Standards and quality indicators for best practice in paramedic and inter-professional experiential practica

Final Report 2015

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<www.paramedics.org/our-organisation/special-interest-groups/scientific-agenda/altc-project/>
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The team would also like to acknowledge the part played in this project by Paramedics Australasia (PA) and its special interest group the Network of Australasian Paramedic Academics (NAPA), the Council of Ambulance Authorities (CAA) and those offering Paramedic teaching programs in Australasia.

The project stakeholders are also acknowledged for their contributions this includes state employers, national ambulance jurisdiction representatives, professional societies, community representatives, health workforce representatives and all those surveyed and invited to respond to questionnaires and last but not least the students who contributed to the evaluation of experiential practica.
List of acronyms used

ANMAC  The Australian Nursing and Midwifery Accreditation Council
BPCLE  Best Practice Clinical Learning Environments
CAA    Council of Ambulance Authorities
CPR    Cardio Pulmonary Resuscitation
EMS    Emergency Medical Service
HPC    Health Professions Council
NAPA   Network of Australasian Paramedic Educators
NOCP   National Occupational Competency Profile
NHTSA  National Highway Traffic Safety Administration
PA     Paramedics Australasia
PHECC  Pre-Hospital Emergency Care Council.
Executive summary

Introduction

Approximately 15,000 paramedics respond to over three million calls a year to treat critically ill and injured patients in Australia. Although these professionals are a vital component of the nation’s health care, emergency preparedness, public safety and public health systems, paramedicine is still a young discipline within the university setting and does not yet have a national curriculum or national standards.

Objectives

The goals of this project were, through the development of quality standards for both intra- and inter-professional clinical practica, to improve the capacity of Australian paramedic graduates to work effectively, to achieve best practice, and to align paramedic clinical practica with inter-professional clinical standards nationally. The long-term goal of the work is to guide the development of a standard national curriculum, which would contribute towards the development of international clinical standards.

The project has developed recommendations for ‘standards’ within paramedic experiential inter-professional clinical practice at the undergraduate level.

Methods

To achieve the project objectives a diverse range of inquiries were launched to find evidence on best practice standards and clinical practica. The methods included:

- An initial survey of stakeholders to establish the commonly accepted competencies expected in paramedic graduates.
- A review of resources and literature to identify standards for experiential learning, work integrated learning and clinical placements in the medical, nursing and allied health disciplines.
- Consultation through:
  - a national survey of paramedic students, both undergraduate and graduate;
  - a national survey of paramedic academics;
  - national reference group meetings; and
  - multiple focus group meetings.
- Interviews with stakeholders, to clarify understanding of the nature of standards for clinical learning and to identify standards that may not be available in the public domain, which may be of importance within the student paramedic setting.
- Development of a consensus of key stakeholders (paramedic educators, managers and practitioners from across and beyond Australia). The consensus was used to produce a set of draft standards and recommendations for best practice clinical practica which were the subject of a survey to establish their relevance. Not only did the Network of Australasian Paramedic Academics (NAPA) group agree with the recommendations and standards but also the professional body through dissemination of their website and the principal employer body, the Council of Ambulance Authorities (CAA), by email invitation from their education committee.

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These final recommendations and standards were developed through consultation with both national and international paramedic educators, managers and practitioners.

**Results**

Based on the interviews and literature review, the project team developed a standardised list of definitions and constructed standards of best practice approaches for inter-professional paramedical practica. Recommendations were developed during the project in the following areas:

- curriculum development;
- the scope of university support needed for effective practica;
- clinical training sites, clinical training agreements and the specification of standards for clinical supervision; and
- core competencies needed by students before undertaking clinical practica.

The recommendations proposed are an opportunity to structure and optimise action plans to facilitate best practice clinical practica for student learning in paramedic placements. Such plans would enable sufficient student instruction, ensuring they meet the paramedic standards of practice expected for a work ready paramedic (CAA., 2010; HPC, 2007; PA, 2013). Encouragingly, NAPA, CAA and the paramedical professional body (PA) all agree with the recommendations and standards presented in this report.

The final set of standards, presented in Appendix 2, are offered for consideration by all parties with an interest in the paramedical profession, for use in designing and implementing clinical learning in collaboration with partner agencies. These standards have been designed to support the delivery of safe and effective clinical learning opportunities for paramedic students. The standards could also be used to evaluate the appropriateness of selected clinical placements. A pilot implementation and subsequent evaluation of the validity and practicality of the standards is recommended.

**Recommendations**

1. Paramedic academic staff should have knowledge of the Australasian paramedic standards of practice and be able to translate the placement experience to help students understand the paramedic role.
2. Paramedic academic staff should have a clear understanding of paramedic scopes of practice in order to create clinical placements for students with differing scopes of practice.
3. Paramedic programs employ preceptors who are well prepared to educate the paramedic students.
4. Paramedic programs aim to produce students who are well prepared for paramedic clinical placements.
5. Paramedic programs provide a supportive environment for student learning for paramedic students.
6. Paramedic programs utilise placements and academic partnerships that facilitate best practice clinical practica for paramedic students.
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Chapter 1 – Background

Introduction

Approximately 15,000 paramedics respond to over three million calls a year to treat critically ill and injured patients in Australia (Commission., 2013). Paramedics are a critical component of the nation’s health care, emergency preparedness, public safety and public health systems, and the role of the paramedic has evolved in recent years to meet changing community needs.

Paramedicine is a profession that requires a combination of theory and practice in order to adequately prepare individuals to meet the expected new-graduate competencies. The successful acquisition of paramedic knowledge and skills requires paramedic education programs to have a strong clinical practice component. The education of paramedics has recently evolved to meet these needs, with a transition from an industry-based apprenticeship model of training to a university-based education that typically involves three years of full-time study prior to employment. In the former model, the student paramedic was employed by an ambulance jurisdiction and completed a short block of intensive training to prepare them for supervised practice. The student usually returned to the training facility within the ambulance jurisdiction to complete further intensive blocks of training before receiving certification to practise as a qualified paramedic. In this former model, the employer controlled all aspects of the training process, which included the setting of standards of performance that the student had to achieve to obtain certification.

The transfer to university education has removed the obligation of the employer to prepare the student for practice. Instead, the employer becomes responsible for the induction of the graduate into the employment context and for the provision of supervision of the graduate while they develop the proficiency required to practise independently. Discussion in the education literature around experiential practica or ‘clinical education’ has focused mainly on medical (Stanton & Grant, 1999) and nursing education (Rafferty, Jenkins, & Parke, 2003). Paramedics programs have until recently not been part of university curricula and hence, in general, paramedics have not been thought of when designing inter-professional clinical practice programs. Nonetheless, universities offering entry-to-practice programs for paramedics must ensure that graduate attributes are linked to the professional competencies required to function as a novice (CAA., 2010; HPC, 2007; PA, 2013). Program accreditation seeks to ensure that curricula and assessment is appropriate for developing defined professional competencies (CAA., 2010; HPC, 2007; PA, 2013). However, current accreditation standards are broad and do not specify sufficient detail to enable the standardisation of learning outcomes during clinical practica.

The need for the standardisation of the paramedic profession is believed by many to be long overdue. In a recent member survey of Paramedics Australasia (528 returned results, representing 12.9% of the total membership) showed that 82% of members surveyed supported the development of national educational standards for the paramedic profession. Of all the participants in the survey, 95% believed that a set national standard for paramedic education would improve workplace practices (PA, 2012). The current lack of detailed

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requirements for standardised clinical practica, coupled with the increasing numbers of students undertaking paramedic education in Australia, produces a situation where there are now insufficient traditional clinical placements to support paramedic education. To overcome the lack of clinical placements paramedic educators have developed innovative clinical practice experiences including non-health sector placements (O’Keefe, White, Spurrier, & Fox, 2001). The apparent deficit in placements is further complicated by a lack of consistency in the nature of clinical exposure that students may receive when on placement. At one extreme, some students on observation shifts are exposed to the culture of the organisation but given no real clinical practice, while at the other end of the spectrum some students are given full immersion into the clinical practice of the workplace. Variations in the content, process and outcomes of clinical practice experiences have guided efforts to standardise the educational quality of all health clinical placements (Rudd, Freeman, & Smith, 2010).

A large body of literature describes student learning outcomes and student satisfaction in learning (i.e. teaching quality in the context of traditional, problem-based and online teaching) (Dalrymple et al., 2007; Elsheikha & Kendall, 2009; Hirsh, Ogur, Thibault, & Cox, 2007; Koh, Khoo, Wong, & Koh, 2008; Kommalage & Imbulgoda, 2010; Polychronopoulou & Diveris, 2009; Richardson, 2005; Richardson & Dowding, 2005; Sedgwick & Hall, 2003; Wood, 2008). Theories of learning that have the capacity to promote real-life learning are those of experiential learning (Kolb, 1984), and authentic learning (Herrington & Oliver, 2000). Experiential learning is learning through reflection on doing (reflective practice) which is often contrasted with rote or didactic learning (Itin, 1999).

Such reflective learning enables teachers to:
1. identify critical characteristics of an experiential clinical learning environment from the extensive literature base on the subject;
2. operationalise the critical characteristics of an experiential clinical environment by designing a program that incorporates the identified characteristics; and
3. investigate students' perceptions of their experiences using practices based on an experiential clinical learning framework (adapted from (Herrington & Oliver, 2000)).

However, quality paramedic standards in clinical learning and teaching are often poorly articulated. There is also a paucity of literature describing student evaluation of clinical practice and the determinants of quality experiential learning.

Assessment tasks aligned with experiential learning are items such as: project work; reading logs; learning journals; self or reflective assessment; negotiated learning contracts; peer assessment and; case studies. Inherent in all of these experiential assessments is a lack of reliability. Academic staff, in an effort to overcome this lack of reliability, often impose a heavy workload on themselves.

Excess assessment presents other challenges such as an inability to provide high quality and individualised feedback, difficulties assessing a diverse mix of students and challenges with managing the volume and coordination of marking (James, McInnis, & Devlin, 2002). Additional complications in the out-of-hospital placement environment are presented by unpredictable call out rates that affect students' hours on placement and as such, not all students receive the same quality or amount of practical training. The nature of the Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
prehospital practicum, being opportunistic experiential learning, determines that opportunities vary in frequency and acuity.

Australian paramedic programs have been developed independently, but bear similarities to other international programs. In Britain, the clinical practice guidelines, and hence the paramedic competencies, are produced by the Health Professions Council (HPC, 2007). Overall, British and Australian systems, are most similar in their paramedic tertiary education programs. Within the British Isles, Irish paramedic programs are most highly regulated through their Pre-Hospital Emergency Care Council (PHECC, 2013) and although they are extensively described, they are still derived from HPC guidelines. In North America the roles and qualifications of paramedics do not match those of Australia. However, North America does have a more highly defined description of clinical guidelines, than Australia, as seen in the Paramedic Association of Canada, National Occupational Competency Profile (PAC, 2014). Paramedic programs in Australia are mirrored by those in New Zealand. However, paramedical professional bodies in South Africa have taken their own path to tertiary qualification, which is more biased toward the traditional training model of ambulatory services training students.

Current literature suggests that prior to the student’s first ambulance shift, he or she should meet minimum standards similar to the standards that have been established for ambulance personnel (Dubois, 1993; HPC, 2007; Lucia & Lepsinger, 1999). Although it is generally agreed upon that these standards should extend beyond purely psychomotor skills, they are vague, inconsistent and not enforceable. For example, the Health Professions Council in the U.K. describe the importance of several competencies including: communication health and safety, and, “professional relationships”, which ensures paramedics can work with patients, allied health professionals, support staff, relatives, patients and carers (HPC, 2007) when educating paramedic students. The CAA directed competencies and standards of the profession include areas of: professional expectations and, knowledge, understanding and skills, including being able to “critically evaluate the impact of, or responses to, the paramedics actions” (CAA., 2010).

Touchstone notes that “EMS educators will need to possess a foundation in educational methodology, adult learning theory, curriculum and lesson plan design and development; as well as evaluation, assessment, analysis and communication skills” (Touchstone, 2000). However, the Arkansas Department of Health only require their educational institutions to employ qualified instructional staff, capable of providing the depth and breadth of information contained in a standard paramedic education program (Arkansas Department of Health, 2009).

