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Clinical Simulation Learning Centres (CSLC): Enhancing Simulated Learning Environment (SLE) services in the Hume Region

Background

Interprofessional education (IPE) has been recognised by various international professional societies (e.g. World Health Organization and the society for Interprofessional Education Collaborative (IPEC)) and accreditation organisations as foundational to achieving safe, high-quality, accessible, and patient-centred care. Simulation-based methodologies can assist students in learning interprofessional competencies by presenting modelling real world of practice, where teamwork often happens asynchronously across time and space. Excellence in the delivery of healthcare depends heavily on the health care team’s ability to work together and communicate in highly effective and reliable ways; however, most undergraduate and post-graduate programs provide only limited educational opportunities for intentionally designed interactions with students of other disciplines. Practice in simulated settings (‘simulation’) has been shown to be an effective mechanism for developing individual and team skills, in a safe learning environment[[1]](#footnote-1).

Problems/drivers

The CSLC project team’s regular contact with Hume Clinical Placement Network (HCPN) via the HCPN coordinator and Committee was an opportunity for a continuous process of evaluation and identification of opportunities for improvement and alignment with CPN priorities. Early in the project, it was identified that it would be beneficial to link to similar projects in the region, with the collegial view of sharing information and resources and having a more united approach to the promotion and use of simulation in the region so as not to dilute the impact of our individual projects. For these reasons, the University of Melbourne, Charles Sturt University, Bogong Regional Training Network and La Trobe University met several times over the life of the project, to maximise our collaborative efforts in simulation education through the exchange of asset lists and sharing of equipment where applicable, combined marketing campaigns and messages, and general awareness of each other’s planned activities and possible overlaps. What came out of these meetings was the drive to work together to deliver simulation, and interprofessional simulation in particular, to students undertaking clinical placements in Small Rural Health Services (SRHS). Normally, the capacity of SRHS to deliver simulation as part of the clinical placement experience is limited by resources – few clinicians on staff who are experienced in simulation and as simulation educators, a lack of technical expertise in the running and maintenance of SLE equipment they may possess, and lack of suitable space. Some of SRHS in Hume were recipients of SLE equipment funded by Health Workforce Australia (HWA) projects, yet the clinical educators had not yet received training on how the equipment functions.

Geographical isolation was also an issue for many of the facilities as this can leads to diminished opportunities for undergraduates to associate with other professional-entry students from another health discipline.

The biggest difficulty for this project to overcome was mapping an undergraduate placement at each of the facilities targeted in order to identify their purpose of placement, level of learning and discipline. This information was required before interprofessional learning outcomes could be planned with each health services educators and the project team.

Arriving at a solution

One of the objectives of this project was to incorporate IPL simulation into clinical placement experiences. A shared commitment for IPL by the La Trobe CSLC team with the University of Melbourne UDRH resulted in the planning and delivery of full-day interprofessional training (using scenarios, lectures and skills sessions) at Echuca Regional Health and Yarrawonga Health. The scenario was based on a boating accident with multiple traumas and the participants included medical students, Diploma of Nursing, Bachelor of Nursing students, paramedicine students and registered clinicians.

The learning objectives were communication, team work and leadership, as well as assessment of ISBAR and the deteriorating patient. Skills stations were also utilised and the feedback from both days was very positive.

Implementation process

In order to best utilise resources, equipment and target the most appropriate audience it was decided by the CSLC team to map undergraduate placements at two health facilities Yarrawonga Health (Hume CPN) and Echuca Health (Loddon Mallee CPN). This allowed the La Trobe project team to configure two scenario and skills days for multiple disciplines under different circumstances. Yarrawonga group had a mixture of three disciplines, medicine, nursing and paramedicine and also a mix of registered staff with undergraduates. The Echuca group had two disciplines medicine and nursing and only undergraduates participated. The project team were able secure confederates to support their disciplines in the simulation scenarios and assess the level of NHET-Sim education they had either been exposed to themselves, or completed, in order to ensure the quality of the scenario day.

Inter-organisational cooperation was required at many levels: CPNs, education providers, health services, individual disciplines, trained professionals and most importantly, the simulation educators. Education was delivered using many modes such as scenarios, skills stations, simulated patients, high and low-fidelity. Preceptors and supervisors of undergraduates were included in the delivery of education and were encouraged to have input as to what their particular learning outcome for their health service would be. Each health service was contacted by the CSLC team and education, and up-skilling requirements were identified which would benefit staff and students. The CSLC project provided clinicians with education regarding the use of the equipment and simulation techniques, and how this could be applied to clinical placement learning opportunities. High-fidelity simulation equipment such as SimMan 3G were purchased with funding made available through the Simulation Learning Capital and Establishment Fund, This was one of many components used in scenario delivery in order to have a realistic learning environment for learning as an outreach program.

Each scenario day comprised a skills station and a faculty briefing as to how the sessions would run. Two teams were formed at each session to perform two different scenarios on the day, with a focus on interprofessional communication, ISBAR, team work and leadership, as well as primary assessment of a patient. Review of the management and outcomes from this interprofessional simulation day was performed by the team. All students and team members were briefed on how the day would be implemented to have a more cohesive outcome (a recommendation from the Yarrawonga group).

Outcomes

For students, one of the strengths of the IP simulation day(s) was the fact that it offered them a helpful experience of interprofessional collaboration that was advantageous for enhancing their teamwork skills (e.g. interprofessional communication) and helped to develop students’ insights into the work of other professionals. In particular, this type of working arrangement offered more opportunities for interprofessional interaction and collaboration than normal placement work patterns. Furthermore, the evaluations suggested that technical, as well as non-technical, skills were consolidated even further using simulation in the clinical environment. Interprofessional scenario days offered an experience for the attending disciplines to not only achieve their own learning outcomes but to work in a team environment and learn from each other, better preparing them for the workforce.

Interestingly, evaluations from the Echuca student-only day reported a more positive outcome as a learning aspect, whilst some participants of the combined staff-student session at Yarrawonga commented that there were “too many registered staff” present on the day, which perhaps hindered he students’ learning experience.

Another positive outcome was the reported improved confidence and capability of staff who supervise students. Many of the clinical educator staff who attended these outreach sessions have since registered to attend further NHET-Sim training, another HWA project.

Barriers

Many HWA funded projects were being implemented at the same time across the state all collecting different data and KPI’s and this led to competition for planning and organising the interprofessional scenario day, as well. Engagement of stakeholders was also paramount and this was difficult at times due to their multiple roles at the SRHS, usually on a part-time basis. Not all registered staff involved had simulation experience or NHET-Sim training, which resulted in more work for the project team.

Future Directions

The popularity of these events indicates that there is still a large, unmet need for delivery of training in teamwork and communication skills that is often underdone in undergraduate health programs and is regularly identified as a training need in the workforce. This collaboration involved two CPN regions, four education providers (La Trobe University, Wodonga Institute of TAFE, GOTAFE and the University of Melbourne) and four disciplines. Comments from the students who attended were exceedingly positive. Interprofessional simulation is an area for continued development in future projects and one that requires a great deal of coordination between education partners, health services hosting the students and the project team alike. The two scenario days were ten months in the making and the value of these days is now appreciated by the team and other attendees. Word-of-mouth around the region has resulted in other health services requesting interprofessional simulation scenario days to be implemented in their facilities.

Further information

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1. Carlson, J., Min, E., & Bridges, D. (2009). The impact of leadership and team behavior on standard of care delivered during human patient simulation: a pilot study for undergraduate medical students. Teaching and Learning in Medicine, 21 (1), 24-32. doi:10.1080/10401330802573910 [↑](#footnote-ref-1)