HWA Expanded Scopes of Practice Program Evaluation:

National Synthesis

July 2014
Cristina Thompson

Kate Williams

Malcolm Masso
Acknowledgements

The authors acknowledge that the evaluation would not have been possible without the contributions and cooperation of a number of groups. In particular we would like to thank the project team members and other staff of the respective organisations involved in the evaluation of the Expanded Scopes of Practice program, as well as the Clinical Advisors and members of the Project Advisory / Reference Groups. The support from key staff of Workforce Innovation and Reform within Health Workforce Australia, Australian Government, is also gratefully acknowledged.

Finally, the authors acknowledge the contribution made by colleagues from the Australian Health Services Research Institute during the course of the evaluation. In particular we would like to thank Darcy Morris, Karen Quinsey, Rob Gordon, Luise Lago, Conrad Kobel, Sonia Bird, Milena Snoek, Simon Eckermann, Patrea Andersen and Kathy Eagar.

Suggestion citation

## Table of contents

1 Introduction and background .......................................................................................................................... 1
   1.1 The case for change and innovation in the health workforce ............................................................ 1
   1.2 The Expanded Scopes of Practice Program ......................................................................................... 1
   1.3 Evaluation of the program ...................................................................................................................... 2
   1.4 Structure of report ................................................................................................................................. 3

2 Advanced Practice in Endoscopy Nursing .................................................................................................. 4
   2.1 Introduction and background ................................................................................................................ 4
   2.2 HWA Domain 1 - Effectiveness and efficiency .................................................................................... 4
   2.3 HWA Domain 2 - Workforce capacity and skills development ......................................................... 7
   2.4 HWA Domain 3 - Leadership and sustainability .................................................................................. 10
   2.5 HWA Domain 4 - Workforce planning ............................................................................................... 10
   2.6 HWA Domain 5 - Workforce policy, funding and regulation ............................................................... 11

3 Physiotherapists in the Emergency Department ......................................................................................... 12
   3.1 Introduction and background ............................................................................................................... 12
   3.2 HWA Domain 1 - Effectiveness and efficiency .................................................................................. 12
   3.3 HWA Domain 2 - Workforce capacity and skills development ......................................................... 15
   3.4 HWA Domain 3 - Leadership and sustainability ................................................................................ 15
   3.5 HWA Domain 4 - Workforce planning ............................................................................................... 16
   3.6 HWA Domain 5 - Workforce policy, funding and regulation ............................................................... 16

4 Nurses in the Emergency Department ........................................................................................................ 18
   4.1 Introduction and background ............................................................................................................... 18
   4.2 HWA Domain 1 - Effectiveness and efficiency .................................................................................. 18
   4.3 HWA Domain 2 - Workforce capacity and skills development ......................................................... 20
   4.4 HWA Domain 3 - Leadership and sustainability ................................................................................ 21
   4.5 HWA Domain 4 - Workforce planning ............................................................................................... 21
   4.6 HWA Domain 5 - Workforce policy, funding and regulation ............................................................... 22

5 Extending the Role of Paramedics ............................................................................................................ 23
   5.1 Introduction and background ............................................................................................................... 23
   5.2 HWA Domain 1 - Effectiveness and efficiency .................................................................................. 23
   5.3 HWA Domain 2 - Workforce capacity and skills development ......................................................... 26
   5.4 HWA Domain 3 - Leadership and sustainability ................................................................................ 27
   5.5 HWA Domain 4 - Workforce planning ............................................................................................... 28
   5.6 HWA Domain 5 - Workforce policy, funding and regulation ............................................................... 29

6 Prospects for wider implementation of the Expanded Scopes of Practice reform methodology ................................. 30
   6.1 Advanced Practice in Endoscopy Nursing ......................................................................................... 30
   6.2 Physiotherapists in the Emergency Department ............................................................................... 30
   6.3 Nurses in the Emergency Department .............................................................................................. 31
6.4 Extending the Role of Paramedics ................................................................. 31
6.5 Generic issues .............................................................................................. 32
7 Discussion and conclusions ............................................................................ 33
References .......................................................................................................... 36

List of figures

Figure 1 Expanded Scopes of Practice Program ..................................................... 2
Figure 2 Average number of patients per list – by nurse by site .......................... 5
Figure 3 Mean total time and insertion time (mins) across all sites .................... 5
Figure 4 Responses to HWA-APEN patient survey, items 1-5 ............................. 6
Figure 5 Training trajectories and linear prediction ........................................... 7
Figure 6 Overview of Nurse Endoscopist Training Pathway ............................... 9
Figure 7 Variation of daily ED presentations by month and MSK patients seen by PCP... 13
Figure 8 Average total treatment time (in minutes) for Triage Category 3, 4 and 5 MSK patients by site and primary practitioner – implementation period .......................... 13
Figure 9 Percentage of Triage Category 3, 4 and 5 MSK patients discharged within 4 hours by volume of MSK patients – baseline and implementation .......... 14
Figure 10 Patients in target group discharged within 4 hours – baseline and implementation ......................................................................................... 19
Figure 11 Number of ESOP cases by month by site ............................................. 25

List of tables

Table 1 Advanced and extended nursing practice .............................................. 18
Table 2 Total ED and NED presentations by site – implementation period .......... 18
Table 3 Presenting problems of patients seen by ECPs in their expanded role .... 24
Table 4 Factors influencing national scalability for extended scope models ...... 32
1 Introduction and background

1.1 The case for change and innovation in the health workforce

The demand for health care in Australia is growing and will continue to do so as the population lives longer - albeit often with chronic illness and complex needs - and has rising expectations for continued quality of life. Increased emphasis on prevention, early detection and primary health care has many potential benefits, but requires resources and support including suitably qualified health professionals to deliver this care. The challenge is to build a self-sufficient, highly skilled health workforce that can meet current and future needs for equitable access, quality care and innovation in health care provision. One promising approach is to develop new models of care by expanding the scope of practice of health professionals, enabling them to meet the needs of consumers in areas of growing demand.

1.2 The Expanded Scopes of Practice Program

In 2012, Health Workforce Australia (HWA) identified examples of innovative work already being undertaken by State and Territory health authorities in expanding scopes of practice. It funded the Expanded Scopes of Practice (ESOP) program to implement and evaluate these innovations and assess their impacts on workforce productivity, recruitment and retention. The overarching goal was to investigate the extent to which these new workforce roles and models of care could be scaled up and applied nationally. A total of 26 organisations received funding under the ESOP program. Four sub-projects were funded, each focusing on a different model of expanded roles for health professionals:

- Advanced Practice in Endoscopy Nursing (APEN)
- Physiotherapists in the Emergency Department (PED)
- Nurses in the Emergency Department (NED)
- Extending the Role of Paramedics (ERP)

Figure 1 shows the number of projects (or funded organisations) and the number of implementation sites for each sub-project. The Advanced Practice in Endoscopy Nursing sub-project had two lead sites with a common training pathway and very similar models of care. The Physiotherapists in the Emergency Department sub-project also had two lead sites, each with its own training pathway and providing guidance and support to a number of implementation sites. The Nurse in the Emergency Department sub-project comprised a large, diverse group of organisations each implementing a model of care designed around local needs but tied together by the goal of improving patient flow through hospital emergency departments. The Extending the Role of Paramedics sub-project built on an established model of paramedic care and provided an opportunity to adapt that model and trial it in different settings.

Although the skills, target patient groups and settings varied considerably, a common element in all the models was the idea of appropriate practitioners for appropriate tasks. By providing experienced health care providers with the skills and support they needed to expand their scopes of practice, a range of benefits could be achieved. These included greater access to timely care for consumers, improved productivity for health care teams and organisations, and enhanced job satisfaction and retention for the expanded scope practitioners themselves.

A brief description of each sub-project is provided below, and further details are available in the full report of each sub-project evaluation (Thompson et al., 2014a-d).
1.3 Evaluation of the program

The Centre for Health Service Development at the University of Wollongong was appointed in June 2012 to undertake the program evaluation of the ESOP program. The evaluation had formative and summative components. This report synthesises the findings from both components.

Evaluation of the program was based on a broad evaluation framework which has been used for several large-scale program evaluations. The framework recognises that programs aim to make an impact at three levels – consumers, providers and the system (structures and processes, networks, relationships) – and is based on six domains: project delivery, project impact, sustainability, capacity building, generalisability and dissemination. The evaluation employed a range of data sources including interviews, surveys, log books, specific tools, site visits, project documentation and routine administrative data. There were three data collection periods – baseline, implementation and sustainability – and data analysis was facilitated with the use of Excel, SAS 9.2, SPSS and NVivo.

Innovations are more likely to be adopted if they have certain characteristics. Successful innovations tend to be compatible with the values and needs of the host organisation; simple, or able to be broken down into stages; adaptable for local use; and amenable to testing on a small scale before wider adoption. For an innovation to be widely acceptable, it must have readily observable benefits, be clearly effective and/or cost effective; and be perceived as low risk (Greenhalgh et al., 2004; Rogers, 2003). The evaluation strategy sought to identify and quantify these characteristics of successful innovations in the participating sites.

In developing the evaluation framework, the Centre for Health Service Development consulted with HWA, the sites and a wide range of stakeholders including clinical leaders, Project Advisory or Reference Groups and independent experts.
1.4 Structure of report

This synthesis report summarises and integrates findings from the four sub-projects in order to draw conclusions regarding the potential for wider implementation and the conditions under which these innovations are most likely to succeed.

The ESOP program was part of a work plan designed to implement the National Health Workforce Innovation and Reform Strategic Framework for Action 2011-2015, which sets out objectives and specific activities in each of five key Domains for Action:

1. Health workforce reform for more effective, efficient and accessible service delivery;
2. Health workforce capacity and skills development;
3. Leadership for the sustainability of the health system;
4. Health workforce planning; and
5. Health workforce policy, funding and regulation (HWA, 2011).

This report is structured around the Domains for Action. Findings relevant to each domain have been identified in the four sub-project final reports and integrated here. For reasons explained below, the ESOP program would be expected to have effects mainly in the first three domains.

The ESOP program directly addressed the need, identified in the first key Domain, to identify proven and promising new models of practice, conduct effective planning, change management and evaluation to support the use of new models, and connect services and encourage dissemination of findings. Redefinition of roles, collaboration between health professions and the use of enabling technologies were other relevant areas for action under this domain. Within the second Domain, the ESOP program involved opportunities for inter-professional learning and working, competency-based approaches to training, and producing adaptable health professionals with appropriate generalist skills. In the third Domain, ESOP contributed examples of empowerment of potential clinical leaders, the reshaping of workplace culture around the patient journey and thoughtful, constructive approaches to implementation in order to ensure sustainability.

