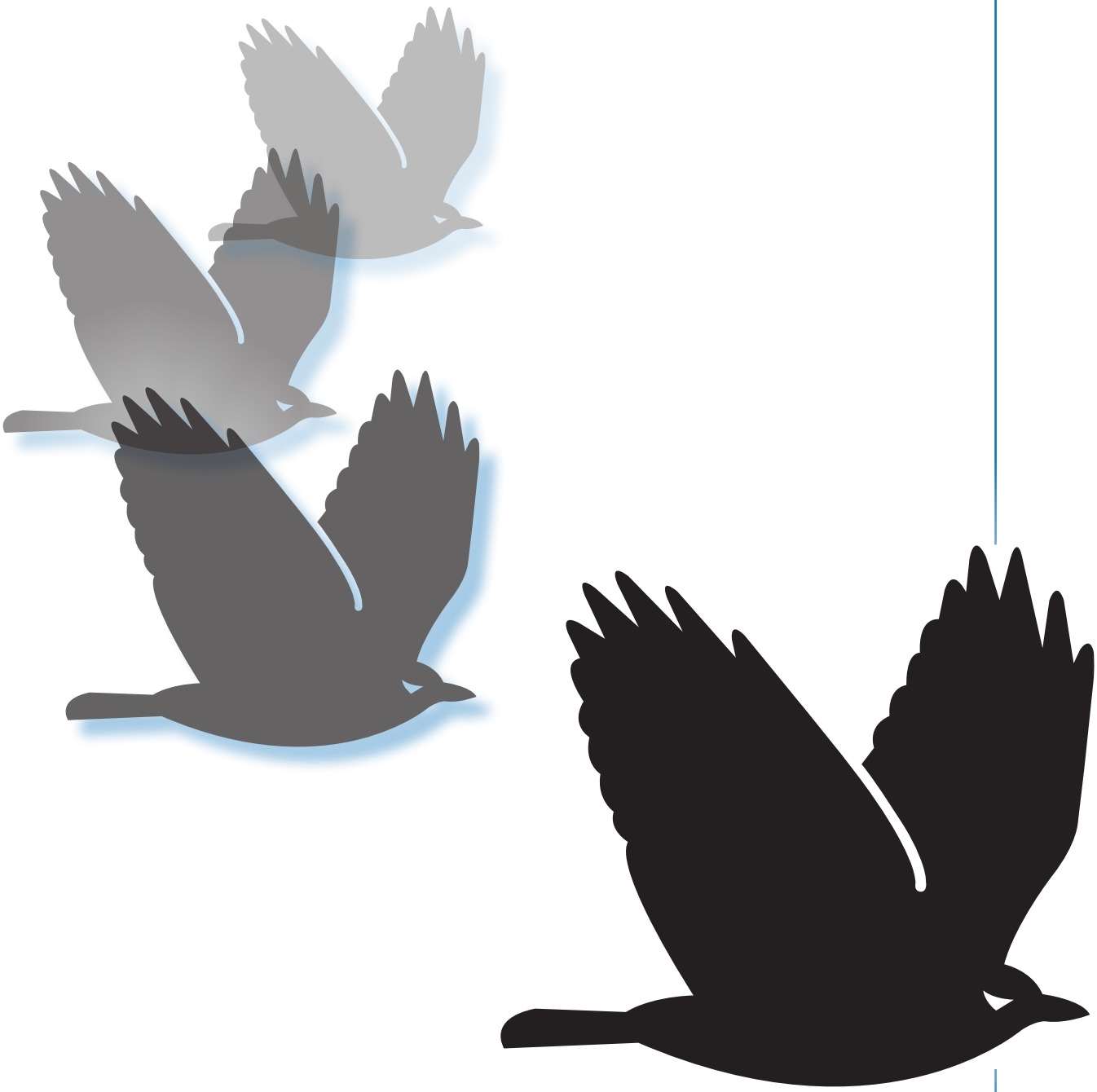
Peninsula
Clinical Placement
Network

Simulated Learning Environment Review



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1 Abbreviations

ACME	Acute Crisis Management in Emergency
ACRM	Anaesthesia Crisis Resource Management
Adv	Advanced
AED	Automatic External Defibrillator
ALS	Advanced Life Support
APLS	Advanced Paediatric Life Support
Art	Arterial Line
BLS	Basic Life Support
BoN	Bachelor of Nursing
BoN,P,M	Bachelor of Nursing, Paramedicine, Midwifery
CCU	Critical Care Unit
Cert	Certificate
CPD	Continuing Professional Development
CPN	Clinical Placement Network
Cric	Cricothroidotomy
Crit	Critical Care
CRM	Crisis Resource Management
CSP	Commonwealth-supported entry-level places
DH	Department of Health
DHS	Department of Human Services
Dip	Diploma
ECG	Electro Cardiograph
ED	Emergency Department
EMAC	Effective Management of Anaesthesia Crises
ENT	Ear, Nose and Throat
HWA	Health Workforce Australia
ICC	Intercostal catheter
ICU	Intensive Care Unit
IDC	In Dwelling catheter
IV	Intravenous
Med	Medical
MET	Medical Emergency Team
NGT	Nasogastric tube
NHWT	National Health Workforce Taskforce
NICU	Neonatal Intensive Care Unit
OSCE	Objective Structured Clinical Examination
Paed	Paediatric
PALS	Paediatric Advanced Life Support
PG	Post Grad
PH	Peninsula Health
PICC	Percutaneous Intravenous Central Catheter
PMCV	Postgraduate Medical Council, Victoria
PTT	Part Task Trainer
RECRM	Rural Emergency Crisis Resource Management
RMO	Resident Medical Officer
RN	Registered Nurse
RTO	Registered Training Organisation
Sim	Simulation
SimBaby	Laerdal high-tech Human Patient Baby Mannequin
SimMan	Laerdal high-tech Human Patient Mannequin
SLE	Simulated Learning Environment
SP	Simulated Patient (actor) also known as Standardised Patient
StJoG	St John of God
SVH	St Vincent's Hospital
TAFE	Technical and Further Education
Tech	Technology (as in complexity of simulation equipment)
TtT	Train-the-Trainer

2 Executive Summary

Current and projected health workforce shortages will place increasing strain on the health service system to deliver health care and educate future health care practitioners. Education providers need to find clinical placements for their students and health services now face the challenge of supplying those places. One such solution is the use of simulation and simulated learning environments (SLEs) to compliment, enhance, replace and improve clinical placements and therefore increase capacity.

The Victorian Department of Health (DH) introduced a new system of governance for health care student clinical placements in 2010. This included the establishment of the stakeholder-led Victorian Clinical Placements Council, to provide statewide strategic oversight and coordination of clinical placement initiatives and the formation of 11 geographically-based clinical placement networks (CPNs). The Peninsula CPN encompasses all health services (small and large, public and private) and higher education facilities in the Frankston – Mornington Peninsula area. The Peninsula CPN membership is drawn from a number of organisations including public health, universities, TAFEs, private health, local government, general practice training providers, the Peninsula GP network and DH Southern Metropolitan Region.

As part of their work on reviewing and reforming clinical placement activities, the Department of Health commissioned the *Victorian Clinical Skills Simulated Learning Environment Infrastructure Review* and released significant funding to support simulation infrastructure. Concurrently, Health Workforce Australia released a report titled *Use of Simulated learning Environments in Professional Level Curricula of Selected Professions in Australia* (December 2010) that is expected to inform future investment in SLEs within Australia (and therefore Victoria). These two factors (limited clinical placements and funding of simulation equipment) have led to a rapid growth of simulated learning environments.

