

Alberta pharmacy students administer vaccinations in the University Annual Influenza Campaign

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Background

An increasing demand from an aging population, coupled with a shortage of health care professionals, makes it necessary for individual health professions to examine expanding their scopes of practice. Administration of vaccinations is one area that has been embraced by most pharmacists. In the United States, the number of community pharmacists administering vaccines is rising.¹⁻⁶ As well, the participation of pharmacy students in immunization initiatives has been shown to improve the vaccination rates.⁷ Pharmacy schools in the United States are now incorporating the administration of vaccines by students into their community rotation.⁸ Across the US, pharmacy students are assisting in influenza clinics, however, very little has been published on this subject. This paper describes Alberta pharmacy students participating in the university's annual influenza campaign as immunizers.

Method

University of Alberta injection certification

On May 30, 2006, the Alberta College of Pharmacists (ACP) Council approved the expanded

scope of pharmacy practice, which includes the administration of drugs by injection. To be able to administer drugs by injection, registered pharmacists must complete additional training from an ACP-approved education program. In order to be considered for approval by ACP, the program must enable pharmacists to acquire theoretical knowledge related to the administration of drugs by injection and acquire competent skills to administer subcutaneous, intradermal and intramuscular injections. Pharmacists have up to 12 months after completion of the course to register with ACP.

In March 2010, the Faculty of Pharmacy and Pharmaceutical Sciences at the University of Alberta submitted a proposal to ACP to certify third-year pharmacy students to administer drugs by injection as part of the pharmacy curriculum. The following were proposed:

1. The knowledge competencies components would be mapped out with the pharmacy curriculum throughout the first 3 years.
2. Pharmacists registered to administer drugs by injection in community pharmacies would be recruited to certify the pharmacy students on the injection skills. These pharmacists must first be approved by ACP as competent assessors.
3. Pharmacy students would be certified in the spring term of their third year.
4. Because these students would not be able to register as clinical pharmacists until 18 months after certification, a request to extend the time for registration from 12 months to 18 months was made.
5. The proposal was unanimously approved by ACP council April 8, 2010.

KEY POINTS



- Student pharmacists were effective in providing influenza vaccines to staff and students of the University of Alberta.
- The influenza clinic promoted the role of pharmacists as immunizers and advocates.
- The influenza clinic enhanced the students' injection skills and improved their confidence in providing vaccinations.

In April 2010, 108 pharmacy students in their third year were certified to administer drugs by injection. Under the Alberta College of Pharmacists guidelines, these students are permitted to administer drugs by injection under the supervision of pharmacists who are registered to administer injections.

To assist pharmacy students in maintaining the level of confidence in their injection skills, the Faculty of Pharmacy and Pharmaceutical Sciences proposed their participation as immunizers in the University Annual Influenza Campaign 2010 to the University Health Centre.

University influenza campaign

With the limited number of available nursing students participating, the University Health Centre could only offer the clinics to the main campus. In collaboration with the Alberta College of Pharmacists, Alberta Health Services, Alberta Health and Wellness, Human Resources and Risk Management, the University Health Centre and the Faculty of Pharmacy and Pharmaceutical Sciences were able to establish 2 influenza clinics in November 2010 at 2 extension campuses (Campus Saint Jean and Enterprise Square Campus). Pharmacy students, now in their fourth year, who were certified to administer drugs by injection in the previous year, were given the opportunity to participate in the University Annual Influenza Campaign. Fifty students participated in the influenza clinics. Ten community pharmacists who were registered to administer drugs by injection were recruited to supervise the pharmacy students.

The objectives of the influenza clinics were to:

1. Provide an opportunity for pharmacy students to be immunizers and advocates for the University Annual Influenza Campaign.
2. Re-assess students' injection skills.
3. Provide hands-on opportunity for students to practise and maintain their injection skills.
4. Provide students the opportunity to educate patients on immunization and the influenza vaccine.
5. Increase students' confidence in providing injections to general public.

Before the clinic day, the students were provided with information on influenza and the influenza vaccine. They were given instructions on the proper handling of needles and accidental needle stick protocol.

