

Vaccination training in Australian undergraduate pharmacy curricula

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Abstract

Context: Recently, legislation has been modified to allow pharmacist administered vaccinations in some Australian jurisdictions. Therefore it is appropriate that pharmacy students are appropriately trained and certified competent to deliver such a service to patients. Such competence will be achieved through the successful completion of approved and validated undergraduate vaccination training program.

Description: This short description outlines the progress to date on the development of an Australian, pharmacist specific, validated vaccination training program (VTP) to be integrated within undergraduate pharmacy training, as identified modules with assessed competency. The training program has been developed with consideration of the learner context, teaching context, subject matter and strategic approach.

Evaluation: To validate the proposed and developed undergraduate vaccination training program, four focus groups for consultation are in progress.

Future plans and implementation: The developed validated undergraduate vaccination training program will be delivered to Australian and Sri Lankan pharmacy students in 2015. On completion, pharmacy students will be surveyed, with the aim to identify participant satisfaction with program delivery. Collection and analysis of survey and assessment data will then be analysed.

Successful completion of the embedded training program will contribute to pharmacy student graduate preparedness to administer vaccinations in a safe, competent and ethical manner.

Keywords: *Training, undergraduate, vaccination, injection skills*

Introduction

An emerging role for Australian pharmacists is the administration of vaccines. In December 2013 the Pharmacy Board of Australia announced that vaccination is within the current scope of practice for pharmacists in Australia (The Pharmacy Board of Australia, 2013). In January 2014 Queensland legislation changes approved by the Department of Health, enabled pharmacists to administer vaccinations after completion of a vaccination training program and enrolment in Queensland Pharmacist Immunisation Pilot program (Queensland Government, 2014). In May 2014, Northern Territory (NT) jurisdictional regulation was amended enabling pharmacists to administer influenza and measles vaccines after completion of an approved training program (Northern Territory Department of Health, 2014). Therefore it is appropriate that pharmacy students are appropriately trained and certified competent to deliver this health service innovation. Such competence will be achieved through the successful completion of an approved undergraduate vaccination training program.

The primary objective of this short description is to detail the progress of a research project proposing, a pharmacist specific, validated vaccination training program (VTP) with incorporated generic injection skills training, to be integrated within Australian undergraduate pharmacy training as identified modules with assessed competency.

Description

A training program has been designed after extensive review of all current and discontinued Australian and international immunisation/vaccination/injection training programs for health professionals. When developing the teaching rational for the vaccination training program a number of elements were considered including learning objectives, the learner and teaching context, the subject matter and the different styles of student learning.

The training program has been developed with reference to current Australian pharmacy curricula and addresses published concerns raised by key stakeholders and professional associations in the past five years,

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particularly the recommendation that vaccination training be an identifiable unit within training. The vaccination training program (VTP), including all educational material, has been designed and developed purposively for the Australian context.

The injection skills training integrates a variety of education pedagogies, including simulation. Simulation is a learner-centred educational pedagogy that facilitates learning by exposing the learner to a situation which is based on or mimics a real life event. It provides the student with a safe environment to problem-solve and learn prior to practising in the professional setting. Further the use of simulation as an educational tool enables experiential learning and constructivism (Papert & Harel, 1991). Simulation provides students an opportunity to create their own meaning and co-construct knowledge in a safe environment.

The training program will be integrated into undergraduate curricula in three parts. First year pharmacy practice students will be taught and competency assessed in the skills of injection administration, infection control and anaphylaxis management. Collectively the three components have been titled 'injection skills training'.

Third year pharmacy students will again complete 'injection skills training' and have their competency reassessed. Fourth year pharmacy students will complete a vaccination training program, delivered over six weeks via weekly lectures, tutorials and workshops. The vaccination training program will deliver and assess concepts pertinent to the judicious and safe administration of vaccines. Further the VTP will cover, public health and the evolving role of the pharmacist, immunology and vaccination, epidemiology of vaccine preventable diseases, objections to vaccinations: myths and realities, logistics of vaccine supply, and how to conduct a vaccination service in the pharmacy setting in line with current professional recommendations and legislation. The three components of 'injection skills training' will be once more assessed.

Evaluation

To validate the proposed vaccination training program, four focus groups will be consulted, the first will take place in the United States of America where credentialed pharmacists are authorised to administer vaccinations in all fifty States under specific jurisdictional prescribing arrangements including, standing orders, protocols, collaborative agreements and written and/or verbal prescriptions.

The focus group conducted in America will be comprised of five participants, including pharmacist vaccinators and pharmacy academics involved in the delivery of vaccination training to current American pharmacy students. The American focus group provides expert consultation and validation of the content and core skills included in the developed training program. Focus group

participants will identify if the material and delivery modes are sufficient for student learning and comprehension of the concepts of both injections and vaccinations and allow skill retention and demonstration of competency.

The second and third focus group will be held in the Northern Territory, Australia. Focus group participants will include, indigenous health practitioners, psychologists, medical doctors, nurse vaccinators, community and clinical pharmacists. The two Australian focus groups aim to validate and ensure the content is contextualised to the Australian setting. Further Australian participants will identify if the completion of the developed training program allows student participants to achieve the same competency standards as required by other health professionals.

The final focus group will be held in Sri Lanka. The focus group to be held in Sri Lanka will include participants with medical and pharmacy qualifications and experience (practice, industry and academic). This final focus group will add a further layer of expert validation to the content and delivery of the training program.

Learning material will be revised as appropriate following the final focus group. A final draft copy of the training program will be sent electronically to all focus group members for final feedback.

After the final revision the primary investigator will 'train the trainer', that is the primary investigator will teach lecturers and demonstrators in Australia and Sri Lanka how to deliver the content of the training program to ensure that graduates in both cohorts can achieve the same level of knowledge and skill. Trainers will be interviewed after train the trainer sessions, enabling yet another iteration of feedback for the developer of the training program.

The injection skills training and vaccination training program will then be delivered to pharmacy students at an Australian and Sri Lankan University. After the delivery of the IST, student competency will be assessed via the demonstration of the skills of injection. Assessment will be conducted by an external assessor using a validated objective structured clinical examinations (OSCE) rubric. The rubric was designed in collaboration with established vaccinators (Australian nurses and American pharmacy academics) and piloted by completion and demonstration of competency with four academics new to the skill of injection. Assessment has been designed specifically for pharmacy students. Additionally, students will undertake a multiple choice questionnaire which aims to test knowledge and understanding of concepts taught. Assessment data will be analysed.

Immediately following the training programs pharmacy student participants will then be invited to participate in a student evaluation questionnaire aiming to identify participant satisfaction with the program and its delivery.

Future plans and implementation

University degrees aim to provide students with the knowledge, skills and graduate attributes for professional and workplace preparedness (Marriott et al., 2008). Universities globally are up skilling pharmacy students to deliver innovative professional and clinical services. The development and inclusion of a validated Australian vaccination and injection skills training program in undergraduate curricula will improve student preparedness as the profession embraces innovative professional practice and pharmacist administered vaccinations.

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