The fourth and fifth Domains were not the primary focus of the ESOP program but the evaluation has generated lessons and reflections relevant to these areas. Issues around service planning, funding mechanisms, legislative barriers to full implementation, and professional recognition and accreditation are discussed below under these Domains.

Throughout this National Synthesis all lead and implementation sites have been de-identified for the purpose of reporting.
2 Advanced Practice in Endoscopy Nursing

2.1 Introduction and background

One of the main drivers of the Advanced Practice in Endoscopy Nursing (APEN) sub-project was the need to respond to growing demand for lower gastrointestinal endoscopies arising from bowel cancer screening. However, only about a quarter of same-day colonoscopies are performed in public hospitals, thus severely limiting the ability of nurse endoscopists to meet this demand without operating in the private sector, which would be strongly opposed by the medical profession. The published evidence to date indicates that nurses performing endoscopies is safe and efficacious (Day et al., 2014).

The APEN model was implemented at five sites, one in Queensland and four in Victoria, with two of the sites serving as lead organisations. The same training program was undertaken at all sites. The focus during training was almost entirely on colonoscopies.

Six highly experienced nurses were recruited into the positions of nurse endoscopist trainees. Requirements included a Bachelor of Nursing Science (or equivalent) and at least five years’ full-time experience, including at least two years in endoscopy. In addition, candidates were expected to have post-graduate qualifications in gastroenterology or to complete a foundation module in this specialty at undergraduate level before commencing the training pathway. Those employed in the roles had 7 to 30 years’ experience and all had post-graduate qualifications.

Certain personal qualities were also considered important in the trainees, including excellent communication skills for handling challenging conversations that might arise with their peers, confidence and the ability to promote the role, and the experience and knowledge to ensure the role was embedded in safe practice.

Project teams used existing clinical governance structures within their organisations to ensure safety and quality, with most projects also establishing working groups and a steering committee to oversee the project. Both lead sites appointed full-time project managers and would not have been able to manage the project without this resource. Implementation required significant organisational resources and financial investment, with sufficient time for extensive planning, consultation and recruitment of key personnel.

Most sites established two dedicated training lists per week for each trainee, with variations due to leave requirements and the availability of procedure rooms. On average, three to four patients were allocated to each list. Sites varied their supervision arrangements and criteria for allocating patients to training lists according to local circumstances. Most of the trainees spent some time (typically about five minutes) with each patient prior to the procedure, with some trainees also seeing patients following their procedure. The most significant barrier relating to resources was the impact of the training requirements on usual throughput. Throughput was least affected when the training lists were in addition to existing endoscopy lists.

2.2 HWA Domain 1 - Effectiveness and efficiency

Full implementation was not achieved, with some trainees yet to complete the required number of procedures and be assessed as competent at time of reporting. Therefore, the relative advantage (effectiveness and cost effectiveness) of the model could not be evaluated. Relative advantage of nurse endoscopy over usual practice can only be fully assessed when trainees are qualified and working at full capacity.

Over the 15-month period from January 2013 to March 2014, the nurse trainees performed 1,458 procedures on patients with intact colons, of which 1,034 (70.9%) were completed unassisted. During this time, two of the nurse trainees performed over 200 unassisted
colonoscopies. Productivity increased rapidly over time, with the nurse endoscopist trainees seeing close to three patients per list from around three months of commencing their training (Figure 2).

**Figure 2** Average number of patients per list – by nurse by site

All but one nurse reached the target of 30 successful unassisted snare polypectomies. All nurses exceeded the benchmark of 90% for caecal intubation. Average insertion time varied from 13.5 minutes to 20.5 minutes across sites; total time varied between 25.2 minutes and 44.0 minutes. The average time to complete the procedure reduced over time (Figure 3).

**Figure 3** Mean total time and insertion time (mins) across all sites

a. Excludes one nurse from APEN1 who had a different trajectory and periods of leave.
b. Includes all procedures – assisted and unassisted.

Both total and insertion time decreased across the implementation period, with a quick drop in total time, and insertion time over the first two months, with a further decrease in procedure and insertion time till around six months into the training period. After this point the time taken was relatively stable.

Five patients re-presented to hospital within 96 hours but this result is considered unreliable due to issues with the reporting of this data item. There was only one readmission to hospital. Two adverse events were reported at one of the implementation sites.

The vast majority of patients responding to a survey (n ranged from 96 to 99), reported excellent or very good experiences of care under the APEN model (Figure 4). In particular, the personal manner and technical skills of the nurse endoscopist trainees were very highly regarded. Although a large number of patients reported feeling mildly anxious during the procedure, experiences of pain, discomfort or severe anxiety were rare. Around nine out of ten patients were satisfied or very satisfied with the care they received and the time it took to be seen by the nurse endoscopist trainee, and seven out of ten rated their overall experience as very good. Seventeen patients (at two sites) refused to be scoped by a nurse endoscopist.

Figure 4 Responses to HWA-APEN patient survey, items 1-5

The nurse endoscopist trainees were generally positive about their roles. In their responses to an ESOP practitioner survey, all agreed or strongly agreed that they felt comfortable approaching other staff members for advice on patient management, and four agreed that other staff were available when needed to provide mentoring and supervision. All but one expressed confidence in their skills and knowledge to provide care, education and information and they were generally confident dealing with patients in their expanded role.

Trainees were, however, ambivalent about the impact of their role. Half strongly agreed that the role had made their service more effective, but half were unsure. Similarly, only half agreed or strongly agreed that their role had improved the quality of care for patients. These views may, in part, be due to the fact that the nurse endoscopists were not yet functioning to the full extent of their role. Five out of six believed that patients were comfortable being treated by nurse endoscopists.

Nurses were generally supportive of the model but some doctors expressed serious concerns. The model was seen by a number of doctors as inefficient because of the length of time taken for training, the perceived slowness of the nurse endoscopists undertaking the procedures and the high level of medical supervision required. Senior doctors did not regard these procedures
as purely technical in nature and felt that nurses lacked the necessary expertise due to their more limited knowledge base. There were concerns about patient selection: on one hand, respondents identified cases of inappropriate patients being placed on nurse endoscopy lists; on the other, they argued that reserving relatively simple cases for the nursing lists would reduce training opportunities for junior doctors. Staff at lead sites, where the models were developed and had been established for a longer period of time, were more positive about the model’s contribution than those at implementation sites.

2.3 HWA Domain 2 - Workforce capacity and skills development

The two lead organisations adopted different approaches with regards to the concept of advanced nursing practice. One lead site implemented a nurse practitioner model of care, with the nurse practitioner candidates working within the endoscopy service in a fully integrated role, performing endoscopy and related health care functions within a broad scope of practice including: advanced patient assessment; interpretation of diagnostic interventions and pathology, differentiating diagnoses; establishing management plans, including selection and prescription of appropriate medication and direct referrals to other health care professionals.

The model of care implemented in the Victorian sites was based on an advanced practice nurse model with the nurse endoscopist trainees undertaking protocol-driven activities within a defined practice scope under the direct supervision and delegated authority of a senior medical officer. The trainees participated in gastroenterology clinics, but even by project end there was still work to be done to clearly define the clinic role of the trainees given their inability to practice as a nurse practitioner.

Both models (nurse practitioners and advance practice nurses) are perfectly acceptable models. Which model is preferable in which circumstances will depend on local factors, particularly the need for nurses to work in an extended role (e.g. prescribing, ordering pathology). The trajectory for achieving the required number of unassisted colonoscopies was relatively similar for each trainee (Figure 5).

![Figure 5](image.png)
a. Even though six nurse endoscopist trainees took part in the project, only five are included in this analysis because one had taken extended leave during the training, which would have biased the result.

The training program used a combination of methods, including self-directed learning packages, face-to-face instruction, skill development through simulation and medical supervision (Figure 6, HWA, 2014). The program consisted of four modules: (1) orientation to the workplace; (2) a theory module developed by the University of Hull in the United Kingdom; (3) a skills training program; (4) supervised clinical practice in their place of work. Modules 2 and 3 were delivered concurrently.

Progression of the nurse endoscopists through the training program was monitored using metrics based on the requirements of the Conjoint Committee for the Recognition of Training in Gastrointestinal Endoscopy.

The training pathway was well constructed and successfully implemented across all implementation sites. It effectively integrated mixed learning methodologies, a structured approach to assessment, mentorship and medical supervision. The training program appeared to be fit for purpose and with development and continued support has the potential for national implementation.

Greater attention was needed to the organisation of the theory module delivered by the University of Hull, including more timely and effective communication with lecturers, and ensuring content was relevant to the Australian context. Despite this, trainees felt they could recommend the training materials to others. There was broad consensus, however, that it would be preferable for future training programs to be offered by an Australian University. Some trainees found it challenging to balance work and study commitments, with a large amount of study required out of hours.

Staff working with the nurse endoscopist trainees agreed that medical specialists were the best people to supervise and mentor the endoscopy nurses during and after their training, and said they were happy to be approached for advice regarding patient management.

Final reports from the sites describe the high standard of work produced by the nurse endoscopists, with increasing capacity and case complexity and decreasing need for supervision over time.

The cost of training is dependent on many factors, particularly the time it takes a nurse to reach proficiency and be deemed competent to practice independently. For an 18-month training period, the estimated net cost (after allowing for revenue raised from the procedures) is approximately $90,000.

The training program provides a pathway for senior gastroenterology nurses to progress to advanced practice or nurse practitioner levels.
**Figure 6 Overview of Nurse Endoscopist Training Pathway**

The diagram outlines the training pathway for nurse endoscopists, including:

**Training Program Aim:**
To further develop the clinical knowledge and psychomotor skills required by practitioners to perform competent colonoscopy (working towards proficiency), on patients that meet ASA I, ASA II and ASA III pathway criteria; within a defined practice scope.

**Orientation:**
- Rotation through relevant clinical areas
- ‘Theoretical Advanced Endoscopy’
- Investigation and Initial management of Gastrointestinal Disease
- ‘Endoscopy Skills Development Workshop’ - theory and intensive simulation training on colonoscope simulator models; plus 3-6 weeks progressive training

**Clinical Knowledge:**
- ’Basic Skills in Colonoscopy’ (3-day Hands-on Course)
- Formative DOPS Assessment (x2 random selection for baseline)

**Skills Training & Development:**
- Having met the following Nurse Endoscopist Training Pathway entry requirements:
  - Registered Nurse; minimum 5 years FTE clinical experience
  - Minimum of 3 years FTE experience within the gastrointestinal specialty; including; two years FTE in endoscopy.
  - Relevant post graduate qualification and commitment to complete training program consistent with the Nurse Endoscopist Training Pathway.