Such lack of national standards creates difficulty in measuring outcomes and it has been suggested that the need to standardise would naturally promote changes that would establish common, comparable lists of paramedic competencies based on well-documented skill sets. This would be likely to ensure standardisation of definitions of such competencies and of the modes of care that should be made available by paramedics. In turn, it is proposed this would result in uniform approaches to the evaluation and treatment of the many identified problems seen in everyday paramedic practice (Anantharaman, 2004).
Benners’ (Benner, 1984) and Dreyfus and Dreyfus’ (Dreyfus & Dreyfus, 1996) research efforts emphasise the value in systematically developing graduated descriptors related to the developmental stages of competencies. Australasian experiential placement studies being undertaken in speech pathology, physiotherapy, occupational therapy and other health professions are developing graduated descriptor approaches related to competencies to describe novice, intermediate and entry levels, thereby providing students with support and explicit feedback during the stages of skills acquisition (Dalton, 2006; McAllister, 2006). It is hoped this study can significantly contribute to the framework needed for similar standardised competencies in paramedicine.

Definitions

Several definitions are important to note as stated in the project proposal and subsequently reinforced by the reference group.

**Competence:**
Competence is a continued ability to operate effectively, either independently or within a team. Evaluation of such, being a combination of the internal ability of the individual to self-identify knowledge gaps and fill them, and the external evaluation of others on their practice (Epstein & Hundert, 2002).

**Competencies:**
Competency is the capability of applying or using knowledge, skills, abilities, behaviours, and personal characteristics to successfully perform critical work tasks, specific functions, or operate in a given role or position. Individual characteristics are significant predictors of employee performance and success; equally as important is an individual’s academic aptitude and knowledge (Lucia & Lepsinger, 1999). Attributes necessary to perform the job may be personal characteristics including mental/intellectual/cognitive, social/emotional/attitudinal, and physical/psychomotor (Dubois, 1993; Lucia & Lepsinger, 1999).

**Competency model:**
A competency model is a descriptive tool that identifies the knowledge, skills and abilities needed to operate in a specific role within a job, occupation, organisation, or industry.

**Standards:**
Standards are general behaviours, outcomes or characteristics that should be met during all events in the workplace (e.g. emergency calls). Clinical standards, for example, help to keep the providers focused on the basic principles of clinical excellence, customer jurisdiction and operational integrity.

**Benchmarking:**
Benchmarking involves searching for and evaluating current processes, products and services and then creating new ideas, best practices, standards and goals for improvement.

**Outcome Measures:**
Outcome measures establish a systematic way to assess the extent to which a program has achieved its intended results. The main questions addressed may be: What has changed in Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
Has this program made a difference? How are the lives of program participants better as a result of the program? (Reisman & Clegg, 2000)

**Project Goals**

The goals were to improve the capacity of Australian paramedic graduates to work effectively, through the development of quality standards for both intra and inter-professional clinical practica. This will allow programs to achieve best practice, as well as to align paramedic clinical practica nationally between programs and with international clinical standards.

The recommendations in this report have been developed to assist in defining the standards that all graduates of Australasian paramedic programs are expected to meet in order to satisfy the program accreditation goal of producing capable, work-ready paramedic graduates (CAA., 2010; HPC, 2007; PA, 2013).
Chapter 2 – Methodology

The standards described by this project (Appendix 2) were developed through extensive consultation with paramedic educators, managers and practitioners from across Australia. Consultation activities included two national surveys, seven national consultation meetings and multiple focus groups (Figure 1).

One of the first goals of the project was to use experiential learning theory to collect best practice approaches, aimed at generating standards for paramedic and inter-professional experiential clinical placements (Figure 1). Experiential learning is learning through reflection on doing which is often contrasted with rote or didactic learning (Itin, 1999).

Data was gathered in this project through the guidance of a reference group and the following methods (Figure 1):

- a literature review;
- meetings with key stakeholders in paramedic fora such as conferences;
- an electronic survey of educators;
- an electronic survey of students; and
- structured interviews with educators.

To achieve the project deliverables, after reviewing the literature, a survey was conducted of all Australian universities offering paramedic programs, thus gathering data specific to the nature, quantity and objectives of paramedic and inter-professional clinical learning and teaching. In addition to this survey, the reference group held discussions with the lead group, using the web site, regarding learning outcomes expected from paramedic and inter-professional experiential practica were formed. To further clarify issues structured interviews were performed with paramedic educators.

From this data the reference group formulated recommendations of indicators for quality standards in Paramedic interprofessional clinical practica (Figure 1).

Detailed methodology of each area of the project is specified below.
Reference group

Members from Paramedics Australasia and NAPA, along with representatives from nursing and medicine, were invited to form the initial project reference group.

Professor Moira Sim, one of the project leaders, chaired the group. The team leader discussions were initially by teleconference and through the project website. The group was later joined by other stakeholders who represented CAA, National patient transport, Health Workforce Australia and the wider community. This large coalition of allied health representatives formed a reflective, international and multidisciplinary team, with shared visions and goals but distinctive contributions specific to their own areas of expertise and application. This reference group met both face-to-face and via teleconference, provided advice and guidance throughout the phases of the project and assisted in selecting indicators for clinical standards. This group will also play a key role in the dissemination of outcomes of this project.

The schedule, attendance and outcomes of each of the reference group meetings are tabled below. NAPA aims to have at least two meetings each year, one associated with Paramedics Australasia annual conference, generally held towards the end of the year, and the other in the Australian autumn. In order to conserve project funds it was decided to align reference group meetings with NAPA meetings as closely as possible.
<table>
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<tr>
<th><strong>Meeting</strong></th>
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<th><strong>Stakeholders in attendance</strong></th>
<th><strong>Outcomes</strong></th>
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<td><strong>Second Meeting</strong></td>
<td>10 April 2012 Adelaide, SA</td>
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<td>Initial Literature review meeting with external auditor, David Page</td>
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<td><strong>Third Meeting</strong></td>
<td>31 October 2012 Hobart, TAS</td>
<td>20</td>
<td>Presentation of draft Literature review. Presentation of initial data</td>
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<td>May 2013 Southport, QLD</td>
<td>27</td>
<td>Presentation of data</td>
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<td><strong>Fifth Meeting</strong></td>
<td>23-27 Sept 2013 Cairns, QLD</td>
<td>4</td>
<td>Team leader consultation on project progress</td>
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<td><strong>Sixth Meeting</strong></td>
<td>18-20 October 2013 Canberra, ACT</td>
<td>25</td>
<td>Progress report on project. Face-to-face interviews of program leaders of paramedic programs by Executive Team</td>
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<td><strong>Final Meeting</strong></td>
<td>22 April 2014 Melbourne, VIC</td>
<td>30</td>
<td>Recommendations of project discussed. Questionnaire based on recommendations for the wider paramedic community finalised</td>
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Table 1. Schedule, attendance and outcomes of reference group meetings.

Between the Canberra meeting and the final meeting in Melbourne, the team concentrated on finalising and consolidating interviews with program leaders, and following this transcription of their results.
**Educators’ survey (Appendix 3)**

A second arm of the study sought to review current national practices with information that had been collected via an electronic survey, using Survey Monkey, at all 13 of the institutions offering undergraduate paramedic programs. Following the start of first semester 2012, emails announcing the survey, and its intentions, were sent to the course coordinators of undergraduate paramedic programs in all Australian universities offering undergraduate paramedicine. After two weeks, reminder emails were sent to the coordinators. The survey was also promoted through reminders on the project website. At the time of the Hobart meeting, survey responses had been received from 8 institutions giving information on educational standards on behalf of their specific programs.

**Student survey (Appendix 4)**

In addition to the emails announcing the educator’s survey, notification was also sent announcing a student survey. The same course coordinators from the 13 Australian universities offering undergraduate paramedical programs were contacted for both surveys. The student survey was aimed at graduates of paramedical courses and was completed online via Survey Monkey. Course coordinators were asked to encourage their graduates to complete the survey, which was available through the project website. No remuneration for survey participation was offered. After two weeks, reminder emails were sent to the coordinators and the survey was also promoted through reminders on the PA website. The student evaluation information collected from the survey represented data from nine institutions, with a total of 358 responses reflecting educational standards within their specific programs.

**Structured interviews**

Structured interviews, regarding quality paramedic standards and inter-professional experiential practica details, were conducted with paramedic program coordinators across Australia. The interviews explored issues such as academic and industry representatives’ understandings of the definition of individual and inter-professional outcomes in a traditional model for outcome based education and opportunities for students to engage in the experience, reflection, feedback, theory and planning cycle of experiential learning. Part of the interview process entailed gathering information regarding explicit objectives, professional and inter-professional practica activities and the assessment of these objectives.

A total of seven interviews were conducted, recorded and transcribed following participant consent, with personal identifiers removed. The interview used a structured method with predefined questions exploring the participant’s understanding of the use of standards in clinical education. Examples of standards that were currently in use were also sought. Further questions allowed the interviewee to elaborate and give further examples. The questions were as follows:

1. **Preparing for the practicum**
   - Can you briefly outline the types of practica you have in your program?
• Do you have certain standards that need to be met before a practicum is confirmed?
• If so, can you describe the ways that you have established these standards?
• How do you determine whether the components of the practicum meet the standards you have set?

2. Standards associated with the practicum site
• Do you have any standards associated with the placement site that must be fulfilled prior to selecting a site as a practicum site, for example minimum standards for supervisors?

3. Preparing the curriculum
• What are the things that make a practicum highly desirable to students?
• What approach do you take to setting standards for assessment during the practicum?

4. Supervision or teaching standards
• What criteria are used, if any, to select individuals to supervise students attending a practicum?

5. Managing the practicum
• Do you have any standards for the development and maintenance of relationships with placement providers?
• What are the things that make a practicum highly valued by the provider?
• Are there any standards regarding communication between practicum organisers, preceptors, placement agencies and students?
• Can you describe any standards that relate to agreements between organisations seeking placements and agencies providing access to clinical learning opportunities?

6. Evaluating the practicum
• How do you evaluate the practicum?
• What outcomes do you measure?

Thematic analysis was the method used to code the transcripts and identify emerging themes. After initial coding the data was further analysed to validate the themes and allow adjustments to the model that describes the outcomes of interest.

Survey on project recommendations

At the final meeting of the reference group (22 April 2014) analysis of the survey data provided the framework for the development of a set of recommendations for quality standards in Paramedic interprofessional clinical practica. These recommendations were developed after lengthy discussion within the group and consensus of results from the educators and students surveys. The recommendations, provided by the reference group, represent current international practice and propose a number of options as exemplars of best practice.

These recommendations were made available online to the wider community of allied Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
health professionals. Reference group members and stakeholders were invited to complete a third survey, in this case a structured response survey, which facilitated comment by all interested parties such as employers, professional bodies and individual academics. Information about the opportunity to respond was widely disseminated through academic departments, professional bodies and societies. The online survey was published in May 2014 using the Opinio survey tool and all survey respondents and key stakeholders were invited to comment.

The survey listed standards relating to clinical practica, with the standards grouped by those relating to:

- The agency providing the clinical placement;
- The university that is seeking to facilitate the clinical placement;
- The relationship with the agency providing the clinical placement;
- The resources required to provide the clinical placement;
- The curriculum supporting the clinical placement;
- The participants (students) undertaking the clinical placement;
- The supervision of the clinical placement; and
- The evaluation of the clinical placement.

Respondents were asked to rank each standard based on the perceived importance of each standard in establishing agreements for clinical practica for paramedic students. There was also an opportunity to provide additional comments.

A total of 49 survey responses were received, with only 23 completing the tabulated results presented in the tables Appendix 1. A 3-point scale was chosen for this survey since the questions were about topics where there was already a consensus. The answers given to most of the questions reinforce the reference group consensus, with many responses strongly agreeing with the statements and recommendations. However questions on individual programs were less well supported and the universities’ involvement appear less than favourable in some cases.

Throughout the project, the team have triangulated data and evaluations, feedback and validation from the industry, state employers, Paramedics Australasia, community representatives, health workforce representatives and NAPA, academics and students. This has been done through a range of surveys, interviews, website dissemination and reference group meetings. Significantly, feedback has been noted, broadcast on the websites and included in the final recommendations. The leadership group collectively decided upon the actions required to respond to the feedback, so that all stakeholders will feel ownership of the final product.
Chapter 3 – Results

In the prehospital emergency environment paramedics’ practice is unique and requires a distinctive set of skills. While distinctive, these skills, like other specific skills of nursing, occupational therapy, physiotherapy and other health professionals hold some similarities and can inform the practice across professions. In teaching paramedics and other health professionals a limited part of their knowledge can be acquired by traditional learning but this knowledge cannot be applied without exposing the students to real-life learning.

