Students, faculty and local community health professionals learning together

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The international literature clearly identifies the need for greater integration of interprofessional education into the curricula of entry-level health professions. This paper reports on the design and outcomes of a short learning program undertaken by rurally based pre-graduate students of the University of New England. The medicine, nursing, pharmacy and social work students worked through two simulated case scenarios based around the care of clients with chronic conditions. The attitudes and experiences of the participating students and the program developers were evaluated using pre and post program surveys, audience response data and qualitative comments. Prior to undertaking this program the majority of participants acknowledged the value of interprofessional learning to their professional practice; however following participation they were overwhelmingly positive about the value of this type of learning to their future practice. They considered that the program gave them a greater appreciation of their role within the interprofessional team and provided valuable insights into the scope of practice of their clinical colleagues. Overall, the student participants found this program valuable, stimulating and challenging, with most indicating that they would welcome more opportunities to learn within interprofessional groups. The same was true for the program developers who indicated that participation in this activity strengthened existing professional relationships and enhanced collaborative practice. The inclusion of consumers and clinical health professionals in the development and delivery of the scenarios contributed to the richness of student experience and evaluation. The outcomes will inform the expansion of interprofessional learning activities at this rural university.

**Keywords:** interdisciplinary, inter-professional health education, rural practice
Background

Although inter-professional health education (IPE) has been described as an imperative for at least the past decade (Daly, Davidson, Duffield, Campbell, & Ward, 2011; Frenk et al., 2010; Stephenson & Richardson, 2008), with a recent Australian report reemphasising this, it has been suggested that in addition to health professional students from different backgrounds learning together, capacity building of educator and clinical supervisor workforces are also required (Health Workforce Australia, 2011). The University of New England (UNE), in New South Wales, Australia offers a range of professional-entry health courses in medicine, nursing, pharmacy and social work. The Clinical Education and Training Institute of NSW Health funded an interprofessional learning program under the Team Health Right Start grants scheme that brought together a number of these students in learning activities, specifically designed to build students’ interprofessional teamwork, communication skills and to support development of safe, client-centred practice.

The authors of this paper used the Centre for the Advancement of Inter-professional Education (2002) definition to frame learning activities - two or more professions learning with, from and about each other. The program that was developed by a project team consisting of academics and clinicians from medicine, nursing, pharmacy and social work disciplines aimed to expose rural health professional students to realistic clinical scenarios to build on and extend their core skills to better prepare them to work together in teams, particularly with rural practice contexts in mind. The development and delivery of this program in November 2011 provided an impetus for cross disciplinary faculty development and created new student and peer connections.

Structuring of the program drew on principles of good pedagogy, that is, promotion of learning through students solving real world problems; applying their existing knowledge and demonstrating, applying and integrating new knowledge through experiential learning in this case using high and low fidelity simulations, and reflection (Merrill, 2002). The activities scaffolded learning experiences framed within Kolb’s model of experiential learning (Kolb, 1984; Kolb & Kolb, 2009), providing students with support and the opportunity for reflection, practice, and experimentation. Secondly, students engaged in interprofessional team-based activities, guided by experienced facilitators, faculty and expert health professionals to consolidate team building skills and communication. The framework for these activities was modelled on reflective practice (Schon, 1983) and constructed to enable collaborative reflections on the scenarios, creating opportunities to articulate and practice effective teamwork.

Prior to the development of this program the use of clinical simulations at UNE across nursing and medicine particularly, tended to be more focused on motor skill development in critical and emergency care contexts. Clinical simulation facilities, which were already available, were thus utilized in a different context. This program sought to simulate complex case scenarios to build student connections by requiring knowledge and interactions with the patient from members of each of the professions. Student awareness of client-centeredness within the rural clinical environment was thus further enhanced using these immersion activities that stimulated situations that require effective inter professional team work and communication to achieve positive outcomes for healthcare consumers.
The initiative and evaluation methodology

The components of the program were sequential. Firstly, medicine, nursing, pharmacy and social work students were directed to a number of pre-workshop readings and resources which were provided on the university’s online learning management system. These students then came together for a two-day workshop in the UNE clinical simulation suite utilising high and low fidelity patient simulators and actors as simulated patients and relatives. High fidelity simulators are complex computer driven manikins that simulate human responses to healthcare interventions, students can interact with these simulators as they would with patients or clients (Bailey, Johnson-Russell, & Lupien, 2011). Low fidelity simulation includes the use of actors, or static props to simulate clinical situations.

In this initiative, in one of the scenarios, a high fidelity SimMan® was used to represent a seriously ill person, “Mr Boney”, an indigenous male in his forties with a complex history including renal dysfunction and diabetes. The other case was centred on an elderly woman, “Mrs Johnson”, who had a range of social, health, and medication issues. In both scenarios props such as X-rays, pathology reports and referral requests to a range of healthcare professionals were also used to simulate the reality of rural practice.

Interprofessional groups of between five and eight students worked within both these two clinical scenarios and focused on the care of these consumers, who both had complex and chronic conditions, across a range of clinical settings. The scenarios were developed by teams of expert professionals, consumers and faculty members to focus on team-building, safe practice, effective communication and client-centeredness.