**Assessment:**
- Assessment as determined by education provider
- Simulation Assessment
- Opportunistic DOPS Assessment for snare polypectomy

**Performance Review Framework:**
- Continued Professional Development
- Procedure Log Book
- Summative DOPS Assessment when proficiency achieved

**Supervised Clinical Practice:**
- At least 12 months supervised clinical practice in Colonoscopy
- 2 x dedicated training lists/week + ad hoc training

**Note:** Trainees may start polypectomy when trainer confident in ability to adequately control colonoscope tip; and able to verbalise indications and contraindications to polyp removal, and associated risk to the patient.

**Quarterly Interim Professional Development Review, including assessment of Skills for Health Endoscopy Competencies:**
- Final End of Program DOPS Assessment (2 x independent assessors required)
- Log Book entry for Recognition of Training
2.4 HWA Domain 3 - Leadership and sustainability

The presence of lead sites streamlined the process of implementation, reduced duplication and provided an ongoing source of support and expertise for the implementation sites. Despite some initial tension between the lead sites, mainly due to differences in the models of care and the fact that one lead site had implementation sites and the other did not, this did not prevent a collaborative approach to the many tasks that needed to be completed. The two lead sites supported each other through recruitment, training, equipment procurement and ethics application processes and worked collaboratively to address professional barriers as they emerged, including the issues of credentialing and professional recognition of the ESOP role. There is, however, a need for a clearer definition of the role of lead sites and their relationships with each other and with their implementation sites. More structured communication processes between lead and implementation sites would also be beneficial.

Based on the final reports from each project and the results of the national evaluation, one of the three main requirements for success in implementing the APEN model was a receptive context for change. A receptive context for change has been described in various ways in the literature, but typically includes factors such as a need for change, a supportive culture which is conducive to innovation, managerial support, leadership, appropriate infrastructure and resources, and engagement of key stakeholders (Dopson et al., 2002; Greenhalgh et al., 2004; Pettigrew et al., 1992). For the APEN sub-project, particularly important characteristics of a receptive context included management support at all levels of the organisation and engagement and support of key medical leaders in the fields of gastroenterology, colorectal surgery and anaesthesics:

‘Support is required for success at all levels starting with the Executive team, the consultants (Gastroenterologists, Colorectal Surgeons and Anaesthetists) and the endoscopy nursing staff.’ (Lead site final report)

The support of key medical leaders was critical in overcoming any resistance which arose from medical staff. Medical officers working within endoscopy units tended to be most accepting of the model. All project teams identified the importance of a supportive chief executive officer and senior executive as a key success factor, particularly the message that such support conveyed to the wider workforce and professional groups about the level of interest in the nurse endoscopy role. One site experienced a lack of stakeholder engagement due to the resignation of key executive stakeholders. On-site clinical champions assisted with managing the complex and influential stakeholders involved in endoscopy. At project end all five implementation sites indicated their intention to retain the nurse endoscopy role.

2.5 HWA Domain 4 - Workforce planning

Most unmet demand for endoscopy exists in rural and outer urban locations due to a lack of medical specialists at smaller hospitals. However, without medical specialists to support nurse endoscopists – even when they are fully trained and proficient – transferring the model to those hospitals may not be viable. Medical stakeholders are likely to resist strongly any efforts to implement a stand-alone nurse endoscopy model. They see the model as making a valuable contribution as one component of a larger service, where sufficient infrastructure, supervision and medical support are readily available.

One lead site has advocated strongly for a nurse practitioner model, whereas the other has promoted an advanced practice role for highly experienced registered nurses. There is no consensus among stakeholders as to whether the model is or should be purely technical in nature or whether true expanded scopes of practice are required.

The added value of having a nurse practitioner in the role is likely to depend on the range of other activities undertaken by individuals in addition to their endoscopy lists. This approach has
the advantage of providing a standardised level of credentialing and greater transferability between jurisdictions.

It will be important to consider the usefulness of a standardised training program, a consistent description of the nurse endoscopist workforce role and a national governance framework. This would potentially reduce variation in this workforce into the future and build stakeholder trust in the model.

2.6 HWA Domain 5 - Workforce policy, funding and regulation

The principal legislative and policy barriers that arose during implementation related to the development of the role, the workforce and funding implications of a nurse practitioner model and the need for a nationally agreed terminology in relation to advanced practice nursing roles. Lead sites agreed that there needs to be a nationally consistent course for nurse endoscopist training. Later on during implementation, the main policy barrier involved the uncertainty around the Conjoint Committee’s recognition of the APEN nurses, when it became clear this would not occur the need emerged to develop an alternative certification process that would support national recognition of the training pathway.

In some jurisdictions, current funding models for endoscopy limit the number of procedures hospitals can schedule in a given period, as they will not be funded for additional procedures. Activity-based funding ‘caps’ mean that nurse endoscopy is effectively in competition with medical endoscopy unless a greater share of the funds are allocated internally. However, hospitals are not currently required to report on colonoscopy waiting lists so there is little incentive to provide extra money to this part of the hospital budget.
3 Physiotherapists in the Emergency Department

3.1 Introduction and background

The Physiotherapists in the Emergency Department (PED) sub-project drew on models of expanded scope of practice physiotherapy developed by State and Territory health authorities. These models equip physiotherapists with the skills and experience to work in primary contact physiotherapy (PCP) roles in emergency departments (EDs). The role allows physiotherapists to assess, treat, refer and discharge patients presenting with a specified set of musculoskeletal (MSK) conditions. The model has the potential to improve patient outcomes, reduce waiting times and ease pressure in times of high demand. To date, the published evidence supporting the introduction of PCP roles into emergency departments is sparse and characterised by methodological limitations (McClellan et al., 2010; Desmeules et al., 2012).

Implementation was led by two sites (PED1 and PED7), each with an established model of care involving physiotherapists in ED treating patients with MSK conditions in triage categories 3, 4 and 5. Both lead sites were responsible for implementation in their own organisations, involving refinement of their existing models, and supported implementation at eleven other sites. The PCP model was implemented in a wide variety of settings, including major metropolitan hospitals, smaller metropolitan hospitals, regional hospitals and rural / remote locations.

The differences between the two models primarily centred on organisational arrangements, rather than the role of individual physiotherapists. Both models emphasised a team-based approach closely linked to the physiotherapy department in each hospital.

The project teams worked with existing clinical governance mechanisms within their organisations and all project teams monitored patient safety and quality data and most involved their steering committee in reviewing this data. Progress with implementation was influenced by the training program. Clinicians could only increase their scope of practice upon completion of the relevant training module and assessment of clinical competencies.

3.2 HWA Domain 1 - Effectiveness and efficiency

Approximately 25% of all ED presentations across all sites during the implementation period were in the MSK patient cohort (ranging from 14% to 42% at different sites). Ninety-seven per cent of patients treated by PCPs had MSK conditions but this represented only 9.5% of total MSK presentations in triage categories 3, 4 and 5, although this varied across sites. Across all implementation sites, PCPs treated 2.4% of ED presentations, increasing to almost 3% when secondary contact cases are included (Figure 7).

A total of 14,512 patients presenting with MSK problems suitable for expanded scopes of practice care were seen by the PCPs during the implementation period. Primary contact cases made up around 85% of their total work load. PCPs also saw more than 2,400 patients in a secondary contact capacity (that is, referred by a medical practitioner or nursing staff). This flexibility was seen as valuable by several sites, because it promoted integration and recognition of the ESOP role among nursing and medical staff.
Across all sites, 92.7% of patients seen by PCPs were discharged within the four-hour target period, compared with 74.5% of similar patients seen by other practitioners. The waiting time, treatment time and length of stay for MSK patients treated by PCPs were shorter than for patients treated by other practitioners. The results for treatment time are illustrated in Figure 8.
a. Treatment time is defined as ‘the time from commencement of service to episode end’ and is calculated by the difference (in days) between items 16 and 17 (date/time of commencement of service) and items 18 and 19 (date/time episode ends).


c. PED3 was unable to provide their paediatric data and it is estimated that this data represents 45% of their ESOP activity and 30% of their total ED activity.

The percentage of MSK patients discharged from ED within 4 hours increased from 72.6% to 77.6% from the baseline period to the post implementation period. Most sites improved performance between the baseline and implementation periods (Figure 9).

![Figure 9 Percentage of Triage Category 3, 4 and 5 MSK patients discharged within 4 hours by volume of MSK patients –baseline and implementation](image)

Based on limited data, re-presentations to the same ED for the same health condition within 96 hours and 28 days were similar for PCPs and other practitioners. The number of unexpected deaths was similar for the baseline and implementation periods and decreased post implementation. The number of patients who did not wait for treatment was very low.

Patients were extremely positive about their experiences of care under the PED sub-project. In general, they felt they had been listened to, their problems were understood, and the physiotherapists were comfortable and competent in dealing with their problems. The least positive responses related to recovery: a small group of patients felt more information could have been provided on how to prevent future problems and how long it would take to recover. There were also high levels of satisfaction with the time taken to be seen by the physiotherapist, and with the overall ED experience. Both models of care received similar ratings for patient experiences and satisfaction.

ESOP physiotherapists saw their role as highly beneficial to patient care. All 25 of the 29 PCPs who responded to a survey strongly agreed or agreed that the model had improved care for specific patient groups. Most also agreed that the model improved access to care and enhanced the effectiveness of the ED. They reported that patients appeared comfortable with the new model.

The PCP role was strongly endorsed by other staff. The PCPs’ skills and knowledge in providing patient care and education, ordering imaging and referring for further treatment were
extremely highly regarded. An overwhelming majority of stakeholders responding to a survey agreed that the model improved the quality of ED care and made the ED team more effective. There were no differences between the two models in terms of respondents’ understanding, support and attitudes. Junior doctors and nurses highlighted a need for better communication about the model and scope of practice, and more information regarding rosters and availability. Some respondents, mainly senior medical staff, expressed concerns about the efficiency and safety of the model, suggesting that undifferentiated patients would be better assessed by doctors before being treated by physiotherapists.

3.3 HWA Domain 2 - Workforce capacity and skills development

Twenty-nine physiotherapists were recruited, many with extensive experience and the majority (83%) with post-graduate qualifications. The vast majority (24/29) were recruited from within the same organisation. Seventy-five per cent of respondents to a survey of ESOP Physiotherapists agreed that they planned to "stay on in the role for the foreseeable future".

The two lead sites each developed a training pathway. The Victorian lead site developed an in-house training program where the emphasis was on a competency based framework, supported by external learning modules. The competency standards were developed collaboratively with the input of clinical leads from all Victorian-based sites. The training program included a self-assessment tool to be used by PCPs to identify areas for improvement to guide their learning program. The program proved to be flexible, cost effective and adaptable but relies heavily on in-kind support and the allocation of non-clinical time so that participants can manage study requirements.

