> I know I have a cynical view of top-down implemented programs because they tend to turn into tick box exercises, or they add workload onto somebody that doesn't really want the workload and you don't really get the engagement in that type of implementation. (D6014)

The PDPs analysis indicated that HNSP doctors need support to recognise learning goals and provide evidence of learning. Few PDPs included SMART learning goals. Instead, goals were broad and vague, without a rationale or timeline for achievement. Most goals were clinically focused, and few were professional or career oriented. In addition to developing new skills in self-directed learning, adopters will need to engage with feedback. Differences were noted in the HNSP doctors' comfort levels in eliciting feedback. This facet of learning needs addressing to help HNSP doctors set learning goals and gain evidence of meeting them.

> It would be very rare that I'd ask someone directly for feedback. (C3010)
>
> I think I definitely go for feedback. Especially when something has gone wrong, or I don't think I've done such a good job or I'm unsure about things. (B4001)
>
> I've had some feedback from my supervisors and I thought that was really helpful. So, I've been asking people to tell me if I'm doing something wrong or if I can do something better and what they think is going to help me for future learning. (C3019)
>
> It's really variable. Sometimes really well because their personal values or approach encourages the seeking of feedback for them as an individual to almost never and in the group of those who almost never seek it, I'm never sure if it's just because they don't know that they can or if they're afraid of what they may hear as well. (DS001)

The supervisors were positive about the process, but they recognised that even in a pilot with supposedly engaged trainees, the response may be variable. Some trainees would require extra input and workload. Supervisors themselves could vary in enthusiasm, and sufficient time for training for new supervisors would be required.

> As a supervisor or as somebody who's trying to mentor these younger doctors, you've got to want to do it, you've got to have some interest, and you've got to show some enthusiasm. (AS001)

> Some supervisors may feel that they don't have the skills to sit down and talk to trainees about professional development. So, they might feel that they need a bit of guidance in what it is they need to do. (AS005)

## DOMAIN 5: THE ORGANISATION

The overall organisation is NSW Health, with multiple health districts and hospitals. In the pilot, the organisation included the local hospitals at the four sites. Within the organisation are clinical workplaces of diverse sizes, geography and capacity to innovate. Taking all sites into account, the organisation is complex. Participants at all pilot sites were highly supportive of the PDP process, including Site D, even though the process there did not run as envisaged due to communication issues. The PDP process will not deliver short-term cost savings and requires resources to introduce and support it. Local organisations will need to factor in time for trainees and supervisors in a system where non-specialist trainees are frequently used to fill gaps in work rotas.

> In our team, the unaccrediteds typically do do more nights. (B4001)

At the time of being interviewed, most HNSP doctors at three sites had had either one or two meetings with their supervisor. Some had a third meeting planned. Sessions lasted from 15 minutes to one hour, with the first meeting typically longer than the second. For supervisors, time was not only spent in discussion but also on documentation and, outside meetings, organising times to meet.

> It's pretty hard to find the time. (B4001)

> I've negotiated some non-clinical time to be able to do that. (AS001)

Time logs indicated that the PDP process would require a minimum of 1.5 to three hours' clinical release time for a supervisor and each HNSP doctor over a 13-week term, with variable additional time for documentation and arranging meetings. Once embedded, administration should take less time than the pilot process. Depending on the number of doctors per site, it could require the equivalent of at least 0.125 full-time work (just over half a day per week).

## DOMAIN 6: THE WIDER SYSTEM AND CONTEXT

Most interviewees agreed that the PDP process should become mandatory.

> I think it would have to be a top-down approach for all unaccredited trainees in New South Wales, and probably for Australia, if I'm honest; but to start with, New South Wales first. I don't think it can be hospital specific. I think if you're going to have something like this, it should be done for all trainees. (AS001)

> I think it's still quite flexible and you can make it quite personal so no [misgivings about being mandatory]. (D3001)

Some interviewees noted that not all departments and hospitals have adequate staffing, particularly in rural areas. They are likely to struggle with additional supervisory commitments, particularly as many potential PDP supervisors are also supervising doctors on specialist training pathways and have other teaching responsibilities.

> Now you've got often non-accredited doctors who are actually most in need of support and training working in areas that are least equipped to provide the support and training. (DS003)
>
> Both accredited and unaccredited trainees and even I have medical students from [XX] Uni who come through. I supervise them as well. (BS001)

### DOMAIN 7: EMBEDDING AND ADAPTATION OVER TIME

A new process will need to adapt to ensure its sustainability and to become embedded in clinical practice. Building PDP requirements into contracts for HNSP doctors and supervisors was seen as important for success.

> For it to work, I feel like having a dedicated supervisor who has this supervision part as a part of their non-clinical portfolio would be a good thing. (CS001)

The pilot lasted one term, whereas the process, if embedded, would extend at least three years (from PGY3 to PGY5) for the HNSP doctors. Ongoing supervision will need to be considered as doctors move within the organisation. It will be difficult for doctors to retain the same PDP supervisor after changing location or department. Several doctors advocated having the same supervisor for one year, while others saw the benefits of change.

> Keeping the same person is definitely better, to have that continuity, I think, is really important. To move supervisors, which is something I did in [XX], was frustrating, and always felt like you never really got to know someone. (B4007)
>
> Maybe it's a good idea to see someone else because they might have different experiences and they might have different options. They might know different courses, or they might know different people to help me organise a meeting with someone from my specialty. It might be a good idea to talk to someone with different experiences. I don't see that as a problem. (C3019)

## DISCUSSION

The ongoing tension between the education of recently qualified doctors and clinical service delivery is increasingly recognised. For example, among other initiatives, the American Medical Association Accelerating Change in Medical Education Consortium aims to create flexible, individualised learning plans to optimise the healthcare learning environment (Andrews et al. 2021). This pilot and the NSW PDP process have similar aims. The NASSS analysis of the pilot data showed that adopting and embedding a supported mandatory PDP process for HNSP doctors in NSW, while acceptable and feasible, will be complex. This was expected, given the diversity of the workforce, clinical workplaces and the overarching health system. The complexity implies that the process rollout is likely to be unpredictable in its adoption, dynamic and emergent (Greenhalgh et al. 2017). Twenty-three recommendations for statewide implementation of the PDP process arising from the pilot have been discussed with NSW Health. We have recommended that the supervisor supported PDP process be mandatory. While professional development may be more sustained if PDPs are voluntary (Smith & Tillema 2001), PDPs are becoming mandatory in Australia in 2023 in any event. If they are developed with supervisor input that addresses learners' needs, they are less likely to be a tick box exercise, as many mandatory activities become (Macdougall, Epstein & Highet 2017).

As with other transitions in healthcare, the addition of a PDP process for HNSP doctors needs to be supported by a timely, statewide orientation that includes the rationale for its implementation. Online resources for HNSP doctors and supervisors are being developed. These explain the process, show what a PDP should consist of and demonstrate examples of content. The doctors should be supported to develop their learning goals with supervisors' input. The focus of the process needs to be on the individual doctor with facilitation tailored to their preferences (Jennings 2007), career goals and experience. The required support level depends on each doctor's experience with PDPs as medical students or prevocational doctors (PGY1 and PGY2) and their comfort with feedback dialogues. Many interviewees stated they had little to no experience setting learning goals and variable experience in engaging with feedback. It is critical to avoid the tensions that have arisen with the portfolio-based assessment of students (Oudkerk Pool et al. 2020). The PDP process should be viewed as a supportive activity for learning rather than an assessment so that doctors are honest about their strengths and areas for improvement. Engaged doctors should require less supervisory input as they progress, particularly if the PDP process enhances their agency and ability to take advantage of a range of work-based learning opportunities (Watling et al. 2021). This would give supervisors more time to motivate non-adopters. Consideration will need to be given to the time and resources required to train supervisors. An ePortfolio may be advisable to develop and share PDPs, though these have cost and security implications. In medical training, PDP portfolios may have contrasting purposes in assessment and support (van der Gulden et al. 2022). In this process, the ePortfolio would have two goals related to support: (1) monitoring and planning doctor development, and (2) stimulating reflection (Driessen & van Tartwijk 2018). The lack of a suitable technological platform that is supported statewide complicates the adoption of the PDP process.

