

Report of WHO funded Clinical Pharmacy Program Development, Delivery, Assessment and Training of Clinical Pharmacy Trainers Program at University of Sri Jayewardenepura Clinical Pharmacy and Pharmacotherapeutics Training of Trainers

WHO Strategic Objective (SO): 10

Project No: SESRL 1004108

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Background

The original proposal to WHO was to obtain the services of Clinical Pharmacy and Pharmacotherapeutics experts to train teaching staff and undergraduates. Specific objectives included:

1. To train the trainers permanently attached to the B.Pharm program on delivering theory and practice knowledge on Clinical Pharmacy and Pharmacotherapeutics which will establish the continuity of teaching this subject for the B.Pharm program.
2. To deliver a comprehensive program to enhance students understanding of theory and practice of Clinical Pharmacy and Pharmacotherapeutics and develop practical skills through a program of clinical tutorials and ward based training for the current final year students of the B.Pharm program.
3. To establish an effective and feasible assessment methodology for Clinical Pharmacy and Pharmacotherapeutics subject

Method

Funding was secured by University of Sri Jayewardenepura from WHO in line with Strategic Objective (SO): 10. A team of experienced clinical pharmacists with experience in the development, delivery, evaluation and assessment of clinical pharmacy and therapeutics from were invited to come to Colombo and to prepare, deliver and evaluate the clinical pharmacy program.

Professor Gita Fernando met with project leaders Dr Ian and Mrs Judith Coombes at the University of Queensland in May 2010 in preparation for the program.

Extensive planning was undertaken by the Queensland team in liaison with Ganga Senarathna. and Nithushi Samaranayake prior to arrival in Sri Lanka.

The Head of School of Pharmacy, University of Queensland, Professor Nick Shaw and Senior Director of Medication Services Queensland gave approval for staff leave and adoption of teaching and assessment material for use at University of Sri Jayewardenepura.

Results

Visiting Lecturer team

The team leader Dr Ian Coombes senior clinical pharmacist and team leader practitioner development Medication Services Queensland, Queensland Health and Senior Clinical Lecturer Schools of Pharmacy and Schools of Medicine, University of Queensland and Judith Coombes Senior Pharmacist Education, Princess Alexandra Hospital and Lecturer School of Pharmacy, University of Queensland, agreed to co-ordinate the project and recruited a team of lecturers to accompany them on the visiting lecture program.

Three clinical pharmacy practitioners and lecturers were recruited to the visiting lecturer team.

- Catherine B. Lynch, Senior Clinical Pharmacist, Princess Alexandra Hospital and conjoint lecturer School of Pharmacy, University of Queensland.
- Nimali Rahathungoda, Clinical Pharmacist, Princess Alexandra Hospital and conjoint lecturer School of Pharmacy, University of Queensland.
- Elaine Poo Ling, Senior Clinical Pharmacist and Team Leader, Medication Services Queensland and Conjoint Lecturer School of Pharmacy, University of Queensland.

The lead resource person Judith Coombes arrived on 5th June 2009 together with Catherine Lynch and Nimali Rahathungoda. Dr Ian Coombes and Elaine arrived on 25th June and joined the team which delivered on teaching and training activities. The final day of staff and student debrief was on Wednesday 14th July.

Delivery of teaching and learning

A series of interactive, problem based lectures were developed and delivered in morning sessions (9 am – 12 noon) over 5 weeks from 7th June to 5th July. In the evening sessions students were split into two groups half of the students were taught on the medical and surgical wards at Kalubowila Teaching Hospital, while the other half were taught in interactive case based tutorials. Student groups alternated between attending tutorials and ward based teaching (attachment 1).

The ward based teaching included the selection and consenting of up to 5 patients, who agreed to be interviewed by pharmacy students. Students were provided with a template for information to be collected from patient interviews and review of patient information. Students then presented back orally to the group which was facilitated by one of the visiting lecturers. Each lecturer was accompanied by a medical pre-intern and a lecturer from University of Sri Jayewardenepura (attachment 1).

Although some of the lectures given by visiting lecturers were recorded or videotaped unfortunately not many were attended in person by University staff to enable an appreciation of student engagement and use of mediums such as the white board and small group work.

Assessment of teaching and learning program

Qualitative

Nimali Rahathungoda carried out 3 focus group discussions with the students and the tutors before conducting the program, halfway through and at the completion of the program. The objective was to assess the perceptions of the students as to their future role as clinical pharmacists, their perceived needs regarding knowledge and skills and their feedback regarding the effectiveness of the teaching and delivery methods.

Summative

Student evaluation was initiated on 7th July with a theory paper which contained 15 MCQs each consisting of 5 true false questions and 2 SAQs (structured answer question) in order to assess the knowledge attained during the Clinical pharmacy class room teaching.

The clinical patient care, communication and problem solving skills and application of knowledge were developed during ward based teaching and were assessed by students' performance in 10 Objective Structured Clinical Examinations (OSCE). Before conduct of the real OSCE, a mock OSCE was conducted to train students on the assessment method.

