

Bringing Canada together

Effective organizational structure for multijurisdictional health services research projects

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Primary health care (PHC) research has been undergoing a renaissance in Canada, bolstered by evidence that PHC is the foundation of high-performing health care systems.^{1,2} There is great interest in understanding the effects of primary care reforms, such as changes in the method of physician remuneration, the use of enrolment models, and introduction of team-based models of care. The amount of research on the effects of these and other reforms has consequently grown in recent years. As different Canadian provinces are currently implementing or evaluating different stages and types of reform, there is great potential to improve health care by understanding and sharing the effects of these reforms.

Comparing how health services perform in terms of quality, costs, and equity across the Canadian provinces would be a highly informative approach. To examine the outcomes of interventions that affect all providers (and patients) in a jurisdiction, an effective design would be to compare the jurisdiction of interest with different jurisdictions that have similar health care systems.³ Cross-provincial comparative research allows for this.^{4,5}

Yet, interprovincial health services research is not yet common in Canada because each province has historically had independent control over the design and reform of its own health care system. Consequently, differences in health care delivery, measurement, and reporting standards impair the ease of conducting cross-provincial comparisons. Moreover, data systems and ways of accessing data for research purposes vary across the country (eg, Manitoba Centre for Health Policy,⁶ Population Data BC,⁷ Institute for Clinical Evaluative Sciences⁸).

There are examples of successful data collection across provinces. Organizations such as the Canadian Network for Observational Drug Effect Studies use the provincial database repositories (and some European data) to conduct meta-analyses to gain a pan-Canadian perspective. The Canadian Primary Care Sentinel Surveillance Network and the Public Health Agency of Canada maintain large databases composed of information

collected across jurisdictions for chronic disease surveillance. Similarly, the Canadian Institute for Health Information and Statistics Canada have access to interprovincial data. Despite these examples, interprovincial health services research is hindered by the governance structure of health care in Canada, whereby each province has constitutional responsibility over its own health care system. As far as health care is concerned, each province is the equivalent of its own country. Data systems are often distinct and not easily comparable. Collecting pan-Canadian health services data thus involves coordination issues not found in other countries.

Nevertheless, scale and breadth are needed to address many health services policy questions, which can only be achieved by collecting data from multiple regions. For example, how does the way family physicians are paid affect the delivery of preventive services for patients with multiple chronic conditions? The Canadian system, albeit difficult to coordinate where research is concerned, offers a unique opportunity to compare delivery system characteristics and outcomes across jurisdictions. The structural and organizational approaches to service delivery that are associated with better outcomes or reduced costs can thereby be determined. To move forward and keep step with the world, Canada's primary care researchers have to overcome the interjurisdictional conundrum and create a workable cooperative system.

Analyzing and comparing PHC systems

This idea was tested in 2010, when Canada was invited to join the European-initiated Quality and Costs of Primary Care (QUALICOPC) study,⁹ which is analyzing and comparing PHC systems in 27 European Union countries, Macedonia, Norway, Switzerland, Turkey, Israel, Australia, and New Zealand. The QUALICOPC study is the largest PHC study ever attempted, and it was important that Canada be involved to establish a national performance benchmark for primary care service delivery. The purpose of the study is to examine "what strong primary care systems entail and which effects strong primary care systems have on the performance of overall health care systems."¹⁰ The QUALICOPC study aims to examine access, equity, cost efficiency, and quality of PHC services. To this end, data are collected at the system, service provision, and user (patient) levels.

This article has been peer reviewed.
Can Fam Physician 2015;61:403-5

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Physician and practice survey data describe practice characteristics (eg, solo or group), practice locations (eg, inner city, suburb, small towns, mixed urban and rural, rural), and use of clinical guidelines, among other things; patients provide data on their experiences and values. Some analyses stemming from these data include comparisons across countries on each of the 3 levels, identification of good practices, and correlation analyses to identify relationships at a country level between structure and outcome variables.

To engage meaningfully in the QUALICOPC study, Canada would have to be appropriately represented by including providers in multiple (or all) provinces. In early 2012, our fledgling Canadian Primary Health Care Research and Innovation Network took on the challenge of developing a data collection system for the Canadian arm of QUALICOPC using the study's standard surveys for practices, physicians, and patients. This initiative represented the first in PHC research to develop a framework to support prospective data collection across provinces. Unlike other organizations, such as the Canadian Network for Observational Drug Effect Studies, the Public Health Agency of Canada, the Canadian Institute for Health Information, and Statistics Canada, the objectives of the QUALICOPC study relied on primary data collection from family physicians, their practices, and their patients.