Consumer representatives were directly involved in providing feedback during the design and delivery phases of this program and in particular they were ‘the voices’ of consumers during student debriefings. Capacity building of the educator and clinical supervisor workforce was also addressed through the program which engaged a range of local community health professionals from the Hunter New England Local Health District. These health professionals included a community pharmacist, a general practitioner, a medical officer from the local rural referral hospital, a social worker and several nurses from acute care and community settings. This expert group provided feedback to the students regarding their management of the simulated cases.

Following their participation in the 2-day workshop students were encouraged to engage in structured online activities to facilitate reflection-on-practice and consolidate learning. These activities included online quizzes and forums as well as a set of reflective questions designed to assist the students to structure their responses. In these reflections students were asked to consider the clients’ perspective, their roles, and the roles of others, as well as strategies that they felt promoted effective teamwork.

Twenty eight students participated in this learning program. Eighty four percent of students were female and 90 percent were from a rural area. Their age range was 20-46 years old. While more than 150 students were invited to attend, and of those more than 50 students initially indicated an interest in this non-compulsory program, the timing of the workshop, which was prescribed by the funding body, was not ideal as many students had already left the campus, following the conclusion of the university’s formal teaching period.
Evaluation was undertaken through analysis of student and other participant surveys. Data was collected using Likert scale responses to online surveys, written feedback and audience response system keypads, which were individually assigned to particular users.

Research Ethics approval was obtained from the University of New England Human Research Ethics Committee.

**Outcomes**

The outcomes of this program were the creation of stronger interdisciplinary student and peer connections via the development and delivery of innovation in clinical teaching and training, using high and low fidelity simulation and actors to mimic the complexity of rural health care. This program focused on enhancing awareness of client-centred care of those with chronic and complex conditions and the need for effective teamwork within the rural clinical environment through immersion in simulated clinical scenarios.

Overall the students and other contributors, including the expert health professionals, faculty and consumers indicated that they gained valuable insights into the value of working collaboratively with colleagues from other disciplines. All groups enhanced their motivation and skills in delivering seamless person-centred care, particularly within the challenging context of rural health settings, which are often characterized by limited health services and professional isolation for healthcare professionals (Australian Government Department of Health and Ageing, 2008).

An online anonymous pre-workshop survey was completed by 14 students. The results of this survey indicated (five point Likert scale; responses 1=strongly disagree, 5= strongly agree) that students strongly believed that teamwork with other health care disciplines was important in the delivery of quality patient/client care (4.7). They also believed that all health care disciplines bring expertise to assist in providing quality patient care (4.6). Less positive views were held regarding beliefs that all health care disciplines have a good understanding of the distinctions between their and other’s roles (3.2) and colleagues from other disciplines treating them as equals (3.1).

Audience response system keypads were used to record feedback immediately at the conclusion of the debriefing on the second day of the workshop activities (yes or no responses were recorded). Students believed that the workshop and panel discussions aided in their understanding of inter-professional teamwork (90% yes) and that they gained a better working knowledge of the roles of other health professionals (90% yes). Students’ views on the questions of whether the student felt that they were part of the team (86% yes) and how well the team focused on meeting the patient’s needs and addressing the patient’s concerns (81% yes) were less positive. The keypads had been set to record results from individual participants. This allowed us to note that for the social work student participants, responses for these two questions were quite different - 60% did not believe that they felt like part of the team nor that the team focused on meeting the patient’s needs and addressing the patient’s concerns.

An online anonymous post-workshop survey was completed by 10 students. The results of this survey (five point Likert scale ; responses 1=strongly disagree, 5= strongly agree) indicated that participating in the inter-professional learning activity was a positive experience (4.8) and that they were able to see how inter-professional learning could contribute to the delivery of quality patient care (4.7).
Audience response system keypads were also used to record feedback from 11 expert health professional members immediately at the conclusion of the sessions (yes or no responses were recorded). They believed that the scenarios were a good vehicle to promote communication and safe practice (100% yes). Their views on the questions of whether the students addressed the patients’ family issues effectively were much less positive (45% yes). This feedback will inform the development of future scenarios to guide all students to consider the ‘big picture’.

Discussion

Although it should be noted that evaluation of our initiative is based on small numbers of participants, this interprofessional learning program achieved its aims in that students and contributors built interdisciplinary connections by working together to respond to the client and family needs in two rurally focused simulated clinical scenarios. A rigorous evaluation of outcomes and processes of further iterations of this program will be required to determine the effectiveness of this initiative. Students clearly regarded the initiative as a positive experience and gained a better working knowledge of the roles of other health professionals. The students also developed links with their colleagues from other disciplines that will assist them to create and sustain peer connections into the workplace.