On the day of the clinic, pharmacy students were given an orientation that included:

1. Patient education on influenza vaccine
2. Obtaining patient consent

POINTS CLÉS



- Les étudiants en pharmacie ont procédé efficacement à la vaccination contre la grippe du personnel et des étudiants de l'Université de l'Alberta.
- La clinique de vaccination antigrippale a contribué à promouvoir le rôle des pharmaciens dans les domaines de la vaccination et de la défense des intérêts.
- La clinique de vaccination antigrippale a permis aux étudiants d'améliorer leurs aptitudes à réaliser des injections et leur confiance dans la prestation de programmes de vaccination.

3. Proper handling of the vaccine

4. Proper administration techniques

Students were given an opportunity to obtain consent and administer the vaccine to their fellow classmates first before the clinic opened. The students were assigned to groups of 6, with 1 pharmacist supervisor. The clinic was divided into 3 areas:

1) *Pre-clinic area* students were responsible for assisting patients in filling out the required forms and answering any questions with regard to the vaccination.

2) *Vaccination area* students were responsible for obtaining consent from the patients and administering the vaccine.

3) *Post-clinic area* students were responsible for monitoring for any adverse events from the vaccine for 10 minutes and answering any questions.

Each group of students rotated through each clinic area every 30 minutes.

In 2 days, the pharmacy students administered a total of 330 doses of influenza vaccine to staff and students of the University of Alberta. The influenza clinics provided students actual hands-on experience that would be almost impossible to simulate in a lab or classroom. The presence of pharmacists at the clinic provided support and the confidence required by the students. These students were the first pharmacy students in Canada to be immunizers in an annual influenza campaign. At the end of the clinic day, students were asked to fill out an evaluation form (Table 1).

Discussion

This innovative education model can be easily implemented in other universities as long as pharmacists and pharmacy students are able to administer vaccinations as part of their scope of practice. The pharmacy faculty member would liaise with the director of the University Health Centre in order to:

1. Collaborate with the College of Pharmacists to identify all requirements for pharmacy students

TABLE 1 Results from student evaluation form ($n = 28$)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The flu clinic met my expectations.	22	5	1		
I will be able to apply the skills learned from the clinic.	25	3			
The pharmacists were helpful.	24	4			
The pre-clinic orientation was helpful.	20	6	1	1	
The orientation at the clinic was helpful.	26	2			
The flu clinic was well organized.	23	3	2		
I would recommend that all 4th-year students participate next year.	26	2			
I would definitely come back to volunteer as a pharmacist next year.	18	8	2		
How do you rate the activities of the flu clinic overall?	Excellent	Good	Average	Poor	Very poor
	18	10			

- to participate in the influenza clinic.
2. Obtain vaccine and patient education materials from the Department of Health.
 3. Recruit certified pharmacists to volunteer for influenza clinics.
 4. Coordinate with students to schedule pre-clinic orientation.
 5. Collaborate with risk management to ensure that students, pharmacists and patients are protected.
 6. Collaborate with Human Resources to provide administrative support for the influenza clinic.

The key is to identify all stakeholders involved in the influenza campaign and to work closely with the respective colleges of pharmacists.

Based on students' feedback (Table 1), the program was successful in meeting the goals and objectives of assisting pharmacy students in maintaining the level of confidence in their injection skills. Due to the timing of the influenza campaign, only half of eligible students (those who were not on clinical placements) could participate in the influenza clinics. In order to provide similar experience to the rest of students, pharmacies offering influenza clinics are currently allowing pharmacy students on rotation to give flu vaccine to their patients/clients. Without the practical experience from the influenza clinics, all of these students would have administered only 2 injections before graduation and would probably require a training session from their employers prior to practice.

From the Faculty perspective, the benefits of having students involved in an influenza clinic were tremendous.

1. It promoted the role of pharmacist as an immunizer and helped build a greater presence for pharmacists in the university and community.
2. It was evident from the student evaluation that

students experienced enhanced learning from their peers. They were more confident in providing injections to the public in a clinic with other students, as it was potentially less intimidating than other settings.

3. Through collaboration with other stakeholders and pharmacy organizations, the Faculty built goodwill with corporate partners.
4. The influenza clinic offered a very efficient way of providing practical experience for the students.

Conclusion

Traditionally, nursing students from the University of Alberta are the immunizers for the annual influenza campaign, but in 2010 they were only able to offer clinics to the main campus. With the pharmacy student participation, clinics were extended to 2 extension campuses. The experience in Alberta demonstrated that pharmacy students under supervision of trained and registered pharmacists can successfully provide immunization to the general public. ■

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