To achieve the project deliverables, after reviewing the literature, a survey was conducted on course coordinators from all Australian universities offering paramedic programs, of which eight of 13 (61.5%) responded. Data from the survey specified the nature, quantity and objectives of paramedic and inter-professional clinical learning and teaching. To further clarify issues raised in the educator survey, structured interviews were performed with paramedic educators. A total of seven interviews were conducted, recorded, following participant consent, and transcribed with identifiers such as names removed.

The outcomes from data obtained from students and paramedic educators, have been combined, analysed and associated with the professional and employer bodies’ anticipated outcomes. A set of national paramedic quality paramedic standards in both intra and inter-professional clinical learning and teaching has been generated as a result (Appendix 2).

The following issues, which emerged in both the surveys and the interviews, have been grouped by themes.

Understanding of standards

The thematic analysis of the interview transcripts showed differing opinions about the definition of a standard, and the difference between a standard and a policy.

Lack of standards

The lack of standards in paramedical education was a clear theme which came across from each of the interviews. The benefits of having agreed standards was recognised, but the challenges in negotiating standards with placement providers was the major barrier to the development and implementation of standards. Interviewees reported an absence of explicit standards around caseload or case mix for students. The absence of standards was not restricted to learning and supervision. The following are examples from several interviews:

**Interviewer:** “Do you have any standards that have to be fulfilled prior to selecting a particular placement site; for example, minimum standards of supervisors?”

**Participant:** “At this stage, no. We’re a little bit at the mercy of the agency in terms of who our students are placed with ... who the students actually end up working with is dictated by the agency.”

**Interviewer:** “Are there any other standards to do with student accommodation,”

Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
accessibility, safety? Any other standards that you’d want to consider before sending out students out to new placement sites?”

Participant: “Well, in terms of workplace health and safety, we do brief students about what’s required of them. We also brief students about their responsibilities for reporting anything that may affect their placement, i.e. medical history, that sort of thing. From the agency itself, no, we don’t, as far as I can remember.”

Interviewer: “Do you have any standards around risk assessment for placement sites?”


Organisational issues

Where standards for clinical placements exist within the university, it is often thought by educators that this generates challenges when working with industry partners and placement agencies.

Statements from the interviews that express this include:

Comment: “There is a disconnection between organisational policies and procedures in the University and in the placement organisation, bridging those can be extremely challenging”.

Comment: “For example, if there are standards in the university but they’re not in the ambulance jurisdiction or vice versa then we struggle to bridge that divide. Where possible, we’ll do that through the clinical placement deed but as you know, that can be extremely challenging.”

Standards for assessment were a core theme. There are perceived variations in student assessment requirements across different institutions. These differences are seen as a cause of conflict among paramedics with responsibility for supervising students:

Comment: “Ambulance (jurisdictions) and the universities need to work together to set standards around clinical performance.”

Comment: “Monitoring of students for clinical competencies is difficult with paramedic students as they are not in controlled environments. The preceptors are often not trained and educated in the students’ requirements or expectations. There are some improvements needed here and information sharing and a collaborative approach will help.”

The processes for raising concerns were noted to be suboptimal in some cases.

Comment: “Both the placement provider and the university should have a clear 'raising concerns' procedure regarding standards of patient care. A student needs to know what to do if they encounter substandard care or even negligence.”

Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
There are organisational barriers to implementing standards. Interview responses indicate that scarcity of placements may result in reluctance to impose standards by the universities to avoid reducing the placement pool further. In addition, other responses to the interviews indicate that selection of placement sites appears to be based on availability, rather than site suitability, in other words the universities are forced to take what they can get:

*Comment:* “The relationship between the universities and the ambulance jurisdiction providers is a difficult one. The power of balance lies nearly solely with the ambulance jurisdiction; they can give and take away the total capacity of student placement throughout the negotiation time for placement agreements. With so many universities looking at providing quality placement the ambulance jurisdiction staff are also feeling the burden of having a third person with them constantly. We must be at tipping point for the number of graduates we are producing versus the chances of employment in any paramedic field, not just with the eight states and territories.”

*Comment:* “If shared standards are established it is likely that ambulance services will charge for placements like other health services. On the one hand this is a good thing as formal agreements will be required. From a negative perspective the challenge for universities will be how to pay these fees and retain courses that are financially viable. Paramedicine programs are a high cost courses and share much with Medicine despite only being funded at the allied health level.”

*Comment:* “In two States of Australia the ambulance services refuse to enter into clinical placement agreements with universities. Therefore, the expectation that these agreements are in place should be removed from the course accreditation requirements.”

**Summary of issues from interview transcripts**

This analysis of interview transcripts highlighted:
- A lack of standards that relate to clinical practica.
- Potential barriers to the development and implementation of standards.
- A need to develop standards and to work with placement agencies to modify standards to suit the learning environment.
- A need to collaborate with placement agencies to ensure that standards are appropriate.
- A need to develop processes for evaluating standards and dealing with non-compliance.

**Student survey (Appendix 4)**

Graduate students were invited to evaluate their experiences of experiential practica. The results of the survey were compared with the activities mandated by each institution. 358 students responded to an evaluation survey that addressed satisfaction with:
- the national uniformity of paramedical standards;
- their particular course content;

Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
• the quality and frequency of their clinical placement experience;
• their work readiness upon graduation;
• the attitudes they met in the workplace;
• students’ understanding of self-direction on practica.

The standards have been ranked by level of importance for each category.

The results demonstrate a high level of agreement on the importance of most of the standards. The highest ranked standards in each category are listed below:

1. **Agency providing the clinical placement (Appendix 1, Table 1)**

   The top three standards as ranked by the reference group participants were:
   a. There are appropriate protocols and procedures in place that deal with student support (personal and educational needs) and safe working environments (supported by 93.5% of participants);
   b. The agency invests in the training of clinical educators and provides time to mentor, supervise and educate students (supported by 90.3% of participants);
   c. Education is covered in the mission, vision and strategic documents of the agency (supported by 80.7% of participants).

   Other standards that were ranked important by more than 75% of participants include:
   d. There is a schedule for review and updating of policies, procedures and evidence based clinical practice guidelines;
   e. Education is included in the planning documents of the agency providing practicum;
   f. Dedicated education facilities (such as training rooms).

2. **University that is seeking to facilitate the clinical placement (Appendix 1, Table 2)**

   The top three ranking standards were:
   a. Clinical placement sites are selected based on suitability for enabling defined learning outcomes (supported by 90% of participants);
   b. A clinical placement coordinator is appointed to manage the administration of the placements and placement agreements (supported by 79.31% of participants);
   c. University staff can access and engage in clinical professional development activities (supported by 73% of participants).

3. **Relationship with the agency providing the clinical placement (Appendix 1, Table 3)**

   The top three ranking standards were:
   a. Relationship agreements include protocols for timely notification of critical events, such as if the student fails to arrive at the facility or if the student is injured (supported by 88.5% of participants);
   b. Practicums are based on a relationship agreement between the university and the agency, which will include KPI’s covering resources, indemnity, roles
and responsibilities of each party and processes for maintaining patient confidentiality (supported by 85% of participants);

- Relationship agreements include processes for feedback on student performance and learning difficulties, as well as mechanisms for resolution of issues and concerns (supported by 81% of participants);

Another standard that was ranked important by more than 75% of participants was:
- Universities must have staff with responsibility for managing practica (supported by 77% of participants).

4. **Resources required to provide the clinical placement (Appendix 1, Table 4)**

The top ranking standards were:
- The agency complies with its occupational health and safety obligations to students and education staff visiting the agency (supported by 96% of participants);
- Adequate clinical sites and clinical supervisors are available (supported by 92% of participants);
- The agency must have sufficient case load (clinical volume) and diversity of clinical settings and patient population to achieve learning outcomes and enable professional competencies (supported by 84% of participants);
- Supervisor/student ratios allow for effective teaching, evaluation and timely feedback to ensure quality clinical experiences (supported by 84% of participants).

Another standard that was ranked important by more than 75% of participants was:
- Rosters, placement site and supervisors allocated to each student are communicated to the university and students in a timely manner (supported by 80% of participants).

5. **Curriculum supporting the clinical placement (Appendix 1, Table 5)**

The top ranking standards were:
- Program goals are clearly stated and aligned with professional competencies (supported by 87% of participants);
- The university clearly explains the criteria, process and timing of formal assessment to students at the commencement of each placement (supported by 83% of participants);
- The program specifies completion criteria as well as options for remediation. (supported by 83% of participants);
- Evaluation and revision of the curriculum includes input from faculty staff, clinical supervisors, professional associations, industry and students (supported by 83% of participants).

Another standard that was ranked important by more than 75% of participants was:
- The placement includes non-technical outcomes that include clinical reasoning, critical thinking, ethical practice and evidence-based practice that are integral components of the learning experience (supported by 78% of participants).
6. **Participants (students) undertaking the clinical placement (Appendix 1, Table 6)**

The top ranking standards were:

a. Students are orientated to policies and procedures associated with the practicum, including conditions that must be met prior to commencing the practicum and conditions that may result in withdrawal from the practicum (supported by 91.7% of participants);

b. Students are supported to maximise their learning opportunities whilst on placement (supported by 91.7% of participants);

c. Students are respected by the workplace (supported by 87% of participants);

Another standard that was ranked important by more than 80% of participants was:

d. Prior to each practicum students undertake mandatory orientation, which addresses safety of students, orientation to the learning activities, assessment tasks and information about the practicum sites, including travel and accommodation recommendations (supported by 83% of participants).

7. **Supervision of the clinical placement (Appendix 1, Table 7)**

The top ranking standards were:

a. The agency ensures that all staff, supervising students, provide regular feedback to students about their performance throughout the placement (supported by 95.6% of participants);

b. Clinical supervisors have been trained to guide learning, provide feedback to students and develop remediation activities (supported by 91% of participants);

c. The agency has clearly defined organisational policy and procedures that outline the agency’s responsibilities for clinical supervision and the roles and responsibilities of the clinical supervisor (supported by 91% of participants);

Other standards that were ranked important by more than 85% of participants include:

d. The clinical supervisor provides education in the areas of communication, clinical and professional skills (supported by 87% of participants);

e. The agency has processes to develop the teaching skills of clinicians who provide training to students (supported by 87% of participants).

8. **Evaluation of the clinical placement (Appendix 1, Table 8)**

The top ranking standards were:

a. Programs have a transparent, objective, measurable and equitable system of evaluation of students, clinical supervisors and placement sites (supported by 95.65% of participants);

b. The agency has a process to regularly monitor placement capacity (supported by 95.45% of participants);
c. The university and agencies providing clinical placement have a quality improvement system for monitoring, maintain and improving the quality of the student learning experience (supported by 91.3% of participants).

None of the other standards were ranked as important by more than 75% of participants.

**Developing the recommendations and promoting best practice**

The reference group reviewed and approved the recommendations (Chapter 5, pg 27). These recommendations represent the needs and opinions of stakeholders in paramedical education, while recognising that the actions of other health professionals will influence practicum environment.

The timeline of this OLT grant did not facilitate the incorporation of teaching materials into established teaching programs. However with the dissemination of these standards it is anticipated that Australian universities teaching paramedic programs will adopt these as best practice standards during 2015 and 2016.

Provisional evaluation of the model has been undertaken by paramedic academics (NAPA members), including clinical coordinators, practica mentors, professional groups, employing authorities, Paramedics Australasia, and, graduate and final year students. This approach ensures that the best practice model recommendations are educationally sound.
Chapter 4 – Project outcomes and impacts

Project outcomes

The intended project outcomes at the beginning of this project were:

- Improved capacity of paramedic graduates to enter the workforce upon graduation;
- Improved opportunity for higher education teachers to design and implement courses and educational resources;
- Improved capacity of paramedic graduates to work effectively in an inter-professional environment; and
- Benchmarking of best practice standards for both intra and inter-professional experiential practices in paramedical programs.

Project deliverables

The intended project deliverables were:

- A set of agreed quality standards for both intra and inter-professional experiential clinical practica;
- A new catalogue of professional and inter-professional clinical practice knowledge and competency criteria proposed to the national association Paramedics Australasia for the evaluation of practitioners;
- A database of examples of best practice approaches to demonstrating standards for both intra and inter-professional experiential practica in paramedical programs;
- An on-line library of flexible learning resources to assist in the implementation of inter-professional learning in clinical practica that can be used for tutorials, workshops and self-reflective learning. Such resources will become the basis for new learning material to be eventually developed by others. They include checklists of suggested activities, assessment tools and evaluation forms;
- A national network of educators who have committed themselves to leading change in this area, and thus can be considered innovators and early adopters of new ideas; and
- A cohort of health students with improved learning outcomes: Students from all universities offering paramedic programs in Australia (through NAPA) will be engaged in trialling new approaches.

