National Collaborating Centre for Determinants of Health

Centre de collaboration nationale des déterminants de la santé

National Collaborating Centre for Infectious Diseases

Centre de collaboration nationale des maladies infectieuses

LEARNING FROM PRACTICE:

JOINT ACTION FOR EQUITY - PARTNERING WITH COMMUNITY PHARMACISTS TO CONTROL ANTIMICROBIAL RESISTANCE

WHAT'S INSIDE...

What follows is a story that illustrates how public health has worked with primary care and community members to improve population health and health equity. This and other *Joint Action for Equity* stories in the *Learning from Practice* series highlight principles and practices that support improved relationships between public health and primary care and the important role of communities in strengthening health systems.

Set in Ontario, this story features the work of leaders in public health and community pharmacy who partnered to improve patient access to primary care, with an emphasis on appropriate antibiotic prescribing to help address antimicrobial resistance.

This practice example is based on interviews with representatives of Public Health Ontario and the Ontario College of Pharmacists who shared their perspectives on a partnership that contributes to health equity.

PROJECT BACKGROUND

The goal of public health is to improve the health of populations through protection, promotion, prevention, disease and injury surveillance and responses, and emergency preparedness. Primary care supports first-contact, accessible, continued, comprehensive, and coordinated patient-focused care (10). Primary care and public health tend to operate independently, but the World Health Organization (WHO) recommends greater integration through ***primary health care***.

The WHO and United Nations Children's Fund (UNICEF) describe primary health care as a holistic approach to strengthen relationships and integrate public health and primary care services locally, with multisectoral actions to empower communities, promote population health, and improve health equity (11).

The ***Joint Action for Equity*** project—a collaboration of the National Collaborating Centre for Determinants of Health (NCCDH) and National Collaborating Centre for Infectious Diseases (NCCID)—highlights examples of sector integration and primary health care. The project profiles stories of how public health programs, primary care service providers and community members created innovative partnerships to respond to local health issues and achieve greater equity in health outcomes.

THE CONTEXT FOR PARTNERSHIP

The World Health Organization has declared antimicrobial resistance (AMR) to be "one of the top 10 global public health threats facing humanity" (1). In Canada, more than a quarter of infections in patients are already resistant to the antimicrobials normally used to treat them, and projections for 2050 suggest that growing resistance will take a heavy toll on human lives, the healthcare system, and the economy, with inequitable consequences (2).

Overuse and misuse of antimicrobials in human health is a driver of AMR at both the patient and population level and, to preserve the effectiveness of antibiotics, Canada's Chief Public Health Officer has called for change in prescribing behaviours, as well as greater awareness among the public and society as a whole (3). One of the most important drivers of AMR is the overuse of antibiotics in community settings, where over 90% of antibiotics are prescribed (3). Research shows that a considerable proportion of antibiotics prescribed in community environments are unnecessary, inappropriate or both, and that there is significant room for improvement (4, 5).

Antimicrobial stewardship promotes the appropriate use of antimicrobials in order to limit antimicrobial-related harms, including AMR. Public health leaders have a vital role in supporting stewardship strategies across the continuum of care; they bring an important population perspective and are well positioned to develop partnerships with both community and healthcare organizations (6). Primary care providers are also essential partners in stewardship initiatives because they directly influence prescribing in the setting and play an important role in community health education.

This story from Ontario features a public health - primary care partnership aimed at supporting appropriate antibiotic prescribing by pharmacists for certain conditions as part of a broader provincial minor ailments program. A systematic review conducted by Public Health Ontario highlighted the benefits of community pharmacist antimicrobial prescribing

to patients and the healthcare system, including their role in reducing overprescribing and increasing appropriate prescribing for conditions like acute pharyngitis (sore throat) and uncomplicated urinary tract infections (7).

GETTING STARTED

Looking back to 2019, Valerie Leung, with Public Health Ontario, and Anastasia Shiamptanis, a pharmacist with the Ontario College of Pharmacists at the time, reflected on what led to the partnership and what helped to support a new cross-sector collaboration.

