Expanding access to HIV testing in Canadian community pharmacies: Findings from the APPROACH study

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Methods

The APPROACH study was funded by a grant from the Canadian Institute of Health Research. We used a type-2 hybrid implementation-effectiveness study design[1] to develop and assess the feasibility and acceptability of a pharmacist-provided HIV POCT program in two Canadian provinces: Newfoundland and Labrador (NL) and Alberta (AB). A mixed methods design incorporated self-report questionnaire data, telephone interviews of participants, pharmacist focus groups, analysis of workload logs, and situational analysis to assess the uptake, acceptability and feasibility of the HIV POCT program.

Development of the HIV POCT program

A full description of our study methods has been published.[2] Advisory Committees were established in each province to provide input into the program design, linkages to care pathways, and promotional plans to invite the public to participate in the new HIV POCT program. Each Advisory Committee was comprised of key provincial stakeholders deemed critical to the success of the program, including pharmacists and managers, HIV-experienced health workers, public health, policy makers, and community representatives from organizations who work with individuals at risk of HIV, and individuals themselves with lived experience.

One urban (population > 100, 000) and one rural (population < 100, 000) pharmacy in each province were selected to participate in the study. Three of the pharmacies were large chain pharmacies and were open seven days per week; two pharmacies were open during the evenings. One pharmacy was independently owned and operated with daytime hours Monday to Friday and limited weekend hours. The two pharmacies in urban settings were centrally located and provided opioid substitution therapy services. Testing was offered by appointment (all four sites) or as walk-in during advertised

testing hours (two sites). All pharmacies had a private room for counselling and performing POCT. At least one trained pharmacist tester was available at each participating pharmacy.

Pharmacists completed a training program that consisted of an online self-study module, in-person training day, in-pharmacy competency assessment, and proficiency assessment. Details of the training program have been published.[2] The training program covered the consent process, pre- and post-test counselling, how to administer the HIV POCT and interpret the test result. Pharmacists were provided with tools to aid in counselling, contact information for the linkages to care and client support services in their area.

Study procedures and population

Participants were not actively recruited by the pharmacists but rather the availability of HIV POCT through participating pharmacies was promoted through news media, social media, posters displayed throughout each community, as well as through active promotion by community partners and organizations who worked with at-risk individuals. Paid advertising through Grindr, a geosocial networking and online dating application geared toward gay, bi, trans, and queer people,[3] was also used for a limited period during the study in NL.

Adults aged 18 years or older were eligible to participate if they provided written informed consent, and had an active healthcare number (for linkage to care purposes). Participants who indicated they had been previously diagnosed with HIV infection or had a previous positive HIV test were not eligible.

Potential participants could request HIV testing at one of the participating pharmacies during advertised testing hours or by appointment. Potential participants were taken to a private counselling room where they met with the pharmacist who screened participants for eligibility and completed the

testing process (Figure 1). The INSTI® HIV-1/HIV-2 rapid antibody test (BioLytical Laboratories, Richmond, BC, Canada) was administered free of charge using a finger-prick blood sample. Results were read within 60 seconds by the pharmacist and the participant was advised of their result. Participants received pre and post-test counselling based on national testing guidelines[4], including advice regarding additional sexually transmitted and bloodborne infection (STBBI) testing. In the event of a reactive test result, the pharmacist provided the participant with a bloodwork requisition to obtain confirmatory HIV testing and additional supports and counselling were offered. Confirmatory test results were received by a designated health provider (physician or nurse practitioner) per the linkage to care plan in each province.

Data collection

Pharmacists recorded the date, participant study ID, test lot number, test result, and time to complete each test in a work log. Participants were asked to complete two de-identified (pre and post testing) questionnaires, which were blinded from the pharmacist. The first questionnaire included demographic data (age, gender, ethnicity, relationship status, highest education attained, and income level) as well as information about HIV risk factors and previous HIV testing history. The second questionnaire assessed perception of the testing experience including factors which influenced their decision to be tested at the pharmacy and whether they would have sought HIV testing elsewhere if not at the pharmacy. Satisfaction questions were aimed to differentiate influences of the pharmacy testing environment from the characteristics of the HIV POCT.

Participants were also offered the choice of participating in a telephone interview with a research assistant (RA) at a later time to permit a more in-depth exploration of their testing experience and their motivation for choosing to be tested at the pharmacy. Clients who agreed were offered the

option to have their name entered into a draw for grocery gift certificates in appreciation for their time. Semi-structured interviews were conducted by two RAs, one in each province, to explore questions about their testing experience at the pharmacy including why they chose to get tested, what they liked and did not like about their testing experience, and willingness to pay for testing.

To assess the pharmacists' perceptions of the testing program, pharmacist testers attended a focus group with members of the research team in each province after the end of the study. Pharmacists were asked about how well the training and program resources supported them to offer the program, as well as questions aimed at understanding the impact of offering the testing program on their workload, the work environment/staff response, sense of professional role and satisfaction. Discussions also explored their fidelity to the testing process, what modifications to the program were made and why, and the implications for scalability and sustainability of the pharmacist testing program.

Data analysis

Participant characteristics, responses to satisfaction measures on the participant questionnaire, and pharmacist time to offer HIV POCT were analyzed using descriptive statistics. Pre-testing questionnaire data was used to calculate a Denver HIV Risk Score[5,6] for each participant, as a means to predict their probability of having an undiagnosed HIV infection. Analysis of variance (ANOVA) was used to assess differences in participants' Denver HIV Risk Scores between provinces, and urban versus rural testing sites, and multivariate analysis of variance (MANOVA) was used to assess differences in participant satisfaction with the testing experience based on province, urban/rural testing site, sex, and history of prior HIV testing. Fisher's Exact tests were used to assess whether history of prior HIV testing depended on province or urban/rural centre for testing.

Qualitative data were analysed using a thematic analysis approach.[7] Interview transcripts and extensive field notes were included for analysis from the participant interviews and pharmacist focus groups. Transcripts from participant interviews were coded using an open or emergent scheme where codes were developed and modified throughout the coding process. Descriptive codes were assigned to identify recurring concepts, and sub-themes were then identified and grouped into significant broader themes. Coding was performed independently by two RAs to improve inter-rater reliability. After completing coding individually, the RAs met several times to discuss the coding process and propose themes, with disagreements discussed in detail until consensus was reached. Emerging themes were grouped and triangulated with the members of the research team (DK, JK, CH) to determine final themes and important considerations emerging from the data. Themes from the pharmacist focus groups were considered according to the COM-B model[8] to understand behaviour change, which considers opportunities and challenges in the context of professional capability, opportunity, and motivation to offer the HIV POCT program.

Ethical considerations

This study was approved by the human research ethics boards in each province. All participants and pharmacists signed study consent forms in keeping with the ethics protocol. Identifiable participant information was stored separately from trial data, and participants were encouraged to provide pseudonyms or false names if they wished for the purposes of being contacted by the RA for their telephone interviews. No identifying information was kept by the study team.

References

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