The Peninsula CPN SLE Review examined the operations and infrastructure of clinical skills SLEs within the Peninsula CPN, with the aim of identifying support and/or resources that could improve clinical skills acquisition and, access to SLEs, and utilisation of SLEs. The project included professional entry courses whose students undertake clinical placements within the geographic boundaries of the Peninsula CPN.

This report details the findings of the project conducted from April to June 2011. The first phase involved a desktop review of similar activities to avoid duplication of previous data collection. The second phase was focused on identifying the stakeholders (particularly the SLEs within the CPN). Phase three was a survey on current SLE infrastructure and associated activities. Phase four was a series of stakeholder discussion forums to elicit views on how skills acquisition can be more effective and how clinical training capacity can be increased through the use of simulation.

From the activity survey, a total of five SLEs were identified within the CPN, all of which contained equipment and mannequins that were, for the most part, used for less than 50% of the time they were reported as being available for use. Each SLE was given a technical rating depending on the type of equipment it contained. Four of the five SLEs were rated at the highest level and three SLEs had simulation infrastructure different to that normally contained within *skills labs* (e.g. a high dependency nursing unit, trauma simulation involving crashed cars, and a simulated four roomed flat with glass external walls for observation purposes).

From the discussion forums it was evident that most CPN stakeholders were not aware of current simulation infrastructure, nor did they know what resources they would require should they embrace the concept of

utilising simulation as an adjunct to clinical training. Significantly, extra equipment was not suggested as being required to enhance skill development, increase simulation capacity, increase access to simulation or to increase student capacity. Increased staffing, particularly simulationists to operate equipment and facilitate simulation sessions, was identified as the major resource required to achieve these goals. New initiatives, such as increased use of Standardised Patients (actors) (especially in relation to training, rather than assessment) and identification of interprofessional learning opportunities within simulation, were also recognised as key factors. Many practical solutions were offered – in particular the need to work together and share resources such as simulation-based educational packages, i.e. scenarios.

Understandably, the major challenge identified from the discussion forums was the need to satisfy accrediting bodies of the legitimacy of replacing some clinical time with simulation time and was seen as a potential major barrier to implementation. Despite an acknowledgement that simulation may be viewed as a way to compliment clinical training time, thereby freeing-up clinical time to increase capacity, strong reservations were expressed regarding regulatory bodies accepting simulation as a viable alternative to real clinical training time (particularly in the short term). Stakeholders felt that until simulation is acknowledged as clinical time or at least an alternative to clinical time, it may be difficult to implement into existing clinical curricula and have an impact on clinical placement capacity.

The need for centralised (CPN-based) planning, covering governance, education and research, was recognised as key to addressing the challenges identified, and the successful implementation of simulation. As a result of the findings of the project, nine actions are suggested:

Suggested Action 1
This report should be publicly available to inform future SLE investment and directions within the CPN.

Suggested Action 2
The location, contact, equipment and booking details of all SLEs within the Peninsula CPN should be accessible via the Peninsula CPN website.

Suggested Action 3
Determine the feasibility of establishing a library-style system for managing SLE infrastructure and equipment.

Suggested Action 4
Simulation capacity of all SLEs including space, equipment, resources and staff, should be identified and mapped using a consistent formula.

Suggested Action 5
Keep a watching brief on state and federal SLE-related activities so that Peninsula CPN SLE-activities can build on, rather than duplicate or compete with, those developments.

Suggested Action 6
Form an SLE-focused sub-committee of the Peninsula CPN Executive Committee to guide SLE development within the CPN.

Suggested Action 7
Identify staff recruitment and training needs for effective delivery of learning through SLEs.

Suggested Action 8
Work with Monash University to access their database of Standardised Patients (MonSim) on behalf of CPN members and/or develop a suite of Standardised Patients for use within the CPN.

Suggested Action 9
Work with the Department of Health and other relevant people and organisations to gain access to the HWA-commissioned literature reviews on the use of SLEs within specific disciplines.

3 Introduction

3.1 Health professional training in Victoria

In recent years, Victoria has successfully campaigned to secure a significant number of additional Commonwealth-supported entry-level places (CSPs) in health professional courses[1]. These additional places have come about as a response to current and projected shortages in the national health workforce. The increase in CSPs in health professional courses has resulted in a proportional increase in the required number of clinical placements, having a major impact on an already over-burdened health service sector.

Clinical placement difficulties are not unique to Victoria (or Australia), and academic literature from around the world indicates shortages exist in North America, Europe and Asia[2]. Furthermore, the shortages relate to many factors including more learners, fewer patients in traditional clinical placement settings, changes to treatment modalities and complexity, a shortage of educators and an ageing workforce[2-3].

To help manage clinical placements, the Victorian Government introduced geographically-based clinical placement networks (CPNs)[4].

3.1.1 Clinical Placement Networks

In October 2007, the Victorian Department of Health commissioned a report – Clinical Placements in Victoria: establishing a statewide approach[1]. This led to the establishment of integrated stakeholder networks, empowered to lead a sustainable clinical placement strategy and policy – development, termed Clinical Placement Networks (CPNs). Eleven geographically-defined CPNs are working collaboratively to increase the capacity for, and quality of, student clinical placements through improved regional cooperation and collaboration. All Victorian health and health-education providers are members of a CPN. Additionally, a high level council, the Victorian Clinical Placements Council (VCPC), provides statewide leadership on clinical placements across health disciplines[4].

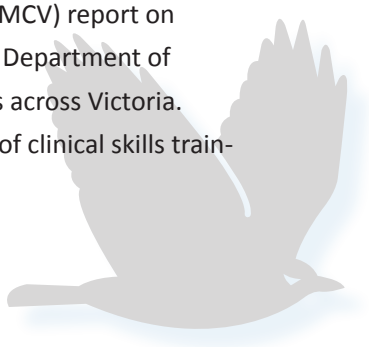
The Peninsula CPN has been established to support clinical education activities in and around the Mornington Peninsula. It is led by an Executive Committee that is representative of the CPN's membership base and supported by a dedicated (full-time) Project Manager. The committee members represent the different sectors involved in clinical education in the CPN[5].

3.2 Simulated Learning Environments

One solution to the difficulty of finding clinical placements has been to reduce, replace or compliment them through greater use of simulation. Simulation is a very powerful methodology for the teaching of specific procedural skills, as well as more generalist skills such as teamwork, decision making and communication. This has resulted in an increase in the use of SLEs to teach health professionals a range of skills[6]. As technology and our understanding of biophysical processes have improved, SLEs have become an accepted part of health professional education, including within Victoria[6-7]. However, there is still a strong desire (probably stemming from a culture of evidence-based practice) to demonstrate the effectiveness of SLEs relative to a clinical placement[6-7].

3.2.1 Supporting the growth of SLEs

Since 2005, stemming from the release of the Postgraduate Medical Council of Victoria (PMCV) report on *Clinical Skills Education Requirements of the Health Professions in Victoria*[8], the Victorian Department of Health (DH) has supported the development or enhancement of over 30 clinical skills SLEs across Victoria. These infrastructure investments have been further supported through the development of clinical skills train-



the-trainer programs. Concurrently, there have been investments by individual health services, universities and Technical and Further Education (TAFE) institutes, in similar infrastructure, often in partnership with Skills Victoria, state and federal government departments or through infrastructure funding programs and grants.

In 2007, in response to the shortage in Victorian clinical placements mentioned above, the Victorian Department of Health published a comprehensive strategy aimed at enhancing the capacity and quality of clinical placements in medicine, nursing and allied health in Victoria – *Clinical Placements in Victoria: Establishing a Statewide Approach*[1]. This strategy proposed a more integrated approach to the use and allocation of new and existing resources, including planning and funding for SLEs.