Aligning Goals

In 2019, at the request of the Minister of Health, the Ontario College of Pharmacists (the College) began work on a plan to expand the scope of practice for community pharmacists as a strategy to provide more equitable and timely access to health care, particularly for people living in remote and other communities with limited availability of physicians and clinics. The plan was to enable community pharmacists to assess minor ailments in clients and, where appropriate, prescribe medications, including antibiotics.

When the College approached Public Health Ontario with this plan, it was seen as an ideal opportunity to help address AMR and promote antimicrobial stewardship among community pharmacists. The organizations agreed to work together on a project that would advance their shared goals.

Establishing the Minor Ailments Advisory Group

Collaboration between the College and Public Health Ontario began with informal communication and meetings to discuss the feasibility of pharmacists prescribing medications, including antimicrobials. A decision was made to create a multidisciplinary advisory group, the Minor Ailments Advisory Group (MAAG), comprised of pharmacists, physicians, public health, data analysts and patient representatives. This group met regularly to share information and guide the implementation plan for the project.

GLOSSARY OF TERMS

Antimicrobials are agents that kill or slow the growth of microbes. They are useful for the prevention and treatment of many infectious diseases and are grouped by the specific type of microbe they act against: bacteria, fungi, viruses, and parasites (1).

Antimicrobial resistance (AMR) occurs when microbes adapt in ways that allow them to fend off or disable antimicrobials. This happens naturally, but greater exposure of microbes to antimicrobials speeds the evolution and spread of AMR. Over time, antibiotics and other antimicrobial medicines become less effective and infections become increasingly difficult or impossible to treat (1).

Antimicrobial stewardship promotes the judicious use of antimicrobials to limit the development of antimicrobial resistant organisms. Antimicrobial stewardship programs support coordinated interventions designed to improve and measure the appropriate use of antimicrobials including selection, dosing, duration of therapy and route of administration (12).

Minor ailments are health conditions that can be managed with minimal treatment and/or self-care strategies. Additional criteria include:

- usually a short-term condition;
- lab tests are not usually required;
- low risk of treatment masking underlying conditions;
- medication and medical histories can reliably differentiate more serious conditions;
- only minimal or short-term follow-up is required (8).

WORKING TOGETHER

Public health and primary care, as well as other health system partners and community members, all contributed to developing the project plan. Examples of where the partners put their focus and what their work together looked like follows.

Selecting Minor Ailment Conditions

The first concrete task for the advisory group was to understand the landscape of existing minor ailment programs in other provinces, including any conditions for which pharmacists were able to prescribe antibiotics in those jurisdictions.

This was an extensive process that involved reviewing the findings of an environmental scan developed with support from Public Health Ontario, assessing provincial emergency department visits data, and seeking feedback from stakeholder groups. The advisory group's selection process was informed by the community through patient representatives in the group, third-party facilitated focus groups, and input from the Citizen Advisory Group—a collaborative partnership of citizens and caregivers (8). Community members offered their perspective on which ailments patients might prefer to have assessed by their local pharmacist. The advisory group worked through challenges in the selection process through many facilitated discussions, a modified-Delphi process, and the use of a conceptual framework (8).

The final list of minor ailments included several conditions relevant to antimicrobial stewardship (8). For example, pharmacists would be authorized to prescribe first-line antibiotics for uncomplicated urinary tract infections; first-line agents were determined based on review of provincial AMR data available from Public Health Ontario (9).

Contributing Public Health Expertise and Data

In addition to insights on provincial AMR rates, Public Health Ontario brought knowledge and expertise in primary care antimicrobial stewardship to the advisory committee for consideration. Data sharing led to extensive discussion about current antibiotic prescribing practices, opportunities for improvement, and AMR rates in various jurisdictions in Ontario. This helped set priorities for planning and implementation that could best meet the needs of the Ontario population.

