

# Simulated Learning Environments Program

## Case study

## Development and integration of the Centres of Excellence in simulation-based education and training in the Northern CPN

### Background

This project aims to enhance and streamline clinical education and training efficiency and quality through an innovative model to coordinate, support and deliver simulation-based education and training (SBET) in the Northern Metropolitan Clinical Placement Network (NMCPN). These aims include:

- The establishment of formal partnerships between healthcare providers and education providers within the NMCPN.
- Drawing together the collective expertise and physical resources in SBET to maximise efficiency and capacity of the NMCPN to provide a simulation-based learning service that is grounded within Best Practice.
- Expanding and increasing access to SBET to all learners including local healthcare and education providers through coordinated and supported access to existing and new facilities and resources, including mobile and virtual simulation solutions to those unable to physically attend one of the NMCPN Centres of Excellence.

### Problems/drivers

- Address gaps and unmet need for simulated learning environments (SLE) and activities in the NMCPN;
- Analyse resources within the CPN to determine capacity for sharing existing resources;
- Develop collaborative collegial Centres of Excellence in SBET in the NMCPN to support the building of capacity to implement quality simulation activities;
- Foster a CPN-wide approach to the development, implementation and ongoing operation of SBET;
- Construct a central pool of equipment that are available to support implementation of distributed simulation activities;
- Create ability to book resources on line to increase access to simulation equipment;
- Develop simulation programs that train staff and students to manage the unique health and support needs of the NMCPN population, e.g. CALD communities, developing and growing communities, people with chronic illness and high burden of disease;
- Develop cross disciplinary and interprofessional simulation programs;
- Design a virtual patient web-based resource to facilitate development of skills of health professional staff in the NMCPN;
- Formulate a research profile to add to the body of knowledge related to SBET to inform Best Practice;
- Manage potential risk to staff and patients through the use of simulation prior to clinical exposure.

## Arriving at a solution

This simulation project was a collaborative project between the stakeholders within the NMCPN including healthcare providers and education providers to achieve the best outcome for patients and learners in the NMCPN in relation to SBET. The Board of Directors ensured that access to SBET within the CPN was distributed in an equitable manner to ensure effective and efficient simulation services.

The Board of Directors:

- Established common principles and guidelines for access to SBET resources within the network;
- Ensured all stakeholders within the NMCPN are aware of the plan for SBET;
- Coordinated activities to achieve critical mass for all disciplines to access SBET and support building capacity within the NMCPN in relation to mentorship of skilled simulation instructors;
- Established mechanisms for coordinating, maintaining, operating and managing the SBET resources within the NMCPN;
- Oversaw the activities of the CPN in relation to SBET in each centre of excellence, the simulation instructors and the development of the virtual suite of resources;
- Played a role in advocating for the appropriate use of SBET to ensure health professionals respect the value and understand the limitations of SBET;
- Began to establish a research profile for the CPN to add to the body of knowledge related to SBET as well as an evaluation program to measure the impact of the project on suggested areas;
- Developed an informed cost-neutral fee structure to ensure sustainability of program across the CPN;
- Advised regarding the development of the Virtual Simulated Patient Resource (VSPR) project.

The Board of Directors modelled the highest ethical and professional standards in the implementation of their responsibilities in the project. Communication plans were setup detailing communication pathways and included monthly meetings, electronic communication options, and identifying roles and responsibilities for each member of the board. The appointment of a Project Manager was to ensure all stakeholders are kept up-to-date with the development of SBET within the CPN and to facilitate the meeting of project deliverables.

## Implementation process

- Improving the coordination and collaboration in SBET across the NMCPN through engaging stakeholders across industry and academia to ensure appropriate and efficient use of resources;
- Building a critical mass of fit-for-purpose equipment and resources that are accessible by all within the NMCPN;
- Build a skill base that can be utilised for a range of SBET in all professions and disciplines in the NMCPN;
- Develop Centres of Excellence for SBET within the healthcare network and have these centres well-resourced and managed to facilitate collaboration with the higher education sector;
- Establish a library of resources for distribution and use within the NMCPN. These resources will be stored within the Centres of Excellence and will be available to all members and stakeholders of the NMCPN;
- Establish an online presence which includes an extensive resource of case studies, educational tools and interactive learning programs widely available to all trainees within the NMCPN.