In 2008, the DH released a discussion paper on the concepts and values of establishing such an agency – *Clinical Placements in Victoria: Considering a Clinical Placement Agency*[9] – and the outcomes of consultations were documented in a second report - *Clinical Placement Agency: Report on Consultation Workshops*[10]. The report on consultation workshops highlighted the need to maintain the current investment in simulation. Furthermore, stakeholders felt greater use of simulation represented an opportunity to improve the efficiency of available clinical education and training and that a central planning agency had a role to play in disseminating information about available simulation facilities[10].

Following on from these reports and consultation sessions, the DH commissioned a project to provide advice on statewide governance arrangements for improving clinical placements in Victoria (including the management of simulation). The final report (*A New Model of Clinical Placement Governance in Victoria*[11]) proposed a multi-level governance model and is the basis of the current Clinical Placement Networks[12]. Within this report (and confirmed by stakeholder feedback), it is suggested CPNs could play a role in maintaining and managing data on clinical placement activities within a region, including information about simulation facilities such as location, access, infrastructure and usage[12].

In 2010, the DH commissioned a review of Simulated Learning Environments within Victoria, including recommendations on how the access and utilisation of SLEs could be improved[13]. The recommendations covered a range of activities including establishing a statewide SLE strategy and reviewing SLE staffing and staff training[13].

At the national level, (simultaneously but somewhat separately) the National Health Workforce Taskforce (NHWT) (formed by the Council of Australian Governments (COAG) in 2006 to oversee three key national areas of health workforce reform – Research, Planning and Data, Education and Training, and Innovation and Reform[14]) released a paper titled *Clinical training – governance and organisation*[15]. Stemming from reforms announced by COAG on 29 November 2008, the paper highlights the need for (and possible models of) a new national agency to manage $1.1 billion worth of health workforce initiatives (including over $90 million for SLE infrastructure and on-going operational costs)[16] to be spent over four years (starting in 2009).

In 2009, NHWT was replaced by Health Workforce Australia (HWA)[17] and a program of activities specifically aimed at simulated learning environments was initiated[18] including $46 million for infrastructure development and a further $48 million for recurrent operations (both amounts to be allocated in 2010-11), with $20 million allocated to SLE activities annually thereafter[19]. Several activities have been conducted under the auspices of these programs including a profession-based review of education using simulation, aiming to identify common elements of educational programs that could be successfully delivered (across the country) using simulation[20]. Indeed, HWA is looking for ways to increase student clinical training capacity

through the use of innovative simulation programs that not only accommodate the increase in student numbers, but that augment clinical training[21].

Thus, via two separate processes (one state and one federal) central management/oversight arrangements for clinical placement activities, including simulation, have been implemented and activities funded. Furthermore, the development and implementation of Victoria's CPNs means that locally driven clinical placements and clinical training will be the responsibility of the CPN.

3.3 The need to review the Peninsula SLE infrastructure

The establishment of CPNs to provide strategic oversight and coordination of clinical education initiatives has resulted in the development and implementation of locally-driven approaches to clinical placement planning, coordination and delivery. The Peninsula CPN includes membership drawn from public health, universities, TAFEs, private health, local government, general practice training providers, the Peninsula GP network and DH Southern Metropolitan Region

This set of circumstances highlights the need for a review of simulation centre capacity to further develop locally-driven clinical placements. This information will be the first step in addressing the provision of simulation resources that are optimised to meet the Peninsula CPN clinical placement demand.

This information will also be used for forward planning including further actions for a more defined role and staffing structure for SLEs within the CPN, highlight additional staffing needs and dedicated staffing resources, identify SLE staff training to support increased capacity, whilst recognising the diversity and needs of disciplines and students.

3.4 Methodology

The consultants (Dr Richard Huysmans and Ms Jennifer Keast), divided the activities of the project into four phases:

1. Review of similar activities;
2. Identifying the stakeholders;
3. Stakeholder survey; and
4. Discussion forums

3.4.1 Review of similar activities

The main aim of this stage of the project was to avoid any unnecessary surveys or requests for data if they had already been gathered. Previous SLE review activities have been undertaken at state and national levels. Two projects in particular – the state-based review of SLE infrastructure and the Australia-wide review of discipline-based simulated learning – have data, outcomes and recommendations relevant to this project. Making use of their contacts at the state and federal level, the consultants sought access to this data to inform the Peninsula CPN SLE Review. These documents were reviewed, and data of interest (such as equipment, usage information and contact details) were noted in a series of spreadsheets and informed future phases of the project.

3.4.2 Identifying the stakeholders

Through their own experiences, including conducting the Victorian SLE Review, the consultants were aware of many SLEs operating across Victoria. However (and as noted in the Victorian SLE Review Final Report), not all known SLEs participated in the Victorian review and it stood-to-reason there would be unknown SLEs that did not participate either (some of whom might be in the Peninsula CPN). Thus, working with the project steering group and CPN Project Manager, the consultants prepared a starting list of stakeholders for consultation throughout

the project. This list was derived from sources such as participants in the Victorian SLE Review, the CPN Executive Committee, attendees at the Peninsula CPN Workshop and distribution lists held by the CPN Project Manager.

A letter was developed to provide stakeholders with information about the project in general; future activities they might be asked to participate in; how they could participate; and the intended outcomes of the project. Each stakeholder was sent the letter via email, to seek their willingness to participate in the review, either through providing simulation infrastructure data and/or attending discussion forums. A survey was created (using Survey Monkey) to ascertain stakeholder contact details, their willingness to attend a discussion forum and their particular involvement in SLEs – whether as a manager or an employee of an SLE (see Section 3.4.4 Discussion forums).

This phase of the project also served as a stakeholder engagement phase and was conducted simultaneously with the review of similar activities.

3.4.3 Stakeholder survey

This phase focused on collecting quantitative data from stakeholders known to have information relating to SLEs (i.e. SLE Managers) as determined by the survey and the consultants' knowledge of simulation activities within the CPN. Permission was sought from the DH to make use of the MS Excel-based survey used (and data collected from the Peninsula CPN) in the Victorian SLE Review. The survey was provided as one excel file with several worksheets. Each worksheet included very brief instructions on how to complete that worksheet and covered a different aspect of SLE activity:

- Organisation – An overview of the SLE covering name, location and type of SLE, operating hours and staff numbers.
- Equipment and resources – This part of the survey listed the vast majority of simulation equipment an SLE might have. It asked questions such as number of each item, training to use the equipment, time available for use, and actual use.
- Education – Focused on educational activities the equipment is used for, the number of educators required to deliver the course, numbers of learners able to be taught at any one time, disciplines taught (and numbers) and level of the learner taught.
- About – Provided a small amount of information about the project, the due date and submission email address for the file and where to get more information

Those organisations that provided data in the Victorian SLE Review were only asked to review and update their information.

3.4.4 Discussion forums

Initially, four two-hour semi-structured discussion forums were planned across the CPN. However, due to the low number of registrants for one forum, only three were held. The forums were held across a two week period from 11 – 16 May 2011, at various sites across the network. All forum registrants received an agenda for the discussion covering the objectives of the project, and optional background reading including the Victorian SLE Review[13] and the HWA report on simulation[20].

Data collected from earlier projects (and earlier stages in this project) were referred to during forums to ensure that suggestions made were consistent with the resources and equipment (and their limitations) available (or not available) within the Peninsula CPN.

4 Findings

4.1 Review of similar activities

In the recent past, two projects have been conducted that provide useful background and supporting information to the current review; namely the *Victorian Clinical Skills Simulated Learning Environment Infrastructure Review*[13] and the report on the *Use of simulated learning environments in professional entry curricula of selected professions in Australia*[20]. Both pieces of work were conducted in 2010, with reports published in November and December respectively. A summary of each is provided below, covering implications for the current project.

