

Pharmacy students perceptions of a non-traditional rural placement: A pilot programme

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Abstract

Background: Multidisciplinary clinical placements provide opportunities to contextualise traditional classroom learning.

Methods: Pharmacy students had a two-week non-traditional rural placement, and experienced a variety of rural health activities and professionals.

Results: Four main themes emerged: learning about and from other health professionals, discipline-specific learning, consumer-specific learning, and rurality. Students developed an increased appreciation and understanding of the roles of allied health professionals and nursing staff. Their understanding of the pharmacists' role in the health care team improved. Consumer-specific factors and the importance of clear communication was a common theme. They appreciated the need for clear communication, particularly in regards to Aboriginal people and those with increased care needs. Students reflected on the flexibility and diversity of the rural health workforce, reduced rural health services and workforce compared to metropolitan regions.

Conclusion: Students knowledge of other health professionals, pharmacists, and consumers as a result of the placement. Students connected interprofessional and consumer observations to their discipline-specific learning.

Keywords: *Experiential Learning Interdisciplinary Learning, Pharmacy Education*

Introduction

Multidisciplinary clinical placements provide opportunities to contextualise traditional classroom learning. As an integral part of the undergraduate pharmacy curriculum, clinical placements bridge students' academic and experiential learning. (Australian Pharmacy Council Ltd., 2012) Pharmacy students have been shown to have a positive attitude toward multidisciplinary teamwork (Curran *et al.*, 2008). Multidisciplinary placements have been shown to improve students' teamwork, communication skills, and knowledge of differing health professionals' roles (McNair *et al.*, 2005).

The entry qualification to practice pharmacy in Australia is either an eight-semester bachelor degree taught over four years or a graduate-entry master of pharmacy taught in six semesters over two years (Marriott *et al.*, 2008). A key element of this education is the clinical pharmacy placements (Australian Pharmacy Council Ltd., 2014). Placements provide students with experiential learning and the opportunity to translate theoretical knowledge to practice. While placements are traditionally in the hospital or community pharmacy setting, they can vary in content, length and objectives amongst the various universities (Kirschbaum, Khalil, & Page, 2015).

The University Departments of Rural Health (UDRHs), located in regional Australia, deliver undergraduate

education and clinical placements to health students. The UDRHs are ideally situated to provide innovative non-traditional placements for students across the health professions (Lyle *et al.*, 2006; 2007). These multidisciplinary programmes are beneficial for students and to local communities where there is a health service gap (Lyle *et al.*, 2007).

At each UDRH, the faculty includes a pharmacist educator known as a Rural Pharmacy Liaison Officer (RPLO) (McNamara, 2007). Funded by Australia's community pharmacy agreement (negotiated between the Australian government and the Pharmacy Guild), the RPLO's role is to support the existing and future rural pharmacy workforce. This includes providing undergraduate rural pharmacy education, such as rural clinical placements.

At the Western Australian Centre for Rural Health (WACRH), one of the eleven UDRHs, a student placement programme based on multidisciplinary principles was designed and implemented. This programme piloted integrating pharmacy students into a multidisciplinary placement environment. It was intended that the pilot programme, and in particular student feedback, would inform the future programme direction. This paper aims to explore the students' perception and reported experiences of the pilot non-traditional rural placement.

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Student placement

Students applied in writing and were selected to participate if they met eligibility. Eligibility was based on students having completed the first of the two year graduate entry Masters of Pharmacy programme, and demonstrating an interest in rural practice through a written one page essay to demonstrate their enthusiasm and interest. Five students applied for and were selected for the programme. Their enrolling School of Pharmacy managed the selection process. The Rural Pharmacy Liaison Officer did not have input in to the selection procession.

The placement was centred in the Western Australian regional town of Geraldton, with a population of approximately 35,000 people. Students spent time in three surrounding rural and remote towns with populations of 300, 500, and 800 respectively, and located at a distance of 50 to 400 kilometres from Geraldton (Australian Bureau of Statistics, 2010). Each student received an individualised timetable when they arrived and were exposed to a variety of rural health care professions in a variety of settings (see Table I for a sample timetable). Insurance issues stipulated that the placement was to be observational only. The preference had been that pharmacy students would work with health students from other disciplines. The placement timing meant that there were no students from other health disciplines on placement at the time.