Project achievements

- A set of agreed quality standards have been identified and agreed by a significant group of the stakeholders (Appendix 2);
- A new catalogue of professional and inter-professional competency criteria (Appendix 5): proposed and accepted by the national paramedic association Paramedics Australasia (PA, 2013);

Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
• **A national and international network of educators**, focused around NAPA and stakeholders, has been brought together by the project and has held seven meetings. A final meeting was held in September 2014 to further progress this project’s findings and resources. Originally the project aimed to deliver a national network of educators, however as awareness of the project grew so did the international component of the educator group.

**Further work required**

• Resources need to be identified, which will contribute to a new catalogue of professional and inter-professional clinical practice knowledge;
• Currently there is still insufficient examples of best practice approaches to demonstrating standards for both intra and inter-professional experiential practica in paramedical programs and a database has yet to be developed, however, some examples are provided in the text of this document;
• A project website has been created and is being used by investigators, focus and reference groups – however, there was a reluctance by stakeholders to share these examples and as a result an on-line library of flexible learning resources to assist in the implementation of inter-professional learning in clinical practica that can be used for tutorials, workshops and self-reflective learning was not achieved within the context of this project. Such resources will become the basis for new learning material to be developed by others. They include checklists of suggested activities, assessment tools and evaluation forms. The September 2014 meeting continued to progress this goal;
• **A cohort of health students with improved learning outcomes.** This was found to be unrealistic within the timeframe of this project however progress across project deliverables and the engagement with key stakeholders positions the sector well to implement improved learning outcomes from clinical practica. The stakeholders involved in this project now have the opportunity to adopt the recommendations from the project, and achieve this aim by 2016.

**Success factors**

When reviewing the available literature it was found that many organisations agree upon the most important standards for best practice in health student clinical placements. While there is a paucity of literature specific to describing student evaluation of clinical practice and the determinants of quality experiential learning for paramedic students in clinical learning and teaching, there are common themes in a number of resources designed for health student clinical placements. The following resources demonstrate common themes, which support the recommendations and standards revealed in this report:

- Online Victorian Best Practice Clinical Learning Environments project (BPCLE, 2014).
- Health Professions Council. Standards of Proficiency; paramedics (HPC, 2007).
- The National Emergency Medical Services (EMS) Education Standards (NEMS, 2007).
- Ambulance Victoria Clinical Placement Booklet.
Impediments

- One of the barriers to the completion of this project has been the transient nature of academic paramedic staff in Australia. Within the project team, three paramedics have left their positions. In the reference group half of the paramedics in course coordinator positions have left their positions. This disturbed the continuity of work upon the project.
- The project has provided evidence that there also exists a lack of a central tracking or data collection system in Australia. Such a system would facilitate comparison and multi-institutional research.
- The lack of trained paramedic preceptors or trained observers, and a lack of training facilities in the clinical setting, results in a shortfall of researchers able to comment on best practice clinical settings.
- A similar situation results from staff shortages both at the university faculty level and in the clinical education sites.
- Clinical education models do not facilitate dedicated professional educators to perform research on paramedic and clinical education.
Chapter 5 – Recommendations

Paramedicine is a profession that requires a combination of theory and practice in order to adequately prepare individuals to meet the expected new graduate competencies. The successful acquisition of paramedic knowledge and skills requires that paramedic education programs have a strong clinical practice component. With increasing numbers of students undertaking paramedic education in Australia there are insufficient clinical placements to support paramedic education and numerous placement challenges exist.

To overcome some of these challenges paramedic educators have developed innovative clinical practice experiences including non-health sector placements (O'Keefe et al., 2001). For example, students have been placed in veterinary science practices to gain clinical experience in record keeping, disease control and obstetrics. Other students undergo intense courses in simulated learning environments to better prepare them for actual clinical practice. Variations in the content, process and outcomes of clinical practice experiences have led to international attempts to standardise the educational quality of all health clinical placements (PAC, 2014).

The following recommendations have been developed to assist in producing action plans to facilitate best practice clinical practica for all graduates of Australasian paramedic programs. Such plans would facilitate instruction of students who are prepared to meet the paramedic standards of practice expected for a work ready paramedic (CAA., 2010; HPC, 2007; PA, 2013). These recommendations and standards were developed through extensive consultation with paramedic educators, managers and practitioners from across and beyond Australia. Consultation activities included two national surveys, seven national consultation meetings and multiple focus groups. The following recommendations should be used to structure and optimise the opportunities for student learning in paramedic placements.

Paramedic Identity

It is recommended that paramedic academic staff have a clear understanding of what identifies the paramedic and specialist paramedic knowledge.

ESSENTIAL:
• Faculty advisor/clinical instructor has knowledge of the Australasian Paramedic standards of Practice, primary health care principles, public health sciences and paramedical science.
• Faculty advisor/clinical instructor is able to translate the placement experience so that students can understand the paramedic role.

PREFERRED:
• Faculty advisor/clinical instructor has current paramedic practice experience/registration.
**Paramedic Scope of Practice**

It is recommended that paramedic academic staff have a clear understanding of what identifies the paramedic scopes of practice. The paramedic academics would use this knowledge to provide clinical placements for students in differing scopes of practice.

**ESSENTIAL:**
- There are opportunities for students to work with patients at group and/or community levels.
- There are opportunities for students to gain exposure to broad determinants of health, citizen engagement, population health, and primary health care principles.
- There are opportunities for students to gain exposure to multiple paramedic strategies e.g. building healthy public policy; developing personal skills; strengthening community action; creating supportive environments; reorienting health services as suggested by WHO (WHO, 1986).
- There are opportunities for students to gain practical experience where students can see the results of their actions and move toward independent practice.
- There are opportunities for students to develop collaborative relationships/partnerships with other allied health agencies.

**PREFERRED:**
- That there are opportunities for the student to engage in practice with patients. Students will experience being part of an interprofessional and potentially intersectoral team.
- Rural, remote and international placements are available.

**Competent Well-Prepared Preceptor**

It is recommended that paramedic programs employ preceptors who are well prepared to educate the paramedic students.

**ESSENTIAL:**
- There are organisational supports for preceptors, especially in the form of time to effectively support students (Beattie, 1998; Billay & Yonge, 2004)
- The preceptor has a positive attitude toward preceptorship and life-long learning.
- The preceptor has experience working in paramedic practice.
- The preceptor has the ability to translate theory into practice with students.

**PREFERRED:**
- Formal preceptor orientation is provided collaboratively by the organisation and the academic institution e.g. preceptor workshop or module.
- The preceptor is a paramedic with experience and knowledge of the Australasian Paramedic Standards of Practice, primary health care principles, public health sciences and paramedical science (Beattie, 1998; Billay & Yonge, 2004).

**Competent Well-Prepared Students**

It is recommended that paramedic programs produce students who are well prepared for paramedic clinical placements.

**ESSENTIAL:**

Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
• There are organisational supports for students, especially in the form of mapping, identifying and facilitating learning outcomes.
• The student has a positive attitude toward studentship and life-long learning.
• The student understands the culture of the employment environment.
• The student has the ability to critically reflect on practice.

PREFERRED:
• Formal student orientation is provided collaboratively by the organisation and the academic institution e.g. student workshop or module.
• The student is aware of the Australasian Paramedic Standards of Practice, primary health care principles, public health sciences and paramedical science (Beattie, 1998; Billay & Yonge, 2004; CAA., 2010; HPC, 2007; PA, 2013)

Supportive Environment for student Learning

It is recommended that paramedic programs provide a supportive environment for learning for paramedic students.

ESSENTIAL:
• In a preceptored learning situation, there is ongoing, regular communication between faculty, preceptors and students, with at least one verbal contact, meaning the student talks to the preceptor at least once (Beattie, 1998; Billay & Yonge, 2004).
• The placement setting has a caring and welcoming attitude towards student mentoring.
• Student orientation to the placement setting is provided by the organisation and the academic institution.
• Attention is paid to student safety.
• The placement settings represent the breadth of paramedic practice and are available from the first year of a student’s study.

PREFERRED:
• In a preceptored learning situation, there is verbal communication at least at the beginning, middle and end of the experience involving faculty, preceptors and students.
• Student preference in placement choice is given consideration.

Placement & Academic Partnerships

It is recommended that paramedic programs employ placements and academic partnerships that facilitate best practice clinical practica for paramedic students.

ESSENTIAL:
• Formalised agreements (e.g. MOU, signed contract) exist between the placement and the academic institution.
• Clearly defined roles and expectations are agreed to.
• Formal recognition of preceptor contribution is provided by the organisation and the academic institution.

PREFERRED:
• Formalised cross-appointments exist between the organisation and the academic institution.

Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
Chapter 6 – Dissemination

- The project results have been progressively disseminated at every meeting of the executive team, the reference group and focus groups listed above.
- Results have also been progressively released upon the PA website.
- A paper describing the project and its results has been accepted by the Paramedics Australasia International Conference September 2014.
- A paper describing the project and its results has been accepted by the International General Practice West Lake Conference October 2014.
- A paper on the results of this project will be submitted for presentation at the “International Improvement Science and Research Symposium” which is part of the annual International Forum on Quality and Safety in Healthcare in London 21 to 24 April 2015.
- A paper on the results of this project will be submitted for presentation at the “International forum on quality and safety in healthcare – Asia” Hong Kong, 28 to 30 September 2015.
- The team will produce journal articles, on the results of this project. They will be presented for publication in high impact paramedic and educational journals.
Glossary

Credentialing
A system recognising the skills, expertise and experience of health professionals who are specialist practitioners.

Exposure
A beginning integration of the relevancy and influence of concepts to paramedic practice.

Faculty advisor/clinical instructor
Faculty/staff employed by the academic institution.

Preceptor
A person, employed by the community organisation, who effectively role-models working in and/or with communities.

Primary Health Care Principles
As originally outlined in the Alma Ata (WHO, 1978) and further expanded upon in recent position statements (Macinko, Montenegro, & Nebot, 2007).

Public Health sciences
Behavioural and social sciences, biostatistics, epidemiology, environmental public health, demography, workplace health, and the prevention of chronic diseases, infectious diseases, psychosocial problems and injuries (Evans, Mechbal, Rasanathan, & Van Lerberghe, 2008).