Only publically available information can be accessed from the Australia-wide review. A summary of that report and implications for the Peninsula CPN are also provided below.

4.1.1 Findings from the Victorian Clinical Skills SLE Infrastructure Review

The consultants were the authors of the Victorian review, and were granted permission to make use of the data collected during that review, adhering to the conditions under which the data were originally collected (i.e. de-identified reporting).

The review involved two data collection processes. The first was an MS Excel-based survey, collecting information about current equipment and activities – referred to as the Activity Survey. The second focused on future requirements and barriers to improving capability and capacity – referred to as the Improvement Survey. Both received responses from people within organisations within the Peninsula CPN.

Summary of Activity Survey findings

According to the final report, two responses were received from organisations within the Peninsula CPN, at a technology level of 2 and 3. This means that at least one simulation facility within the Peninsula CPN has high technology equipment, such as a SimMan® or METTI® and at least one full-body mannequin (but not at the technology level of SimMan or METTI).

Compared to the rest of Victoria, on average the Peninsula CPN has slightly more different pieces of equipment and the same total number of pieces of equipment.

According to the data provided, in 2009 no piece of equipment was used to its full capacity (i.e. used all weeks it was available for use), but there were at least two pieces of equipment (SimMan and *Other BLS/ALS mannequin)* that came close (48 weeks out of 52). The next closest is only used half of the time it is available. This implies that for the most part, there is spare equipment capacity within the CPN.

According to the data provided, a wide range of equipment is used in train-the-trainer activities. This is to be expected, given trainers are expected to use the equipment. In respect of individual pieces of equipment, SimMan is used for a wide range of activities (the broadest of all reported equipment for the Peninsula CPN) and some equipment was not registered as used for any activity (*Adult nursing mannequin* (14 reported in the CPN) and *other birthing mannequin* (one reported in the CPN)). However, the data provided were not clear on how many sessions were delivered using the equipment.

According to the information provided, medicine, nursing, paramedicine and midwifery were the only disciplines taught in simulation facilities. Disciplines that might have particular relevance to the Peninsula CPN not in the list include physiotherapy, occupational therapy, social work and allied health assistant.

Of the 24 staff who were reported as operators of simulation equipment (technicians or educators), only six had some form of training and four of those only had on-the-job training. Thus, there may be scope within the Peninsula CPN to provide more training for SLE operators and/or encourage more people to become SLE operators.

Both facilities reported limited dedicated teaching or technical staff, with much of the services of the SLE provided via sessional teachers/technicians. Similarly, maintenance was reported as being outsourced as required.

Summary of Improvement Survey findings

From the Peninsula CPN, six responses were received to the improvement survey. These responses came from two different organisations (one at Level 2 technology and one at Level 3 technology).

- All respondents indicated their organisation had SLE infrastructure (the only CPN to not have respondents from an organisation without SLE infrastructure), and the majority (four) felt it was Level 3 (high) technology.
- Interestingly, one respondent indicted their SLE was used to full capacity, whereas the other respondents did not; although two were not sure. The reasons for indicating the SLE was at full capacity were not explored. This was one of eight full capacity responses received across the entire survey (127 respondents).
- The barriers to increasing capacity were multiple, but buy-in from management was most often listed as number one, and staff training was selected by the most number of respondents.
- Teaching staff were nominated as most necessary (from a staffing point of view) to increase capacity.
- Videoconferencing was most nominated as enabling an increase in capacity – higher than all responses relating to simulation equipment.
- Protected time for participants was the biggest access factor related to capacity.
- Teaching space was also reported as having a negative effect on capacity (more reported than dedicated simulation space or more storage space, although all were nominated as space-related barriers to improving capacity).
- Similarly to capacity, one respondent indicated their SLE was used to its full capability and the rest said it was not (three) or they were unsure (one).
- Buy-in from management was the nominated barrier to increasing capability. Number of staff, training of staff and simulation equipment were also nominated as factors.
- When asked specifically about staffing, Peninsula CPN respondents suggested almost all types of staff (Dedicated Manager, Technical Staff and Teaching Staff) could improve capability. They also suggested there should be less reliance on good will and greater access to support networks.
- In relation to the effect staff training has on capability, support to attend staff training was nominated most frequently.
- Similarly to capacity, SLE equipment was not highly selected as necessary to increase capability; audiovisual equipment and video conferencing were more nominated.
- Geography was a big issue relating to capability.
- Time was most frequently noted as a barrier to delivering learning through simulation (more nominated than staff, space or equipment). However, when it came to delivering services to those outside the host organisation, staffing was the biggest issue.
- Finally, when asked about services to support their SLE (that would be external to their SLE) Peninsula CPN respondents indicated a simulation support network, pool of SLE trained staff and a bank of education scenarios with equal (and highest) frequency.

Similarity to whole of Victoria

There are clearly differences between the Peninsula CPN data, and the data for the whole of Victoria, however, there are many similarities evident from both the activity and improvement surveys.

In the final report on the *Victorian Simulated Learning Environment Infrastructure Review,* the consultants conclude with a number of suggested actions for simulation in Victoria. Notwithstanding some actions may be better handled at a state (rather than CPN) level, it is interesting to note the responses relating to the

Peninsula CPN only, would suggest a similar set of actions. For example, the Peninsula CPN data suggest:

- There is currently unused simulation capability and capacity.
- That staffing and time are greater barriers to accessing this unused capability and capacity than equipment.
- There is greater need for non-simulation equipment (e.g. audio visual) than simulation equipment.
- That resources such as a support network and a pool of trained SLE educators would be of benefit.

All of these outcomes are also listed in the final report on the *Victorian Simulated Learning Environment Infrastructure Review.*

4.1.2 Findings from the Use of Simulated Learning Environments in Professional Entry Level Curricula of Selected Professions in Australia

The report summarises 12 projects (each with their own report), covering 12 separate professions – medicine, nursing, midwifery, physiotherapy, occupational therapy, social work, speech pathology, oral health (including dentistry), paramedicine, clinical psychology, pharmacy and radiation sciences. CPN establishment data indicate that all disciplines covered in the HWA report, besides oral health (including dentistry), are taught in the Peninsula CPN. Thus, the summary report and the detailed reports they are based on, will form a useful starting point for the development of a CPN-wide approach to SLE use. However, at this stage the full reports from each profession are not available; although the HWA SLE program update of 23 February 2011 notes that the 12 technical papers for each profession will be made available *(shortly)*[21].

The 12 projects were commissioned by HWA, with the intent of gaining a greater understanding of the current and potential use of simulation within the current curricula of health professions. The projects were profession-based, with one lead organisation (usually a university) and were expected to gain the participation of all organisations offering training in the particular profession at the professional-entry level as well as the relevant accreditation bodies.

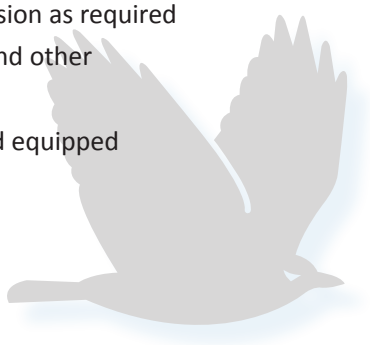
The summary report provided by HWA indicates that higher education providers are very willing to consider delivering aspects of their respective professional entry courses through simulated environments. For their part, accreditation bodies were open to the idea of the use of simulation as a training technique. This was the case across all professions covered. Learners were also willing to be taught using simulation, providing the activity was not overly artificial/reflected the real environment.

Each profession was asked to report on four areas:

- Curricula elements where simulation is most likely to be deployed and will achieve the best educational outcome;
- The barriers to implementation;
- The use of simulation in interprofessional learning; and
- Recommendations for development and implementation.