The other lead site provided each of their implementation sites with a training resource which had previously been developed in collaboration with the International Centre for Allied Health Evidence at the University of South Australia. The PCPs enrolled in a study program at the University of Canberra (Graduate Diploma of Extended Scope Physiotherapy). This model required organisations to pay University fees of about $18,000. The credentialing component involved supervised practice of the expanded scope skills and completion of a competency log book. Feedback from participating organisations raised issues about the structure of the program, delivery, content and assessment methods.

Both training models are reliant on the availability of experienced clinical leads and medical staff for mentoring and competency assessment of the trainees.

3.4 HWA Domain 3 - Leadership and sustainability

The evaluation indicated that one of the three main requirements for implementing the PCP model was a receptive context for change. Two key aspects of a receptive context are leadership and management support (see Section 2.4). This is consistent with an earlier review of PCP services in Victoria which found that one of the four main factors influencing successful implementation was support from hospital management and senior nursing and medical staff (Aspex Consulting, 2010).

The key group for facilitating a receptive environment for the PCP model is medical staff in the ED, not only to provide general support for the model, but also to provide practical assistance in terms of mentoring, supervision and assessment of clinical competencies. In some instances, medical staff working outside the ED can also be key stakeholders, depending on local policies and practices e.g. orthopaedic surgeons, radiologists. Senior managers provided guidance and a management perspective on the models of care and staffing issues.

Some senior medical staff expressed a strong preference for a secondary contact model in which patients with MSK presentations are assessed, diagnosed and discharged by doctors and referred to physiotherapists for treatment as required. Their concerns about the efficiency and
safety of the ESOP model appeared to be based on perceptions that medical staff had spent a
great deal of time supervising the PCPs and performing assessments on patients referred back
to doctors. Nevertheless, these respondents clearly valued the physiotherapists’ presence and
respected their skills in providing therapy.

The clinical lead physiotherapist was critical in providing leadership for the PCP model of care
and was often the key individual responsible for service implementation, liaising with
stakeholders, overseeing the service and training of new staff. The PCPs also had to
demonstrate leadership qualities as they championed the new model of care on a daily basis
through their interactions with patients and other staff in the ED.

Data collected during the evaluation shows there was strong clinical leadership throughout the
project with some room to improve senior leadership engagement.

Leadership and support from the two lead sites was important to ensuring implementation and
sustainability of the PCP model. Both lead sites were also implementation sites and this created
pressures as they had to balance the competing demands of both roles. The lead sites provided
varying assistance depending on the needs of each implementation site and the project
management style of the lead team. Lead sites played an important role engaging key
stakeholders within their own organisations and at the implementation sites. Interviews with
PCPs and key stakeholders and comments in project final reports indicated that implementation
sites were generally positive regarding the contribution of the lead sites and described them as
very helpful and approachable. At project end eight sites had sustained their PCP service in
various forms. One site had ceased service delivery due to the development of an adjacent
Urgent Care Centre. Two project teams were pursuing ongoing funding and remained optimistic
about sustaining project outcomes.

### 3.5 HWA Domain 4 - Workforce planning

The majority of clinical staff working in Emergency Departments are capable of seeing and
treating a wide range of patients. Introducing a role such as a PCP into that environment, to
treat a very specific patient cohort, is critically dependent on sufficient throughput of suitable
cases for the position to be worthwhile.

There is potential for conflict between different innovations implemented concurrently, and it can
be difficult to distinguish their respective impacts on efficiency and effectiveness. For example,
at one site, the nurse practitioner service in the fast track area of ED was increased by 50%
during the ESOP program, so that at some times of the day there were three nurse practitioners
on duty and during quiet periods, nurse practitioners and PCPs were effectively competing for
patients, which meant less throughput for both groups.

Other sites also identified the problem of medical staff taking responsibility for patients in the ED
that clearly had MSK conditions. Ongoing explanation is needed to help ED staff be clear about
the role of the PCP and the difference between the primary and secondary contact
physiotherapy roles.

### 3.6 HWA Domain 5 - Workforce policy, funding and regulation

The model of care in the Victorian sites is underpinned by the Australian Physiotherapy
Association (2009) definition of advanced scope of practice. Although this includes roles and
responsibilities traditionally undertaken by the medical profession, and thus requires additional
training and credentialing, it does not extend beyond the current legislation and hence is not
“expanded” scope of practice.

When all competency requirements for the Victorian training pathway have been met, this is
recognised at the hospital level. Practices around this recognition vary according to local
governance. Opportunities should be explored with professional bodies to record and manage certification. Broader professional recognition would enhance the sustainability of this training pathway.

The other model of care goes beyond advanced practice and requires formal tertiary studies leading to the qualification of Graduate Diploma in Extended Scope Physiotherapy, plus additional training and credentialing for tasks such as autonomously ordering and interpreting imaging (ultrasound, CT scan and MRI), managing fractures and performing joint and fracture reductions and joint aspirations. On completion of the formal course requirements, the University of Canberra notifies the Australian Health Practitioner Regulation Agency (AHPRA) of successful graduates eligible to be recognised as an Extended Scope Physiotherapist. Due to the professional implications and the need for a nationally agreed standard for education at this level, consultation is needed with the appropriate professional bodies to establish satisfactory processes for notification to occur.

One Queensland site was able to get access to independent x-ray ordering rights with assistance from its lead site. This entailed a careful examination of the Queensland Radiation Safety Act, an extra training component in the University of Canberra program, benchmarking and help with stakeholder engagement. Requests initially had to be co-signed by a medical officer, but in September 2013 a policy was ratified allowing independent referral for plain film imaging by ESOP physiotherapists at that site.

The lead site also helped implementation sites deal with some of the barriers to prescribing and administering medication. It reviewed the legislation and was able to identify avenues by which physiotherapists in Queensland could be granted limited prescribing rights, along with the legal potential for administration of Schedule 2 medications. A proposal was drafted to be submitted to the Queensland Chief Medical Officer requesting limited prescribing rights under research conditions. Standard Operating Procedures for initiation and administration of simple analgesia (paracetamol and ibuprofen) were developed at two Queensland implementation sites and are awaiting local approval. One site secured permission to prescribe and administer medicine towards the end of their project.

The lead site also assisted another implementation site in reviewing State-based legislation governing prescribing of medications, identifying stakeholders and helping facilitate dialogue between the project team and the State-based Medicines and Technology Policy and Programs (MTPP) and Controlled Substances Licensing. However, at the time of this report, there was no possibility for PCPs at this site to administer medications despite completing the relevant module of the Graduate Diploma.

In order to realise the full scope of the University-based training model, a coordinated national approach may be required to remove legislative and regulatory barriers to PCPs prescribing medication.

Examination of the provisions in the Workplace Safety / Worker’s Compensation Acts indicates that only South Australian clinicians are legally able to complete Worker’s Compensation forms. This restricted the autonomy of the PCPs as they were unable to provide a complete service to work-injured patients.
4 Nurses in the Emergency Department

4.1 Introduction and background

The common goal of the Nurses in the Emergency Department (NED) sub-project was to improve ED flow and reduce waiting times for patients with non-life-threatening presentations while providing safe and high quality care. Eight organisations received funding, with each implementing a different model of nursing care in the ED: three organisations focused on patients presenting with mental health issues; one organisation initiated an ED review clinic staffed by clinical nurse consultants; four organisations aimed to enhance nurses’ skills and confidence in dealing with common presentations (Table 1).

Table 1 Advanced and extended nursing practice

<table>
<thead>
<tr>
<th>Site</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>NED1</td>
<td>Nurses employed as clinical nurse specialists in a team led by a nurse practitioner.</td>
</tr>
<tr>
<td>NED2</td>
<td>Increasing the role of clinical nurse consultants within a framework of standing orders and policies.</td>
</tr>
<tr>
<td>NED3</td>
<td>Appointment of two nurse practitioners, with supervision by a consultant psychiatrist.</td>
</tr>
<tr>
<td>NED4</td>
<td>Clinical nurse consultants working towards endorsement as nurse practitioners under medical supervision and within a framework of medication standing orders and hospital protocols.</td>
</tr>
<tr>
<td>NED5</td>
<td>Increasing the skills and knowledge of registered nurses with the use of clinical pathways linked to medication standing orders.</td>
</tr>
<tr>
<td>NED6</td>
<td>Increasing the scope of practice of registered nurses already working in an Urgent Care Centre with a focus on clinical procedures for common presentations.</td>
</tr>
<tr>
<td>NED7</td>
<td>Registered nurses already working in the ED expanded their role with a focus on common illnesses and injuries working within a framework of clinical guidelines and pathways.</td>
</tr>
<tr>
<td>NED8</td>
<td>Nurses already working in an ED received training so that they could send home children with four common conditions according to pre-determined criteria.</td>
</tr>
</tbody>
</table>

Two sites were based in rural areas and an important goal was to prevent unnecessary transfers to larger, regional hospitals. Two targeted paediatric patients with the goal of facilitating faster assessment, treatment and discharge.

4.2 HWA Domain 1 - Effectiveness and efficiency

ESOP nurses saw 11,615 cases during the implementation period, representing 2.5% of all ED presentations (Table 2). Of these, 11,032 cases involved patients in the ESOP target groups. The volume of cases varied a great deal across sites, as did success in identifying and serving patients within the defined target groups.

Table 2 Total ED and NED presentations by site – implementation period

<table>
<thead>
<tr>
<th>Site</th>
<th>Total ED presentations</th>
<th>No. of months</th>
<th>Total ED presentations per month</th>
<th>Total ESOP-NED presentations</th>
<th>ESOP-NED presentations per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>NED1</td>
<td>95,181</td>
<td>16</td>
<td>5,948.8</td>
<td>2,359</td>
<td>2.5</td>
</tr>
<tr>
<td>NED2</td>
<td>44,321</td>
<td>9</td>
<td>4,924.6</td>
<td>188</td>
<td>0.4</td>
</tr>
<tr>
<td>NED3</td>
<td>85,624(^2)</td>
<td>10</td>
<td>8,562.4</td>
<td>306</td>
<td>0.4</td>
</tr>
<tr>
<td>NED4</td>
<td>64,188</td>
<td>15.5</td>
<td>4,141.2</td>
<td>4,626</td>
<td>7.2</td>
</tr>
<tr>
<td>NED5</td>
<td>24,348</td>
<td>6</td>
<td>4,058.0</td>
<td>57</td>
<td>0.2</td>
</tr>
<tr>
<td>NED6</td>
<td>10,039</td>
<td>15</td>
<td>669.3</td>
<td>106</td>
<td>1.1</td>
</tr>
<tr>
<td>NED7</td>
<td>62,181</td>
<td>11</td>
<td>5,652.8</td>
<td>2,830(3)</td>
<td>4.6</td>
</tr>
<tr>
<td>NED8</td>
<td>74,634</td>
<td>11</td>
<td>6,784.9</td>
<td>1,143</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>460,516</td>
<td>93.5</td>
<td>4,925.3</td>
<td>11,615</td>
<td>2.5</td>
</tr>
</tbody>
</table>

\(^1\) ESOP data was provided for 10 months, therefore the number ESOP-NED presentations per month is 188/10.