> "I think that with public health, there's that lens of what's happening from a population-based perspective."
>
> ANASTASIA SHIAMPTANIS (PRIMARY CARE)

Creating an Implementation Framework

Advisory group members agreed that they needed a robust approach to support discussions around implementation strategies and Anastasia and Valerie were designated as the two point-people to lead the work. Building on Public Health Ontario's expertise in using an implementation science approach to support practice change, the Capability, Opportunity and Motivation and Behaviour (COM-B) model was used to identify barriers and facilitators

to behaviour change and potential strategies to address these when pharmacists prescribe for minor ailments. As part of a research grant, members of MAAG also engaged in a qualitative study in order to identify resources needed to support pharmacists for the safe and effective implementation of the minor ailments program.

Creating Tailored Resources

Specific, practical guidance was identified as an important implementation strategy to support community pharmacists in their expanded role.

The advisory group reviewed available resources for the selected ailments and determined that, while existing tools were adequate for most conditions, Ontario-specific, focused guidance promoting appropriate initiation, selection and duration of antibiotics would be helpful for pharmacists in their busy, day-to-day practice. Brief, one-page assessment and prescribing algorithms were co-developed using an iterative process that incorporated feedback from pharmacists and other primary care providers.

Building a Foundation for Evaluation

The next item on the advisory group's agenda was to begin thinking about an evaluation process for the post-implementation period. To help guide the development of an evaluation plan, a logic model was created for the minor ailments program, outlining the inputs, activities, outputs, and short- and long-term outcomes from both patient and system perspectives. The evaluation plan will assess the impact of the program on various aspects, including accessible and equitable service delivery, efficacy and safety, as well as overall antimicrobial use and appropriate antimicrobial prescribing across the province of Ontario.

Public Health Ontario remains committed to providing ongoing data and expertise required to implement and support the evaluation process, as well as updating the resources. They will also use the findings to inform future antimicrobial stewardship interventions throughout Ontario.

RESULTS OF PARTNERSHIP

Expanding the mandate of community pharmacists required extensive collaboration among all the members of MAAG. But the partnership between public health and primary care made a difference for what could be achieved, including the following outcomes.

Opportunity to Engage Pharmacists

Although past collaboration between public health and primary care had produced some educational materials and opportunities aimed at creating awareness, expansion of the pharmacists' mandate in Ontario presented a new opportunity to directly engage community pharmacists as leaders in antimicrobial stewardship.

> "Knowing that community pharmacists would now be prescribers of antibiotics… This was actually a key—a new opportunity to integrate stewardship into their practice—because now they were going to be responsible for deciding when, if, and which antibiotics they were going to prescribe, and potentially for how long. And those are all key aspects of appropriate prescribing."
>
> VALERIE LEUNG (PUBLIC HEALTH)

Tailored Antimicrobial Stewardship Resources for Community Pharmacists

Many existing educational supports on antimicrobial stewardship in primary care are broad, targeted to physicians, and less relevant for community pharmacists in their day-to-day practice. The resources created as part of this partnership were specifically designed to help community pharmacists prescribe antibiotics appropriately within the scope of the Ontario minor ailments program in order to optimize patient outcomes and minimize antibiotic harms. More online education modules are currently being developed to provide additional context and increase awareness of how appropriate prescribing by community pharmacists can make a difference in controlling AMR.

More Equitable Access to Care

People living in areas with limited access to physicians and healthcare clinics will now have the option to consult with a community pharmacist for assessment and treatment of minor ailments, reducing long-distance travel and service delays in emergency departments or community healthcare clinics. This will, in turn, reduce demands placed on community health care providers working in emergency departments and community healthcare clinics.

> "In some underserviced areas, there might not be as ready access to a physician or an office, and so we were wanting to position the community pharmacist as another option for patients, especially those that might have barriers to accessing health care."
>
> ANASTASIA SHIAMPTANIS (PRIMARY CARE)

LESSONS LEARNED

Looking back at how the partnership developed, representatives from Public Health Ontario and the College recognized some opportunities and useful approaches for public health - primary care partnership. From their perspective, the following lessons emerged.

