The impact of pharmacists as immunizers in Collaborative cOmmunity Offsite Pharmacy Practice (CO-OPP Phase 1)

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Introduction

Annual influenza immunization remains the most effective way to reduce influenza-related complications, yet low immunization rates remain an international public health concern.¹ Many factors have been identified as contributors to low immunization rates, including concerns around accessibility and convenience, such as distance to clinics and inconvenient hours.²

Pharmacists are highly accessible and may improve convenience for receipt of vaccinations.³ As of December 2016, 9 of 10 provinces in Canada have legislation that enables pharmacists with appropriate training to administer vaccines.⁴ Most published data have focused on the impact of pharmacists providing immunizations in the pharmacy.⁵ The role of the pharmacist providing immunizations in alternative community settings may further improve patient access and immunization uptake.

This article aims to summarize the experiences and results, including patient and collaborative partner satisfaction, impact on the number of immunizations and fiscal feasibility, of a pharmacist-led influenza immunization strategy in non-pharmacy community sites in rural Nova Scotia.

Methods

The project lead (S.E.B.) identified potential collaborative partners in the local community based on potential number of vaccine recipients and physical resources, including a private room and waiting room space, to provide the clinic. Collaborative partners varied and included schools,

the town, the largest business in the town and a service club.

Communication tools were developed for discussions with potential partners, including a list of resources needed, such as the space requirements. The project lead contacted local employers and other potential community partners using information letters and cold calls in the spring of 2014 and followed up with interested partners in the fall to confirm immunization clinic dates. In subsequent years, the project lead followed up with previous sites and recruited additional sites through additional information letters and cold calls.

A paper-based quality assurance survey was developed and provided to patients postinjection and returned anonymously. A survey was sent by email to collaborative partners to assess their satisfaction with the service and returned by email or mail (see Appendix 1, available in the online version of the article). The collaborative partners' survey was not anonymous, in order to facilitate possible future clinics and growth opportunities. The survey was determined by the Dalhousie Research Ethics Board to be quality assurance and so exempt from research ethics board review.

The number of immunizations provided by the pharmacy was compared before and after the addition of the community administration sites.

Fiscal feasibility was assessed by subtracting the cost of pharmacist and assistant time based on their hourly wages from the total number of administration fees received. Pharmacist and assistant time was used to add vaccine recipients

TABLE 1 Clinic attendee survey responses (2014-2015)

Site number	Total number of clinic attendees	Number of clinic attendees that completed (survey response rate, %)	Responses to survey		
			Question 1: Convenient? Number (%) who indicated “yes”	Question 2: Satisfaction* Number (%) who indicated “happy or very happy”	Question 3: Use again? Number (%) who indicated “yes”
1	12	9 (75)	9 (100)	9 (100)	9 (100)
2	87	68 (78)	68 (100)	68 (100)	68 (100)
3	22	22 (100)	22 (100)	22 (100)	22 (100)
4	17	15 (88)	15 (100)	14 (93.3) [†]	15 (100)
5	25	23 (92)	23 (100)	22 (95.7)	23 (100)
6/7 [‡]	19	19 (100)	19 (100)	19 (100)	19 (100)
Total	182	156 (86)	156 (100)	154 (98.7)	156 (100)

*Likert scale: 1 = very unhappy, 2 = unhappy, 3 = neutral, 4 = happy, 5 = very happy.

[†]Possible error in completion of survey, as 1 respondent in each of sites 4 and 5 indicated “yes” to questions 1 and 3 but chose “1” for question 2.

[‡]Sites 6 and 7 submitted surveys together, so could not be separated.

to pharmacy files, process and file documents required by the Nova Scotia College of Pharmacists (NSCP) Standards of Practice, provide education, get consent from patients and administer the vaccinations.⁶ Other costs, such as fuel and stationary, were not included in the calculations, as the pharmacy was willing to absorb these costs to offer the clinics.

Results

In the first year of the project, the 2014-2015 influenza season, 8 community partners, including schools, the local municipality, employer and service groups, were identified and 7 committed to the initiative and booked clinics. In the following year, the 2015-2016 influenza season, 1 additional community partner participated.

The number of immunizations provided by the pharmacy team in the pharmacy increased by 23.8% from 437 in 2013-2014 to 541 in 2014-2015 and by 13.7% to 615 in 2015-2016. The community-based clinics provided 182 new immunizations in 2014-2015. These immunizations represent 63.6% of the increase in immunizations for 2014-2015. In 2015-2016, an additional 34 vaccines were provided in community-based clinics, resulting in a total of 216 vaccines. This represents an 18.7% increase in vaccines that were provided at community-based clinics compared to 2014-2015.