\(^2\) Includes data from two hospitals in NED3 services.

\(^3\) NED7: ESOP activity data quality checks showed missing data items.
Patients seen by ESOP nurses were discharged faster, on average, than similar patients seen by other health professionals in the ED. Averaged across all sites, 73.5% of patients seen by ESOP nurses were discharged from the ED within four hours. This compared to 62.8% of similar patients seen by other health professionals during the implementation period.

The sub-project resulted in nearly 1,900 additional patients being treated and discharged within the national four-hour target. There was improved National Emergency Access Target performance at all participating sites and approximately one percentage point of this improvement was due to the contribution of ESOP nurses. The overall percentage of target patients discharged from ED within four hours rose from 57.0% at baseline to 63.8% in the post-implementation period. All sites showed an improvement in performance from the baseline period to the implementation period for this KPI. However, they had very different starting points and scope for improvement and there was considerable variation in the numbers of patients seen at each site. This can be seen more clearly in Figure 10.

![Figure 10 Patients in target group discharged within 4 hours – baseline and implementation](image)

The investment per patient seen by ESOP nurses averaged $188, or 5.3 patients per $1,000 spent by HWA. This calculation does not include the costs borne by the implementation sites or the costs of developing and implementing the training components of the model. There was wide variation in the investment per patient across the sites, with some highly cost-efficient and others less so.

Safety and quality data were not reported consistently across sites. The limited available information indicates similar outcomes for ESOP compared with usual care. Interviews with ESOP nurses and stakeholders identified a set of common factors that were seen as important contributors to safety and quality. These included careful selection of experienced nurses, relevant training and strict clinical governance structures. ESOP nurses described the characteristics of ED environments that supported their practice, including a ‘risk averse’ culture in which they had the capacity to decide that a patient was not within their scope and the ready availability of clinical review and mentoring. ESOP nurses took great care to educate patients and ensure they understood the next steps in resolving their health issues, which often involved referral to a general practitioner or a return to the ED for review.
The models were implemented on a small scale at most sites, with relatively few staff, so the ‘dose-response’ impact was expected to be correspondingly small and difficult to detect above the noise of other concurrent changes in the ED environment. Stakeholders acknowledged the difficulty of measuring impacts on efficiency and productivity but described less tangible benefits such as reduced pressure on medical staff and increased confidence that timely and appropriate care was being provided. There were many anecdotal observations that the ESOP models had improved patient flow through the ED.

Consumers reported positive experiences and high levels of satisfaction with ESOP nursing care. More than 75% of survey respondents strongly agreed that the nurse listened carefully, understood what was wrong, understood their concerns and believed their problems were real. More than 80% strongly agreed that the nurse seemed comfortable dealing with their problems. Overall satisfaction was also very high, with seven in ten patients rating their ED experience as very good (9/10 or 10/10). The quality of emotional support and the effectiveness of the treatment provided by ED nurses were key predictors of overall satisfaction with the ED experience. A small group of respondents would have preferred a more thorough examination, more tests and more information about the cause of the problem and the expected time to recovery, suggesting areas for future improvement.

One site ran its own survey and found mental health patients reported that they appreciated the nurses’ patience, willingness to listen and evident understanding of the patient’s problems. Patients valued having ED procedures and processes explained to them, which made them feel calmer and reassured. They also acknowledged mental health nurses’ knowledge of services specific to their needs.

4.3 HWA Domain 2 - Workforce capacity and skills development

A total of 173 nurses were recruited to ESOP roles. Most sites recruited from within the organisation, which was a deliberate strategy to ensure sustainability. Selection criteria varied according to the model of care, but all were highly experienced and many had post-graduate qualifications. The number of ESOP nurses at each site was generally limited to between two and six, with the exception of one site where all registered nurses in the ED were eligible to take part. At that site, 123 nurses completed the training and competency assessments required to carry out ESOP duties.

Three sites used project funding to recruit nurse practitioners, registered nurses working towards nurse practitioner status, or clinical nurse specialists into new positions in the ED. These senior nurses brought their existing expertise into the project and did not require training beyond orientation to the workplace. They were used to deliver specialist care for mental health patients (two sites) and to assess, treat and discharge low-acuity patients and those returning to the ED for review (one site).

Most of the NED projects did not implement a truly expanded scope of practice role but rather empowered and enabled nurses to work to the full range of their existing scope of practice. Registered nurses were able to advance their practice within a framework of clinical guidelines, protocols and pathways.

The scope of practice was carefully and clearly defined at each site and supported by clinical guidelines or protocols. Clinical leaders were involved in developing these documents, and this engagement was crucial to acceptance and successful implementation of the models of care. The scope of practice needed to align with accepted industrial classifications in relation to diagnosis and discharge. Lack of clarity about these limits delayed training and implementation in some projects. A few projects found that gaining approval for medication standing orders or nurse-initiated medications was delayed by resistance from medical staff and internal organisational committees.
Nurses had high levels of confidence in their ability to provide patient information and appropriate care. The vast majority were comfortable approaching other staff for advice. More than 80% said they were satisfied with the ESOP role, felt it had enhanced their careers and were planning to stay on for the foreseeable future. The ESOP nursing model of care appears to be an effective retention strategy, providing an expanded clinical role and further career pathways for the nursing workforce. The intention of nurses to continue in the role is likely to be an important contributor to the sustainability of the model.

### 4.4 HWA Domain 3 - Leadership and sustainability

The evaluation indicated that one of the three main requirements for implementing the NED models was a receptive context for change. Two key aspects of a receptive context are leadership and management support.

All NED project teams identified the need for leadership for their model of care. This leadership often came from the project team themselves; that is, project managers and ESOP nurses. In this respect it was especially important that the project manager had sound leadership skills. In addition, strong leadership from the Director of Nursing and Director of ED (and potentially other medical officers in the ED) was also imperative to successful implementation of the model and achieving sustainability.

Key stakeholders at most sites were optimistic about the future of the ESOP models and committed to seeing them continue. They recognised the need to embed the changes in normal practice and to continue demonstrating and communicating benefits to stakeholders at all levels of the organisation.

On the whole, nurses, allied health staff and medical officers working alongside ESOP nurses accepted and understood the new roles. Nine out of ten ED staff who responded to a survey said they felt comfortable in providing advice on patient management to the ESOP nurses. The educational preparation for the ESOP nursing roles was not well understood, however. More comprehensive communication strategies could be introduced to support workforce change management in the ED.

Other ED staff perceived that the ESOP nursing model improved throughput and eased workload pressures. Nurses with personal qualities such as reliability, competence and flexibility were highly valued.

Data from the sustainability tool indicated that senior leadership engagement was less than optimal in some organisations. Four of the eight sites perceived that either organisational leaders were taking limited responsibility for efforts to sustain the change process or that better two-way communication between staff and leaders was needed. At the two paediatric sites, paediatric specialists and hospital executives strongly supported the projects. At one of those sites, a history of successful implementation with a similar program in other parts of the hospital helped gain high-level support from hospital executives and ED management. At project end six projects had been sustained. For the remaining two projects staff had been retained in the ED but returned to their usual duties.

### 4.5 HWA Domain 4 - Workforce planning

ESOP nursing models can only be implemented where appropriately experienced nurses are available. Building capacity in the existing workforce rather than recruiting new staff was a successful strategy to ensure sustainability. Engagement with medical staff is essential to sustaining and scaling up these roles. At most sites, the medical and nursing staff had well-established prior relationships and trust had already been established.
The ESOP models can also provide an opportunity to better utilise the skills of nurse practitioners in the ED. This strategy was employed successfully at three of the sites. HWA funding allowed these models to be evaluated and all three sites subsequently obtained ongoing funding for specialist (mental health) and generalist (review clinic) ED roles for nurse practitioners.

Implementation of innovative ESOP nursing models is dependent on the support of senior managers and their willingness to embrace the need for further, rigorous evaluation at the local level.

4.6 **HWA Domain 5 - Workforce policy, funding and regulation**

Further funding will be required to diffuse these innovative models across organisations and the broader health sector.

Cooperation among jurisdictions, including national and state/territory levels of government, is likely to promote wider adoption of ESOP nursing models. Nevertheless, local leadership is essential in order to achieve the level of stakeholder engagement required.

Diffusion of ESOP nursing roles has broader funding implications for jurisdictions as personnel who are working in an expanded role frequently expect this to be recognised with enhanced remuneration.
5 Extending the Role of Paramedics

5.1 Introduction and background

The Extending the Role of Paramedics (ERP) sub-project built on a model developed by the South Australian Ambulance Service (SAAS) which aims to provide a service that is complementary to primary health care, thus reducing emergency department presentations. The core of the model is training Extended Care Paramedics (ECPs) to treat patients in their usual place of residence, with referral to other health professionals if appropriate. ECPs are typically required to manage patients with diverse, ill-defined, conditions, often against a background of chronic illness. Although considered ‘low acuity’, this requires expertise and clinical reasoning of a high order.

The published evidence to date generally supports an expansion of the role of paramedics to include the assessment and management of patients with minor illnesses and injuries to avoid transport to hospital (Bigham et al., 2013; Evans et al., 2014; Mikolaizak et al., 2013; Tohira et al., 2013). However, the evidence is primarily from overseas, particularly the United Kingdom, and more research is required to establish the effectiveness and safety of the model.

The model was implemented in five locations – one regional city, one remote area, one large metropolitan area, and two medium-sized urban centres with large outlying districts – and adapted to meet local needs at each site. Existing call dispatch systems were used to allocate cases to ECPs via the State- or Territory-based Communications Centre or equivalent. Having an ECP in the central call centre greatly assisted case allocation and management. Two sites in South Australia were able to leverage off the experience of the Adelaide metropolitan service, whereas for the other sites the ERP model was a new initiative for their organisation. With one exception, each site procured and equipped a vehicle specifically for ECP use.

Sites took similar approaches to clinical governance by building on existing practices and structures within their organisation. Several project teams had clinical coordinators, clinical support officers and / or experienced operations managers who were available 24 hours/day to provide assistance and advice in the field. Project teams established local coordination or governance committees and developed or adapted existing clinical practice guidelines for the ECPs.