Timing is Key

The right timing was critical to partnership creation. Prior to being approached by the College, Public Health Ontario had been studying antibiotic prescribing patterns and AMR rates for Ontario for several years and felt this proposed initiative might be an effective means to advance antimicrobial stewardship in the community. From a primary care perspective, the College had already been considering how they could promote antimicrobial stewardship practices among community pharmacists. Both organizations were ready to partner on an antimicrobial stewardship strategy. It is worth noting that before partnering, the College and Public Health Ontario had many exploratory discussions, which helped lay the foundation for this specific collaboration.

Start with Clear Objectives and Data

Before getting started, it was important to think about what the partners wanted to achieve, how they could work together, and the type of data and information they would need to collect.

"...let's say public health does the (jurisdictional) scans and then, let's say, we review it together, being clear on what the objectives are in terms of what you're looking for."

ANASTASIA SHIAMPTANIS (PRIMARY CARE)

Engage Stakeholders Early

Engaging stakeholders at the beginning of the planning process, rather than trying to bring people together in the middle of a project, allowed the partners to contribute in effective and meaningful ways.

"What was nice about this is that we were being engaged from the beginning of creating this program—creating the regulation, creating the policy—as a lot of times I feel we may become engaged later in the process, which is not as helpful."

VALERIE LEUNG (PUBLIC HEALTH)

Equal Representation and Supportive Organizations

Equal representation from primary care and public health was important to the partnership's success. Balancing representation required that both organizations support their staff's participation by allowing them enough time and flexibility to attend meetings and perform assigned tasks.

"To achieve the desired outcome, there has to be representation from all stakeholders around the table, not just as participants but as partners. To do this, you also need support from the organizations to allow you the time to create these partnerships and to work together."

VALERIE LEUNG (PUBLIC HEALTH)

Complementary Skills

When building the project team, it was helpful to recruit individuals with different and complementary skill sets. Primary care practitioners, public health professionals, and patient representatives tended to bring different competencies and perspectives that could contribute to success.

Role Flexibility

Advisory group members volunteered to work together in sub-groups between meetings, often taking on responsibilities that were well beyond their roles within the group. Building flexibility into their collaborative approach allowed the group to accomplish things that they might not necessarily have had the expertise or resources to do on their own and rewarded them with continual progress between meetings.

"...together we could advance things that neither of us could have done independently."

VALERIE LEUNG (PUBLIC HEALTH)

THE TAKE HOME MESSAGE

Developed in partnership, this project focused on opportunities to improve equitable access to primary care, reduce unnecessary prescribing, and motivate pharmacists to promote antimicrobial stewardship within their own communities. Although it is too early to report on the effect the project is having on AMR, this story illustrates how public health and primary care worked together to intervene on important drivers of AMR, in ways that the partners could not achieve independently.

Going forward, the new prescribing procedures will encourage more community-based antimicrobial stewardship as community pharmacists treat minor ailments locally. Community members, including residents of remote communities, will have more options when seeking advice on common infections, like coughs or urinary tract infections, which will improve access to care and reduce demands on emergency rooms and community health clinics.

This story demonstrates that public health and primary care professionals can find opportunities to work together to tackle difficult issues, like AMR, and that collaboration can improve quality and equity in health care. By working together, not in silos, these partners showed that so much more can be accomplished.

QUESTIONS FOR REFLECTION

Thinking of your work, community, and priorities to promote joint action for equity...

- What opportunities might you have to engage a partner from a primary care, public health, or community organization?
- Where can networks be formalized between public health, primary care, and community organizations, in order to enable and sustain collaboration?
- How are community members or patient advocates involved in setting priorities or contributing to decisions?
- What helps ensure that all partners gain value from partnership?

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