

An Australian and Sri Lankan Collaboration in Clinical Pharmacy

“It’s not just cricket”

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Background: In 2006, University of Sri Jayewardenepura (USJ) commenced one of the first Bachelor of Pharmacy programmes in Sri Lanka. A clinical pharmacy subject is included in the fourth year of the curriculum, but due to lack of local expertise, USJ requested funding from World Health Organisation, and assistance from international colleagues to deliver the subject.

Aim: Aim of this collaboration was to write and deliver a six week undergraduate clinical pharmacy subject.

Methods: Objective of the subject was to deliver knowledge and skills required to practice as a clinical pharmacist, and to build local capability. The curriculum was designed using the subject profile, expertise of clinical pharmacists from Queensland, and consultation with local academics.

Results: In July 2010, the clinical pharmacy subject was delivered by the international team to the first cohort of students, and evaluated. 45 hours of lectures, 21 hours of tutorials and 12 hours of ward-based teaching sessions were delivered. Students provided feedback on delivery and content of lectures. The curriculum and presentation were continually refined during delivery in response to feedback. The students were assessed using multiple choice and short answer questions, and objective structured clinical examinations stations. Overall the course was well accepted by local academics and students.

Conclusion: Experienced pharmacists in developed countries such as Australia can significantly impact on the quality of undergraduate training in developing countries like Sri Lanka. This undergraduate teaching (especially the ward based teaching component) from international pharmacists may play a role in driving clinical pharmacy services forward.

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BACKGROUND

The first pharmacist certificate course was introduced in Sri Lanka in the early 1950s. Bachelor of Pharmacy (BPharm) programs were only introduced in 2006. The University of Sri Jayawardenepura (USJ) in Colombo commenced their first program in 2006 with an intake of 19 students. This full time four year program consists mainly of lectures with limited practical and tutorial sessions. The aim of the USJ program is to produce a pharmacy graduate “who is able to deliver the elements of pharmaceutical sciences and who would serve the country with competence, compassion and care”.¹



As a result of the lack of BPharm graduates in Sri Lanka, there is also a shortage of qualified pharmacy educators in the field. The current program is taught mainly by local medical practitioners and Bachelor of Science (BSc) degree holders with little or no clinical pharmacy experience. It is because of this gap in expertise that USJ requested assistance from their international colleagues to teach the clinical pharmacy subject.

AIM

The aim of this collaboration was to write, deliver and evaluate a six week undergraduate clinical pharmacy subject.



METHOD

A specialist team of five clinical pharmacists (“the team”) from Queensland was invited by USJ to travel to Sri Lanka to deliver a six week course in their clinical pharmacy subject. All members of this team have an extensive clinical pharmacy and teaching background. The objective of the clinical pharmacy course was to deliver the knowledge and skills required to practise as a clinical pharmacist and in doing so to build local capability in this field. The content of this course was designed by the team based on the USJ subject profile, using their clinical expertise and teaching experience, and collaborating with the local academics. A student feedback questionnaire was developed by the team during the development phase.



RESULTS

Development of subject

In February 2010, the team began the process of course development. USJ provided the team with information regarding the areas to be covered in the clinical pharmacy course. Each team member was allotted an area for course development. The team decided that lectures, tutorials and ward based teaching sessions would be used to deliver the content.

Delivery of course

In July 2010, the clinical pharmacy course was delivered by the team. Forty-five hours of lectures, 21 hours of tutorials and 12 hours of ward-based teaching sessions were delivered. The lectures were delivered in the morning. Each lecture was approximately one hour in duration. The team wanted the lectures to be interactive, so case studies were embedded to encourage student participation in class.



The afternoons were dedicated to tutorials and ward based teaching sessions. Half the class stayed at the university to complete a tutorial, whilst the other half attended the ward based teaching sessions. The following day, the groups alternated. The tutorial tasks included theoretical questions and case studies where the students were encouraged to integrate their pharmaceutical knowledge into practice.

Each student attended four ward based teaching sessions. During these sessions, the students were divided into small groups of three to four students and each group was allocated a patient. The students were expected to obtain a medication history from the patient, gather relevant information from the medical notes, determine the appropriateness of the prescribed medicines and present their findings to the larger group. The team facilitated the ward based teaching sessions with the help of one or two local academics. The team provided feedback to the students and encouraged class discussion.