The ECP role was relatively standardised, but with variations on how that role was delivered. If there was sufficient throughput, a sole ECP worked in a specially equipped vehicle with no patient transport capability, quite separate from existing emergency response crews. If throughput was less, two types of hybrid role were implemented: (1) ECP working with another paramedic as part of an existing emergency response service, using a vehicle with patient transport capability; (2) combining the ECP role with another role. In practice, the ECP caseload was too small to warrant a full-time, stand-alone position at most sites. The hybrid role was seen by most ECPs as more satisfying and efficient in rural and regional locations, with the added benefit of ensuring that ECPs maintained their ICP skills.

5.2 HWA Domain 1 - Effectiveness and efficiency

The majority of ECP cases originated from calls to ‘000’, with other referrals coming from residential aged care facilities and medical practitioners. In general, presenting problems seen by the ECPs were poorly described with no consistent method of recording across sites. The four main categories of problems seen by ECPs involved general symptoms and signs, symptoms and signs related to the digestive system and abdomen, injuries and procedures (Table 3).
### Table 3  Presenting problems of patients seen by ECPs in their expanded role

<table>
<thead>
<tr>
<th>Category</th>
<th>Example(s) of descriptions</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>General symptoms and signs</td>
<td>Headache, fever, fainting, sick, unwell</td>
<td>590</td>
<td>26.9</td>
</tr>
<tr>
<td>Digestive system and abdomen</td>
<td>Abdominal pain, vomiting, constipation</td>
<td>237</td>
<td>10.8</td>
</tr>
<tr>
<td>Injuries</td>
<td>Laceration, dislocation, burns</td>
<td>226</td>
<td>10.3</td>
</tr>
<tr>
<td>Procedures</td>
<td>Blocked catheter, dressing change</td>
<td>224</td>
<td>10.2</td>
</tr>
<tr>
<td>Falls</td>
<td>Collapse, fall</td>
<td>173</td>
<td>7.9</td>
</tr>
<tr>
<td>Circulatory and respiratory</td>
<td>Chest pain, shortness of breath</td>
<td>156</td>
<td>7.1</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>Hip pain, back pain, dislocation</td>
<td>146</td>
<td>6.7</td>
</tr>
<tr>
<td>Cognition, perception, emotional state and behaviour</td>
<td>Confusion, dizziness, drowsiness</td>
<td>73</td>
<td>3.3</td>
</tr>
<tr>
<td>Skin and subcutaneous tissue</td>
<td>Abscess, lump, swelling, rash</td>
<td>47</td>
<td>2.1</td>
</tr>
<tr>
<td>Urinary</td>
<td>Haematuria, urinary retention</td>
<td>45</td>
<td>2.1</td>
</tr>
<tr>
<td>Palliative care</td>
<td>Palliative care, end-of-life support</td>
<td>26</td>
<td>1.2</td>
</tr>
<tr>
<td>Transfer</td>
<td>Inter-facility transfer, transfer</td>
<td>18</td>
<td>0.8</td>
</tr>
<tr>
<td>Psychiatric problem</td>
<td>Depression, threatening suicide</td>
<td>17</td>
<td>0.8</td>
</tr>
<tr>
<td>Diabetic problems</td>
<td>Hypoglycaemia, hyperglycaemia</td>
<td>16</td>
<td>0.7</td>
</tr>
<tr>
<td>Assessment or review</td>
<td>Assessment, neurological review</td>
<td>12</td>
<td>0.5</td>
</tr>
<tr>
<td>Allergic reaction</td>
<td>Allergic reaction, anaphylaxis</td>
<td>11</td>
<td>0.5</td>
</tr>
<tr>
<td>Overdose</td>
<td>Overdose</td>
<td>9</td>
<td>0.4</td>
</tr>
<tr>
<td>Traffic accident</td>
<td>Motor Vehicle Accident</td>
<td>8</td>
<td>0.4</td>
</tr>
<tr>
<td>Problems with mobility</td>
<td>Unable to walk, unsteady gait</td>
<td>7</td>
<td>0.3</td>
</tr>
<tr>
<td>Hazardous exposure</td>
<td>Ingestion cleaning fluid</td>
<td>5</td>
<td>0.2</td>
</tr>
<tr>
<td>Stroke</td>
<td>Stroke</td>
<td>5</td>
<td>0.2</td>
</tr>
<tr>
<td>Assault</td>
<td>Assault, sexual assault</td>
<td>4</td>
<td>0.2</td>
</tr>
<tr>
<td>Drowning</td>
<td>Drowning, near drowning</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>Obstetric, pregnancy</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Other</td>
<td>Assist, deceased, unable to contact</td>
<td>61</td>
<td>2.8</td>
</tr>
<tr>
<td>Inadequately specified</td>
<td></td>
<td>71</td>
<td>3.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>2,190</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Note: table excludes cases where presenting problem was not reported.

Between January 2013 and March 2014, ECPs across all sites attended to more than 3,500 cases including more than 2,100 cases in their extended role. A stand-alone model of care for ECPs requires sufficient throughput for the model to be viable. In situations (e.g. rural locations) where throughput is insufficient, a hybrid model is preferable. Towards the end of the implementation period, throughput averaged about 1.4 ‘expanded scope’ cases per 12-hour shift, with considerable variability across sites. Throughout the implementation period there was considerable variability in throughput between sites (Figure 11).
Median waiting times ranged from seven minutes at one site to 23 minutes at another. By definition, half of all patients waited less than the median. The average waiting time across all sites – which is influenced by a few large waiting times – was 30 minutes.

A key goal of the ERP model is to treat particular patient groups in their own residence or the community and thus avoid transport to hospital. This was largely achieved. Overall, 62% (range 50% to 77%) of eligible patients were treated at a private residence. A high proportion of patients (average 72.5%, range 65.4% to 78.4%) seen by ECPs did not require transport to hospital.

There was a very high level of consumer satisfaction with the model of care. ECPs communicated well with patients, examined them thoroughly, provided effective treatment and seemed comfortable dealing with their problems. Few patients (2.2%) refused treatment.

Respondents to a survey of ambulance staff and stakeholders indicated a reasonably good understanding of the model of care and a high regard for the quality of the service provided. However, a substantial minority reported that they did not fully understand the scope of practice or the education required to become an ECP. Many did not see the model as effective for two of its key aims: reducing pressure on the local ED and improving access to emergency care.
Many respondents – especially community stakeholders – felt the model filled an important niche, addressing the needs of specific, vulnerable groups and complementing other services such as palliative care and community care.

There was strong agreement among ECPs that their practice was safe and that they provided a high quality of care. They perceived that their role had also contributed to the overall quality of care within their ambulance service through the system of review that the ECP could provide. Most ECPs were positive about their experiences working in the role, strongly agreeing that they were comfortable approaching other staff for advice regarding patient management. They also reported high levels of agreement regarding their confidence in dealing with patients and having the skills and knowledge to provide education, information and appropriate care.

Some ECPs felt that other staff did not fully understand their role, its functions, the educational preparation required, and differences in extended skills and expertise. They also felt that other staff could more fully acknowledge the ECPs’ additional skills and knowledge. Several ECPs indicated that appropriate personnel for mentoring and supervision were not always available when required. ECPs believed that the individual qualities of the ECP, such as their experience, training and attitude, were key contributors to safety and quality of care.

An unintended outcome of the model was the opportunity for ECPs to ask their colleagues to review a patient during the next shift. Over the course of the program, other ambulance officers occasionally requested ECPs to review a patient that was not transported. This ‘safety net’ aspect was seen as an important contribution of the ERP model to the effective care of patients.

On the whole, stakeholders felt that the ERP model of care was as safe as usual care. The results of the evaluation indicate that the model is low risk, with small likelihood of adverse outcomes. This finding is predicated on strict clinical governance arrangements being in place and recruitment of suitable paramedics to the role.

The model can be cost-effective in locations with a sufficiently large volume of potential cases. Cost-efficiency is reliant on the availability of enough ECPs to provide adequate roster cover, and is critically affected by the accuracy of call centre staff in identifying appropriate cases and dispatching ECPs appropriately. The costs of implementing the ERP model are met by ambulance services, but any cost savings accrue to the health system as a whole, a situation complicated by different management arrangements and payment models in each jurisdiction.

Scenario analysis shows that if all implementation sites saw six ECP patients each shift (that is, six daily for each site for 365 days per year) and the same levels of ED avoidance rates seen during implementation were maintained all sites would be highly cost effective with annual cost savings ranging from $411 per patient to $998 across the sites.

5.3 HWA Domain 2 - Workforce capacity and skills development

Recruitment of paramedics was managed internally at each site, using similar selection criteria to that used by SAAS. Most of those recruited had extensive paramedic experience and 15 of the 17 were trained as Intensive Care Paramedics (ICPs); six were registered nurses, and several had additional tertiary qualifications.

The capabilities most commonly referred to by ECPs as important to the role included breadth and depth of clinical knowledge; knowledge of the health system and how it works; experience working in the community in an uncontrolled environment; communication and relationship building skills; comprehensive assessment and examination skills; and advanced clinical reasoning and decision-making skills.

Medical mentors playing a critical role in providing ongoing support, clinical supervision, telephone advice, and back up for the ECPs. ECPs reported that medical mentors were highly
Each ECP was trained in one of two programs: three sites sent all their ECPs to the training program offered by SAAS; one site used a program from Edith Cowan University (ECU); and one site accessed both training programs at different times. Minor modifications to the training programs were made for rural and remote sites, to reduce the amount of time ECPs were away from home and families. All ECPs who undertook the training program successfully completed it. The training programs had similar costs, estimated at about $30,000 per ECP, which includes clinical placement costs.

The training programs were comprehensive, appropriate and well resourced, using a mix of different training modalities. Both training programs had clearly articulated assessment schedules with well-documented competency requirements. The programs proved to be affordable, accessible, and capable of producing competent clinicians that were ‘fit for purpose’.

For most ECPs the major limitation of the training program was the limited clinical exposure, frequently from relatively small numbers of cases. It was perceived that there was a need for increased supervision to increase confidence in new skills. ECPs felt that the training program needed to emulate the problem solving approach of medicine rather than the more protocol driven approach adopted by paramedicine.

Both training programs demonstrated they could be adapted for use in other jurisdictions and valuable lessons were learned about contextualising the program for local conditions. A significant concern about the SAAS training program was that it did not generate any formal qualification. This is a significant barrier to the transferability of the training program and has implications for national implementation.

Stakeholders (other than the ECPs) believed that having enough trained and experienced ECPs to create a “critical mass” was essential for the model to work efficiently and provide for succession planning.