References


Standards and quality indicators for best practice in paramedic and inter-professional experiential practica


Standards and quality indicators for best practice in paramedic and inter-professional experiential practica


Standards and quality indicators for best practice in paramedic and inter-professional experiential practica
Appendix 1: Tables

Table 1: Agency providing the clinical placement

<table>
<thead>
<tr>
<th></th>
<th>Very Important</th>
<th>Minimally Important</th>
<th>Not Important</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education is covered in the mission, vision and strategic documents of the agency.</td>
<td>26</td>
<td>83.87%</td>
<td>4</td>
<td>12.9%</td>
</tr>
<tr>
<td>Dedicated education facilities exist (such as training rooms), proportionate to the size of the agency and its educational capacity.</td>
<td>24</td>
<td>77.42%</td>
<td>5</td>
<td>16.13%</td>
</tr>
<tr>
<td>The agency invests in the training of clinical educators and provides time to mentor, supervise and educate students.</td>
<td>28</td>
<td>90.32%</td>
<td>3</td>
<td>9.68%</td>
</tr>
<tr>
<td>There are appropriate protocols and procedures in place that deal with student support (personal and educational needs) and safe working environments.</td>
<td>29</td>
<td>93.65%</td>
<td>2</td>
<td>6.45%</td>
</tr>
<tr>
<td>There is a schedule for review and updating of policies, procedures and evidence-based clinical practice guidelines.</td>
<td>26</td>
<td>83.87%</td>
<td>5</td>
<td>16.13%</td>
</tr>
<tr>
<td>Education is included in the planning documents of the agency providing the practicum.</td>
<td>25</td>
<td>80.65%</td>
<td>6</td>
<td>19.35%</td>
</tr>
<tr>
<td>The health agency provides an orientation to all students prior to commencing operational or clinical work.</td>
<td>25</td>
<td>80.65%</td>
<td>5</td>
<td>16.13%</td>
</tr>
</tbody>
</table>

Table 2: University that is seeking to facilitate the clinical placement

<table>
<thead>
<tr>
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<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical placement sites are selected based on suitability for enabling defined learning outcomes.</td>
<td>27</td>
<td>90%</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>University staff can access and engage in clinical professional development activities.</td>
<td>22</td>
<td>73.33%</td>
<td>8</td>
<td>25.59%</td>
</tr>
<tr>
<td>Staff position descriptions or performance management plans include key performance indicators (KPI) relating to the individual’s ongoing education.</td>
<td>20</td>
<td>88.97%</td>
<td>8</td>
<td>27.09%</td>
</tr>
<tr>
<td>There is a documented strategy for career progression for clinical education staff including the mentoring of novice educators.</td>
<td>20</td>
<td>71.43%</td>
<td>7</td>
<td>25%</td>
</tr>
<tr>
<td>The university supports students when away from home through travel bursaries and providing information regarding accommodation when the practicum is located outside the student’s region of residence.</td>
<td>10</td>
<td>34.48%</td>
<td>16</td>
<td>53.17%</td>
</tr>
<tr>
<td>A clinical placement coordinator is appointed to manage the administration of the placements and placement agreements.</td>
<td>23</td>
<td>75.31%</td>
<td>4</td>
<td>12.63%</td>
</tr>
<tr>
<td>Clinical educators are encouraged to review their own practice in conjunction with a mentor.</td>
<td>22</td>
<td>75.86%</td>
<td>7</td>
<td>24.14%</td>
</tr>
<tr>
<td>The academic leader for clinical education provides evidence of experience as a paramedic educator.</td>
<td>17</td>
<td>60.71%</td>
<td>11</td>
<td>39.29%</td>
</tr>
</tbody>
</table>
Table 3: Relationship with the agency providing the clinical placement

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Minimally important</th>
<th>Not important</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practicums are based on a relationship agreement between the university and the agency which will include KPIs covering resources, indemnity, roles and responsibilities of each party, and processes for maintaining patient confidentiality.</td>
<td>22</td>
<td>9.4%</td>
<td>1.71%</td>
<td>100%</td>
</tr>
<tr>
<td>All relationship agreements include protocols for exchange of information on educational objectives, assessment and knowledge and proficiency level of learners prior to the commencement of the practicum.</td>
<td>19</td>
<td>73.08%</td>
<td>7.96%</td>
<td>100%</td>
</tr>
<tr>
<td>Relationship agreements include protocols for timely notification of critical events such as if the student fails to arrive at the facility or if the student is injured.</td>
<td>23</td>
<td>88.46%</td>
<td>11.54%</td>
<td>100%</td>
</tr>
<tr>
<td>Health agency educators receive support from the university partner to develop and maintain their educational skills.</td>
<td>13</td>
<td>50%</td>
<td>5.56%</td>
<td>11.11%</td>
</tr>
<tr>
<td>Relationship agreements include a point of contact within the health agency and within the university to enable communication of problems during and out of business hours.</td>
<td>20</td>
<td>76.92%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Relationship agreements include processes for feedback on student performance and learning difficulties, as well as mechanisms for resolution of issues and concerns.</td>
<td>21</td>
<td>80.77%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Universities must have staff with responsibility for managing practica.</td>
<td>20</td>
<td>76.92%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Placements must be developed and maintained in collaboration with the agency to ensure an appropriate number and range of practice education options are available to students.</td>
<td>21</td>
<td>80.77%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Stakeholder perceptions of practicum outcomes are sought from health consumers, families, and the agency.</td>
<td>12</td>
<td>46.15%</td>
<td>5.13%</td>
<td>11.11%</td>
</tr>
</tbody>
</table>

Table 4: Resources required to provide the clinical placement

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Minimally important</th>
<th>Not important</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>The agency must have sufficient case load (clinical volume) and diversity of clinical settings and patient population to achieve learning outcomes and enable professional competencies.</td>
<td>21</td>
<td>84%</td>
<td>14%</td>
<td>100%</td>
</tr>
<tr>
<td>Adequate clinical sites and clinical supervisors are available.</td>
<td>23</td>
<td>92%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Rosters, placement site and supervisors allocated to each student are communicated to the university and students in a timely manner.</td>
<td>20</td>
<td>80%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Supervisor/student ratios allow for effective teaching, evaluation and timely feedback to ensure quality clinical experiences.</td>
<td>21</td>
<td>84%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>The agency complies with its occupational health and safety obligations to students and education staff visiting the agency.</td>
<td>24</td>
<td>96%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>The agency provides continuity of clinical supervision so that, wherever possible, the student works with the same supervisor for the duration of the placement.</td>
<td>16</td>
<td>64%</td>
<td>6%</td>
<td>100%</td>
</tr>
</tbody>
</table>
### Table 5: Curriculum supporting the clinical placement

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Minimally important</th>
<th>Not important</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program includes clinical learning in the workplace at the minimum</td>
<td>16</td>
<td>7</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>level of 20% of contact hours for the program.</td>
<td>69.57%</td>
<td>30.43%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>11.59%</td>
<td>5.07%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Program goals are clearly stated and aligned with professional</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>competencies.</td>
<td>86.96%</td>
<td>12.04%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>14.49%</td>
<td>2.17%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>The university clearly explains the criteria, process and timing</td>
<td>19</td>
<td>4</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>of formal assessment to students at the commencement of each</td>
<td>82.61%</td>
<td>17.39%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>placement.</td>
<td>13.77%</td>
<td>2.9%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>The placement includes non-technical outcomes that include</td>
<td>18</td>
<td>5</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>clinical reasoning, critical thinking, ethical practice and</td>
<td>78.26%</td>
<td>21.74%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>evidenced based practice that are integral components of the</td>
<td>13.04%</td>
<td>3.62%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>learning experience.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The program specifies completion criteria as well as options for</td>
<td>19</td>
<td>4</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>remediation.</td>
<td>82.61%</td>
<td>17.39%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>13.77%</td>
<td>2.9%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Evaluation and revision of the curriculum includes input from</td>
<td>19</td>
<td>4</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>faculty staff, clinical supervisors, professional associations,</td>
<td>82.61%</td>
<td>17.39%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>industry and students.</td>
<td>13.77%</td>
<td>2.9%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Table 6: Participants (students) undertaking the clinical placement

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Minimally important</th>
<th>Not important</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to each practicum students undertake mandatory orientation</td>
<td>20</td>
<td>3</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>which addresses safety of students, orientation to the learning</td>
<td>83.33%</td>
<td>12.5%</td>
<td>4.17%</td>
<td>100%</td>
</tr>
<tr>
<td>activities, assessment tasks and information about the practicum</td>
<td>9.35%</td>
<td>1.4%</td>
<td>0.47%</td>
<td>11.21%</td>
</tr>
<tr>
<td>sites, including travel and accommodation recommendations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students are orientated to policies and procedures associated</td>
<td>22</td>
<td>2</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>with the practicum, including conditions that must be met prior</td>
<td>91.67%</td>
<td>8.33%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>to commencing the practicum and conditions that may result in</td>
<td>10.28%</td>
<td>0.93%</td>
<td>0%</td>
<td>11.21%</td>
</tr>
<tr>
<td>withdrawal from the practicum.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student workload/caseload is monitored and adjusted appropriately</td>
<td>17</td>
<td>6</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>to the student’s level of experience.</td>
<td>70.83%</td>
<td>25%</td>
<td>4.17%</td>
<td>100%</td>
</tr>
<tr>
<td>7.94%</td>
<td></td>
<td>2.8%</td>
<td>0.47%</td>
<td>11.21%</td>
</tr>
<tr>
<td>Learner perceptions about their feelings of safety and wellbeing</td>
<td>15</td>
<td>7</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>during their placement are measured and reviewed.</td>
<td>62.5%</td>
<td>29.17%</td>
<td>8.33%</td>
<td>100%</td>
</tr>
<tr>
<td>7.01%</td>
<td></td>
<td>3.27%</td>
<td>0.93%</td>
<td>11.21%</td>
</tr>
<tr>
<td>Learners are included in team meetings and interprofessional</td>
<td>11</td>
<td>10</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>activities during the practicum.</td>
<td>45.83%</td>
<td>41.67%</td>
<td>12.5%</td>
<td>100%</td>
</tr>
<tr>
<td>5.14%</td>
<td></td>
<td>4.67%</td>
<td>1.4%</td>
<td>11.21%</td>
</tr>
<tr>
<td>Processes are available to measure student satisfaction</td>
<td>19</td>
<td>4</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>regarding the clinical supervision and interaction with</td>
<td>79.17%</td>
<td>16.67%</td>
<td>4.17%</td>
<td>100%</td>
</tr>
<tr>
<td>patients.</td>
<td>8.89%</td>
<td>1.87%</td>
<td>0.47%</td>
<td>11.21%</td>
</tr>
<tr>
<td>Students must have a learning contract/objectives prior to</td>
<td>19</td>
<td>4</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>placement.</td>
<td>82.61%</td>
<td>17.39%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>8.88%</td>
<td></td>
<td>1.87%</td>
<td>0%</td>
<td>10.75%</td>
</tr>
<tr>
<td>Students are respected by the workplace agencies.</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>86.96%</td>
<td></td>
<td>13.04%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>9.35%</td>
<td></td>
<td>1.4%</td>
<td>0%</td>
<td>10.75%</td>
</tr>
<tr>
<td>Students are supported to maximise their learning opportunities</td>
<td>22</td>
<td>2</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>whilst on placement.</td>
<td>91.67%</td>
<td>8.33%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>10.28%</td>
<td></td>
<td>0.93%</td>
<td>0%</td>
<td>11.21%</td>
</tr>
</tbody>
</table>
### Table 7: Supervision of the clinical placement

<table>
<thead>
<tr>
<th>Description</th>
<th>Very Important</th>
<th>Minimally Important</th>
<th>Not Important</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff involved in clinical education with direct responsibility for student learning must have relevant educational qualifications and experience.</td>
<td>19</td>
<td>3</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>82.61%</td>
<td>13.04%</td>
<td>4.35%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>10.33%</td>
<td>1.63%</td>
<td>0.54%</td>
<td>12.5%</td>
</tr>
<tr>
<td>The agency has clearly defined organisational policy and procedures that outline the agency's responsibilities for clinical supervision and the roles and responsibilities of the clinical supervisor.</td>
<td>21</td>
<td>2</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>91.3%</td>
<td>8.7%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>11.41%</td>
<td>1.09%</td>
<td>0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Clinical supervisors have been trained to guide learning, provide feedback to students and develop remediation activities.</td>
<td>21</td>
<td>2</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>91.3%</td>
<td>8.7%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>11.41%</td>
<td>1.09%</td>
<td>0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>The clinical supervisor provides education in the areas of communication, clinical and professional skills.</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>86.96%</td>
<td>13.04%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>10.87%</td>
<td>1.63%</td>
<td>0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>The agency ensures that all staff supervising students provide regular feedback to students about their performance throughout the placement.</td>
<td>22</td>
<td>1</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>95.65%</td>
<td>4.35%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>11.96%</td>
<td>0.54%</td>
<td>0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>The supervisor performs formal assessment of the student's performance in accordance with assessment criteria provided by the university.</td>
<td>18</td>
<td>5</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>78.26%</td>
<td>21.74%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>9.76%</td>
<td>2.72%</td>
<td>0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>The agency has processes to develop the teaching skills of clinicians who provide training to students.</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>86.96%</td>
<td>13.04%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>10.87%</td>
<td>1.63%</td>
<td>0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>The agency ensures that the performance of students is monitored across each placement and appropriate action taken when any problems are identified.</td>
<td>20</td>
<td>2</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>86.96%</td>
<td>8.7%</td>
<td>4.35%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>10.87%</td>
<td>1.09%</td>
<td>0.54%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

### Table 8: Evaluation of the clinical placement

<table>
<thead>
<tr>
<th>Description</th>
<th>Very Important</th>
<th>Minimally Important</th>
<th>Not Important</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs have a transparent, objective, measurable and equitable system of evaluation of students, clinical supervisors and placement sites.</td>
<td>22</td>
<td>1</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>55.65%</td>
<td>4.35%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>16.06%</td>
<td>0.73%</td>
<td>0%</td>
<td>16.79%</td>
</tr>
<tr>
<td>The university and agencies providing clinical placement have a quality improvement system for monitoring, maintaining and improving the quality of the student learning experience.</td>
<td>21</td>
<td>2</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>91.3%</td>
<td>8.7%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>15.33%</td>
<td>1.46%</td>
<td>0%</td>
<td>16.79%</td>
</tr>
<tr>
<td>The agency evaluates the effectiveness of clinical teaching.</td>
<td>14</td>
<td>9</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>60.87%</td>
<td>35.13%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>10.22%</td>
<td>6.57%</td>
<td>0%</td>
<td>16.79%</td>
</tr>
<tr>
<td>The agency has a process to regularly monitor placement capacity.</td>
<td>21</td>
<td>1</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>95.45%</td>
<td>4.55%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>15.33%</td>
<td>0.73%</td>
<td>0%</td>
<td>16.06%</td>
</tr>
<tr>
<td>Learner satisfaction is evaluated in relation to the availability and quality of learning resources in the workplace (e.g. internet access, textbooks, clinical equipment, training rooms).</td>
<td>15</td>
<td>7</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>65.22%</td>
<td>30.43%</td>
<td>4.36%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>10.96%</td>
<td>5.11%</td>
<td>0.73%</td>
<td>16.79%</td>
</tr>
<tr>
<td>The agency has processes to monitor patient satisfaction regarding the involvement of students in the provision of health care.</td>
<td>12</td>
<td>11</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>52.17%</td>
<td>47.83%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>8.76%</td>
<td>8.03%</td>
<td>0%</td>
<td>16.79%</td>
</tr>
</tbody>
</table>
Appendix 2: Quality standards developed by consensus process.