The process needs to be adaptable to local hospital and district circumstances, such as workforce issues (particularly in rural and remote areas), supervisory capacity and experience, individual HNSP doctors' needs and availability of resources (hours and support). Significant time and effort across the organisation are required to set up and document meetings and find suitable times to meet. These factors may be mitigated by paid additional administration support as provided in the current pilot. Governance is also needed to ensure that doctors meet the PDP process requirements.

## STRENGTHS AND LIMITATIONS

A strength of the pilot evaluation is using the NASSS framework to inform data collection and analysis. The study did not solely look at outcomes. It also examined the development and implementation process and implications for the wider rollout of the PDP process.

The pilot was undertaken at four sites. Almost half of the HNSP doctors involved (excluding those at Site D) and 13 supervisors were interviewed. The study also analysed PDPs and collected data on administration and supervision time. This resulted in a sizeable amount of data to apply the NASSS framework, make recommendations for the rollout and enhance sustainability. However, due to the short length of the pilot (13 weeks), we were unable to explore longer-term outcomes in terms of benefits for the HNSP doctors and the health system.

The HNSP doctors and supervisors were recruited to the pilot following successful expressions of interest by their LHDs. Those doctors who consented to be interviewed were more likely to be positive about the process than those who did not or the small

number who withdrew or did not engage with the PDP process. A late start and slow uptake hampered the process at one site, but this experience informed the evaluation.

The findings of this evaluation may not be transferable to all NSW Health facilities or other states and territories. However, within the applied framework, they capture the complicated and complex nature of the HNSP condition. This has informed significant recommendations that recognise those complexities and how they may be mitigated.

Given the short time frame, we did not conduct a cost evaluation or explore cost-effectiveness, apart from collecting data about supervisor and administrative time required during the pilot. There need to be more cost-related studies in professional health education, including continuing professional development (Cook, Wilkinson & Foo 2022). This aspect of the process will be more closely examined when it is implemented statewide.

## CONCLUSION

The evaluation of the PDP process for doctors in unaccredited positions indicates that the process is acceptable and feasible. However, it must also be capable of adapting to local circumstances, including workforce, supervisory capacity and experience, individual doctor needs and available resources.

*Note: PDPs are mandatory in Australia for all doctors (with a few exceptions). At the time of this publication, this was dependent on doctors having a CPD home, and there were no suitable CPD homes for doctors in unaccredited positions. Therefore, the requirement to have a PDP will not be enforced until 2024 for this group.*

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### Conflict of interest

The authors declare no conflicts of interest.

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# The SEED Team journey: A phenomenological study of a multidisciplinary healthcare team's experience using the new creative tool photovoice for critical reflection

Christopher Robert Marjoribanks[1], Leanne Cummins[1], Padmini Pai[1]

## Abstract

***Purpose***

*This paper describes how a newly formed multidisciplinary healthcare team used photovoice as a creative way to improve team bonding and explore individual and team wellbeing.*

***Methodology***

*A phenomenological methodology was used to explore connections and team bonds in the Stability Encompassing Endurance Direction (SEED) Team, a newly formed team of healthcare professionals, using photovoice.*

***Findings***

*The SEED Team's reflections provide insights into using creative photography as a way to express feelings and the importance of wellbeing. The process encouraged individuals to take time away from their cognitive task state.*

***Research implications***

*The use of photovoice in a newly formed team highlighted the effectiveness of reflective practice that can strengthen team connections and provide opportunities to take a break.*

***Originality***

*This study explored a simple yet powerful tool from an experiential perspective. The tool has potential for use in future wellbeing activities and initiatives. The process added value to the participants' existing facilitation skills and fostered awareness of their surroundings while taking creative photographs.*

Keywords: photovoice, SEED, reflection, connections, wellbeing

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## INTRODUCTION AND BACKGROUND

The Stability Encompassing Endurance Direction (SEED) Program is an innovative workplace wellness model that commenced in 2019 in the Illawarra Shoalhaven Local Health District (ISLHD), a regional area in New South Wales (NSW), Australia (Pai et al. 2022). The SEED model uses co-design and implementation science to enable consumers (healthcare staff) to become equal partners in the improvement process (Agency for Clinical Innovation 2022). Implementation science ensured the SEED model could adapt to real-world circumstances and that the research could be applied to local settings, as all healthcare areas are unique and have different barriers (NSW Health 2021a).

The SEED Program was born out of the 2019 bushfires in the southern part of the district (Milton Ulladulla) and further cumulative natural disasters, including the COVID-19 pandemic. The ISLHD initiated a strong focus on staff wellbeing, resilience and recovery, coinciding with the publication of the Elevating the Human Experience guide to action by the NSW Ministry of Health (NSW Health) (NSW Health 2021b; Pai et al. 2022). The SEED Program's success in 2019 led to further interest and investment from the ISLHD Chief Executive (CE) and the NSW Health Chief Experience Officer to support the development of a new SEED Team. A narrative inquiry into the practices of healthcare workers who had experienced the SEED Program identified eight wellness practices that supported healthcare workers (Olcon et al. 2022):

1. responsive and compassionate leading
2. co-designing wellness activities with staff
3. listening to understand
4. creating a safe and healing space
5. connecting with others
6. collective caring
7. diversifying and localising wellness activities
8. striving for sustainability.

A multidisciplinary team was formed to accelerate the uptake of SEED over eight weeks. Recruitment was finalised in May 2022. The SEED Team was structured in the ISLHD Clinical Governance Unit. Its safety and quality improvement expertise helped with role modelling and staff wellbeing. The SEED Team comprised staff from various disciplines and sites around the district, including a clinical nurse educator, a social worker, an executive assistant, an occupational therapist, a divisional support officer and a clinical midwifery specialist. They began their journey with a unique two-day orientation using SEED elements to strengthen team connections.

The SEED Team was given a project management plan that outlined weekly objectives and goals for the eight weeks. Phenomenological methodology and photovoice reflection methods provided insight into the team's thoughts and feelings (Budig et al. 2018). Phenomenology is the qualitative study of lived experience, particularly reflecting on and writing about an experience (Errasti-Ibarrondo et al. 2018).

Photovoice is a participatory creative method that uses a photograph to create a reflection (Budig et al. 2018). Consent forms to share media were signed by each team member. This study complied with Human Research Ethics Committees—Quality Improvement & Ethical Review: A Practice Guide for NSW (NSW Health 2007c) and was approved by the ISLHD Ethics Committee.

Photovoice can enhance community dialogue, facilitate reflection, encourage engagement and elicit authentic data through sharing lived experiences (Liebenberg 2018). The team was introduced to the stream of consciousness narrative communication style, a form of cognitive neuroscience that allows the mind to wander so an individual can document their experience, feelings or behaviours (Smallwood & Schooler 2014). Stream of consciousness allowed the team, using photovoice, to capture their thoughts, perceptions and mental content through the neurocognitive process of taking a photograph and describing it (Smallwood & Schooler 2014). This process is described as a drift from the 'current train of thought (often an external task) to mental content generated by the individual' (Smallwood & Schooler 2014, p. 6), also described as mind-wandering. People can spend 25 to 50 per cent of their waking hours engaged in thoughts unrelated to their present moment, leading to a positive or negative mood, including depression and anxiety (Smallwood & Schooler 2014). Mind-wandering that focuses on the past can lead to unhappiness, however 'an interesting mind-wandering' (Smallwood & Schooler 2014, p.14) experience can lead to a positive mood, as demonstrated in the participants' photovoice pictures and descriptions (Smallwood & Schooler 2014).

The overall aims and objectives of this paper are to explore:

1. the introduction of photovoice as a new creative tool to a newly formed team of multidisciplinary healthcare workers over eight weeks

2. the influence of photovoice on individual wellbeing and team building.