The student's feedback on the OSCE process both as an exam and a learning opportunity was obtained by completion of a 7 point Likert scale. The students found the process a practical, positive experience that evaluated their skills and knowledge. They felt it was a fair reflection of their potential performance and both a fair exam and realistic. Unsurprisingly they all found it stressful to a varying degree. (Figure 1)

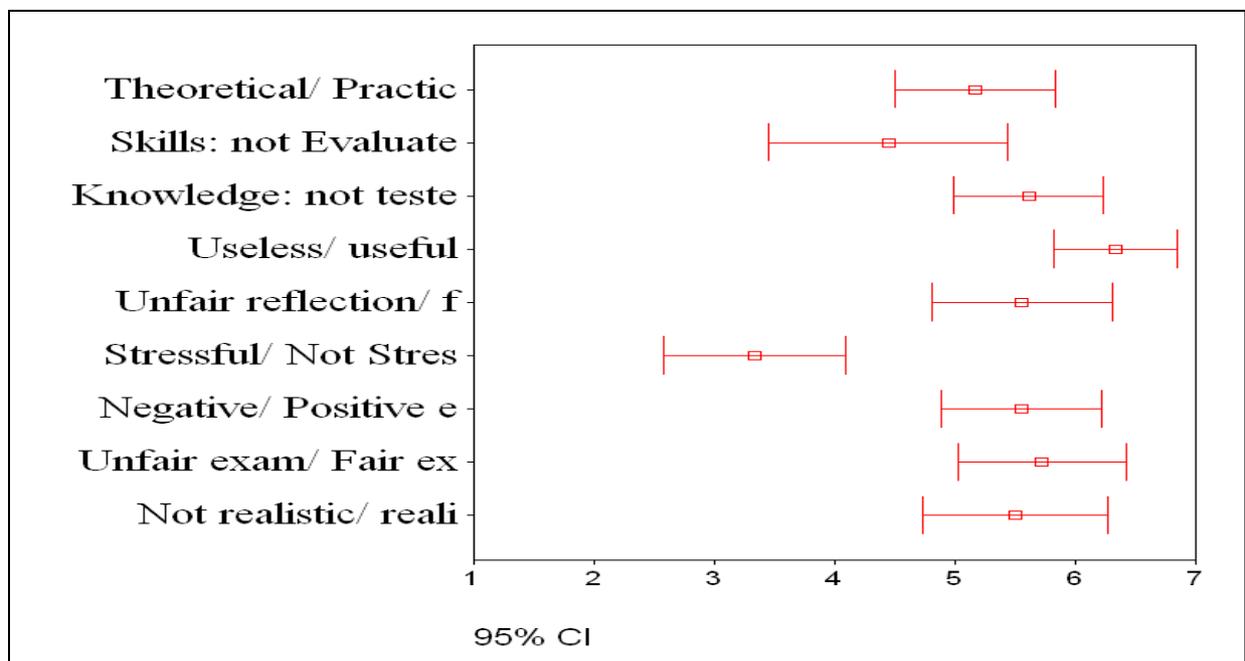


Figure 1 Student feedback on Mock OSCE process (mean and 95% ci)

Train the trainer Program

Five one day training of trainer sessions were carried out on 10th, 17th and 24th June and 1st and 8th July from 9 am to 4 pm (attachment 2).

The events were attended by academics from University of Colombo, University of Peradeniya, University of Ruhuna, Open University of Colombo and all the academics from the B Pharm program at the University Sri Jayewardenepura.

Feedback was also obtained from the participating academics, who found the course constructive, taught them both teaching skills and increased their understanding behind adult teaching and learning and both formative and summative assessment processes and ability to run OSCEs.

There was benefit to the pharmacists in the inclusion of clinical pharmacology staff, interested physicians and pre-intern demonstrators attached to the school of Pharmacy.

Development of Clinical Pharmacy Standards

The need for clinical pharmacy standards for Sri Lanka in line with the Federation of International Pharmacists (FIP) Global Competency framework was agreed. The need for competency standards was realised as a pre-requisite to determining assessment criteria for pharmacy graduates, which could also be adopted for registration competency assessment for a future intern program.

Assistance was obtained from the attending clinical pharmacologists and pre-medical intern trainees to develop competency standards to guide the development of both the curriculum and assessment of the Clinical Pharmacy and Pharmacotherapeutics components of the B.Pharm program at our University (attachment 3).

Conclusion and way forward

Publication, presentation and collaboration for sustainable effective teaching, learning and practice

It is hoped that a report be submitted to the Sri Lankan Pharmaceutical Journal and a paper to the 2011 FIP conference in Hyderabad and 2011 conference for hospital Pharmacists of Australia. Further papers will result from Nimali's focus groups and analysis of the formative and summative assessments. The clinical pharmacy standards and competency frameworks should further developed by the existing group formed from the train the trainer attendees and promoted as a National Standard.

Formalization of clinical pharmacy teaching component within BPharm courses

After the completion of this initial clinical pharmacy teaching program it will be important to consider whether the subject should continue to be taught as a 5 week block with visiting lecturers from overseas or to revise the 4th year curriculum at University of Sri Jayewardenepura to incorporate the subject into the 4th year.

As University of Peradeniya also began this teaching component in 2009 it would seem sensible to collaborate in formalization of the teaching programs and assessment processes for their BPharm programs.

The successful delivery of the material at either site will rely upon the allocation of subjects to existing Sri Lankan staff to revise the visiting lecturers material to enable delivery in the own style and ensure material is updated in line with contemporary Sri Lankan medical and pharmacy practice.

Further collaboration between Universities of Queensland and Sri Jayewardenepura

There could potentially be a memorandum of understanding or letter of agreement signed by heads of University of Queensland, and University of Sri Jayewardenepura which will foster further collaboration and potentially enable future visiting or exchange of lecturers between the two facilities.

Need for local clinical practitioner input to the program – possible conjoint practitioner/lecturers

The need for experienced clinical pharmacists to deliver the material both in the classroom and on the wards is acknowledged and it will be important to harness the enthusiasm of this first batch of students who may become hospital interns and later practitioners to act as conjoint lecturers.

Future research and grant support for Clinical Pharmacy teaching and mentoring

The seeking of funds for a possible collaborative research program to evaluate the impact of clinical pharmacy teaching on graduate performance in the workplace should be explored.

Attachments:

1. Timetable for undergraduate lecture, tutorials and ward based teaching
2. Timetable for train the trainer program
3. Draft Clinical Pharmacy Standards