## Outcomes

### Key outcomes of the project

The project has enabled a number of key outcomes in the NMCPN including:

- Enabling effective collaboration and establishing productive partnerships across industry and academia through the collaborative SBET Centres of Excellence established in the NMCPN;
- Building the capability within the NMCPN to develop, implement and evaluate quality SBET;
- Continued development of awareness of the value, role and application of SBET in clinical training programs;
- Increased capacity of the NMCPN staffing profile to facilitate a variety of SBET approaches through the running of workshops for the National Education and Training in Simulation (NHET-Sim) Program, the Victorian Simulated Patient Network (VSPN) workshops and the Cultural Respect Encompassing Simulation Training (CREST) project ;
- Providing access to SBET experts across the NMCPN to enable mentoring and ongoing development of personnel in relation to designing and facilitating SBET methods and advanced methods of debriefing;
- An equitable distribution of existing and new resources within the CPN to maximise access to quality SBET;
- Utilisation of a central library of simulation equipment booked through Centres of Excellence and maintained at a host sites;
- Demonstrated increased delivery of in-situ simulation activities and use of resources;
- A flexible VSPR that is applicable to all disciplines which aims at developing non-technical skills of undergraduate health professionals accessed at [www.vspr.net.au](http://www.vspr.net.au);
- Efficient usage of resources in the NMCPN to support SLE activities.

### Barriers

Significant issues were experienced in the project in relation to the development, supply, activation and utilisation of capital resources. Issues were experienced with:

- The development of subcontracts from the lead agency which resulted in a condensed time period for the development, activation and utilisation of selected resources in the project.
- Significant barriers and challenges were experienced in the creation of the virtual resource in relation to sourcing and securing video production companies to produce VSPR scenarios on a budget and securing external simulation experts to write simulation scenarios focused on non-technical skills. Cancellations from external production companies and simulation experts writing scenarios created significant delays to the project. Risk management processes enabled the support of the universities multimedia development team to offer support for the project and complete the production work.
- An interim loan agreement form was developed across the project in the NMCPN. Due to the project contract date of cessation being 30 June, a new loan agreement is being developed to govern the use of resources across the NMCPN. The legal teams of all collaborating partners will collaborate to resolve this issue. These have stemmed from the process of the resources being purchased by the lead agency however hosted at different sites.
- Delays in appointment of EFT across the project including simulation instructors and project coordinator impacted on the implementation of project activities. Reviews of EFT across the period of the project were undertaken and alterations to EFT were implemented at Centres of Excellence across the NMCPN. Further to support the coordination of the project EFT was seconded from a centre of excellence.
- Unintended complications with the installation and utilisation of the product, Learning Space. The installation at each of the three sites was delayed due to specific capital work required prior to installation. These requirements were not well communicated and lead to further identification of connection requirements between sites. Action plans were developed that provided for installation of all hardware across each site. Upon installation, the Information Technology Department developed a further plan to connect the three sites that would enable each site to function. As of the end of the project the St Vincent's Health is running but the Austin and northern sites were not connected at that time. This aspect of project is still continuing.

## **Future directions**

The project has enabled the NMCPN to be adequately resourced in relation to simulation resources and spaces. The use of these spaces has been demonstrated in the significant increase in the simulation hours delivered across the NMCPN. To ensure sustainability of the project strategies will be developed to enable the project to be continued. Cost recovery processes and sourcing external funding will contribute to this aim.

Ongoing marketing will continue the development of awareness of the SLE program within the NMCPN. The development of a SLE Committee that will report to the NMCPN Committee has signalled a positive outcome for the CPN to ensure that needs within the CPN relating to learning through simulation can be considered at a high-level for action.

The development of robust loan agreements and loan procedure documents will govern the use of the simulation resources across the NMCPN and will serve to sustain the usage of the equipment for learning through simulation activities.

A robust research program has begun to emerge from the project and will include ongoing evaluation of resources as well as contributing to the growing body of knowledge around learning through simulation activities. The findings of the research projects will add to the ongoing improvement of the learning through simulation service supplied in the NMCPN.

## **Further information**

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