Assessment of students

The students were assessed on both the theory from lectures and the skills they gained during the ward based teaching sessions. An in-course multiple choice question (MCQ) exam was held during the six weeks of teaching. At the completion of the course, the students were assessed at ten Objective Structured Clinical Examination (OSCE) stations. A final MCQ and short answer theory exam was planned for the end of the semester. The results from the above examinations are the property of USJ and were not available for use in this study.

Evaluation of course

The content and delivery were continually refined during the course in response to anonymous student feedback. Student feedback questionnaires were distributed to the students after the initial lecture by each of the team lecturers and then after a subsequent lecture by the same lecturer later on in the course.

The questionnaire consisted of three 5-point Likert scale questions, and three open-response questions. The three open-response questions were included in the questionnaire to give the students the opportunity to clarify or respond in more depth. The answers to the open-response questions were analysed using thematic analysis and several issues emerged.



Results of evaluation

Results from the three open response questions can be seen in Table 1. The themes from the first set of feedback questionnaires and the second set of feedback questionnaires were similar. The theme and the student comments are presented in the first two columns and the third column provides a description of the adaptations made to the subsequent lectures.

Table 1: Results from the open ended questions

Theme	Student comment	Strategies to address feedback
Reduce the speed of delivery of the lectures	“Speak slowly & loudly. Sometime I couldn’t understand because of the speed & pronunciation” “It is better to slow down speed of lecturing and stress the important parts” “A little hard on understanding due to different pronunciations but I think it will be ok soon after few days with you”	Local and team academics attended lectures and signalled when they thought the team lecturer was speaking too fast Team members tried to choose simple words, and avoided idiomatic English, jargon, or slang. Team members also attempted to enunciate their words to improve clarity and decrease speech rate.
Strong preference for visual reinforcement of the material covered in lectures	“Use more diagrams when explaining” “Lecture was good. Especially using video clip it was more practical and help not be boring”	Team members continued to use visual reinforcement, using diagrams, pictures and videos to highlight important information and ease the cognitive load of listening alone.
Use of case studies and examples was preferred to enhance the students’ understanding of the lecture.	“I feel that we should have spent more time with the examples, case studies as this was an area we had not covered before.” “Use more practical examples, we like to see what actually happen in hospitals” “Including case studies to the lecture is interesting and easy to understand the topic”	Team members tried to discuss case examples that they had encountered during the ward based teaching session to highlight the key concepts. Team members also tried to incorporate Sri Lankan terminology, names of people and places when teaching. Other team members observing the lectures contributed by providing examples of patients and situations from their experiences.



The Likert scale questions asked about the delivery speed of the lecture, appropriate use of audiovisual aids and the usefulness of the lecture in helping the students to understand the topic. Results from the Likert scale questions can be seen in Table 2.

Table 2: Results from the Likert scale questions (average for all the team members) %

	Strongly Agree & Agree	No opinion	Strongly Disagree & Disagree
The lecturer delivered the lecture at the right speed			
Lecture 1	82%	9%	9%
Lecture 2	92%	7%	1%
The lecturer used effective audiovisual aids			
Lecture 1	85%	13%	2%
Lecture 2	89%	11%	0%
The lectures were useful in helping me understand the topic			
Lecture 1	97%	1%	2%
Lecture 2	99%	1%	0%



SUMMARY OF FINDINGS

- An interesting observation from the feedback questionnaire was regarding the speed of the delivery of the lecture. The results from the Likert scale questions showed that majority of the students agreed or strongly agreed that the lecturer delivered the lecture at the right speed. However, in the open ended questions, some students commented on the need for the lecturer to reduce the speed of the lecture.
- In the Likert scale questions, most students felt that the lecturers used effective audiovisual aids in the lecture. The comments from the open ended questions allowed the students to expand on this. Students commented that they would like more pictures and diagrams in the PowerPoint presentations to reinforce the material covered in the lecture.
- Majority of the students found the lectures helpful in understanding the topic. The students requested the use of case studies and practical examples in the lectures to enhance the students understanding of the content covered.



CONCLUSION

Experienced pharmacists in developed countries such as Australia who have an interest in education can significantly impact on the quality of undergraduate training in developing countries like Sri Lanka. This undergraduate teaching (especially the ward based teaching component) from international pharmacists may play a role in driving clinical pharmacy services forward. Studies and practical examples in the lectures to enhance the students understanding of the content covered.



1. University of Sri Jayawardenepura. Bachelor of Science in Pharmacy Degree Program. 2008 [cited 2010 Nov]; Available from: <http://www.sjp.ac.lk/fms/courses/pharmacy.html>.