The body of the report provides a summary of outcomes from each project against the four areas required for coverage. Therefore, for each of the 12 professions there are dot points, tables or summary paragraphs covering each of:

- Curricula elements where simulation is most likely to be deployed and will achieve the best educational outcome – these tended to be competencies or skills already determined by the profession as required for safe clinical practice. Common to all professions were communication, team work and other behavioural skills.
- The barriers to implementation – focused on limited access to appropriately staffed and equipped



SLEs (low technology and/or low fidelity), the (low) level of (education) training of SLE staff and scheduling difficulties.

- The use of simulation in interprofessional learning – primarily viewed as an opportunity to increase interprofessional learning as well as increase the use of SLEs, the major barrier cited to greater use was scheduling and space management.
- Recommendations for development and implementation-there were eight recommendations common across the projects, relating to the simulated environment, namely:
    - investment in human resources including training of educators and technicians and the provision of recurrent funding for staffing simulation programs;
    - promotion of collaboration within university schools, across multiple campuses and between schools;
    - increased geographical access to programs for all students;
    - engaging in site visits to centres to ascertain site readiness;
    - investing in enhancing current programs;
    - encouraging interprofessional learning by using simulation as the catalyst;
    - maintenance of standards in simulation through the adoption of certification and accreditation programs; and
    - simulation programs which are underpinned by strong governance and strategic business planning.
- A further six recommendations were common across the projects relating to education approaches, namely:
    - the development and maintenance of a case bank within professions and across professions;
    - investment in new technologies virtual and web-based to enable broader reach;
    - evaluation and research to be embedded into all simulation programs;
    - aligning simulation curricula with professional standards and frameworks;
    - development and maintenance of universal skills by profession; and
    - flexibility within simulation curricula to meet local curricula needs.

4.2 Identifying the stakeholders

Using the contact details gathered in the Victorian SLE Review as a starting point, and with further input from the CPN and consultant knowledge, a list of stakeholders was created. The list was intended to cover locations and people with and without SLE infrastructure. It included 119 *individuals,* covering 53 *placement providers,* 23 *education providers* encompassing 15 disciplines. On 21 April 2011, all people in this list were sent a letter (in the form of an email and an attachment), outlining the project and how they could participate. This included a link to register for the discussion forums scheduled in May 2011 (see Section 4.4, starting on page 18).

4.3 Stakeholder survey

The stakeholder survey was designed to capture the location and usage of SLEs and SLE equipment; staff numbers; types, numbers and duration of courses and sessions; disciplines and numbers of participants and level of SLE technology. A modified version of the Victorian SLE Review Activity Survey was used to facilitate ease of data-transfer and comparison between the two projects. The modifications took into account the feedback on the Activity Survey as well as the objectives of the current project. Based in MS Excel, the survey did not have any compulsory sections, nor did it force particular types of responses. It was felt that such flexibility would be more favourable with respondents. Naturally, this flexibility allowed variable responses across surveys and necessitated some data cleaning and coding to aid interpretation.

4.3.1 Response rate

Through the stakeholder identification process and subsequent responses on the registration form for the discussion forums (see Section 4.4, starting on page 18), five SLEs were identified within the Peninsula CPN and all returned completed Activity Surveys (i.e. a response rate of 100%). As noted in the Methodology Section 3.4.3 (Stakeholder survey, page 10), those organisations that provided data in the Victorian SLE Review (two organisations), were provided with pre-filled forms and thus only needed to update their information. Of the other three respondents, one did not participate in the Victorian review, and the other two were not identified in that review.

4.3.2 Organisation

All responses received included information within the Organisation worksheet. The aim of the Organisation worksheet was to provide a summary of the SLE's location, operations, including access and staffing. Five SLEs were identified within the CPN; their locations are listed in Table 1.

Table 1: Peninsula CPN SLE location and tech level

SLE Location	Tech Level
Monash University, Peninsula Campus (Nursing)	Level 2
Monash University, Peninsula Campus (Paramedicine)	Level 3
Peninsula Health, Mt Eliza Campus	Level 3
Chisholm Institute of TAFE, Frankston Campus	Level 3
HMAS Cerberus	Level 3

A total of five responses were provided to the question *Is there a dedicated simulation-based teaching space?* Respondents were asked to indicate what type of SLE they had – Skills Centre, Simulation Lab, In-situ Lab, Other (please describe). No definition of SLE type was provided (it was presumed the audience would understand the differences) and responses were received in each category (see Table 2). Four respondents indicated they had a *Skills Lab,* representing 80% of responses received to this question. Four respondents also indicated they had a *Simulation Centre* (4, 80%). Next most popular were *In-situ Labs* (3, 66%) and finally *Other* (2, 40%). *Other labs* were a simulated *High Dependency Unit,* an outside *Trauma Simulation Centre* and a simulated *living environment* i.e. 2 bedroom flat. All respondents indicated they had more than one SLE type, with three respondents indicating they had three or more types of SLE.

Table 2: SLE type and number within the Peninsula CPN

Type of SLE	Description	Number in Peninsula CPN
Skills Lab	Tutorial -type rooms, with access to part -task trainers and clinical equipment	4
Simulation Centre	Realistic clinical environment housing patient mannequins and usually some form of recording/playback capability	4
In-Situ Lab	Located in the working part of the health service	3
Other	Simulated high dependency unit; trauma simulation centre; simulated living environment	2

Operating hours were fairly standard and ranged between opening between 0730 and 0900 and closing between 1630 and 1800. One lab remained open until 2200 including Saturdays. Although a direct question on staff as it relates to operating hours was not asked, it was presumed the operating hours primarily relate to SLE staffing.

Staffing varied greatly. One location indicated they had one dedicated staff member and the highest reported number of staff was 6.4 FTE. One SLE reported that there were no specific staff but it was "utilised by all academic staff".

4.3.3 Equipment

The major part of this SLE Activity Review, and therefore the review of clinical skills SLE infrastructure within the CPN, was the Equipment worksheet. In summary, it was intended to:

- Collate a CPN-wide inventory of SLE equipment;
- Identify frequently used equipment;
- Establish the type of training required to utilise SLE equipment in teaching programs;
- Assess availability of equipment for use; and
- Note (historical) actual usage.

Tech rating

As part of the data-cleaning and -coding process, all pieces of equipment were given a tech rating of 1 (low – PTTs, e.g. IV cannulation arm), 2 (medium – full body mannequin, not including SimMan, METTI or similar), or 3 (high – full body simulation mannequin, e.g. SimMan, SimBaby or METTI). Each response was then given a tech rating, equivalent to the highest rated piece of simulation equipment reported in the particular response. Within the CPN, four of the five SLEs are rated at Level 3 and one is Level 2.

Although the data presented in this section provides a picture of SLE equipment within the CPN, some SLE equipment may be housed in areas away from the SLE (unbeknown to the respondent) and therefore may not be accounted for in responses. Indeed, such occurrences were uncovered in the discussion forums.

Reported equipment

Of the 38 pieces of equipment listed, 31 are present within the CPN. The most popular (i.e. all responding organisations have one) were the *IV cannulation arms* and the *Adult Airway trainer*. IV cannulation arms are actually used to teach three separate but similar skills – IV cannulation, venepuncture and blood culture collection. The most common piece of equipment (i.e. the most units across the CPN) was the *injection trainer* (44 units reported across all surveys received). IV cannulation arms were second most common (36), followed by *Suture Trainer* (21) and then *Resus Annie* (20). Other popular items were *Paed/neonatal BLS/ALS mannequin* (17), *Nursing Kelly* (16) and Airway trainers (13). These results are consistent with the outcomes from the *Victorian Clinical Skills Simulated Learning Environment Infrastructure Review* (2010)[13].