1. The following standards relate to the **agency** providing the clinical placement.
   a. Education is covered in the mission, vision and strategic documents of the agency.
   b. Dedicated education facilities exist (such as training rooms), proportionate to the size of the agency and its educational capacity.
   c. The agency invests in the training of clinical educators and provides time to mentor, supervise and educate students.
   d. There are appropriate protocols and procedures in place that deal with student support (personal and educational needs) and safe working environments.
   e. There is a schedule for review and updating of policies, procedures and evidence-based clinical practice guidelines.
   f. Education is included in the planning documents of the agency providing the practicum.
   g. The health agency provides an orientation to all students prior to commencing operational or clinical work.

2. The following standards relate to the **university** that is seeking to facilitate the clinical placements.
   a. Clinical placement sites are selected based on suitability for enabling defined learning outcomes.
   b. University staff can access and engage in clinical professional development activities.
   c. Staff position descriptions or performance management plans include key performance indicators (KPI) relating to the individual’s on-going education.
   d. There is a documented strategy for career progression for clinical education staff including the mentoring of novice educators.
   e. The university supports students when away from home through travel bursaries and providing information regarding accommodation when the practicum is located outside the student’s region of residence.
   f. A clinical placement coordinator is appointed to manage the administration of the placements and placement agreements.
   g. Clinical educators are encouraged to review their own practice in conjunction with a mentor.
   h. The academic leader for clinical education provides evidence of experience as paramedic educator.

3. The following standards relate to the Relationship with the **agency** providing the clinical placement.
   a. Practicums are based on a relationship agreement between the university and the agency which will include KPIs covering resources, indemnity, roles and responsibilities of each party, and processes for maintaining patient confidentiality.
   b. All relationship agreements include protocols for exchange of information on educational objectives, assessment and knowledge and proficiency level of learners prior to the commencement of the practicum.
   c. Relationship agreements include protocols for timely notification of critical
events such as if the student fails to arrive at the facility or if the student is
injured.

d. Health agency educators receive support from the university partner to develop
and maintain their educational skills.

e. Relationship agreements include a point of contact within the health agency and
within the university to enable communication of problems during and out of
business hours.

f. Relationship agreements include processes for feedback on student performance
and learning difficulties, as well mechanisms for resolution of issues and
concerns.

g. Universities must have staff with responsibility for managing practica.

h. Placements must be developed and maintained in collaboration with the agency
to ensure an appropriate number and range of practice education options are
available to students.

i. Stakeholder perceptions of practicum outcomes are sought from health
consumers, families, and the agency.

4. The following standards relate to the **resources** required to provide the clinical
placement.

   a. The agency must have sufficient case load (clinical volume) and diversity of
   clinical settings and patient population to achieve learning outcomes and enable
   professional competencies.

   b. Adequate clinical sites and clinical supervisors are available.

   c. Rosters, placement site and supervisors allocated to each student are
   communicated to the university and students in a timely manner.

   d. Supervisor/student ratios allow for effective teaching, evaluation and timely
   feedback to ensure quality clinical experiences.

   e. The agency complies with its occupational health and safety obligations to
   students and education staff visiting the agency.

   f. The agency provides continuity of clinical supervision so that, wherever possible,
   the student works with the same supervisor for the duration of the placement.

5. The following standards relate to the **curriculum** supporting the clinical placement.

   a. Program includes clinical learning in the workplace at the minimum level of 20%
of contact hours for the program.

   b. Program goals are clearly stated and aligned with professional competencies.

   c. The university clearly explains the criteria, process and timing of formal
   assessment to students at the commencement of each placement.

   d. The placement includes non-technical outcomes that include clinical reasoning,
critical thinking, ethical practice and evidenced based practice that are integral
   components of the learning experience.

   e. The program specifies completion criteria as well as options for remediation.

   f. Evaluation and revision of the curriculum includes input from faculty staff, clinical
   supervisors, professional associations, industry and students.

6. The following standards relate to the **participants** (students) undertaking the clinical
placement.

   a. Prior to each practicum students undertake mandatory orientation, which
addresses safety of students, orientation to the learning activities, assessment tasks and information about the practicum sites, including travel and accommodation recommendations.

b. Students are orientated to policies and procedures associated with the practicum, including conditions that must be met prior to commencing the practicum and conditions that may result in withdrawal from the practicum.

c. Student workload/caseload is monitored and adjusted appropriately to the student’s level of experience.

d. Learner perceptions about their feelings of safety and wellbeing during their placement are measured and reviewed.

e. Learners are included in team meetings and interprofessional activities during the practicum.

f. Processes are available to measure student satisfaction regarding the clinical supervision and interaction with patients.

g. Students must have a learning contract/objectives prior to placement.

h. Students are respected by the workplace agencies.

i. Students are supported to maximise their learning opportunities whilst on placement.

7. The following standards relate to the supervision of the clinical placement.

a. Staff involved in clinical education with direct responsibility for student learning must have relevant educational qualifications and experience.

b. The agency has clearly defined organisational policy and procedures that outline the agency’s responsibilities for clinical supervision and the roles and responsibilities of the clinical supervisor.

c. Clinical supervisors have been trained to guide learning, provide feedback to students and develop remediation activities.

d. The clinical supervisor provides education in the areas of communication, clinical and professional skills.

e. The agency ensures that all staff supervising students provide regular feedback to students about their performance throughout the placement.

f. The supervisor performs formal assessment of the student’s performance in accordance with assessment criteria provided by the university.

g. The agency has processes to develop the teaching skills of clinicians who provide training to students.

h. The agency ensures that the performance of students is monitored across each placement and appropriate action taken when any problems are identified.

8. The following standards relate to the evaluation of the clinical placement.

a. Programs have a transparent, objective, measurable and equitable system of evaluation of students, clinical supervisors and placement sites.

b. The university and agencies providing clinical placement have a quality improvement system for monitoring, maintaining and improving the quality of the student learning experience.

c. The agency evaluates the effectiveness of clinical teaching.

d. The agency has a process to regularly monitor placement capacity.

e. Learner satisfaction is evaluated in relation to the availability and quality of learning resources in the workplace (e.g. internet access, textbooks, clinical
equipment, training rooms).

f. The agency has processes to monitor patient satisfaction regarding the involvement of students in the provision of health care.
Appendix 3: Educators’ survey

The purpose

This brief survey is designed to help us understand what educators involved in Paramedical undergraduate teachings think of academic standards, curriculum content and educational practices. The survey should take about 15 minutes of your time to complete.

About the survey and data management

This project addresses the Program Priority one: Academic Standards. The project will develop a shared understanding of ‘standards’ within paramedic experiential inter professional clinical practice at undergraduate level.

This project adheres to ECU’s policies relating to data collection from human participants, and has been approved by the ECU Human Research Ethics Committee. User data and records will be held in a secure database, accessible only to the researcher and project leader. Stored data will be held securely for a period of at least 5 years. No names, email addresses or any contact details will be collected in this survey. Results reported in any aggregated ‘findings’ will not be associated with the identity of any one individual.

For questions or concerns relating to this research please contact Assoc Prof Richard Brightwell on r.brightwell@ecu.edu.au or Lee Waller on 0417 995 135 or l.waller@ecu.edu.au.

An independent contact person is also available should a user feel their concern/enquiry has not been dealt with adequately. In this case, please contact Kim Gifkins at 6304 2170 or research.ethics@ecu.edu.au

If you agree to the above, please proceed to the survey.
Quality indicators for Paramedic standards (Educator Survey)

Information here is used to obtain data on what state/institution participants of the survey belong to.

1. Which state/territory do you currently teach in?
   - Australian Capital Territory
   - New South Wales
   - Northern Territory
   - Queensland
   - South Australia
   - Victoria
   - Tasmania
   - Western Australia
   Other (please specify)

2. Which institution do you currently teach at?
   - Edith Cowan University
   - Monash University
   - Charles Sturt University
   - Australian Catholic University
   - Flinders University
   - Victoria University
   - University of Tasmania
   - Queensland University of Technology
   - LaTrobe University
   - University of Tasmania
   - Sunshine Coast University
   - University of Central Queensland
   - University of Queensland
   Other (please specify)
Quality indicators for Paramedic standards (Educator Survey)

Data collected here is on educators beliefs and academic teaching standards.

*3. What is your concept of a standard?

4. Do you believe the course content you just delivered or are currently delivering maintains a high standard?

   - Definitely No
   - No
   - Unsure
   - Yes
   - Definitely Yes

Your comments are greatly appreciated

5. What measures are in place to ensure that set standards are integrated into current course curriculum?

6. Which overseeing body/group ensures that these standards are put into practice throughout the curriculum?

7. How was the current curriculum developed?

8. Paramedics are consulted in assisting in the development of course curriculum?

   - Strongly disagree
   - Disagree
   - Unsure
   - Agree
   - Strongly agree
Quality indicators for Paramedic standards (Educator Survey)

9. Paramedics should be consulted regarding curriculum development for their profession?
   - Strongly disagree
   - Disagree
   - Unsure
   - Agree
   - Strongly agree

Your comments are appreciated

10. How often is the curriculum assessed to be updated?
   - > 5 years
   - Every 5 years
   - Every 3 - 5 years
   - Every 1 - 2 years
   - Every Year
   - Unsure

Other (please specify)

11. When was the curriculum last updated?
   - > 5 years ago
   - 3 - 5 years ago
   - 1 - 2 years ago
   - Recently
   - Unsure

Other (please specify)

12. How does curriculum assessment occur?
Quality indicators for Paramedic standards (Educator Survey)

13. The curriculum supported by current evidence based practice?
   - Strongly disagree
   - Disagree
   - Unsure
   - Agree
   - Strongly agree

Your comments are appreciated

14. List established guidelines which are applicable to evidence based practice in Paramedical Science?

15. Who determines the competency level for each of the skills required?

16. What qualification is awarded once the course curriculum is completed?
   - Diploma
   - Advanced Diploma
   - Associate Degree
   - Bachelor Degree
   - Other (please specify)
**Quality indicators for Paramedic standards (Educator Survey)**

**Curriculum Delivery**

Data collected here is based on how the course content was delivered by the educators and their beliefs in that delivery.

**17. In your delivery of the set course content please rate the questions below.**

<table>
<thead>
<tr>
<th>The training objectives were clear</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The training met the course objectives</td>
<td>_</td>
<td>_</td>
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<tr>
<td>The training was well presented</td>
<td>_</td>
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<tr>
<td>The course content was appropriate</td>
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<td>You as an educator created a positive learning environment</td>
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<td>The course content you delivered was intellectually challenging for the students</td>
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<td>The pace and delivery of the course content was about right</td>
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<td>The course content was communicated clearly and effectively</td>
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<td>The course content you delivered was made interesting enough for the students to progress through</td>
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<td>There were sufficient activities/simulations included within the content</td>
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Quality indicators for Paramedic standards (Educator Survey)

Student Placements

Data collected here relates to educators beliefs and standards of paramedic placements into the allied health field.