## METHOD

Recruitment for SEED Team positions, including one project co-ordinator and six facilitators, was through the internal NSW Health Recruitment Onboarding System (ROB). The successful candidates met on the first orientation day, 2 May 2022. During the two-day orientation, participants consented to the project by signing the ISLHD media image consent form, approved by the ISLHD Low and Negligible Risk (LNR) committee. The project was considered a practice/quality improvement project not requiring any further ethical review. Each participant was given an information sheet on stream of consciousness and the consent forms. The ethics application 'Photovoice: a reflective practice to improve bonding in a new team' was approved (ISLHD/QA154).

In this study, photovoice involved participant-generated textual and photographic data captured using mobile phone technology. Seven team members began using photovoice during orientation to their new role and continued to use photovoice for six weeks. A mobile WhatsApp group was created, and each team member was asked to take a digital photograph once per week, followed by a text reflection on the photograph and why they took it. A total of 44 photographs with 44 corresponding texts were captured over the six weeks, which were analysed and themed. Seven photographs are included in this article for visual representation.

The photographs and reflections were uploaded to the WhatsApp group for participants to share their experiences.

## FINDINGS

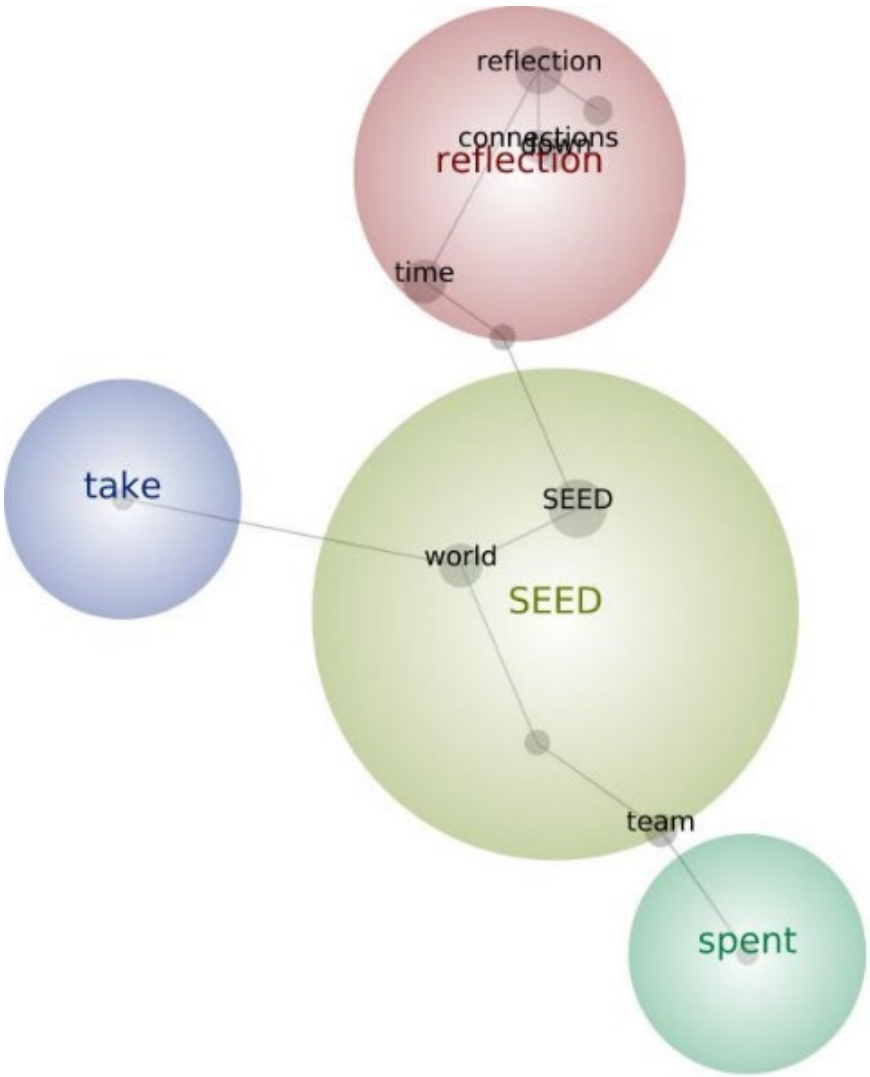
Spontaneous or directly induced mind-wandering can be measured using Magnetic Resonance Imaging (MRI) (Smallwood & Schooler 2014). However, Smallwood and Schooler (2014) discuss the challenge posed by evoking mind-wandering for assessment, including directly causing an individual's mind to wander. Spontaneous

mind-wandering occurrences that link experiences to processes are not transparent. This study demonstrated that a researcher can have some control over directly inducing mind-wandering with stream of consciousness. Initiating and implementing photovoice to describe an experience with an image to the team resulted in participants ceasing what they were presently doing and taking time to take the photograph with a description. Group participation was enhanced when team members reviewed each other's WhatsApp messages and photographs and replied with their photographs shortly after.

A mixed method approach was utilised to analyse the data, involving researcher thematic analysis and content analysis performed with the Leximancer software program (Ward et al. 2014). The researcher employed thematic analysis as the first method, where they familiarized themselves with the data, created and organized codes, and identified and labelled themes. The second method involved entering participants' quotations into Leximancer over six weeks, which used algorithms and word associations to identify concepts and generate themes. Language is a window into the mind and the words people use can provide insight into knowledge and thoughts (Wolff et al. 2010). When we speak or write, we use concepts in our language and the concepts in a group of people who have shared needs, goals and feelings, could be more tightly linked if their thoughts are grounded in universal concepts (Wolff et al. 2010). By converting natural language into a semantic language, Leximancer learned the primary concepts and how the texts were related to one another (Ward et al. 2014). Semantics, which is concerned with the relationships among words, sentences, and meaning, is a branch of linguistics (Vocabulary.com 2022). Leximancer produced "thesaurus iterations" like SEED, team, world, different, and connections based on the data, indicating that the SEED project was aligned with the goals of the Elevating the Human eXperience guide (NSW Health 2021b), which prioritises connection and togetherness as the foundation of individual and collective wellbeing. The human experience and interactions between staff and patients are shaped by culture, values and different beliefs that can influence patient perceptions across the continuum of care (NSW Health 2021b). The photovoice reflections revealed that the SEED Program allowed participants to establish strong connections with each other, resulting in the flourishing of individual and team wellbeing.

Leximancer generated a transparent model that captured themes. The three most common themes chosen to analyse were SEED, reflection and 'take'. These themes were then interpreted by reviewing the concepts associated with each theme (Leximancer, n.d.). This is represented in a conceptual map (Figure 1).

Figure 1. Conceptual map




Leximancer conceptual maps cluster concepts (smaller grey circles in figure 1) into higher-level themes, represented by coloured circles that are heat mapped or colour coded from hot to cold to signify the prevalence of the theme (Leximancer 2021). The most significant theme appears hot (red), and the less important themes appear in cool colours (blue, green), according to the colour wheel (Leximancer 2021). In Leximancer, the size of the circle is not a reflection of the frequency of the words in the text, but rather the connections between words travelling across boundaries of the circle. The size of the circle does not represent the prevalence of the texts. The connections between words travel through the circle boundaries.

Some of the themes Leximancer drew from connections between words travelling together through the text were similar to themes found by the researcher using thematic analysis. Two new themes emerged through Leximancer.

The themes of connections, strong bonds, teamwork, reflection and nature were identified by the researcher through analysis of photographs and descriptive text. The distinction between thematic analysis conducted by the researcher and the use of Leximancer software lies in the fact that the researcher possesses knowledge of the context and meaning of the images, while Leximancer does not have any pre-existing

understanding of the subject matter. However, SEED and 'take' were not identified as main themes throughout the text by thematic analysis, even though the word SEED appeared 15 times, as specified in Leximancer. 'Take' was overlooked as it did not stand out compared to words like focus, rainbow or light. 'Take' as a theme was considered the most significant finding, as it was not considered that staff needed to take wellbeing from a mindset point of view. Some individuals may not allow themselves to take a break or may not know how, even if they have the opportunity and support to do so.