5.4 HWA Domain 3 - Leadership and sustainability

The importance of a supportive Chief Executive Officer was identified by all project teams as a key success factor. This leadership from the top sent an important message to the wider workforce about the level of interest in the ERP model of care. The expertise held within organisations was leveraged by project teams, for instance the inclusion of experienced ambulance executives at the HWA Workshop 2. All ECPs identified the need for leadership for the ECP model of care from the CEO through to operational management levels.

Several project teams found that it was challenging for operational managers to reconcile the ECP initiative with the organisation’s emergency response focus and this may have influenced their views about sustainability. Engagement of local operational managers, so they had ownership of the project, was identified as a key influence on the perception of the ECP role within the organisation.

Project teams that consistently communicated achievements were better able to sustain interest in their initiative. Presenting early wins and communicating widely to many different organisational stakeholders helped silence critics and swayed some of the sceptics. This was most effective when the data presented was aligned to organisational key performance indicators. The teams who used this strategy most effectively listened to the criticisms of their project and communicated information that addressed this.

*By being determined and constantly motivating and engaging these entities you can consistently demonstrate that the ECP path is an exceptional patient journey avenue*
that fills the gap in the healthcare system, while at the same time is effective, safe and provides cost savings.” (ECP)

For all project teams, the availability of additional funding was the single most important determinant of sustainability.

“If I was given an increased budget I absolutely would support the continuation of the program...Without a doubt, to the point where I would actually expand it to different sites across the state. I believe it is certainly worth it, and I actually have very strong views that it shows that in the future, the next five to ten years, it will be absolutely the way ambulance goes. There is absolutely no doubt about that in my mind.” (Stakeholder – Paramedic Manager)

Each project was asked to collect data relating to project sustainability at two time points – within the first two months of implementation commencing and within the last two months of implementation ceasing. Two of the ten factors comprising the tool relate to leadership (senior leadership and clinical leadership). The ratings for both senior and clinical leadership (averaged across sites) were less than optimal at project commencement. Engagement of clinical leaders improved over the course of the project.

Influential external stakeholders were included on clinical coordination committees and took part in developing clinical pathways and governance arrangements. Their involvement ensured ECP treatment was consistent with current practice and facilitated monitoring of safety and quality outcomes.

All project teams, with the encouragement of HWA, worked to sustain the ERP model. HWA provided high quality input about business case development. Lobbying and negotiation was undertaken by all project sites, and local evaluation data was used to present a case for sustainability following the conclusion of the implementation period. Three project sites advised that they had been unable to secure further funding for the ERP initiative. One project team secured funding for a further twelve months and intends to train additional ECPs. The remaining implementation site is awaiting the outcome of their funding submission.

**5.5 HWA Domain 4 - Workforce planning**

In rural areas and smaller ambulance services, it may be unrealistic to require ECPs to have ICP qualifications. One jurisdiction amended the selection criteria to make ICP qualifications a desirable, rather than an essential, criterion in order to broaden the field of applicants.

Models of care may need to vary according to local context and needs. The ECP caseload was too small to warrant a full-time, stand-alone position at most sites. A hybrid role was seen by most ECPs as more satisfying and efficient in rural and regional locations, with the added advantage of allowing ECPs to maintain their ICP skills. The stand-alone model is probably more viable in large metropolitan locations. However, interviews with the ECPs and key stakeholders showed that this was a contentious issue and there are a number of advantages of a standardised role definition, not least the fact that this would facilitate formal recognition of qualifications.

Consideration should be given to the transferability of training and qualifications between states and territories. Currently, there is little evidence that an ‘Authority to Practice’ issued in one jurisdiction will be recognised by another. Transferability across jurisdictions would help build a critical mass of ECP expertise, make the role more widely recognised and understood, and assist in covering periods of leave, thus enhancing the effectiveness and sustainability of the model. One option is to develop a formal qualification.
Due to the relative newness of the ECP role, workforce planning has not occurred in any systematic way at a state, territory or national level. If the ECP role is to be sustained then jurisdictions will need to plan for this workforce development. HWA in collaboration with the Council of Australian Ambulance Authorities has embarked on ‘The Ambulance officer and Paramedic Workforce Study’ to build a comprehensive understanding of Australia’s ambulance officer and paramedic workforce and add to the nationally consistent evidence base it is developing for Australia’s health workforce. This remains a work in progress.

The ECP role appealed to a large group of experienced ambulance officers. This is evidenced by the high calibre of the applicants for the role – most were Intensive Care Paramedics, six were registered nurses, and several had additional tertiary qualifications. An ECP position that was advertised at one regional site during the project attracted 16 applicants. There was a high level of retention, with only two ECPs leaving during the project, for reasons which appeared unrelated to the ECP role. Almost 70% of ECPs indicated that they were planning to remain in the role for the foreseeable future.

5.6 HWA Domain 5 - Workforce policy, funding and regulation

The costs of implementing the model are met by ambulance services, whereas the benefits are likely to accrue to the health system as a whole. This discrepancy represents a challenge to the viability of the model of care. The situation is complicated by different management arrangements and payment models in different jurisdictions. In one jurisdiction, ambulance services receive approximately 40% less reimbursement for management of a lower acuity case, where transport is not required, than they do for an emergency transport case. In another jurisdiction ambulance services are supplied on a contract basis to the State/Territory government. These issues of funding and management require consideration because they are likely to affect sustainability.

Full implementation of the model of care depends on local authorities and may require the development of additional local processes and procedures. Likewise, any proposed extensions of the model of care should be considered in the light of potential legislative and policy barriers.

The changes needed are likely to vary between jurisdictions. For example, in some jurisdictions patients who require antibiotics cannot be managed by ECPs as they do not have authority to use and store these pharmaceuticals. In other jurisdictions ECPs cannot prescribe medication or carry blood products.

The key stakeholder interviews highlighted a need for better communication between ambulance services and primary health care providers regarding interventions for eligible clients. Although this issue was resolved at a local level for each of the sites, it would be worth considering the development of standard templates to document the care provided, facilitate communication and ensure care outcomes are reported appropriately.

National registration of paramedics, similar to that in place for nurse practitioners, could facilitate access to items through the Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS). This would assist the sustainability of the model, particularly in rural and remote locations where access to health care is limited and the ability for ECPs to prescribe and provide certain medications could be a valuable contribution.
6 Prospects for wider implementation of the Expanded Scopes of Practice reform methodology

There are various ways of conceptualising the wider implementation of innovations. One way of framing a strategic approach to wider implementation involves three main mechanisms of adoption:

- ‘Let it happen’: allow innovations to be adopted in a ‘natural’ way, with individual organisations making their own decisions about whether to adopt or not adopt an innovation. This approach is unpredictable and self-organising, as individuals and organisations learn from each other and adapt what has been shown to work elsewhere to their own environment.
- ‘Help it happen’: the process of innovation adoption is facilitated, influenced and enabled e.g. with additional resources, changes in legislation, changes to funding.
- ‘Make it happen’: the adoption of innovations is managed in a formal way, typically by some central agency (Greenhalgh et al., 2004).

Based on this conceptualisation, the results of the evaluation suggest different approaches for each sub-project.

6.1 Advanced Practice in Endoscopy Nursing

A ‘help it happen’ approach is the preferred course of action, with the ‘help’ coming in various forms: seed funding to support implementation, funding to support ‘lead’ sites in the provision of support and guidance to implementation sites (for any implementation sites which would like such support), a nationally accredited course for nurse endoscopist training and changes to funding and legislation to support the APEN model. The results of the evaluation demonstrate the value of the lead / implementation site model, with lead sites facilitating implementation, minimising duplication and serving as a source of ongoing support.

Much of the ‘help it happen’ should occur at a State / Territory level, rather than a federal level, with the main exception being the establishment of a nationally accredited course linked with an agreed national framework for trainee nurses, so nurse endoscopist training can be recognised in the same way that doctors’ training is recognised by the Conjoint Committee for Recognition of Training in Gastrointestinal Endoscopy.

The Victorian Department of Health recently announced the establishment of a State Endoscopy Training Centre at Austin Health with the intention of funding additional trainee nurse endoscopy positions in 2014. The Nursing and Midwifery Office, Queensland Health, has also indicated that the Queensland Government is committed to the establishment of a nurse endoscopy workforce.

6.2 Physiotherapists in the Emergency Department

There are no major structural impediments to the model being widely adopted. Given the importance of local requirements for success (e.g. receptive context for change, particularly the support of local managers and medical staff) a ‘make it happen’ approach would be inappropriate and self-defeating. A ‘let it happen’ approach could be taken and may well achieve some success, given the momentum that has been building in recent years, particularly in Victoria, with the implementation of PCPs in many EDs. However, a ‘help it happen’ approach is the preferred course of action, with the ‘help’ coming in the form of seed funding to support implementation, funding to support ‘lead’ sites in the provision of support and guidance to implementation sites (for any implementation sites which would like such support), dissemination and ongoing updating of training resources and changes to funding and legislation to support PCP practice.
Much of the ‘help it happen’ should occur at a State / Territory level, rather than a Federal government level. However, there may be some economies of scale in taking a national approach to the training of PCPs. The very significant training resources developed by both lead sites should be made widely available. Consideration should be given to the most cost effective way of providing training. For example, there are merits in having a University qualification for PCPs, particularly the portability of the qualification, but there may be scope to include a greater proportion of the education in online or distance learning modalities, with less reliance on a residential component.

Several of the implementation sites recommended changes to the MBS and PBS to facilitate expanded scope of practice in EDs.

### 6.3 Nurses in the Emergency Department

The factors influencing adoption of the NED models, other than characteristics of the actual models, are essentially local, particularly the ‘receptivity’ to change. Given the diversity of the NED projects a ‘let it happen’ approach is considered to be the most appropriate strategy. More directive approaches (either ‘help it happen’ or ‘make it happen’) are inappropriate, in part because of the relatively modest scale of each project, with ESOP nurses treating only 2.5% of ED presentations (ranging from 7.2% to less than 1%).

With a ‘let it happen’ approach, the key strategy is one of wide dissemination of the results regarding each of the models. This represents a form of generalisability known as transferability or case-to-case translation, which occurs when an innovation in one setting is considered for adoption in another setting. Judgements about transferability are a joint enterprise between those who have undertaken and evaluated a project and those reading the results. The role of the reader is to ‘evaluate the extent to which the findings apply to new situations. It is the readers and users of research who “transfer” the results’ (Polit and Beck, 2010, p. 1452).

### 6.4 Extending the Role of Paramedics

The ECP model has been implemented in metropolitan, regional and remote settings. There are no major structural impediments to the model being widely adopted. Alone among the four ESOP sub-projects, ambulance services are organised on a jurisdiction-wide basis. Hence, decisions about whether to implement, or not implement, the model are likely to be taken at a jurisdictional level. Once such decisions are made, a ‘make it happen’ approach is warranted, but with sensitivity to the need for local adaptation. Help is required at a local level to establish and refine the model to meet local needs and at a jurisdictional level to ensure funding and legislation to support ECP practice.