Obstetric training devices were well represented with ten birthing mannequins across three sites. There were nine neonatal/paediatric PTTs and one SimBaby.

Apart from neonates and paediatrics there are 39 torsos/mannequins available for BLS/ALS training and nine SimMan mannequins (which are also commonly used for BLS/ALS training).

Requirements for training

Having listed how many items they had, respondents were then asked to note if training was required to use the piece of equipment. For the vast majority of responses and pieces of equipment, no requirement for training was noted. This even included more technical pieces of equipment such as SimMan or METTI. This is somewhat surprising given the authors' experiences with these pieces of equipment suggest some (even if informal) training is required for novice users.

Availability for use

All equipment at all sites was available for use for between 50 and 52 weeks of 2010. However, actual use varied from as much as 52 weeks to as little as two weeks. Indeed, only 19 pieces of equipment were used for more than 25 weeks of 2010. The best-used piece of equipment was *IV cannulation arm;* that was used for 52 weeks of the 52 it was available. The next best was other *BLS/ALS adult mannequin* (used for 48 weeks of 52, four unused weeks) and SimMan (48 of 55, four unused weeks). Equipment used least often included *intraosseous trainer* (1 week) and *ECG chest trainer* (2 weeks). These results are consistent with the outcomes from the *Victorian Clinical Skills Simulated Learning Environment Infrastructure Review* (2010)[13].

As noted above, equipment availability was reviewed from a historical perspective. That is, reviewing available and actual usage as it occurred in the 2010 calendar year. Follow-up discussions with each of the SLEs, revealed none were able to formally determine or predict what external capacity could be made available for the next 12 months (i.e. they could not provide a calendar of use of space or equipment). Most ran on a month-by-month calendar and their system for handling external requests was on an *ad hoc* as needs basis, usually in the form of a telephone call. This even seemed to be the case for simulation sessions built into courses and booked well in advance.

4.3.4 Education

The Education worksheet collected data on the delivery of health care practitioner training using simulation equipment, as it occurred in the 2010 calendar year. For each course listed by respondents, the worksheet was intended to cover items such as participants taught, number of educators required, the duration of the course, the discipline of the learners and the level of the learners.

A total of 62 different courses were reported as being delivered across the CPN in 2010, with 34 courses taught at more than one site – five at four sites (ALS, basic nursing skills, bed making, injection training, venepuncture) and 13 at three sites. A total of 64 sessions were delivered across the CPN (i.e. most courses only appeared to be run once, but a couple have been run twice). On average 21 courses were delivered at each SLE, with 46 being the highest number of courses and five the lowest. Courses ranged from two hours duration (for skills training) to two days duration (for communication and counselling training).

Two of the SLEs# were built with particular disciplines of learners in mind – paramedics or defence force medical sailors . Although they could be used for other disciplines, the survey data indicate they are not. A further three of the SLEs mainly teach nursing, midwifery and physiotherapy students. Interestingly, only one site noted teaching medical students. Group sizes varied from 12 to 54.

Four of the five SLEs provided data on the discipline and the level of the learners taught. Simulation sessions were delivered to a range of different student levels. For example, 22 sessions were delivered to Advanced Medical Sailors at one site, 13 sessions were offered to Cert IV level students across two sites, 12 sessions were offered at Diploma level across two sites and 82 sessions were offered at professional-entry level across three sites.

In 2010, the two largest disciplines taught were nursing (500 trainees for both division 1 and 2) and nursing/ paramedicine double degree students (150 trainees).

It should be noted that respondents were not asked to rate the fidelity of the education delivered using high-tech mannequins. For example, it could be that SimMan is used for IV cannulation training – as it has that type of arm – rather than for fully immersive simulated scenarios – its primary design purpose. So whether the equipment is used to its full capability is not identified through this survey.

 # A medical sailor is specifically trained for the armed forces, and is not equivalent to a civilian doctor, nurse or other health care practitioner.

Based on the data, the educational sessions delivered can be categorised into four broad themes:

1. Psychomotor skills taught on PTTs (equipment noted as Level 1 tech in this report).
2. Resuscitation skills taught mainly on low-tech mannequins (equipment noted as Level 2 tech in this report).
3. Workshops utilising PTTs and low-tech mannequins.
4. Team training simulations utilising high-tech mannequins (equipment noted as Level 3 tech in this report) – these sessions are mainly based on specialty areas such as ICU.

Psychomotor skills taught on part-task trainers

Just under half (30 out of 62) of the courses listed in the Education worksheet fall into this category. The skills taught can be separated into those that are generic (required by all medical, nursing and midwifery staff) e.g. IV cannulation and airway management and those that are more specialised e.g. shoulder dystocia in midwifery and obstetric training. Psychomotor skills are taught at four of the five SLEs.

Resuscitation skills taught mainly on low-tech mannequins

Fifteen adult, paediatric and neonatal resuscitation sessions were delivered across the CPN in 2010. However some sessions may have been embedded within other courses and have therefore gone unidentified/ recorded. They were taught at all five of the SLEs.

One site reported delivering 18 mock code sessions, whereby the cardiac arrest is paged in the normal way within the hospital and participants are unaware until they arrive on the scene that the case is not a real person.

Workshops utilising part-task trainers and low-tech mannequins

In our experience, many SLE workshops use a scaffolded learning approach with the psychomotor skill component being taught on a PTT and then embedded into a low fidelity simulation to contextualise the skill. Twelve such workshop style sessions were delivered in 2010. Generic situations captured in this style include sessions such as midwifery skills and intern training. Other more specialised workshops included obstetric emergency scenarios and ICU Training.

Team training simulations utilising high-tech mannequins

Interprofessional, team-training, fully immersive simulations such as Advanced Complex Medical Emergencies (ACME) and Emergency Crisis Resource Management (ECRM) were delivered at two of Level 3 sites. Interestingly, one Level 2 SLE was able to deliver this type of training (despite not having a SimMan or equivalent). Twenty-three such courses were delivered across three sites. One site reported in situ sessions in a real clinical environment.

4.4 Discussion forums

In total, 21 people attended the forums, representing three universities (Monash University, La Trobe University and Charles Darwin University), two health services (Peninsula Health and St John of God), two TAFEs (Chisholm Institute of TAFE and Swinburne TAFE, one RTO (Health Train Education) and the Department of Health. They covered a range of health disciplines including medicine, nursing (division 1 and 2), midwifery, physiotherapy, occupational therapy, social work and medical imaging, as well as several of the simulation centres.

Initially, there were plans for four forums – one in each of Hastings and Rosebud, and two in Frankston. As only two registrants were received for the Rosebud forum, both were contacted to ensure they would be in attendance. Over the phone, one person indicated they could no longer attend. Therefore, the forum was cancelled and the other registrant was encouraged to attend another forum.

All registrants were sent reminder emails at least a week prior to their forum. The email provided details of the forum location, as well as noting a small amount of background reading (sections of the Victoria-wide SLE review and sections of the report by HWA on the use of SLEs within certain disciplines).

The discussion forums were structured around four topics, directly aligning with the project objectives; namely:

- Additional resources required to enhance skill development across disciplines in the Peninsula CPN
- Opportunities for increased simulation capacity in the Peninsula CPN;
- Opportunities for enhancing access to simulation resources not currently being utilised; and
- Opportunities to increase student capacity through the use of simulation resources

Reference was made to the available simulation equipment within the CPN, particularly if a simulation centre representative was not present at the particular forum. In general, discussion was robust and all present contributed. Within each forum there were some unique discussions – such as *what is the definition of simulation/simulated learning environments?* There were also some common themes that emerged, which are summarised below under each of the topics discussed. It should be noted that it is somewhat artificial to separate discussions into four topics as the discussion generally switched between topics, and the issues raised and solutions proposed crossed topics.