The outcomes were a strong connection to nature and the SEED Program, deep reflection and taking time to prioritise individual wellness. This led to a transformation of team members' perspectives on the importance of their wellbeing, the wellbeing of healthcare staff and using creative photography to express their feelings. Key learning outcomes were using photovoice as a new medium and stream of consciousness to enable authentic reflection and deep, meaningful, creative collaboration among team members. This built trust and allowed team members to connect deeply and care for each other's vulnerabilities. Participants offered different perspectives and thought processes through the photograph descriptions. For example, the photograph in Figure 2 could suggest putting your car in low gear and staying within the speed limit, but one participant linked it to pausing after completing tasks.

Figure 2.


Remembering to pause after ticking lots off the list!

## THEMES

### SEED

SEED or the SEED Program was referenced 15 times out of the 44 photographs in a variety of ways, for example, being hopeful for the SEED Program, the dawn of new beginnings, a 'messy' space before 'it gets going', caring for the world to make it a better place, trusting each other through SEED, energising self and enabling the thought to stop, taking time to think and enjoy nature.

Participants involved in the SEED Program since its beginning identified eight SEED practices. These practices strongly focus on responsive and compassionate leadership, which has been a success of the SEED model (Olcon et al. 2022).

Table 1. SEED practices

| Number | Practice | Description |
|---|---|---|
| 1 | Responsive and compassionate leading | Immediate recognition and response can have positive impacts to individuals and staff |
| 2 | Co-designing wellness activities with staff | Co-design creates a sense of ownership, inclusion and collaboration |
| 3 | Listening to understand | Benefits those listening and being heard |
| 4 | Creating a safe and healing space | A safe space creates psychological safety and provides the opportunity to share stories |
| 5 | Connecting with others | Deep connection can lead to staff having more compassion, caring and understanding of each other |
| 6 | Collective caring | Caring for each other creates a sense of connection between colleagues and increases kindness between others |
| 7 | Diversifying and localising wellness activity | Caring for each other creates a sense of connection between colleagues and increases kindness between others |
| 8 | Striving for sustainability | Flexibility and adaptability is important to suit individual site needs |

The SEED Team met with the ISLHD CE, who asked each team member to discuss their work. One team member introduced the CE to photovoice and gave the example of their photovoice from that morning, a picture of a rainbow (Figure 3). The CE replied with a gentle smile that they had seen the rainbow too, and they commented on how nice it looked. This is a strong example of SEED Practice 5 and leaders sitting as equals. 'Who would have thought we would be having conversations with the CE about

rainbows?' (SEED Facilitator, personal communication, 12th May 2022). SEED Practice 5 is 'connecting with others'. Having deep authentic connection with others can lead to conversations with colleagues that are not always work related (Olcon et al. 2022).

Figure 3.

SEED made me stop and take in this rainbow over Keiraville this morning.

Figure 4 shows an example of SEED Practice 2, 'Co-designing Wellness activities with staff'. The fully participatory, inclusive and collaborative process of co-designing wellness-orientated activities result in staff feeling a sense of ownership, as utilising each other's strengths can empower individuals (Olcon et al. 2022).

Figure 4.


This calendar picture for the month of May is titled 'the world that nobody owns'. [It] reminds me of SEED [because it] is 'messy before it gets going'. Our team all playing our part and embracing our different strengths and focus … I like the title because for me the world doesn't belong to us—we are its caretakers for the time being and hope/want to leave it a better place than we found it … this mirrors what SEED can mean in the context of health organisations.

## REFLECTION

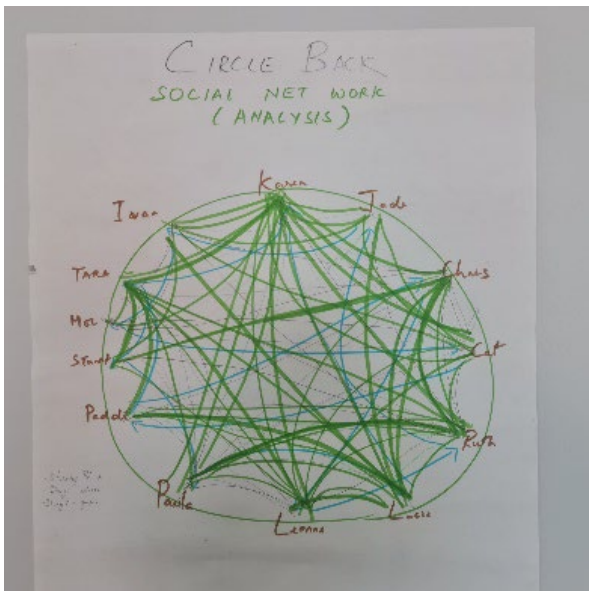
Self-reflection was seen to break down barriers between participants and enhance team bonding (Figure 5). Reflection is linked to SEED Practice 6, 'collective caring'. A sense of responsibility for the wellbeing of others produces a work culture where colleagues strive to help each other to be well (Olcon et al. 2022). Creating a safe space and a sense of connection among staff showed they were more likely to be kind, respect each other, care for each other authentically and put people before processes.

Figure 5.

Breaking down barriers with self-reflection and the hopefulness of SEED.

During orientation, participants made a visual representation of the connections they made with each other over two days (Figure 6). The links ensured that all team members got to know each other. One participant discussed having important conversations in a peculiar space (the parking lot next to rubbish bins, demonstrating humour) and how this strengthened team bonds (Figure 7).

Figure 6.




Connections made in three days. Bonded to become a team.

Figure 7.

The car park I have not parked in, I love the walk up from the road. I find it very curious that the car park would take centre stage overlooking the beautiful ocean with the hospital behind looking at the carpark. Yet, two important conversations took place in the car park space, both on day one—the first, a reflection on why the car park and the bins are here (humour) and the second was a bond [that] was strengthened at the end of the day. And as an add-on, a third lovely moment happened in the car park at the end of today—another bond strengthened.

The staff worked well together in this short project. The SEED Team was connected and bonds were strengthened through the process.

## TAKE (TAKING TIME)

SEED encouraged participants to take a break, take a breath and stop and not to 'sweat the small stuff'. 'Take' was referenced in the context of mother nature taking away life's problems in a picture of the sand, ocean and sun gazing high above (Figure 8).

Figure 8.

Mother Nature can take all troubles away.

The quotation with figure 9 advised taking time to stop and focus.

Figure 9.


In the world of wellbeing we always give from our 'brim', not from our 'empty'. To do this well we take time to stop and focus on messages within the cup.

'Take' links to SEED Practice 4, 'creating a safe and healing space'. This practice discusses intentionally providing the opportunity to create a safe space. Using self

reflection in this space allows staff to focus on wellness and healing in the workplace (Olcon et al. 2022) There is an increasing need for staff to take a break and take care of themselves to enhance their wellbeing and patient outcomes.

Figure 10.

I'm walking the talk, taking time out for me.

The SEED Team saw 'take' as an emerging phenomenon as SEED is a wellbeing model focused on giving and allowing leaders and staff to participate in wellbeing activities during work. Facilitated by SEED workshops and education, the SEED Team felt they needed to practice what they preached and take opportunities for their own wellbeing. One participant captioned a photograph 'Stop, think, take a breath, and don't sweat the small stuff'.

The photovoice images prompted reflections on the significance of both team and personal wellbeing, emphasizing the importance of seizing opportunities to priorities self-care. The use of photovoice also fostered better communication within the team, encouraging informal discussions with high-ranking executives on topic such as rainbows. Educating and facilitating staff wellbeing is essential. Rather than solely being about individuals receiving wellbeing, it can also be seen as the SEED Team empowering staff to take responsibility for their own wellbeing, ultimately promoting greater sustainability.

## STRENGTHS, LIMITATIONS AND IMPLICATIONS FOR PRACTICE

While the number of participants in this study was small, a strength of this study was the introduction of photovoice as a new creative medium for reflection within a multidisciplinary team. Further research is required to establish its contribution to bonding within teams. Photographs uploaded by staff were an effective and creative way to improve team bonding and explore wellbeing.