Creating a workable cooperative system

How did we conduct a research study in 10 provinces? In short, by creating a 2-tier cooperative system (Table 1) that shared the pain (cost and workload) and the gain (comprehensive results).

We started by recruiting a lead researcher in each of the 10 provinces (because of time constraints and methodologic challenges, the 3 territories were not included in this study). In turn, those lead researchers made contact with their provincial governments, health quality councils, or national or provincial research funding agency representatives and sought funding for the

data collection in their provinces. That paved the way for a 2-level partnership that included

- a central federal coordinating committee hosted by Canadian Primary Health Care Research and Innovation Network, made up of the lead researcher or a knowledge user representative from each province; and
- 10 provincial bureaus run by the lead researcher in each province, including representatives from relevant government departments and local partners.

The second task was to agree on the responsibilities of the central committee and the provincial bureaus. Responsibilities were defined as follows:

- The central committee was involved in big-picture planning and coordinating of projects such as adapting provincial surveys and methods for national use and creating pan-Canadian data sets. It met regularly via conference calls. Many of the participants have never met face to face.
- The provincial bureaus were responsible for on-the-ground data issues, including ethics approval, practice recruitment, data collection, and intraprovincial data analysis and dissemination.

The above-described structure facilitated a standard administration of surveys and data collection in each province, as well as a knowledge translation plan that included agreement on a process for authorship attribution. It additionally enabled the development of data-sharing agreements among government and research partners. Hence, this structure permitted the merging of provincial data into a single pan-Canadian data set.


Benefiting from lessons

Results from the QUALICOPC project will improve the quality of primary care through support for better decision making and resource deployment. But for Canada, QUALICOPC did much more. It opened a door too long avoided and proved that the diversity that was so long considered a weakness of our 13 provincial and territorial health care systems could now be a strength.

Table 1. Building an effective organization for multijurisdictional health services research projects

CENTRAL COMMITTEE	PROVINCIAL AND TERRITORIAL BUREAUS
<p>Who: 2 cochairs, lead researchers or ministry of health or health quality council representatives from each province</p> <p>Main task: planning and coordinating</p> <ul style="list-style-type: none"> • Catalyze national funding sources • Create a shared electronic workspace • Adapt surveys to a universal form for use by all provincial bureaus • Standardize reporting of research protocols (implementation) • Develop national data-sharing protocol and agreements • Merge provincial data with national data sets • Approve analysis and distribution of pan-Canadian data sets • Deal with international partners and issues • Disseminate findings nationally 	<p>Who: a lead researcher, government and research partners, support staff</p> <p>Main task: data collection</p> <ul style="list-style-type: none"> • Obtain provincial funding • Obtain local ethics approval • Identify and recruit primary care practices and distribute surveys • Gather, clean, and collate data • Work with local chapters of the College of Family Physicians of Canada and provincial medical associations • Record and submit all provincial information (protocols, ethical materials) to shared electronic workspace • Approve analysis and distribution of provincial data sets • Disseminate findings provincially

The Canadian Institutes of Health Research has recently funded 12 community-based PHC innovation teams and launched the Strategy for Patient-Oriented Research Network in Primary and Integrated Health Care Innovations. These initiatives represent an investment of almost \$60 million, by far the largest investment in PHC research ever made by the Canadian Institutes of Health Research. Both initiatives support only multijurisdictional research teams that include partnerships among researchers, clinicians, and knowledge users.¹¹ Both initiatives could benefit from the lessons learned from the QUALICOPC study.

This is a new era in primary care research in Canada. We have the technical ability, the organizational structure, and the financial support to conduct and coordinate large multijurisdictional projects to compare health services and outcomes among our 13 health care systems and thus to improve each through the lessons learned. Applying the results from this cross-provincial comparative research will reduce fiscal waste by implementing only the most effective and efficient practices that are most likely to improve health outcomes for Canadians. 

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Competing interests

None declared

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The opinions expressed in commentaries are those of the authors. Publication does not imply endorsement by the College of Family Physicians of Canada.

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