4.4.1 Additional resources required to enhance skill development across disciplines in the Peninsula CPN

Very few forums suggested equipment as an additional resource (a finding mirrored in the Victorian SLE Review[13]), most indicated more staffing, particularly simulationists (people able to operate and teach using simulation equipment). There were also suggestions of a register of Peninsula CPN simulation centres SLEs and their associated equipment, including how the simulation centre/equipment could be accessed.

4.4.2 Opportunities for increased simulation capacity in the Peninsula CPN

It was against this topic that the discussion on the definition of simulation started. Although only raised at one forum, the need to define simulation is an interesting one, particularly if software such as Second Life™# is considered a resource, as it raises the question of the extent to which other software (far less sophisticated perhaps) should be included in the definition of simulation.

As with the first topic, equipment was not nominated as a barrier to increasing simulation capacity within the CPN, but staffing was. The major opportunity for increasing simulation capacity was seen as improved communication about the existing simulation resources within the CPN. A case in point was that few (if any) people were aware there are five traditional simulation laboratories within the CPN (i.e. mainly focused on various pieces of equipment; placed in situ in some cases). Other opportunities to increase simulation capacity were a bank of simulation scenarios, staff training in the effective use of simulation (both identified in the Victorian SLE Review[13]), a discipline-specific evidence-base that demonstrates the value (or otherwise) of using simulation (i.e. a literature review).

4.4.3 Opportunities for enhancing access to simulation resources not currently being utilised

There were two common suggestions here; the first was a list of simulation centres and their equipment. The second was some kind of system to support hire/borrowing/movement of simulation equipment between locations within the CPN (i.e. a library and/or mobile library).

In those forums where Second Life™ was discussed, participants were interested and indicated that appropriately trained/experienced developers would help make use of such systems.

 # Second Life is an online virtual world developed by Linden Lab. Several health services and universities make use of it for teaching and orientation activities (http://secondlife.com/).

Some education organisations operating within the CPN have a database of Standardised Patients. Many sites would like to make greater use of these types of simulation resources, but do not have the capacity to develop them and/or are unable to access this database. Thus, it was suggested the CPN might be able to access the database on behalf of members and/or facilitate direct access by CPN members.

4.4.4 Opportunities to increase student capacity through the use of simulation resources

The need to increase clinical placement capacity through the use of simulation was kept at the forefront of all discussions. As noted within the HWA report on the use of simulated learning environments, this may come down to accreditation bodies and their willingness to accept simulation as a legitimate replacement (whether it be 1:1 or some other ratio) of clinical placement time[20]. Certainly, all participants agreed that (greater use of) simulation could help reduce the number of hours learners spend within the clinic, without a negative impact on their skills and abilities as a (future) practitioner, however they were uncertain their relevant accreditation body agreed. They also noted that reducing clinical placement hours (and replacing them with simulation), may prove difficult (indeed impossible) in the absence of a course accreditation or re-accreditation process.

At one forum, the concept of fairness was also raised and that all students need to have the same clinical placement (simulation) experience. That is, if one cohort of students has simulation programmed in as part of their clinical placement at a particular location, then other cohorts at other locations also need simulation programmed in as part of their placement at the ALTERNATE location. This implies that all clinical placement locations require a simulation facility (and by extension all CPNs). It is unclear if this is necessary, given the diversity of clinical placement locations and experiences already in place. Of course, the quality of education in simulation must be high.

An innovative suggestion to increase capacity, was to work more closely with hardware and software vendors and manufacturers to develop new simulation equipment and software. This was of particular importance to disciplines with limited relevant simulation equipment, such as physiotherapy and occupational therapy.

To the extent that teamwork, communication skills and other generic skills required by health care practitioners is taught in clinical placements, it was felt that some of this teaching could be (more) effectively taught using simulation, whether that be on mannequins or Standardised Patients.

4.4.5 Overall impressions

In all, the discussion forums were very positive and collegiate. People were willing to work with others to achieve their goals, including making compromises and/or allowing access to facilities that were previously far more closely guarded. An interesting outcome of the forums has been an increased awareness of the simulation resources within the CPN and subsequent investigation of their greater use/access and (in the case of Second Life™) their design. In some cases, participants arranged meetings straight after the forum as a direct result of interactions during the forum.

5 Discussion and Suggested Actions

The main objectives of a CPN are to determine capacity, match capacity and demand, address demand, ensure quality, identify resources and to be responsible for policy and advocacy in relation to clinical placements. Therefore, CPNs are in an ideal position to coordinate simulation-based activities in order to ensure access across the disciplines, to maximise the potential of the existing SLEs and to plan for future requirements within the CPN. Indeed, the CPN, with a dedicated Project Manager, has a role to play in using simulation to enhance clinical training and increase clinical capacity. An integrated, long-term, structured and supported plan is required to initially coordinate simulation-based infrastructure and activities and to plan for the future including assisting SLE managers to formally determine true capacity and identify resources required to achieve it i.e. determine the relative impact of increasing staffing, versus increasing space, versus increasing equipment for each specific SLE.

Through this project, momentum has been generated for the Peninsula CPN to begin a program of work focused on coordinating SLE activities. Participation in the project was excellent; the activity survey received a 100% response rate and the reception received from stakeholders was one of enthusiasm at the prospect of a more coordinated clinical skills simulation sector within the CPN. Common themes emerged across the discussion forums and a general feeling of a willingness to contribute, share, consolidate and plan was evident. The spirit of collegiality was no more evident than in the willingness of all SLEs within the CPN to be named in this report, with most agreeing to have their details listed on the CPN website, including listing their resources, equipment and, if possible, their availability – activities that have been resisted in many jurisdictions during the history of SLEs within Victoria.

Suggested Action 1

This report should be publicly available to inform future SLE investment and directions within the CPN.

Suggested Action 2

The location, contact, equipment and booking details of all SLEs within the Peninsula CPN should be accessible via the Peninsula CPN website.

One of the intended outcomes of this report was to immediately identify spare capacity within SLEs across the CPN. This proved challenging as capacity is made up of a balance between space, equipment and staff and (depending on the educational activity) desired learning objectives. In most cases, the limiting factor is staff (as found in the Victoria review, summarised in Section 4.1.1, page 11 and also in the Discussion Forums). For the most part, SLEs indicated equipment usage was less than 50% (in 2010), yet SLEs self-identified as being at full capacity. It is clear that some activities may require less support or infrastructure than others, particularly the use of PTTs which are relatively portable. Nonetheless, it is still necessary to note their use (or that they have been borrowed if they are to be taken off-site), and this will require staff time. In some respects, the activities of an SLE are analogous to a library – there is equipment that could be borrowed, there is space that can be accessed, and there are staff to support activities – however, it is clear SLEs lack the processes and procedures of most libraries and thus the ability to accurately collect and report their usage data.

Suggested Action 3

Determine the feasibility of establishing a library-style system for managing SLE infrastructure and equipment.

As the primary role of a CPN is to identify clinical training capacity and offer places to educational providers enabling them to place their students appropriately, it is reasonable to expect this to extend to (or perhaps include) SLEs. Thus, SLEs could be added to the clinical placement database as a placement provider and

the placements available noted. It would then be up to those institutions and the disciplines they represent to understand and plan how best to utilise those places in order to meet the needs of the curriculum, the students and the governing bodies they are responsible to.

Suggested Action 4

SLEs should be listed as a clinical placement location within the (developing) clinical placement database.