## DISCUSSION

This paper has discussed the use of photovoice to describe the SEED Team's individual and shared experience. Photovoice provided insights into using creative photography

to express feelings and the importance of wellbeing. It encouraged participants to take time away from their cognitive task state and created an opportunity for them to change to less intense activity, allowing the mind to wander. High attention demanding tasks, such as mathematics, can increase mental and physical fatigue (Shan Huang et al. 2020).

Hannay et al, (2013) reported on a group of nineteen teenagers and six adults who utilised photovoice to lend weight and authenticity to their personal accounts of the challenges and circumstances in their neighbourhood. Barriers to physical activity outside of school hours, such as busy family schedules, racism, inadequate transportation, and crime, including gang violence and drug use, were among the topics explored. Through reflective writing, participants were able to capture an image and narrate their thoughts and emotions in their own words, providing a meaningful voice in the decision-making process. The teenagers showcased their photovoice narratives to a state-wide audience at Connecticut's 2nd Annual Physical Activity and Nutrition Symposium, effectively representing their community. The reflective writing process bolstered the credibility of each story and contributed to several positive initiatives, including a free 60 hour fitness program for teenagers that combined career development and leadership skills, as well as a signed petition, endorsed by 100 people, urging the Common Council to reopen a community pool, with support from the current mayor (Hannay et al., 2013). By utilising critical reflection, the participants were able to document their strengths and priorities, and to contemplate what factors might effect social or professional change (Bowers, 2017).

Photovoice has also been used for health and safety. A scoping review and literature research produced an overview of current photovoice designs and applications in the health and safety domain and found that photovoice has strong potential to support safety management (Lindhout, Teunissen & Reniers 2021). Safety management faces increasing challenges from human factors, such as safety culture and worker behavior, as well as from complex installations and environmental constraints. To better understand these interactions, safety management could benefit from using methods that provide insight into what is happening between people, equipment, and their workplaces (Lindhout, Teunissen & Reniers 2021). Lindhout, Teunissen and Reniers (2021) found that photovoice can offer a different mode of expression for people to share their experiences in safety management and that the human element is also critical in occupational health and safety, clinical incident management and education. Photovoice is a powerful tool that can be used by workers themselves in specific settings or represented by a union to communicate with safety regulatory agencies (Lindhout, Teunissen & Reniers 2021).

The literature demonstrates how photovoice can be used in various ways to enhance engagement, communication and empowerment. These elements common to our study highlight how photovoice can be used in different settings as it creates room for a voice in a safe and creative space.

Although SEED is modelled on a strength-based growth model approach, using photovoice during SEED activities, projects and workshops could empower staff to be courageous and take ownership of their wellbeing. The SEED Team was fully engaged in using photovoice to reflect, bond and explore wellbeing individually and as a team.

## CONCLUSION

Photovoice is a safe, simple and fun medium to quickly embed meaningful connections, strengthening participant bonds. Using photovoice within a

multidisciplinary team is an effective and creative way for staff to reflect, enhance bonding and explore individual and team wellbeing.

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# The review of Aboriginal and Torres Strait Islander content within an undergraduate paramedicine degree curriculum

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## Abstract

*A review of Aboriginal and Torres Strait Islander content in an accredited paramedicine degree curriculum was undertaken as part of a major course review and ongoing program evaluation. The aim was to ensure the course content was appropriate and relevant to Aboriginal and Torres Strait Islander communities. All content and teaching activities were audited, where specific content was explored and noted. Findings were presented to a review team where good practice was highlighted, and areas for development were addressed. This has encouraged staff to seek opportunities to embed content in both clinical and non-clinical skills, knowledge teaching and experiences, in addition to encouraging further review of other diverse communities.*

Keywords: Aboriginal and Torres Strait Islander educational content, health education, prehospital, paramedicine

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## INTRODUCTION

This paper presents how Aboriginal and Torres Strait Islander content and approaches have been reviewed and embedded across an undergraduate paramedicine degree program in Western Australia. This is to ensure that this community is reflected in the skills and knowledge teaching and assessment across the prehospital curriculum and enhance the practice of paramedic students. In addition to meeting the Australian Health Practitioner Regulatory Agency (AHPRA), registration of professional capabilities for paramedics was established by the Paramedicine Board of Australia (Paramedicine Board 2021).

A previous audit of the curriculum's Aboriginal and Torres Strait Islander content was conducted in 2020. It showed that while relevant content was evident, it was often discussion-based, not formalised or assessed and frequently taught in standalone modules. The audit was the start of a continuous development process concerned with maximising opportunities for graduate work and empathetic future paramedics who deliver culturally safe patient care in our communities.

The review discussed in this paper followed the 2020 audit of the undergraduate paramedicine curriculum. It evaluates the progress, identifies good practice and highlights areas needing further development. As this project was an evaluation of a program already occurring for students, ethics approval was deemed unnecessary. Reviewers consisted of stakeholders representing the university, paramedic profession and communities. All of whom expressed an interest in participating. The process took two months, during which the curriculum content and resources were reviewed, Aboriginal and Torres Strait Islander-related items were noted, and further context was gained from the unit coordinators. This information was then collated and presented to the stakeholders. Discussions regarding the content were conducted, the use of good practice and areas for further development were identified and feedback provided. This will be re-evaluated in 12–18 months. The desired outcome of this review was and continues to be the normalisation of Aboriginal and Torres Strait Islander content throughout the course. This simulates paramedic practice, as the cultural background of patients is not always known from the initial emergency call. Therefore, students and future paramedics need to respond in the moment, and preparing for diversity enables students to learn from situations, practice skills and gain confidence in safe educational spaces. While it is not possible to cover all cultures, preferences and situations, promoting an empathetic and respectful approach to patient-centred care is key.

The results from the review showed that many units were identified as containing a considerable amount of content regarding Aboriginal and Torres Strait Islander people in Australia. A conscious effort to embrace Aboriginal educational practices was evident, with the utilisation of yarning and storytelling activities to share experiences and offer teachings that prepare and encourage students as they develop their paramedical practice. From an educational perspective, Elders are central to First Nation pedagogy. They teach and maintain culture, traditions, ideals, knowledge and life lessons across the community through informal teachings, storytelling and role modelling. This type of teaching is considered informal in the Western paradigm because it has no predetermined standardised curriculum or structure (First Nations Pedagogy 2023). However, utilising this style of sharing experiences and practices in the curriculum, delivered by those with lived experiences, has proved highly credible with students. An example of this is the use of a wide variety of guest speakers in the Clinical Placement Units, where students are prepared for placements and, ultimately, employment with ambulance services or communities. Guest speakers include paramedics, other first responders, nurses, lawyers, community service providers and

alumni attending class to share their experiences informally and openly. This offers students insight into a diverse range of patient care scenarios with a focus on lawful, patient-centred, culturally safe, respectful and dignified care for all. The shared experiences also supplement the information taught across the course and clearly demonstrate its application.