In 2014-2015, the survey was completed by 6 of the 7 community partners and 156 of 182 (85.7%) of clinic attendees. The responding community partners were all satisfied with participating in this initiative and interested in hosting clinics again in the future. Verbal feedback from community partners from 2015-2016 indicated their continued interest and hope that this service would continue. All clinic attendees who responded to the survey found the service convenient and would use it again if offered in the future. Most respondents were happy or very happy with the pharmacist-provided service (Table 1). Additional written comments by clinic attendees were positive, reflecting their ratings of convenience. Specific comments were noted as “very convenient,” “quick and easy” and “no work missed.” In addition, comments reflected a positive immunization experience (“great needles” and “best shot ever”) and the professionalism of the staff providing the service.

Two different surveys were used with clinic attendees in 2015-2016, but 1 question was the same between all years and sites—attendees were asked if they would use the service again, and 100% of respondents indicated they would. Written comments were also similar to 2014-2015 around the experience being positive and convenient. Overall, the community-based clinic participants shared that the clinic was

convenient for families, that it was convenient to have it at work and that it increased the likelihood that they would have the influenza immunization that year.

In 2014-2015, 6 of the 7 sites were found to be fiscally neutral to positive. All 8 sites were found to be fiscally positive in 2015-2016.

Discussion

The pharmacist-led influenza immunization clinics held at community partner sites were found to be well received by the sites, were convenient for patients and resulted in increased vaccinations administered by the pharmacy, with some financial benefits.

Previous studies have found that community-based pharmacists can increase public awareness and the provision of convenient, easily accessible immunization services that result in improved immunization rates.^{2,3,5,7-9} This study furthers this evidence by showing that pharmacists administering immunizations at community partner sites were convenient for the patients, based on the survey responses, and increased the number of vaccines administered. Due to the small scale of this project, we were unable to evaluate if this increased vaccine rates in the town. Another benefit to the community-based clinics was the increased visibility and engagement of pharmacists within their community, which assisted in the public seeing the pharmacist as a health care provider beyond their role as a dispenser. The clinics additionally provided the pharmacists opportunities to educate clinic attendees on other health-related matters and engage community partners to discuss opportunities for the provision of additional pharmacy services in the work place/community site (e.g., smoking cessation and health-related presentations).

A strength of this initiative was the identification of supportive community partners. The partners provided a private room and assisted in coordination of clinic attendee arrival. The site survey results that indicated interest in being involved in the future were shown to be accurate, as all sites held clinics for the 2015-2016 and 2016-2017 influenza seasons.

All but 1 site had a positive financial impact for the pharmacy in 2014-2015. Costs were higher than initially expected due to extra time spent on creating patient profiles and follow-up documentation. Through collaborative processes, the team developed key practices to ensure fiscal viability of

all sites in the future, including less time between appointments, a request that all collaborative sites provide a coordinator during the provision of the clinic to ensure patient timeliness and streamlining of documentation and follow-up processes at the pharmacy. The team implemented these initiatives, and the costs for 2015-2016 were lower.

Initial barriers noted by the implementation team to setting up these clinics were communication with the collaborative partners around what their responsibilities would be in the running of the clinics, such as space provision and personnel to assist with workflow, as well as helping the collaborative partners understand the importance of efficiency in workflow, so that enough injections were provided to make the clinic financially viable. A potential future barrier in expanding the practice was that some employers contacted were not interested in assisting with a clinic and would instead prefer their employees to receive vaccines in other settings, including physician offices and pharmacies. Communication with potential partners will be key to determining whether influenza vaccination clinics in the workplace are mutually beneficial to the employer, employees and pharmacy.

A potential limitation of the study was the lack of pilot testing of the survey questions and differences in the surveys used each year; however, the surveys were designed for quality assurance, were succinct and included standard questions. The response rates from individual sites and overall were very high and the results consistently positive from all clinic sites; therefore, it was felt that the surveys met the goal of providing quality assurance on site and patient satisfaction with the clinics.

Nova Scotia has a province-wide universally funded influenza vaccination program, which allows the implementation of a clinic that does not involve direct patient billing; therefore, the results of this project may not be replicable in jurisdictions with different funding models.¹⁰

Conclusion

Pharmacist-led influenza immunization clinics held at community partner sites were convenient to the site and patients, increased the number of vaccinations administered by the pharmacy and were fiscally feasible. Community partner interest in further clinics offers opportunity for future collaborations to enhance the delivery of patient-centred care. ■

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Acknowledgments: The authors thank Lisa Zwicker for her assistance with the initial letter to collaborators and general support throughout the process.

Author Contributions: S. E. Beresford and J. P. Crawshaw, contributed to the concept and design of the work and acquisition of the data. S. E. Beresford, J. E. Isenor and S. K. Bowles were responsible for the analysis of the data. J. E. Isenor and S. E. Beresford were responsible for drafting the manuscript. All authors had complete access to the study data, contributed to the interpretation of the data and critically revised the work for important intellectual content. Final approval of the version to be published and agreement to be accountable for all aspects of the work was given by all authors.

Declaration of Conflicting Interests: The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding: The authors received no financial support for the research, authorship and/or publication of this article.

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