The Victorian SLE Review uncovered that clinical skills simulation activities have been around since 1985, but more recently there has been an exponential growth in simulated learning activities, perhaps driven by a shortage of clinical placements and an acceptance of SLEs as a suitable alternative[13]. This growth is set to continue with significant state and federal funds being allocated to support the development of SLEs, both from an infrastructure and staffing point of view. In conducting this project and framing this report, particular attention has been paid to these activities and it is important this continue as the CPN develops its SLE program.

Suggested Action 5

Keep a watching brief on state and federal SLE-related activities so that Peninsula CPN SLE-activities can build on, rather than duplicate or compete with, those developments.

When the findings of the Discussion Forums, the Activity Survey and earlier projects are reviewed together, the outcomes can be grouped under three broad areas: governance, training and research. These areas are likely to be crucial to the successful implementation of simulation as a strategy to increase clinical placement capacity and enhance skill acquisition within the Peninsula CPN.

5.1 Governance

It was clear from the discussion forums that lack of SLE equipment is not limiting the use of simulation within the CPN (indeed this was also the case at the state-level[13]) and the data provided in the Activity Survey supports this. Barriers to greater use of simulation stem from lack of knowledge of the SLEs and their equipment/infrastructure, and subsequently extend to the existence of suitably qualified staff, their availability/numbers and finally suitable curriculum (sometimes referred to as scenarios).

To some extent, lack of knowledge has been addressed through this project and will continue to be addressed via Suggested Action 2 and to a lesser extent Suggested Action 1. However, addressing the other issues, particularly in the financially constrained clinical placement environment, may prove more problematic, even more so if addressed on an SLE-by-SLE basis. This could be solved by the creation of a CPN-based and driven simulation management group (perhaps a sub-committee of the Peninsula CPN), comprising the managers of the five SLEs. This group would provide guidance on issues faced by individual SLEs, and propose solutions for the mutual benefit of the entire CPN, such as joint staff appointments across multiple SLEs. Ultimately, this group would dissolve barriers through inclusivity and may even lead to the amalgamation of SLE staff and infrastructure across the CPN (as suggested in several Discussion Forums). It would also build on and preserve the existing goodwill already in existence within the CPN.

Suggested Action 6

Form an SLE-focused sub-committee of the Peninsula CPN Executive Committee to guide SLE development within the CPN.

In order for this group to describe its scope of work appropriately, a definition of simulation might be required. One previously used by HWA and taken from Gaba (2004) (that may be appropriate) is “Simulation

is a technique – not a technology – to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner"[22-23].

This group, perhaps supported by the CPN Project Manager, could take responsibility for a number of activities suggested within the Discussion Forums, aimed at improving SLE access, use and opportunities to augment clinical placement capacity, namely:

- create a consistent set of policies and guidelines for SLE access and use;
- develop a database of (validated) learning scenarios;
- create supporting materials for simulation sessions (such as patient histories or back stories);
- provide guidance on quality;
- work with clinical placement coordinators and education providers, to enhance the links between clinical placements and SLE activities;
- lead advocacy on SLEs to state, federal or other representative bodies;
- convene multi-disciplinary forums on expanding the use of simulation in clinical education;
- coordinate innovation and research projects;
- develop educator training;
- work with manufacturers (hardware and software) to improve existing or develop new simulation tools; and
- work with SLEs in other CPNs.

Indeed, if this sub-committee (or equivalent) were formed, it would be reasonable to expect them to manage all other elements and suggested actions described in this document.

In suggesting this scope of work, it is understood that clinical placements are part of a discipline-based system of health professional education, governed by accrediting body standards, regulations and guidelines. Therefore, enhancing, replacing or complimenting clinical placements via simulation may necessarily require engagement at the discipline level. Thus, the responsibility for standardisation of the simulation component of a curriculum may well be the responsibility of the educational institution(s) that deliver the course(s) and not the CPN. However, given the HWA report on the use of simulation within selected professions[20], it may well be possible for this sub-committee to lead the integration of the outcomes of that report (and the individual discipline reports when they become available) into courses/clinical placements delivered within the Peninsula CPN.

5.2 Training

As highlighted by the data, the need for appropriately skilled/trained staff is seen as the biggest challenge to using simulation to enhance clinical placement. There are already concerns about the amount and quality of clinical supervision in the clinical workplace, without further exacerbating the situation using inadequately or inappropriately staffed simulation facilities. Indeed, consideration should be given to implementing standards, such as those being developed by the Australian Society for Simulation in Healthcare (ASSH), which will help define the minimum quality of teaching in simulation[24]. It should be noted that the role of simulation teacher is vastly different to that of traditional clinical teacher; simulation roles such as simulation technician (who drive the software and manage the hardware) and simulation facilitator need to be identified and supported, including provision of training. In this regard, HWA have indicated that in 2010-2011, $6 million in funding will be allocated to support Simulator Educator and Simulator Technician training[21]. Thus, the CPN may wish to identify suitable staff to attend these sessions, when/if they become available.

One interesting but potentially controversial idea, which is gaining popularity nationally, is the use of content experts rather than qualified clinicians to teach within simulation. Examples of this outside simulation include nurse practitioners teaching medical students about routine cases and management. However, this may require further research on effectiveness, prior to such a staffing model being widely implemented.

Suggested Action 7

Identify staff recruitment and training needs for effective delivery of learning through SLEs.

The huge impact that Standardised Patients could have on simulated learning activities was highlighted in the Discussion Forums. A small number of education providers are aware of the Monash University database of Standardised Patients specifically trained to simulate real patient encounters – however most participants were unaware of it or how to access it. Furthermore, until such simulation activities were discussed, many participants felt simulation was of limited value to training within their discipline. Thus, accessing the Monash database of Standardised Patients will be of particular value to many disciplines within the CPN.

Suggested Action 8

Work with Monash University to access their database of Standardised Patients (MonSim) on behalf of CPN members and/or develop a suite of Standardised Patients for use within the CPN.

Through the discussion forums, it was also established that most Standardised Patient programs are utilised primarily for assessment (e.g. Objective Structured Clinical Examination, OSCE) rather than for training, with cost sited as the main reason for limiting their use (rates are approximately $32/hour). Secondly, most Standardised Patients are trained in history taking for medical students, with little (if any) focus on other disciplines or other activities. Therefore, a huge opportunity exists for Standardised Patients to be trained and utilised across a broad range of disciplines such as neurological examination for physiotherapy and occupational therapy students studying aphasia (absence of speech) or in conjunction with simulation hardware (e.g. a PTT such as an IV arm) allowing teaching of technical and non-technical skills simultaneously. Indeed, this delivers the highest fidelity simulated experience for students e.g. taking blood from a patient and answering the patient's questions about the test at the same time. Simulated Patients could also play a much greater role in interprofessional learning for the teaching of common skills such as communication, patient relationship development, attitudes and professionalism.

5.3 Research

Notwithstanding the need to conduct research and evaluation of the SLE programs created and delivered, the major research activity to arise from the Discussion Forums was that supporting the use of simulated learning environments SLEs. Many participants were unaware that for many disciplines there is an existing body of evidence on the use of SLEs simulated learning environments – both academic literature and precedence on the use of SLEs as a replacement for clinical placement time. Participants felt that collation of this evidence (perhaps in the form of a literature review), would be beneficial when attempting to integrate the use of SLEs into existing courses (i.e. when lobbying education providers) or when trying to increase acceptance of SLEs as a legitimate training activity (i.e. when lobbying accreditation bodies). Although it would be easy to recommend a literature review be undertaken for the major disciplines trained within the CPN, this is advised against as HWA have commissioned a number of such projects[20]. Although press releases from HWA in March 2011 suggested a release "later this year"[19] access to this information is still not possible.

Suggested Action 9

Work with the Department of Health and other relevant people and organisations to gain access to the HWA-commissioned literature reviews on the use of SLEs within specific disciplines.

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