The student's observational activities included:

- Following a consultant pharmacist, they observed community home medication review interviews for a day. In Australia, Home Medication Reviews are undertaken in the consumer's home with a credentialed consultant pharmacist. After referral from the general practitioner, the pharmacist visits a consumer in their home. In an interview that lasts approximately one hour, the pharmacist gathers a history related to medicine use, and reconciles medicine use. The pharmacist write a report to the general practitioner that includes any identified problems and recommendations to optimise therapy.
- In a remote residential aged care facility, they observed medication reviews, the audit for a drug usage evaluation, and presented medication education for the staff.
- In-home care staff supervised the students individually over three days. Students spent one day with each of a continence nurse, wound care nurse, and a personal carer. The wound care nurse visits people in the community several times a week to care for wounds. During these visits, the nurse reviews healing, and dresses the wound. The continence nurse is a registered nurse with additional training who supports, educates and rehabilitation for people living with incontinence. The personal carer provides support to facilitate the person to stay remain in their own home. This support can include showering,

house cleaning, and grocery shopping. These health professionals visit patients in their own homes to support them to remain in the community and deliver health care services.

- Observation of the interdisciplinary team at the day therapy unit. The day therapy unit supports older adults living in the community with increased support needs, such as chronic disease, stroke rehabilitation, and dementia. There is not a pharmacist involved in the day therapy unit, so allied health professionals supervised the students; Students observed the service delivery and interdisciplinary practice, and delivered medication education to the allied health staff.
- Students spent two days in a remote township that does not have a community pharmacy. They participated in cultural education training presented by an Aboriginal Academic. They also undertook site visits to understand medicine supply and community services in a remote area without a pharmacy.

Other student activities included an individual weekly meeting with the rural pharmacy academic to discuss any concerns or issues that may have arisen. These conversations were led by the students, and consisted of topics they wished to discuss. Students were required to write a short daily reflection each evening. This short daily reflection was not a prescribed length. If students provided only a narrative account of their activities, the Rural Pharmacy Liaison Officer would ask questions to prompt reflection. They were asked to write a detailed post-placement reflection of at least one A4 page within several weeks of returning home. They were not directed on the topics or themes for their reflection.

The University of Western Australia's Human Research Ethics Committee reviewed the study and assessed it as exempt from ethical review (ref: RA/4/1/6693).

Table I: Sample Schedule

<i>Week One</i>	
Monday	Home Medication Reviews
Tuesday	In home care – wound care nurse
Wednesday	Day Therapy Unit
Thursday	Residential Aged Care Facility
Friday	In home care – personal care assistant
<i>Week Two</i>	
Monday	Remote Town
Tuesday	Remote Town
Wednesday	Presenting medicines information session to allied health care staff
Thursday	Residential Aged Care Facility
Friday	In home care – continence nurse

Analysis

The students' daily reflections and detailed post-placement reflection were analysed using a qualitative thematic methodology. These reflective writings were imported into nVivo v.10 qualitative data management software (QSR International Pty Ltd., 2012). The reflective writings were analysed qualitatively using content analysis. AP coded the texts line by line. She developed themes and sub-themes until no further sub-themes could be identified.

Findings

Five pharmacy students undertook a two-week clinical placement in a rural region of Geraldton in July 2013. Two students were male, and three were female. None of the students had a rural background. Four students completed the two-week placement, the fifth returning home three days early due to an unexpected family death. All had completed an undergraduate bachelor degree in an unrelated discipline and had completed one-quarter of their Master of Pharmacy degree.

Five main themes emerged from the content analysis. These themes were learning about and from other health professionals, pharmacy-specific learning, consumer-specific learning, rurality and feedback on the placement model.

Learning about and learning from other health professionals

Students reported an increased appreciation and understanding of the roles of allied health professionals and nursing staff. They reported an interest in observing the process of multidisciplinary interactions to develop and implement support for elderly patients cared for by a physiotherapist, speech pathologist and occupational therapist. These observations demonstrated to the students the "vital connectivity of other services in the health system" (*Pharmacy Student 3*)

"The placement was more focused on observing how different disciplines work together. ... I was able to observe how physiotherapist, speech pathologist and occupational therapist were helping a patient who had previously had stroke in recovering their everyday life." (*Pharmacy Student 1*)

"I went to a home visit and saw how the occupational therapist student and physiotherapist student did their assessments for the elderly patient. It is interesting to observe how the two different professionals performed their assessments for the patient, how they worked together and tried to improve the patient's current situation. Good communication, either between two health professionals or between the patient and the health professional, is very important and one of the key factors to improve the quality of life of the patients." (*Pharmacy Student 5*)

Pharmacy discipline-specific learning

Through an improved knowledge of other health professionals, students reported an increased understanding of the pharmacists' role in the health care team relating to and complementing other health professionals. From these observations, they discussed the role they saw that pharmacy could play in the same team, realising that pharmacists have a role outside the dispensary. They stated that they appreciated the opportunity to see other roles and opportunities outside of the traditional pharmacist roles. They appreciated that they could relate back to pharmacy practice the specialised services provided by other health professionals.