Some examples are:

| Unit | Topics | Examples of Activities and Resources |
|---|---|---|
| Perspectives in paramedic professional practice (First year, first semester unit) | Exploring own culture<br><br>Sharing experiences<br><br>Aboriginal and Torres Strait Islander narratives on culture | Introduction to regular yarning and safe spaces. These are scaffolded and supported with regular activities where a wide variety of reflective topics are discussed. Initially, an explanation on the purpose of yarning and the benefits of creating a safe, non-judgemental educational space is shared. Increasingly challenging and educational topics in the context of the course are discussed, for example, their own journey, culture, family, human nature, judgement, bias, racism and death. Each participating student has the opportunity to be heard by all and respond accordingly in this safe and nurturing environment.<br><br>Students reflect on the meaning of culture and related terms, then share their own cultural experiences.<br><br>Utilisation of cultural empathy and challenging attitudes through indigenous narratives resources (Edith Cowan University 2012). This is part of a project led by Edith Cowan University in conjunction with non-health-service sectors, educators and health professionals to collaborate as a reflective, multi-disciplinary team with shared visions and goals (Edith Cowan University 2012).<br><br>Use of 'Interprofessional ambulatory care program – Creating cultural empathy, ensuring Client centred care' (ECU Health Simulation Centre 2012). This interprofessional learning through simulation resource package |

| Unit | Topics | Examples of Activities and Resources |
|---|---|---|
| | | has been designed to support the facilitation of interprofessional learning among students and practitioners interested in developing their skills and knowledge of interprofessional practice. |
| Lifespan development for paramedics | Related epidemiology<br><br>Cultural awareness in the community | An end-of-life culturally sensitive learning activity with a focus on related history-taking documentation. This activity builds across the unit, applying learnings along the way. |
| Emergency mental health response | Aboriginal and Torres Strait Islander narratives on mental health and belief systems<br><br>Drugs and alcohol<br><br>Homelessness<br><br>Overrepresented communities | The utilisation of 'Embrace', a multicultural mental health resource with narratives, activities, and discussion (Embrace Multicultural Mental Health 2020).<br><br>Use of 'The Framework for Mental Health in Multicultural Australia', which is a nationally available online resource, allowing practitioners to evaluate and enhance their cultural responsiveness, through detailed narratives from consumers with lived experience (Mental Health Commission 2014).<br><br>Collaboration with the Western Australian Network of Alcohol and Other Drug Agencies and Peer Based Harm Reduction, for community education and support across metro, rural and remote services. |
| Clinical skills for paramedical practice 1 | Practical clinical scenarios | The integration of Aboriginal and Torres Strait Islander representation of patients with common medical conditions, such as cardiovascular disease and chronic kidney disease. These are not limited to Indigenous Australians; however, discussion in debrief is based around the increased prevalence of these diseases in the population. |

| Unit | Topics | Examples of Activities and Resources |
|---|---|---|
| Cultural studies<br><br>Written and delivered by Kurongkurl Katitjin Centre for Indigenous Australian Education and Research | Introduction to culture<br><br>Culture in healthcare systems<br><br>Strategies to promote equity in health practices<br><br>Communicating with people from culturally diverse backgrounds<br><br>Building cultural reflexivity | This unit explores cross-cultural understanding through development of lifelong learning principles informed by professional and ethical considerations in health systems. Aboriginal and Torres Strait Islander health is the primary focus of the unit; however, cultural safety and capability will be applied to additional contexts. |
| Trauma studies for paramedics | Prevalence in populations<br><br>Aboriginal and Torres Strait Islander scenarios | Embedded in case studies throughout, lecturers share their own experiences in the prehospital environment using storytelling, giving context and application of learning and opportunities to address queries from students. |
| Paramedic clinical placements 1st, 2nd and 3rd years | Experience and reflection on placement experiences in various communities<br><br>Continuing professional development planning and goal setting<br><br>Links to AHPRA paramedic professional domains and capabilities<br><br>Volunteering in a medical setting<br><br>Aged care<br><br>Transitional care<br><br>GP clinics | Portfolio is built around the domains for the AHPRA professional capabilities for registered paramedics. The domains cover all communities across Australia, including Aboriginal and Torres and Strait Islander communities. Sessions are presented by experienced paramedics or nurses, who also share their own experiences through storytelling.<br><br>Self-reflection by the paramedic students is undertaken to enable growth in cultural awareness and a self-assessment of the conversation, patient rapport and overall patient treatment. While this process is not limited to the Indigenous population, it provides an avenue to reflect on the level of cultural awareness of the individual and make effective improvements as required. |

| Unit | Topics | Examples of Activities and Resources |
|---|---|---|
| | Mental health<br><br>Community care<br><br>Drugs and alcohol<br><br>Emergency department<br><br>Intensive care unit<br><br>Theatre wards<br><br>Ambulance observer shifts<br><br>Rural and remote locations | International placements are undertaken with diverse populations and healthcare systems, including community and rural hospitals in Bali, Indonesia, and ambulance services in the United Kingdom and United States of America. |
| Medical studies for paramedics 1 | Associated diseases and epidemiology diseases in Aboriginal and Torres Strait Islander people | Unit consists of lecture-based content with case studies. |
| Clinical skills for paramedical practice 2 | Common medical conditions (e.g., mental and substance abuse disorders and neurological disorders). | Practical scenarios cover a variety of patients. Debriefs are based around the increased prevalence of specific diseases and issues in the Aboriginal and Torres Strait Islander populations.<br><br>Paramedics share their experiences through storytelling techniques in the prehospital context. |
| Medical studies for paramedics 2 | Associated diseases and epidemiology (advanced)<br><br>Co-occurring disorders and illnesses<br><br>Treatments available in metro, rural and remote areas | Unit consists of lecture content and case studies. |

| Unit | Topics | Examples of Activities and Resources |
|---|---|---|
| Introduction to pharmacology | Medications for prevalent diseases and epidemiology | Unit consists of lecture content. |
| Prehospital diagnostic techniques | Inclusion of population and diagnostic techniques | Unit consists of lecture content and case studies. |

As previously outlined, the initial findings of the review were encouraging, with clear evidence of Aboriginal and Torres Strait Islander content already embedded in units. The review also identified areas of content that could be further enhanced. For example, the inclusion of resources created by or in collaboration with Aboriginal and Torres Strait Islander authors. As paramedicine is a relatively young profession, with registration in Australia occurring in 2018, literature and resources on prehospital practice from Aboriginal authors are very limited. It is hoped that as the profession continues to grow in Australia more will be written and subsequently included in the course.

This review has increased the inclusion of authentic content and experiences that enable students to consider ethical and cultural paramedic practices, their own views and prejudices. This encourages open and honest exchange and exploration with peers and other professionals. While this can be uncomfortable, with the professional and sensitive approach from lecturers, it is hoped this will promote a more empathic approach to patient care and interprofessional working with Aboriginal and Torres Strait Islander patients, families, bystanders and colleagues.

This review has resulted in an ongoing collaboration with graduated Aboriginal and Torres Strait Islander students, who are now working in ambulance services. They have and will continue to assist in the continuous development and creation of relevant cultural scenarios, aimed at enhancing students' cultural awareness and sensitivity. It is hoped that other interested parties and stakeholders will come together to join a specialist group—which will expand to cover other cultures to ensure the continued embedding of relevant content, scenarios and related activities. This will lead to ongoing evaluation of the developments through feedback from students, staff and stakeholders.

During this review, continuous engagement with the Kurongkurl Katitjin Centre for Indigenous Australian Education and Research was vital to ensure that appropriate approaches and resources were promoted and used. The paramedicine teaching team have been encouraged to undertake an internal micro credential, called 'Infusing Aboriginal Content and Perspectives'. This, along with ongoing advice from the Kurongkurl Katitjin Centre, aids the development of culturally relevant and safe units, course content, resources and assessments, benefiting the outcomes for students, patients and colleagues.

The structure of this review has provided further opportunities to explore other areas of diversity encountered in the prehospital emergency environment, such as LGBTIQ+ communities and individuals with specific needs. Thus, this encourages the growth of paramedicine students' skills and confidence to be respectful, professional and empathetic in all clinical and non-clinical interactions. This makes for a more relevant and community-focused degree, maximising opportunities for students to

gain employment. This is particularly important as community paramedicine is a growing area in which paramedics work in clinical roles outside of ambulance services.

## Conflict of interest

The authors declare no conflicts of interest.