There may be specific legislative barriers to realising the full potential of the role. For example, in some States and Territories, the carriage of blood products by ECPs requires a change of legislation and an amendment to the Poisons Act is required for ECPs to be able to prescribe. Legislation may inhibit the ability of ECPs to use and store an extended range of pharmaceuticals such as antibiotics which may limit the management of specific cohorts of patients in their own residence. In one jurisdiction, the inability of paramedics to supply medicines means that some patients have to be transported to the emergency department for this purpose.

There may be some economies of scale in taking a national approach to the training of ECPs, including the two training models used in this program. National recognition of ECP training would support paramedics working across jurisdictions. The significant training resources resulting from the two training pathways should be made widely available. Consideration should be given to the most cost effective way of providing training. For example, there are merits in having a University qualification for ECPs, particularly the portability of the qualification, but
there may be scope to include a greater proportion of the education in online or distance learning modalities. The most appropriate method for providing clinical placements also needs to be considered.

6.5 Generic issues

Based on the results of the evaluation, a series of questions at the level of patients, providers and the system has been developed which can be considered at any location where one of the extended scope models is being considered for implementation (Table 4).

Table 4 Factors influencing national scalability for extended scope models

<table>
<thead>
<tr>
<th>Level</th>
<th>Questions to be answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
<td>Is there sufficient demand for the model (in terms of patient target groups)?&lt;br&gt;Can the model deliver care that is as safe as, and of the equivalent quality (or better) than, usual care?&lt;br&gt;Can patients see the benefits and will they accept the role?</td>
</tr>
<tr>
<td>Providers</td>
<td>Is there a case for change that a new role can add value?&lt;br&gt;Is there a critical mass of appropriately qualified and experienced personnel who can fill, or be trained to fill, the role?&lt;br&gt;How will the skills and expertise of the expanded scope practitioners be maintained?&lt;br&gt;Will other providers working alongside the expanded scope practitioner accept and support the role?&lt;br&gt;Will the model help to attract and retain staff?&lt;br&gt;Is strong support available from influential clinical leaders?</td>
</tr>
<tr>
<td>System</td>
<td>Does the model fill a gap in existing service provision?&lt;br&gt;Is there a receptive organisational culture to embrace the new role?&lt;br&gt;Does the organisation have the necessary systems in place to support the role?&lt;br&gt;Does the organisation have the necessary infrastructure in place to support the role?&lt;br&gt;Does the organisation have adequate resources to fund the necessary training programs?&lt;br&gt;Is there management support, at all levels of the organisation, for the model?&lt;br&gt;Are appropriately qualified personnel available to provide supervision and support when required?&lt;br&gt;Is there reason to believe the model will contribute to increased productivity?</td>
</tr>
<tr>
<td>Broader system of legislation and funding</td>
<td>Are any legislative changes required to facilitate the role?&lt;br&gt;Are there any legislative or funding barriers that are insurmountable at the present time?&lt;br&gt;Is there jurisdictional cooperation to drive the workforce reform agenda?&lt;br&gt;Are the new workforce roles transferable among organisations and jurisdictions?&lt;br&gt;Are professional bodies engaged and supportive of the expanded scope role?</td>
</tr>
</tbody>
</table>
7 Discussion and conclusions

Implementing effective health workforce reform is hard work. The evaluation of the Expanded Scopes of Practice program explores what works, for whom, in what circumstances, and in what respect, and how (Pawson and Tilley, 2004). The right investment has the potential to deliver better care for consumers, optimise the skill mix and job satisfaction of our health workforce and generate productivity benefits for the health system.

This program of work has built upon promising models of expanded scope of practice that have been implemented internationally and adapted to address Australian healthcare needs in local contexts. In introducing workforce reform, incremental change appears to be more acceptable than disruptive change, because it cannot be achieved without the support of the broader health workforce. This multi-disciplinary workforce needs a case for change that demonstrates the new role fills a service need or gap, can be integrated into existing practice, and can be implemented safely and efficiently.

The models of care implemented through the Expanded Scopes of Practice program were diverse in their goals, their target populations and the extent to which they had previously been tested. To a varying degree, they aimed to provide the necessary training, mentoring and support for senior practitioners in a range of professions to either work to their full scope of practice or expand that scope of practice. Not only did this provide an opportunity for job enrichment and greater satisfaction and retention but it also freed other health professionals from tasks that could be performed as effectively, and in some cases more effectively, by other members of the health care team.

The people and organisations best placed to lead workforce innovation have certain characteristics. Expanded scope practitioners tend to be clinical leaders because of the level of prior experience and training needed for the roles, but more than this, they have a particular mindset. They have a capacity to reflect on their practice and were comfortable recognising when care was out of scope. Most importantly, they were capable of genuine inter-professional collaboration and respected the contribution of other members of the healthcare team. To practice effectively they required advanced clinical reasoning, sound assessment skills and an ability to communicate their findings with other practitioners. They willingly shared their knowledge and expertise within their organisation and had an important role in educating others. They saw themselves as responsible for adding value to the broader healthcare team.

Workforce reform had a smoother path to implementation in organisations where there was strong support for the innovation at all levels of management. This needed to cascade from the CEO to frontline operational managers. These organisations generally had a track record of successfully implementing workforce change and understood the importance of engaging internal and external stakeholders. Where possible, existing quality management, information systems and clinical policies and procedures were adapted to support the new model. In this way the new model was embedded in a familiar and acceptable framework. This was particularly important for ensuring effective clinical governance of the new role. The new roles were subject to intense scrutiny and the willingness of expanded scope practitioners to participate in case reviews and share performance data with their medical colleagues was an essential engagement strategy. The most successful organisations had robust project management practices and resourced the project appropriately. Those organisations that underestimated the time and effort required for project management tasks faced greater pressures, especially with reporting and evaluation.

Clinical leaders played a pivotal role in the success of all expanded scope of practice initiatives. Even if project teams could generate strong support from their profession, if they did not secure the support of key medical personnel, this presented a fundamental barrier to full implementation. Where key medical personnel took an active leadership role, particularly in
persuading their peers about the value of the model, there were fewer obstacles to implementation. Ongoing communication was required throughout the project. This included demonstrating benefits early in the project that were meaningful to clinicians and managers and directly addressed organisational objectives. These models were implemented in dynamic healthcare environments with constant turnover of staff so messages had to be repeated and reinforced frequently. Other members of the healthcare team needed to understand the impact of the workforce change on their roles and day-to-day work.

A spectrum of training programs were developed, ranging from University-delivered post-graduate qualifications through to in-house, competency-based short courses. The common goal was to deliver practitioners who were fit for the expanded scope of practice role and were recognised as such by their peers. When other clinicians were informed about the specific content and methods of the training, this generated confidence in these practitioners. When this was unclear, however, other clinicians had doubts about the value of the role as they did not fully understand how it differed from usual care. The training programs most suitable for wider implementation were well structured and documented, with clear learning outcomes and defined competencies, and the capacity for minor adaptation to account for legislative and regulatory differences among States and Territories. Training programs that generated a recognised qualification had several advantages, including greater transferability across jurisdictions and a perception that skills and competencies were standardised for that role. There needs to be a continuing process of accreditation for professionals working in expanded scope of practice roles.

An important side benefit for most participating organisations was the contribution the expanded scope practitioners could make to the professional development of other staff. This ranged from informal, one-on-one consultations and knowledge transfer through to structured training programs for more junior health professionals. Initially there were concerns that establishing these specialty roles might reduce training opportunities for other groups of staff (particularly junior medical officers and nurse practitioner candidates). By the end of the program, however, stakeholders generally agreed that this potential cost was outweighed by the benefits brought to the team by these expert practitioners who were willing to share their knowledge.

In hospitals, emergency departments and ambulance services, there is a strong team-based culture. The expanded scope practitioner was better accepted when they had a track record in the organisation and established credibility as a senior clinician. The team environment reduced professional isolation and provided ready access to mentoring, supervision and consultation. Senior doctors appreciated their expertise and their collaborative approach to patient management. Even when expanded scope practitioners were fully capable of managing a phase of patient care, those who were most accepted recognised when it was important to engage other members of the healthcare team. This may have been because of a need to demonstrate that they understood the boundaries of their scope of practice or because trust was still being established. At times this approach may have impacted on the efficiency of the expanded scope roles but it was a concession that needed to be made to embed the role.

At times, expanded scope practitioners needed to take on tasks that did not require their enhanced skill set for the good of the team. For example, an extended care paramedic may need to respond to a life-threatening emergency as they were the closest vehicle, or a primary contact physiotherapist may provide a mobility assessment to ensure a patient was discharged within four hours. This team-building role had to be balanced against the need to remain available for patients in the target groups for expanded scope models and to maximise productivity in their expanded scope roles. For projects based in ED, the expanded scope practitioner often provided a point of continuity on whom senior clinical staff could rely. Unlike junior doctors, who rotate on a regular basis, expanded scope practitioners are a constant presence and their productivity in dealing with a specific patient cohort has the potential to improve over time.
Expanded scope of practice models of care need to generate economic value in order to work for the broader health system. Training experienced practitioners to take on specific tasks can improve access and continuity of care and free others for more complex patient care. The economic impact of these innovations is necessarily limited by the scale and length of local implementation and the resources available. It is difficult to detect the effect of a relatively small ‘dose’ of any innovation above the noise of other concurrent changes in the workplace.

Sustaining workforce changes requires the cooperation of all jurisdictions and professional bodies. Through a combined approach, legislative and regulatory barriers can be addressed. Strategies to disseminate knowledge about expanded scopes of practice, such as implementation toolkits and evaluation findings, need to be a shared responsibility between participating organisations and all levels of government. The national integration of expanded roles into the Australian health system relies on the contribution of many stakeholders and will be the ultimate test of sustainability.

Evaluative judgements have a tendency to place greatest emphasis on quantitative results. That would be a great disservice to this Expanded Scopes of Practice program. The models need to be judged in a more holistic way, taking into account all the attributes that have been shown in the literature to contribute to the successful adoption of innovations.

Three questions need to be answered:

- Has this workforce reform generated benefit for patients, their families and carers?
- Has it strengthened the capacity of our health workforce?
- Has it delivered economic value for the health system?

When there is reasonable evidence that a contribution has been made at all three levels then broader implementation of an innovation can be recommended. The Expanded Scopes of Practice program has facilitated the development of promising models of workforce reform. It provides evidence of the situations and conditions in which these models can be most effective. This program of work has provided a solid platform for further implementation and evaluation.
References