Informal qualitative feedback which included the following comments:

“This workshop enlightened me of the unique qualities that other disciplines bring to patient centred care - in particular the social worker. As illustrated in the scenarios, there are many agendas of concern for the hospitalised patient, many of which can form perceived barriers or influence their decisions regarding their treatment options. By listening, acknowledging and resolving issues of importance for our patients and families, we are authentically providing ‘patient centred care’” (student 1)

“I would jump at the opportunity to participate in a similar project….Although we are only second year students with very little clinical knowledge I was amazed at how much I could still bring to the table in regards to patient care. I believe that all the other professions gained a better understanding and appreciation of the abilities of a pharmacist in both a clinical sense and a holistic health approach to patient care. I personally gained so much from the experience and would love to be involved again, in the future. I think the use of actors gave the scenarios so much more depth and realism that I would love to see them used in the future” (student 2)

reinforced the benefits for the students in the project.

As this was a small scale project designed to ‘pave the way’ for more interprofessional learning opportunities, the results of the evaluations will be used to plan for a more integrated approach to embedding interprofessional learning across the curricula of UNE professional entry health courses. The challenges of developing and delivering this program were overcome by the commitment of the project team to engage with a range of clinicians and consumer representatives.

One unanticipated outcome was the enhancement of existing professional and collegial links between faculty members and local health professionals who collaborated in the design and delivery of this program as evidenced by comments such as:
“A great team of people, who worked together to give the students an enlightening and fun experience in a very short space of time, there should be more of this!” (academic team member)

Informal qualitative feedback from consumers included the following comment:

“It was really interesting to see how the doctors and nurses (sic) approached these cases, it gave me a new look at how these sort of teams really need to work together to provide the best care for each patient” (consumer)

demonstrating yet another unintended outcome- that of potentially developing consumer driven demand for interprofessional teamwork in health care.

Interprofessional learning initiatives should be focused on building students’ interprofessional teamwork and communication skills (Smith & Anderson, 2008) as within the health arena patient or client-centred care is considered central to quality health care (Epstein & Street, 2011). The inclusion of consumers, actors, academic observers and expert practitioners in our initiative also allowed us to observe a diversity of views regarding whether client or patient focus was achieved, as evidenced by the data above and quotes such as the following:

Students were great, they introduced themselves to me, but they did not always tell me their role (actor)

“Most students listened carefully to the patients’ concerns, but in most cases they ‘stood over’ the patients rather than sitting down and talking to them at eye level” (academic observer)

This supports the findings of earlier studies in which similar observations have been made by those who have participated as simulated patients (Sutton, 2011).

The use of audience response keypads and the recording of results from individual keypads allowed us to observe that social work students also had a different views regarding client-centeredness. A possible explanation for the difference may be the tendency, particularly when a scenario is being undertaken in a simulated hospital room, for health professionals such as doctors and nurses to focus on the acute needs of the patient, while social work’s role considers the interaction between patient and environment and systems, such as family needs and planning for services beyond the hospital room. It was of interest to observe that social work students’ interventions were appreciated by the other students who realized that the client became much more cooperative once patient concerns had been addressed. It was interesting to note that the students’ perceptions of what constituted ‘client-centred’ care differed depending on their discipline; this reinforced the value of having inter-professional teams involved in a more holistic identification of client care needs but also highlights the gap around understanding ‘client-centred care’ across all medical, allied health and nursing professionals.

An interesting observation made was that the students involved in this initiative, when surveyed pre-workshop, demonstrated that they strongly believed that teamwork with other health care disciplines was important in the delivery of quality patient/client care and that all health care disciplines bring expertise to assist in providing quality patient care. This contrasts with other findings regarding interprofessional attitudes (Kenaszchuk, Rykhoff, Collins, McPhail, & van Soeren, in press). However this may be due to self-selection of students who already believed in the value of inter-professional practice. It is important to remember that the focus of this initiative was not to demonstrate a causal link between the initiative and student attitudes,
rather to encourage students to value inter-professional practice as a means of delivering more effective person-centred care. However, it may be that the students’ belief in the value of inter-professional practice reflects the possibility that medical, nursing and allied health students from a rural background have quite different views regarding interprofessional practice than do students from an urban background or that this finding is a positive reflection of the innovative UNE health profession curricula.

Some of the areas that emerged from this study that merit further exploration include how to enhance interprofessional appreciation and knowledge within the existing curriculum to contribute to greater awareness that will allow even better communication and cooperation, and how potential risks to patient safety can be both identified and overcome through interprofessional collaboration using simulated learning experiences.

Interprofessional learning through the use of rurally focused simulations, provided students, local health practitioners, academics and consumers with an opportunity to work together to respond to the client and family needs in two rurally focused scenarios. Within our rural location health professional academics from the university have a long history of working closely with their clinically based colleagues to support the education of all health students. This program enhanced the existing connections to involve these clinicians in the design and delivery of this inter-professional learning activity.

The evaluation of this pilot study will be used to inform the development of further interprofessional learning activities at the university. The resources and scenarios developed in the course of the project are reusable in other contexts and in further iterations of the workshops. The design of the pilot program was such that maximum student numbers were included in the activity; however scalability of the program is achievable through running the program on several occasions and through a reorganisation of the program timetable.

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