"It was good to look at the medication aspects and then discuss with the head nurse the practicality aspect of switching or changing medications, and the quality of life impact which it could have on the patients, essentially complementing the theoretical versus practical aspects of poly-pharmacy for the patient." (*Pharmacy Student 3*)

"The discussion and reasoning of the use of patients' medications was pretty good. The discussion makes me realise that knowing the indications and adverse effects of the medicines is not enough. It is important to know how to link all the information up as well." (*Pharmacy Student 5*)

Several students described a consolidation of their pharmacy-specific knowledge through the experience. When presenting a session on medicines to experienced allied health clinicians, the pharmacy students were surprised that they were able to provide a generalised medicine education training session that taught experienced clinicians' new information.

"This had allowed me to consolidate the common medications...reinforcing my knowledge of medications used in this area." (*Pharmacy Student 2*)

Observing the wound care nurse was viewed as an opportunity to understand and increase familiarity with products sold at community pharmacies. They related the cases they observed with the nurses back to topics that had been taught theoretically at university.

"In school, we won't have the opportunities to see such cases. Hence, I find the session on that day is educational as I can relate the cases back to what I was taught in school." (*Pharmacy Student 5*)

Consumer-specific learning

Consumer-specific factors and the importance of clear communication was a common theme. Students were confronted by the daily challenges experienced by adults receiving in-home personal care. Students were reluctant to be placed with a personal care assistant as this was not seen as a clinical role, yet simultaneously discussed their

surprise at the functional limitations of these community members and extrapolated the ramifications this would have on their ability to manage medicine use.

“I think that it would be more educational for us if we follow a nurse instead of a care assistant. This is because the job scope of a nurse is more clinical and so we might be able to relate back to what we have learnt in school.”...“I never thought that performing all the daily activities could be so difficult till I met all these elderly. Going to the various home visits gave me an opportunities [sic] to see how people are living their lives...” (Pharmacy Student 5)

“I followed the care assist which encompassed following one of the staff to homes where the patients required assistance that included: bathing, grocery shopping, food preparation as well as some other miscellaneous jobs. Even though this was not pharmacy based, it allowed me to get insight into the interprofessional learning, allowing us to understand the roles of the other health workers, as well as the patients whom we dispense medication to and their circumstances, which may influence their adherence to medication.” (Pharmacy Student 2)

The placement highlighted to the students the need for good communication. They reflected on this particularly in regards to Aboriginal people, and those with increased care needs. They had little or no prior experience with Aboriginal people, and to alter one’s communication style for cross-cultural interactions was a new concept. The idea that “even though they speak English, the meaning [of a word] might be different” (Pharmacy Student 1) for people from different cultural backgrounds.

“Extremely helpful experience, providing vital background on how to approach certain health issues with the Aboriginal community and how to optimise their health outcome, based on these cultural aspects.” (Pharmacy Student 3)

All the students stated that the cultural education was a highlight of the placement, and in particular the communication sessions.

Rurality

Students reflected on observations of rural practice and rural health. Compared to metropolitan regions, they noted the flexibility and diversity of the rural health workforce and the reduced availability of rural service delivery.

“Such that people working in this area of health have to be open to constant change and to be able to work at the highest level of flexibility. This necessity has shown me that rural health relies upon the diversity and community support of its health work force, to maximise its outcome and reach across the wider rural community.” (Pharmacy Student 3)

“It was interesting to see the difference in living in a rural town compared to a metro city. In one case, we had to drive about 3 hours (return trip) just to do a Health Medicine Review (HMR) for one hour. It made me realise, that when there are minimal healthcare professionals in a rural town sometimes you have no choice but to travel far distances.” (Pharmacy Student 4)

Feedback

Students provided feedback on the placement as to the perceived value, the most useful activities, and ways in which it could have been improved. Overall, the students reflected that the experience was a positive one. The students were initially confronted by the prospect of a non-traditional placement, but found it useful.

“My rural experience in Geraldton exceeded my expectations. It was not a typical pharmacy placement. It was an inter-professional learning experience, and it was great to see how other allied health professions deal with patients.” (Pharmacy Student 4)

“This placement was certainly an eye opener for me, I would like to say that I went in with a completely open mind, but the fact is that no matter how hard you try you will always bring to a new experience the preconceptions of your last, that is unchangeable. Saying that, participating in this placement I have gained valuable experience and insights into rural health and it has greatly broadened my view and understanding of multiple issues facing rural health.” (Pharmacy Student 3)

Students provided feedback on their perceptions of the most useful activities. The remote town visits and cultural education sessions were highly valued. Students valued the opportunity to observe the multidisciplinary day therapy unit and services provided by the wound care nurse and incontinence nurse. Additionally, students appreciated the opportunity to observe medicine reviews in the community and residential aged care as well as participate in a drug use evaluation at the residential aged care facility.