18. How important are the placements in the following disciplines prior to their on-road experience?

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Not important at all</th>
<th>A little important</th>
<th>Moderately important</th>
<th>Quite important</th>
<th>Very important</th>
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<tr>
<td>Physiotherapy</td>
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<td>Occupational therapy</td>
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<td>Other (please specify)</td>
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</table>

19. How many hours of physical patient interaction do your students receive within their clinical placements in the following areas?

<table>
<thead>
<tr>
<th>Discipline</th>
<th>None</th>
<th>Unsure</th>
<th>&lt; 9 hours</th>
<th>10 - 19 hours</th>
<th>20 - 29 hours</th>
<th>30 - 49 hours</th>
<th>50 - 99 hours</th>
<th>100 - 199 hours</th>
<th>&gt; 200 hours</th>
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</table>
Quality indicators for Paramedic standards (Educator Survey)

20. **How many hours of physical patient interaction do your students receive within their clinical placements in the following areas?**

<table>
<thead>
<tr>
<th>Area</th>
<th>None</th>
<th>Unsure</th>
<th>&lt; 9 hours</th>
<th>10 - 19 hours</th>
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</table>

Other (please specify)

21. **How many hours of physical patient interaction do your students receive within their clinical placements?**

- None
- Unsure
- < 9 hours
- 10 - 19 hours
- 20 - 29 hours
- 30 - 49 hours
- 50 - 99 hours
- 100 - 199 hours
- > 200 hours

Other (please specify)
Quality indicators for Paramedic standards (Educator Survey)

22. How many hours within those student clinical placements is dedicated to observation/socialisation?

- None
- Unsure
- < 9 hours
- 10 - 19 hours
- 20 - 29 hours
- 30 - 49 hours
- 50 - 99 hours
- 100 - 199 hours
- > 200 hours
Appendix 4: Student survey

The purpose

This brief survey is designed to help us understand what students who have recently completed the paramedic undergraduate program think of academic standards, curriculum content and educational practices. It should take about 10 minutes of your time.

About the survey and data management

This project addresses the Program Priority one: Academic Standards. The project will develop a shared understanding of ‘standards’ within paramedic experiential inter professional clinical practice at undergraduate level.

This project adheres to ECU's policies relating to data collection from human participants, and has been approved by the ECU Human Research Ethics Committee. User data and records will be held in a secure database, accessible only to the researcher and project leader. Stored data will be held securely for a period of at least 5 years. No names, email addresses or any contact details will be collected in this survey. Results reported in any aggregated ‘findings’ will not be associated with the identity of any one individual.

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An independent contact person is also available should a user feel their concern/enquiry has not been dealt with adequately. In this case, please contact Kim Gifkins at 6304 2170 or research.ethics@ecu.edu.au

If you agree to the above, please proceed to the survey.
Quality indicators for Paramedic standards (Student Survey)
Information here is used to obtain data on what state/institution participants of the survey belong to.

1. In which state/territory did you reside while you studied paramedicine? If you are currently studying the course please show what state you mainly resided in.
   - Australian Capital Territory
   - New South Wales
   - Northern Territory
   - Queensland
   - South Australia
   - Victoria
   - Tasmania
   - Western Australia
   - Other (please specify)

2. Which institution did you study or are currently studying paramedicine?
   - Edith Cowan University
   - Monash University
   - Charles Sturt University
   - Australian Catholic College
   - Flinders University
   - Victoria University
   - Queensland University of Technology
   - LaTrobe University
   - University of Tasmania
   - Sunshine Coast University
   - Other (please specify)
Quality indicators for Paramedic standards (Student Survey)

3. Which of the following best describes your current level of study in paramedical science?

- 1st year of studies
- 2nd year of studies
- 3rd year of studies
- Completed undergraduate studies (Bachelor)
- Current postgraduate studies
- Completed postgraduate studies
Quality indicators for Paramedic standards (Student Survey)

**Pre Employment Areas**

We are interested in your views about the uniformity of teaching practice in undergraduate programs.

4. **There should be national uniformity on entry criteria to university paramedical science programs.**
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Unsure
   - [ ] Agree
   - [ ] Strongly agree
Quality indicators for Paramedic standards (Student Survey)

**Curriculum Content**

We are interested in your beliefs about curriculum and academic teaching standards.

**5. What is your concept of "a standard"?**

6. Regarding curriculum development and implementation please answer the following questions.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The course I am studying in or studied in maintains or maintained a high standard?</td>
<td><img src="image1" alt="Rating" /></td>
<td><img src="image2" alt="Rating" /></td>
<td><img src="image3" alt="Rating" /></td>
<td><img src="image4" alt="Rating" /></td>
<td><img src="image5" alt="Rating" /></td>
</tr>
<tr>
<td>Paramedics should have a role in the development and implementation of professional standards and practices.</td>
<td><img src="image6" alt="Rating" /></td>
<td><img src="image7" alt="Rating" /></td>
<td><img src="image8" alt="Rating" /></td>
<td><img src="image9" alt="Rating" /></td>
<td><img src="image10" alt="Rating" /></td>
</tr>
</tbody>
</table>

Your comments are appreciated
Quality indicators for Paramedic standards (Student Survey)

7. In considering the delivered curriculum please rate your agreement with the statements below.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The training objectives were clear</td>
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<tr>
<td>The training met the course objectives</td>
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<td>The training was well presented</td>
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<tr>
<td>The course content was appropriate</td>
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<td>The educators created a positive learning environment</td>
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<td>The course content was intellectually challenging</td>
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<td>The pace and delivery of the course content was about right</td>
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<tr>
<td>The course content was communicated clearly and effectively</td>
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<tr>
<td>The course and its content met my expectations</td>
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<tr>
<td>The course retained my interest throughout</td>
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<td>The content was consistent with evidence based practice and guidelines</td>
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<tr>
<td>The materials covered in the curriculum were directly related to the course objectives</td>
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<td>The course material was well presented</td>
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<tr>
<td>There were sufficient &quot;hands on&quot; activities or simulations included within the teaching.</td>
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</tbody>
</table>

Your comments are appreciated
Quality indicators for Paramedic standards (Student Survey)

8. Please comment on how the course you studied or are studying in could be improved.

Course content (what was taught)
Course delivery (how it was taught)
Practical components (practice in on-road skills)
Access to resources
Other
Quality indicators for Paramedic standards (Student Survey)

**Student Placements**

We are interested in your views on paramedic placements.

**9. In relation to each of the following clinical areas please rate your agreement with the statement that: It is important to have clinical contact with this clinical area prior to on-road experience.**

<table>
<thead>
<tr>
<th>Clinical Area</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Department</td>
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<td>Theatre</td>
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<td>Coronary Care Unit</td>
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<td>Paediatrics</td>
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<td>Obstetrics</td>
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<td>Occupational therapy</td>
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<td>Dietetics</td>
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</tbody>
</table>

Your comments are greatly appreciated

**10. I have attended these placements throughout the duration of my studies.**

<table>
<thead>
<tr>
<th>Clinical Area</th>
<th>Unsure</th>
<th>Never</th>
<th>1-4 times</th>
<th>5-10 times</th>
<th>11 times or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Department</td>
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<td>Theatre</td>
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<td>Occupational therapy</td>
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<td>Dietetics</td>
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</tbody>
</table>

Your comments are greatly appreciated
Quality indicators for Paramedic standards (Student Survey)

11. The placements in the following areas were relevant and helped to develop knowledge and skills for on-road practice.

<table>
<thead>
<tr>
<th>Area</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Department</td>
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<tr>
<td>Theatre</td>
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<td>Burns Unit</td>
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<td>Paediatrics</td>
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<td>Obstetrics</td>
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<td>Neonatal</td>
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<td>Occupational therapy</td>
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</tbody>
</table>

Your comments are greatly appreciated

12. The course content taught the following systems thoroughly.

<table>
<thead>
<tr>
<th>System</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
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</thead>
<tbody>
<tr>
<td>Skeletal system</td>
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<tr>
<td>Digestive system</td>
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<td>Circulatory system</td>
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<tr>
<td>Respiratory system</td>
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<tr>
<td>Urinary system</td>
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<td>Neurological system</td>
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<tr>
<td>Reproductive system</td>
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<tr>
<td>Muscular system</td>
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<tr>
<td>Endocrine system</td>
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<tr>
<td>Ophthalmic system</td>
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</tbody>
</table>

Your comments are greatly appreciated
Quality indicators for Paramedic standards (Student Survey)

**Skill Delivery Set**

We are interested in your views on clinical skills development for the on-road environment.

**13. Please rate your agreement with the following statement for each of the assessment areas:**
I felt adequately prepared for the following tasks when I entered the on-road environment.

(If you have not yet commenced on-road placements/practice please select N/A)

<table>
<thead>
<tr>
<th>Assessment Area</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient history taking</td>
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<tr>
<td>Scene examination</td>
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<tr>
<td>Scene control</td>
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<tr>
<td>Physical examination of the patient</td>
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<tr>
<td>Physical examination of the patient</td>
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<tr>
<td>Chest auscultation/lung sounds</td>
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<tr>
<td>Interpretation of BSL</td>
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<tr>
<td>Interpretation of ECG</td>
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<tr>
<td>Spinal assessment</td>
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<tr>
<td>Neurological assessment</td>
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<tr>
<td>Approach to the paediatric patient</td>
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</tbody>
</table>

Please feel free to comment on specific areas or issues
Quality indicators for Paramedic standards (Student Survey)

14. Please rate your agreement with the following statement for each of the procedural areas:
I felt adequately prepared for the following tasks when I entered the on-road environment.

(If you have not yet commenced on-road placements/practice please select N/A)

<table>
<thead>
<tr>
<th>Area</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG application</td>
<td></td>
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<tr>
<td>Defibrillation techniques</td>
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<tr>
<td>Fracture management</td>
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<tr>
<td>Limb alignment</td>
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<tr>
<td>Head injury management</td>
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<tr>
<td>Oropharyngeal (Guedel) airway insertion</td>
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<tr>
<td>Nasopharyngeal airway insertion</td>
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<tr>
<td>Endotracheal intubation</td>
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<tr>
<td>I/V cannulation</td>
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<td>Intraosseous access</td>
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<tr>
<td>Rapid sequence induction</td>
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<tr>
<td>Cricothyrotomy</td>
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<tr>
<td>Chest decompression</td>
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<tr>
<td>Child birth</td>
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<tr>
<td>Birthing complications</td>
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<tr>
<td>Cardio pulmonary resuscitation (Neonatal)</td>
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<tr>
<td>Cardio pulmonary resuscitation (Child)</td>
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<tr>
<td>Cardio pulmonary resuscitation (Adult)</td>
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</tbody>
</table>

Please feel free to comment on specific areas or issues.
Quality indicators for Paramedic standards (Student Survey)

**15. Regarding patient management: The areas below where delivered to the highest standard and were covered well enough to allow a smooth transition into the ambulance field.**

<table>
<thead>
<tr>
<th>General principles such as correct treatment regimes and interventions</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential diagnosis encompassing most illnesses and presentations</td>
<td></td>
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<tr>
<td>Acute care treatments and being able to correctly assess the time critical patient</td>
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</tbody>
</table>

Please feel free to comment on specific areas or issues.

**16. Regarding communication: The areas below where delivered to the highest standard and were covered well enough to allow a smooth transition into the ambulance field.**

<table>
<thead>
<tr>
<th>Communication with the patient focussing on information relevancy, accuracy and empathy</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication with carers/relatives focussing on information relevancy, accuracy and empathy</td>
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<tr>
<td>Communication with colleagues and other agencies focussing on relevancy, accuracy and empathy</td>
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<tr>
<td>Communication with the media focussing on relevancy, accuracy and empathy</td>
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<tr>
<td>Patient advocacy focussing on all relevant safety, treatment standards and outcomes for all patients</td>
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<tr>
<td>Patient care recording focussing on relevant</td>
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</tbody>
</table>
succinct documentation and correct medication administration and recording

Please feel free to comment on specific areas or issues
Quality indicators for Paramedic standards (Student Survey)

17. **Regarding appropriate attitudes**: The areas below were delivered to the highest standard and were covered well enough to allow a smooth transition into the ambulance field.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriateness of attitude</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Understanding of ethical principles related to the paramedic</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Understanding of ethical standards related to the paramedic</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Understanding of legal responsibilities of a paramedic</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Please feel free to comment on specific areas or issues.