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# Website redesign in a maternity setting: Co-designing a resource for consumer support and education

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## Abstract

*Women want to be informed about their healthcare. Google searches provide an accessible option for women during pregnancy, but the content is largely unmonitored. Women have expressed dissatisfaction and confusion about receiving conflicting information from clinicians across the maternity service. It is essential for providers to offer person-centred care and listen to the voices of consumers. If the aim is to provide a service women want to use, women must have the opportunity to voice what they want. The local health district (LHD) maternity website development project aimed to redesign maternity website pages over 12 months to meet community needs and increase hits to the site by 70% within six months. Consumers were approached to participate through maternity services in a regional Australian health district where approximately 3,500 babies are born yearly. In a three-phase participatory action research study, researchers identified the areas of concern for consumers, worked with them to co-design and implement a new website, and evaluated the changes. Almost 20% of women who birthed from January to March 2022 responded to the evaluation survey. Half of these had explored the website. After the upgrades, the number of hits to the district website service page increased by 875 (from 124 to 999). Post-development surveys showed that women who felt they received inconsistent information at the hospital during their pregnancy were more likely to visit the website for clarification (p = 0.009). Of women who visited the website, 78% found the information useful, and 73% said they would use it again. This study highlighted that women engaging in maternity services desire access to relevant, quality information through digital technology. Maternity website development improvements increased patient satisfaction and reduced confusion, providing a reliable source of accessible health information for consumers.*

Keywords: maternity, digital, website, education, antenatal

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## INTRODUCTION

The World Health Organization recognises women's health during the perinatal period as a foundation for population health (Nieuwenhuijze & Leahy-Warrant 2019). This acknowledgement demonstrates the importance of prioritising accessible, trusted information for women. Empowering women through pregnancy and childbirth education is believed to lead to more positive outcomes in pregnancy and birth that also continue into motherhood (Vedam et al. 2017). Therefore, the design and implementation of good quality, consistent education for women and their families must be a priority of maternity service delivery. Women report greater satisfaction with birth experiences when involved in decision-making (Vedam et al. 2017). Many pregnant women report using online media to supplement their knowledge of pregnancy and childbirth concerns. This highlights online media as a significant resource for maternity care providers to develop quality antenatal education (Alainmoghaddam, Phibbs & Benn 2018). When providers offer accessible, trusted information, women can change from passive recipients into collaborative partners in the healthcare space (Vedam et al. 2017). The significant barriers women report include needing more information, lack of access and receiving conflicting or inconsistent information (Alainmoghaddam, Phibbs & Benn 2018, Cummins, Wilson & Meedya 2022). These barriers can be remedied by providing an improved, trusted, accessible one-stop information source for women via a digital platform (Alainmoghaddam, Phibbs & Benn 2018, Cummins, Wilson & Meedya 2022).

This paper outlines the considerations in designing a maternity website, including acknowledging the diverse community within the Illawarra Shoalhaven Local Health District (ISLHD). In this region, 3.4% of people identified as Aboriginal or Torres Strait Islander (compared to 2.4% in NSW), 9% were born in a predominantly non–English speaking country, 26% lived in the most disadvantaged communities in the region (compared to 20% in NSW) and there was a growing number of refugees (Illawarra Shoalhaven Local Health District 2019). Three models of maternity care are used in the ISLHD: doctors' clinics, antenatal general practitioner shared care and midwifery-led clinics (Illawarra Shoalhaven Local Health District 2019).

## METHODS

Participatory action research (PAR) methodology was chosen for this study, as the team wanted to work with consumers to gain their insights into how they thought healthcare information could be improved for all users of the maternity services website. Phase 1 identified areas of concern, and Phase 2 involved working with consumers, staff and LHD stakeholders to co-design and implement an improved website. Phase 3 evaluated whether consumers were using the website, were satisfied with the changes and would use the website again.

Ethics approval to conduct this research was granted by the ISLHD Low and Negligible Risk Research Review Committee (ISLHD/QA147). All participants were provided with project information and gave their consent to participate. Responses received were anonymous.

### PHASE 1: IDENTIFICATION OF CONSUMER CONCERNS

Phase 1 sampled 60 women receiving maternity care through Wollongong hospital via a convenient online Qualtrics survey. Staff asked participants to fill in a survey that asked whether they knew a website existed, whether they had used it and what they looked for. If they had not yet seen the site, consumers were given the website link to

evaluate it at that time and answer further questions. They were then asked what they would like to see on an improved hospital-based maternity website to enhance the information gathered from stakeholders in Phase 2 focus groups. Surveys were anonymous and could be completed in paper form while women waited in the antenatal clinic or online via Qualtrics. Consent was implied with completion. All paper-based forms were entered into Qualtrics and then destroyed. Online survey answers were kept on a password-protected computer.

### PHASE 2: CO-DESIGNING AN INTERVENTION

In 2020, ISLHD had a basic website that included service information. The study identified what stakeholders thought should be changed on the website through focus groups of maternity consumers, staff and health support services, such as multicultural and Aboriginal health services. Participants were sought through community consumer groups, and staff from all areas of maternity and health support services were invited to attend. Three focus groups of four to 10 participants were run from February to March 2021 to co-design ideas for a new maternity website that would serve the needs of consumers. Facilitators informed all focus groups of the outcomes of Phase 1 consumer surveys. Notes from focus groups were taken, and themes were gathered from all groups. No participants were identified. All files were confidential and kept on a password-protected computer.

Reflexive thematic analysis was conducted during the three focus groups following Braun and Clarke's (2006, 2021) six phases of analysis. Researchers immersed themselves in the emerging data, created themes and revisited them until data collection was complete. There were no new ideas after the three focus groups were completed. The co-designed ideas became the basis for new maternity website pages, and construction started in March 2021. Researchers worked with district leaders to ensure National Safety and Quality Health Service Standards were met for ISLHD by implementing a website that improved the quality of health service provision, partnered with consumers and protected the public from harm (Australian Commission on Safety and Quality in Health Care 2022). Development of the new website pages concluded in September 2021, and they were then advertised to maternity consumers via posters in antenatal clinics, general practitioner surgeries, birthing units and maternity wards.

### PHASE 3: EVALUATION

The website team aimed to increase visits to the new maternity site. Therefore, the number of visits and average time spent on the pages were measured and evaluated. To determine whether consumers would revisit the site, an invitation to participate in the Phase 3 online website evaluation survey was sent to all women who birthed between January and March 2022 (n = 1,060) across the district via SMS. Survey questions such as 'did you find the website useful?' and 'would you use it again?' evaluated consumer experiences.

## RESULTS

Results across the three phases of the study show how information was gathered to co-design a website well utilised by consumers.

## PHASE 1: IDENTIFICATION OF CONSUMER CONCERNS

The study received 60 surveys from women about the website available to them in 2020 (Table 1). All respondents had looked for pregnancy information online, but almost one in four did not know a maternity website existed for the hospital, and 40% thought it was hard to find. Participants were asked to comment on their first impression of the hospital website. Comments were received from 32% of participants, and all of them had negative connotations, such as 'not enough information', 'impersonal', 'disappointing', 'clunky' and 'confusing'.

Most consumer responses (80%) showed they were looking for general information about birth, gestational diabetes mellitus (GDM) or midwifery models of care. Over half of the respondents looked to the website for general pregnancy advice. However, only 10% reported that finding the information they sought was easy.

Table 1: Consumer survey responses to 2020 website

| **Website 2020 Consumer Responses** | **n (%)** |
|---|---|
| Used websites to look for maternity information | 60 (100) |
| Unaware of the hospital website | 14 (23) |
| Found the hospital website hard to find | 24 (40) |
| Had a negative first impression | 19 (32) |
| Found it easy to find the information sought | 6 (10) |
| Sought general information (Midwifery Group Practice, gestational diabetes mellitus [GDM], birth) | 48 (80) |
| Sought general pregnancy advice | 34 (57) |
| Sought antenatal classes | 23 (38) |
| Sought breastfeeding information | 15 (25) |

To inform the focus groups in the next phase of the study, we asked survey participants what they would like changed in new website pages. Every respondent commented. Responses ranged from suggestions about how the website looked (e.g., add photographs, videos and tours, reduce clinical language) to requests for more specific information on antenatal models of care and advice around pregnancy, GDM and breastfeeding.

