

Strategy for Patient Oriented Research: Innovative Clinical Trials Project

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[For definitions of numbered terms see “Key Terms” at end of the document]

Doctors need to stay up to date with new research and treatment recommendations so they can provide high quality care. But changing habits is difficult. Just knowing **what** to do usually isn't enough. Research shows that telling doctors **how often** they follow best practices and **how they compare** with other doctors helps turn their knowledge into action. This strategy is known as 'audit and feedback'.

This project focuses on using audit and feedback and additional supports to help family doctors improve patient care and outcomes in two important areas: **antibiotic (1)** prescribing and **opioid (2)** prescribing. These are both issues where we know that doctors do not reliably use best practices and where we need improvement to prevent public health crises.

The research tests how audit and feedback effects family doctors' prescribing of these two types of medications to learn how to better deliver care across a range conditions. The project is being done in partnership with a number of different provincial health care organizations and the team includes physicians, researchers, and people who have lived-experience with these medications (from here on we will use the term patients). Many people on the project fit into more than one category!

Some more details on the two parts of the research project are below:

Antibiotic Prescribing

In partnership with Public Health Ontario and Ontario Health - Quality, we are researching how to reduce unnecessary antibiotic prescribing in **primary care (3)**. This will involve:

1. ***Qualitative Studies (4)***: These studies use interviews to help us understand the factors that affect prescribing by Ontario family physicians in primary care and in nursing homes. We hope to use what we learn to design better interventions to improve appropriateness of prescribing.
2. ***Randomized Control Trials (5)***:

Phase 1 – In a previous trial, Public Health Ontario sent letters to 3,000 family doctors in Ontario who prescribe the most antibiotics . The letters informed them about their antibiotic prescribing practices. The results indicated that the letters successfully reduced the antibiotic volume, mainly by reducing antibiotic prescription duration. However, we also learned that family physicians questioned whether the reports were able to fairly account for their practice size and population.

Phase 2 – The letters tested in Phase 1 were updated and then feedback was gathered from doctors and patients to help us further improve them. The final letters were launched two linked trials to test their effectiveness. One trial will be done through Public Health Ontario (PHO), and the other will be done through Ontario Health (OH). The PHO trial will recruit physicians who have **not** opted-in to receiving a *MyPractice* report from OH. This trial will test four different versions of a letter sent twice from PHO and will include materials from Choosing Wisely Canada. The OH trial will involve physicians who receive their *MyPractice* report. Physicians in this trial will be **randomized** to receive (or not) materials from Choosing Wisely Canada.

Opioid Prescribing

This project looks at the the effects of two different interventions

Audit & Feedback reports – Over 2,000 reports which tell doctors about their opioid prescribing were sent by Ontario Health – Quality.

Academic Detailing - 600 family doctors in Ontario received one-on-one, face-to-face educational outreach visits from specially trained pharmacists

This research includes:

Process Evaluation (6): We are examining the content of the audit and feedback reports and academic detailing to understand which aspects worked best and what should be improved.

Part 1 - We spoke with family doctors who have received either feedback reports, education or both to understand (i) whether, and how, the reports and the educational outreach work together, and (ii) which parts of these strategies seem to be working best.

CANCELLED: Part 2 - We will speak with patients of the doctors who we interviewed in Part 1 to better understand how the feedback reports and educational outreach may have affected communication between the doctor and the patient and patient experience overall.

Quasi-Experimental Trial (7): We are using health data that is already collected by the province to find out how much impact the audit and feedback report and the academic detailing have on opioid prescribing. We are also looking at other relevant patient outcomes and exploring which types of family doctors and which types of patients show the most improvements after the feedback reports and education interventions.

KEY TERMS not defined above

- 1. Antibiotics:** Medications that destroy or slow down the growth of bacteria. Prescribed for bacterial infections such as strep throat or pneumonia but do not work on viral infections such as cold and flu
- 2. Opioids:** A group of medications which act on a specific kind of receptor in the body often used to treat short term (acute) or long term (chronic) pain.
- 3. Primary care:** Day-to-day healthcare provided by a family doctor or nurse at a basic level. It is sometimes referred to as general practice and usually the first point of contact for patients in the health care system. From here patients may be referred to more specialized care.
- 4. Randomized trial:** A type of research trial which compares two groups: an experimental group who receive the new treatment or intervention (for example - in our antibiotic research project the intervention is the letter that is sent to the doctor about their antibiotic prescribing) and a control group, who receive the usual treatment or intervention (in this case the control group would receive no letter). In a randomised controlled trial, the decision about which group someone joins is based on chance. A computer will decide at random rather than the researcher or the participant. Randomisation ensures that the two groups are as similar as possible, except for the treatment they receive. This is important because it means that the researcher can be sure that any differences between the groups are only due to the treatment. [Adapted from INVOLVE Jargon Buster]

5. **Qualitative Studies:** Involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences. It can be used to gather in-depth insights into a problem or generate new ideas for research (Adapted from [Scribbr.com](https://www.scribbr.com)).
6. **Process Evaluation:** For understanding how interventions function in different settings, including if and why they have different effects or do not work at all. This is particularly important in trials of complex interventions in 'real world' settings where it is difficult to determine the cause of something.
7. **Quasi-Experimental Trial:** Like a true experiment, a quasi-experimental design aims to establish a cause-and-effect relationship between two variables. However, unlike a true experiment, a quasi-experiment does not rely on random assignment. Instead, subjects are assigned to groups based on non-random criteria. ([Adapted from Scribbr.com](https://www.scribbr.com))