18. **Regarding decision making skills**: The areas below were delivered to the highest standard and were covered well enough to allow a smooth transition into the ambulance field.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical reasoning</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Relation of current practice to evidenced based research</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Coping with uncertainty</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tbody>
</table>

Please feel free to comment on specific areas or issues.

19. **Regarding personal development**: The areas below were delivered to the highest standard and were covered well enough to allow a smooth transition into the ambulance field.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The promotion of self-paced learning</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The promotion of self confidence</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The knowledge passed in order for the student to be able to adapt to change in any environment</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The ability to be self motivated</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The ability to maintain a good self initiated role</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Please feel free to comment on specific areas or issues.
Please feel free to comment on specific areas or issues
Quality indicators for Paramedic standards (Student Survey)

**Simulation education**

We are interested in your views and experiences on educational simulation.

**20. Regarding simulation education: The questions below aim to ascertain your experiences throughout your undergraduate (Bachelor) education.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The simulation area was well resourced</td>
<td></td>
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<tr>
<td>You had adequate simulation time before your &quot;on-road&quot; time begun</td>
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<tr>
<td>You had adequate adult patient simulation time</td>
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<tr>
<td>You had adequate child patient simulation time</td>
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<tr>
<td>You had adequate neonatal patient simulation time</td>
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<tr>
<td>You had adequate obstetric patient simulation time</td>
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<tr>
<td>The simulations you performed were valuable</td>
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<tr>
<td>The simulations you performed were relevant</td>
<td></td>
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<tr>
<td>The simulation manikins were realistic</td>
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<tr>
<td>The scenarios you performed were relevant to your &quot;on-road&quot; practices</td>
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</tbody>
</table>

Please feel free to comment on specific areas or issues.
Data collected here is on the attributes of lecturers and subsequent teachings.

### 21. Regarding your lecturer(s) please answer the below questions.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
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<td>Your lecturer(s) provided leadership and promoted success through regular feedback, prompt response and clear expectations.</td>
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<td>Your lecturer(s) was/is/where actively involved in all facets of your learning</td>
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<td>Your lecturer(s) facilitates interaction amongst students</td>
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Your lecturer(s) provide an online syllabus that defines objectives, concepts and learning outcomes

Your comments are appreciated

We are very interested to know any other concerns or feedback you may have regarding this survey and your experiences during your undergraduate (Bachelor) paramedical studies.

22. Your comment in relation to this research is greatly appreciate
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The development of competencies for the paramedic profession will facilitate:

1. The design of paramedic curricula;
2. Course accreditation;
3. Benchmarking of competencies against international standards;
4. Determination of “scope of practice” or development of legislation that governs paramedic roles, responsibilities and practice;
5. National and international mobility for paramedics by enabling the comparison of competencies across different jurisdictions;
6. Determination of reciprocity. Nurses, Respiratory Therapists, Military Medics and allied health professionals may use the competencies to map prior learning against paramedic competencies to determine credit for prior learning;
7. Registration of paramedics by linking registration to evidence of achievement of competencies;
8. Design of continuing education programs by the professional college;
9. Evaluation of conduct and competency by the registration body. The competencies establish the base for clinical knowledge, skills and professional behaviours. Any practitioner who acts by commission or omission outside the establish competency profile may be subject to conduct and competency hearings and discipline processes.

The competencies comprising the Australasian Competency Standards for Paramedics are organised within the domains of Professional Practice, Clinical Practice, and Professional Knowledge

1. **Professional practice**

1.a  Professional autonomy and accountability

Paramedics must demonstrate the ability to:

1.a.1 Practise within the legal and ethical boundaries of their profession

- Practice in accordance with the paramedic profession’s codes of ethics and conduct;
- Understand the need to act in the best interests of patients at all times;
- Be aware of current legislation applicable to the work of the profession, inclusive of duty of care, confidentiality, and privacy;
- Practise in accordance with current legislation governing the use of therapeutic agents.

1.a.2 Practise in a non-discriminatory manner

- Maintain awareness that individual attitudes, values, beliefs and biases may affect clinical judgements and the quality of care’
- Recognise the need to acknowledge patient needs as they relate to dignity, cultural and religious requirements;
• Understand the application of anti-discrimination and equal opportunity laws as they relate to an individual's/group's race, culture, religion, age, gender, sexual preference, physical or mental state;
• Acknowledge the right of the individual to self determine their care;
• Demonstrate respect for the individual regardless of their race, gender, culture and beliefs.

1.a.3 Understand the principle and application of the concept of confidentiality

1.a.4 Understand the principle of consent as it applies in the community emergency health setting

1.a.5 Provide health care in accordance with local standards of practice

1.a.6 Provide care that is consistent with principles of beneficence and non-maleficence.

1.a.7 Exercise a professional duty of care

1.a.8 Practise as an autonomous professional, exercising their own professional judgement
• Analyse, identify and resolve problems independently using personal initiative;
• Understand their limits of practice and seek advice or refer patients to other professionals when appropriate;
• Recognise that they are personally responsible for and must be able to justify their decisions;
• Use a range of skills and self-awareness to manage unusual or unexpected challenges;
• Understands and practices within their scope of practice as determined by registration conditions;
• Prioritise care according to acuity;
• Anticipate and respond to changing situations in the operational environment.

1.a.9 Recognise the need for effective self-management of workload and resources to provide equitable and effective health care for the community

1.a.10 Maintain fitness to practise
• Understand the need to practise safely and effectively;
• Understand the need to maintain high standards of personal conduct;
• Understand the importance of maintaining one’s own physical and psychological health;
• Accept personal responsibility for continuous professional development to maintain currency of knowledge and clinical skills.

1.b Professional relationships

Paramedics must demonstrate the ability to:
1.b.1 Work effectively in interprofessional practice

- Understand the need to build and sustain professional relationships as both an independent practitioner and collaboratively as a member of a team;
- Identify health professional partnerships and health care models that may improve and maintain health in community settings;
- Involve patients, family and carers in the clinical decision making process;
- Make appropriate referrals to other health professionals and agencies;
- Understand the range and limitations of operational relationships between paramedics and other healthcare professionals and emergency service personnel;
- Recognise the principles and practices of other healthcare professionals and healthcare systems and how they interact with the role of a paramedic to improve health outcomes;
- Understanding the role of the paramedic and Paramedic Services in the provision of health care within the broader health care system;
- Work effectively with emergency management agencies, acknowledging the differing responsibilities regarding situations such as scene management and preservation of evidence;
- Support the concept of the paramedic being an integral component of the health care team.

1.b.2 Collaborate effectively in interprofessional practice

- Understand the role of other health professionals in preventing disease, maintaining health and curing illness;
- Collaborate with other health professionals to obtain specialist advice and to identify appropriate referral pathways;
- Communicate with other health professions to evaluate the efficacy and appropriateness of clinical decisions involving referral decisions.

1.b.3 Communicate effectively in interprofessional practice using effective and appropriate skills to provide information, advice, instruction and professional opinion to colleagues, patients, their relatives and carers

- Be able to communicate in English to the standard equivalent to level 7 of the International English Language Testing System or TOEFL equivalent;
- Use appropriate strategies to communicate with individuals whose first language is not English, including interpreter services and translation aids;
- Understand how communication skills affect the interaction with carers and others with an interest in the patient, the assessment of patients, and effective interactions with other health professionals;
- Be aware of the characteristics and consequences of communication and how this can be affected by age, ethnicity, culture, gender, religious beliefs and socio-economic status;
- Understand how communications skills affect the practitioner – patient relationship and patient outcomes;
- Identify anxiety and stress in patients, carers and others and recognise the potential impact of stressors on communication.

1.b.4 Function as an advocate for patients, advocate groups and their rights relating to health care

1.b.5 Participate in the mentoring, teaching and development of others

- Support developing practitioners and students in meeting their learning objectives;
• Share knowledge and experience to support learning;
• Promote the development of the profession in an interdisciplinary environment;
• Participate in and contribute to continuing professional development programs;
• Participate in health promotion/ injury prevention and public safety initiatives.

1.c Evidence based practice

Paramedics must:

• Recognise the value of research in the critical evaluation of practice;
• Understand the strengths and limitations of research methodologies in order to appraise the strength of the evidence;
• Evaluate research and other evidence to inform paramedic practice;
• Participate in research;
• Recognise the need to monitor and evaluate the quality of practice and the value of contributing to the generation of data for quality assurance and improvement programmes;
• Initiate review of practice guidelines that appear to be inconsistent with current evidence;
• Collaborate to review and develop policy, procedures or clinical guidelines;
• Promote the reporting of high-risk activities without fear of retribution or decertification.

2. Clinical practice

2.a Identification and assessment of health and social care needs

Paramedics must demonstrate the ability to:

2.a.1 Gather appropriate information as it relates to the assessment of a patient’s health status

• Undertake a comprehensive assessment of the patient, which includes assessment of the psychological, social and cultural determinants of health.

2.a.2 Select and use appropriate assessment techniques

• Undertake a focussed clinical examination that is consistent with the chief complaint and medical history;
• Record the findings of the clinical examination using appropriate techniques and equipment;
• Involve the patient, family and carers in clinical decisions where appropriate while maintaining patient confidentiality.

2.a.3 Undertake or arrange investigations in accordance with practice guidelines

2.a.4 Analyse and critically evaluate clinical findings to formulate an appropriate care plan

2.b Formulation and deliver plans and strategies for meeting health and social care needs
Paramedics must demonstrate the ability to:

2.b.1 Use knowledge, reasoning and problem-solving skills to determine appropriate judgements and actions
- Prioritise the care provided to optimise safety and health outcomes for the patient.
- Be able to demonstrate a logical and systematic approach to problem solving.
- Implement effective decision-making

2.b.2 Contribute effectively to multidisciplinary teamwork

2.b.3 Formulate specific and appropriate management plans
- Understand the requirement to adapt practice to meet the needs of different groups distinguished by, for example, physical, psychological, environmental, cultural or socio-economic factors;
- Develop patient care plans which reflect the individual patient's needs.

2.b.4 Provide safe, effective and appropriate care
- Maintain the safety of members of the community, patients and those involved in their care.
- Implement safe and effective strategies to access, retrieve and transport patients from the scene of an incident or health emergency;
- Maintain the necessary knowledge, skills and attitudes for safe and effective practice;
- Use evidence based guidelines to provide safe and effective care.

2.b.5 Operate effectively and independently in settings with limited resources

2.b.6 Generate health care records
- Use appropriate medical terminology to document care;
- Use information technology to create, transmit and maintain accurate care records.

2.c Critical evaluation of paramedic practice
Paramedics must demonstrate the ability to:

2.c.1 Monitor and evaluate the effectiveness of the care plan and modify it accordingly
- Analyse qualitative and quantitative information to evaluate patient responses to the care plan;
- Evaluate responses to interventions designed to improve health or relieve suffering and modify care plans accordingly;
- Report findings from the evaluation of clinical practice.

2.c.2 Audit, reflect on and review practice [reflection on action]
- Understand the principles of quality control and quality assurance;
- Identify adverse events and clinical errors and reports these events in order to inform strategies that may prevent or mitigate future events;
- Participate in quality assurance programmes.

2.c.3 Identify and report unprofessional and unsafe practice and
behaviour

3. Professional knowledge

3.a Knowledge, understanding and skills

Paramedics must demonstrate the ability to:

3.a.1 Understand and apply key concepts and knowledge underpinning paramedic practice

- Understand physical, behavioural and clinical science concepts and theories to enable effective care;
- Understand determinants of health and factors which constrain an individual's access to health care;
- Recognise the role of primary health care in the community and identify the role of the paramedic in the provision of community-based health care;
- Understand policy, procedures and guidelines relating to the paramedic's role in responding to major incidents and disasters;
- Recognise the contribution of other professions to interprofessional practice;
- Understand the theoretical basis of, and the variety of approaches to assessment, diagnosis and intervention designed to improve health.

3.a.2 Understand the need to establish and maintain a safe practice environment

- Apply relevant health and safety legislation and related policies and procedures, and be able to act in accordance with these;
- Identify and manage risks to safely;
- Select and use appropriate personal protective equipment based on assessment of risk;
- Establish safe environments for practice;
- Understand and apply safe and effective manual handling techniques;

3.a.3 Use information and communication technology

- Locate and identify resources to support continuing professional development;
- Use technology to communicate patient information and to locate information needed to support effective clinical decisions;
- Interpret and analyse information obtained from diagnostic equipment to inform clinical judgements and treatment decisions;
- Use technology to undertake administrative functions including reporting and communication of business data.