“The two weeks placement was a new and different experience for me. We were exposed to many different things. It was a totally different experience from a community or a hospital placement. It is good that we had the opportunities to see the other job scopes of a pharmacist beside the usual roles in community and hospital pharmacies.” (Pharmacy Student 5)

However, students felt that the placement could have been improved by greater pre-placement orientation, as the placement had been significantly different from their expectations. They stated that the objectives and activities of the placement had not been clear before the placement,

and this meant that they had to adjust their expectations. The students also stated they would have appreciated more discipline-specific experience, such as in the rural hospital pharmacy

“A breakdown of what the student would be doing would also be a good idea before students actually apply for the placement because most student would just think that they would have to work in community or hospital pharmacy and that would put some off from applying, but the placement offer much more especially the cultural awareness sessions.” (*Pharmacy Student 1*)

Discussion

In this non-traditional rural placement, students reported improved knowledge of other health professionals, pharmacists and consumers. Although they were at an early stage of their degree, the students were able to extrapolate information to pharmacy from observing multidisciplinary placements. For example, they connected the supporting role of community care assistants back to the patient's ability to manage their medicines. They observed it again when accompanying the wound care nurse and considered the products used, and when they reflected on the medicine-specific knowledge of experienced allied health practitioners.

Students reported that they wanted their placement experience around multidisciplinary and consumer observations to also include discipline-specific learning. The placement was limited to observation only, which made a traditional placement within a community or hospital pharmacy impractical. However, it would appear that students would appreciate and benefit from a longer placement that included time in a non-traditional multidisciplinary capacity and time in a traditional role to practice discipline-specific skills. This approach of learning discipline-specific skills from multidisciplinary placements has been previously demonstrated to be a useful approach for learning about one's own profession and other health professionals (Kipp, Pimlott & Satzinger, 2007).

Students learn better when they are actively engaged in the learning process (Huba & Freed, 2004). As an experiential placement, the students were immersed in the rural community and experiencing multidisciplinary practice. Within their growing awareness of the consumer over the placement, the students reflected on how the consumer was affected by issues such as rurality, communication and ability to independently undertake activities of daily living. This work supports previous work that found experiential learning for pharmacy students improves their communication skills (Beardsley, 2001).

Health professional students have found multidisciplinary education to be a positive experience (Davidson *et al.*, 2008). However, a number of barriers exist to implementing multidisciplinary education in practice (Davidson *et al.*, 2008). In this placement programme, the students' initial reluctance to undertake a

multidisciplinary placement rather than a discipline-specific placement was a barrier; through their experience, however, the students reflected after the placement that it was a beneficial and positive experience. Given the students' initial reluctance, it suggests exposure to multidisciplinary practice during the undergraduate course may be useful as an aim of multidisciplinary learning is to improve collaboration (Davidson *et al.*, 2008). It has previously been asserted that introducing students during their training through experiential learning to the practicalities of multidisciplinary practice may increase their enthusiasm for collaborative care, and appreciation of other health disciplines (Allen, Penn & Nora, 2006). Multidisciplinary practice needs individual practitioners to have the mindset that collaboration among health practitioners is important for patient care (Allen *et al.*, 2006). The students understanding of pharmacy practice was strengthened through multidisciplinary education, which is similar to previous work where students own professional identity improves through multidisciplinary education (Cooper, Spencer-Dawe & Mclean, 2005).

Students discussed changes in career interest over the placement, with newfound interests in multidisciplinary practice and a broader awareness of career choices. Previous research in both pharmacy and other health disciplines has shown rural multidisciplinary placements to improve interest in both rural health and multidisciplinary practice (McNair *et al.*, 2005; Charles *et al.*, 2008; Wright *et al.*, 2014). The students in this non-traditional placement did not report a change in their intentions to a rural career, though we did find an increased awareness of rural issues and practice.

There were only five students for two weeks in this study, and they were students who applied for and were subsequently selected for the placement. This potentially limited the generalisability of the experience. Another limitation to our work was that we did not undertake either objective or subjective pre- and post-placement assessment to measure change over time, nor did we explore the effect on the other health professionals that the students worked with. This work will inform the design of a larger evaluative study to explore rural pharmacy placements across the UDRH network, where we can consider these issues.

The use of reflective writing was another potential bias as there are strengths and limitations to reflective practice activities (Tsingos, Bosnic-Anticevich, & Smith, 2014). The limitations of reflective writing were possibly reduced as the students were motivated and self-selected. However, the students chose which topics to write about as they were not given any direction as to the topic for reflection. This was both a strength and a limitation of our work.

This work adds to the evidence that multidisciplinary placements can improve both discipline-specific and multidisciplinary knowledge for pharmacy students. It is intended that the programme will be expanded in the following year; ideally the placement will be longer. This would mean that the programme could be expanded to

maintain the current aspects and additionally include time in a traditional pharmacy environment and timed to allow pharmacy students to integrate with health students from other disciplines. It appears that a rural multidisciplinary placement is useful for improving pharmacy students' understanding of consumer needs and the role of other health professionals and pharmacists within the health care team.

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