## PHASE 2: CO-DESIGNING AN INTERVENTION

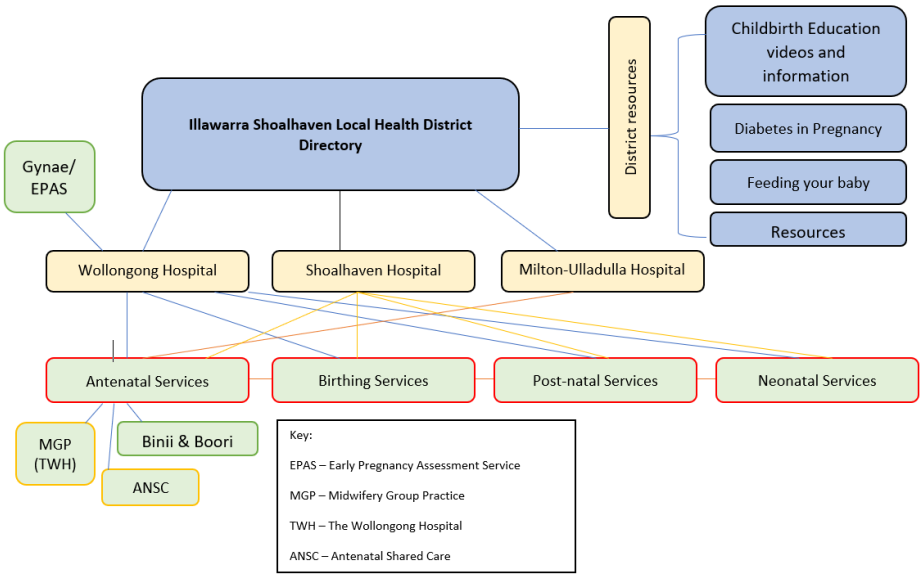
Three focus groups of consumers, staff and community stakeholders were run in February and March 2021. Results from Phase 1 were shared to start a conversation.

Groups collaborated using mind maps. No new themes emerged from the first focus group; however, it was important for researchers to talk to as many staff, consumers and stakeholders as possible. During that time, researchers spoke to 19 people with interest in improving the hospital-based maternity website:

- Workshop 1: eight consumers, two staff
- Workshop 2: one consumer, two ISLHD stakeholders, two staff
- Workshop 3: one stakeholder, three staff.

Following the collaboration, the groups designed a flowchart for a new website to submit to the LHD's quality and safety committee for approval before the website team began construction (Figure 1). The LHD has three hospitals that provide antenatal services and two that offer birth services. New pages would be required for each of these and district information pages on topics such as childbirth education, GDM and breastfeeding.

Figure 1. Outline of flowchart for maternity web pages




Information for each page was gathered from consumer recommendations and the clinical educators in each area. It included photographs, videos and tours and considered the Clinical Excellence Commission's health literacy guidelines (NSW Government Clinical Excellence Commission 2022).

## PHASE 3: EVALUATION

Evaluation of the website during Phase 3 by measuring webpage use and asking maternity service users about their experiences. In September 2020, the website was limited to pages with information about the service (e.g., phone numbers) and a general description. The study measured visits to the main district page and the average time visitors spent there.

In September 2020, the average number of visits per month in the previous six months was 539, and the average time spent on each page ranged from 41 seconds to

under three minutes (Table 2). The new pages were completed in September 2021 and then advertised. From January to February 2022, the monthly usage rate was 6,613 visitors across all maternity pages, and visitors were engaged on each page for an average of one to four minutes. Visits to all areas of maternity services were enhanced by improving the pages and letting consumers know the site existed.

Table 2. Visits to maternity website 2020 and 2022

| Page Title | Visits per Month March to September 2020 | Average Time (minutes) 2020 | New Pages Built | Visits per Month January to February 2022 | Average Time (minutes) 2022 |
|---|---|---|---|---|---|
| District services main page | 124 | 0.41 | District | 999 | 1.24 |
| Postnatal services | 12 | 1:33 | TWH | 118 | 2.36 |
| | | | SDMH | 41 | 1.21 |
| Birthing services | 69 | 1:53 | TWH | 476 | 3.43 |
| | | | SDMH | 75 | 2.15 |
| Antenatal services | 120 | 2:53 | TWH | 592 | 3.47 |
| | | | SDMH | 45 | 2.00 |
| | | | MUH | 15 | 1.43 |
| Neonatal services | 8 | 1:55 | TWH | 47 | 3.06 |
| | | | SDMH | 12 | 1.08 |
| Feeding your baby | N/A | | District | 502 | 2.46 |
| Childbirth education | N/A | | District | 558 | 4.08 |
| Gestational diabetes mellitus (GDM) | N/A | | District | 147 | 3.15 |

In addition to attracting more visitors to the maternity website, the researchers also wanted to evaluate whether women found the information useful or would use the website again. An invitation to participate in an online survey to was sent to 1,060 women who birthed across the district between January and March 2022, and 11.5% of those responded (n=122). Almost half of the respondents (47.5%) had used the website (n = 58), and, of those, 53% were having their first baby and 19% were aged 36 years or over. Of the 122 women who responded to the survey, 41.3% (n = 50) stated they did not feel they received consistent information while in hospital. Of these women, 53.4% looked at the website to clarify information (p = 0.009).

Of the women who used the website (Table 3), 78.8% found it easy to use, 73% would use it again, 69.2% thought the information was well organised and 63.5% thought the information was easy to find (63.5%). A third accessed the website to help manage breastfeeding issues. Overall, 80.8% were satisfied with the website pages.

Table 3. Consumer survey responses to 2022 website

| **Website 2022 Consumer Responses (n = 58)** | **n (%)** |
|---|---|
| Having their first baby | 31 (53.4) |
| Aged 36 years or over | 11 (19) |
| Found the website easy to use | 41 (78.8) |
| Found it easy to find information | 33 (63.5) |
| Found the information well organised | 36 (69.2) |
| Would use the website again | 38 (73.1) |
| Used information for breastfeeding issues | 16 (33) |
| Were satisfied with the pages | 42 (80.8) |

## DISCUSSION

The high percentage of responses received in the study highlighted that women wanted to be heard, which informed the creation and management of the website. Many women use digital technology to access health information about their maternity care (Alainmoghaddam, Phibbs & Benn 2018). The maternity care team should use websites and social media to capitalise on these forms of communication as key methods of health promotion. This may allow healthcare professionals to positively influence care and provide women with an avenue to allay their concerns more promptly (Alainmoghaddam, Phibbs & Benn 2018, Lupton & Maslen 2019).

After the website was developed, the statistical records showed that the number of visits increased as more women were utilising it to gather information. The

participants felt they received conflicting information while in hospital. This is consistent with reports from other maternity services, specifically regarding information about breastfeeding and GDM (Alainmoghaddam, Phibbs & Benn 2018, Cummins, Meedya & Wilson 2021). This validates the website development team's action and provides scope for further updates and enhancements.

Providing quality education to empower women's decision-making during pregnancy is imperative. Enhancing a maternity website in any LHD will positively impact prenatal and postnatal health outcomes (Nieuwenhuijze & Leahy-Warrant 2019). Further research should be undertaken amongst different pregnancy cohorts to assess and develop the impact of online information.

## PRACTICE IMPLICATIONS

The results demonstrated that co-designing a website with consumers, staff and ISLHD stakeholders enabled the website team to develop well-utilised pages that offered consumers relevant, evidence-based information and education. Maternity services can support consumers by providing a website that has the information they want and need to clarify information gained from other sources.

## IDENTIFIED SERVICE GAP

From the research, the website development team was able to identify and address a service gap. Women did not always receive consistent information from the hospital system. The redevelopment of the website improved the availability and accessibility of appropriate quality information.

## STRENGTHS AND LIMITATIONS

Identified strengths of the study were the high response rate and a qualitative research method where women were encouraged to share their priorities with the website development team.

There were also some limitations to this research. The target demographic is women who can access and use digital technology via a computer or smartphone. This may exclude some women. The research required women to recall their previous experiences within the healthcare system. While the period between the healthcare interaction and the research contact was not excessive, there was potential for participant recall bias. It should also be noted that the question in the survey asking whether participants would use the website again provided no opportunity for a contextual response. Therefore, this question could include responses from women who would not use the website again due to having completed their families.

## CONCLUSION

The study identified that women have stated that they are not receiving consistent information from the hospital system. The researchers were able to address this concern through the implementation of a website with accessible, high-quality information. The website provided a trusted information resource many women said they would use again.

## Acknowledgements

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## Conflict of interest

There are no conflicts of interest.

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