

Ten most notable family medicine research studies in Canada

Cheryl Levitt MBChC CCFP FCFP Alan Katz MBChB CCFP MSc FCFP Eric Mang MPA Artem Safarov

Abstract

Objective To identify 10 noteworthy Canadian family medicine research studies that have affected practice in order to demonstrate the unique value that Canadian family medicine research offers.

Composition of the committee Representatives from the Section of Researchers (SOR) and the Health Policy and Government Relations department of the College of Family Physicians of Canada developed a framework for inclusion and identified an initial list of articles. Members of the SOR Council and research directors from the 17 Canadian departments of family medicine reviewed the preliminary list and suggested additional studies.

Methods The authors developed an initial list of studies carried out by Canadian family medicine researchers from those researchers who had received awards from the College of Family Physicians of Canada since 2002. Additional studies were proposed by members of the SOR Council and the university research directors. A total of 36 published articles were reviewed by the SOR authors, and an annotated short list of 16 articles was prepared. From that list, the other authors identified 7 noteworthy studies that were used to form the basis of advocacy materials. The SOR authors, along with 3 additional members of the SOR Executive, used an informal consensus process to select the final 3 articles to arrive at the top 10.

EDITOR'S KEY POINTS

- In recognition of the 10th annual Family Medicine Research Day of the College of Family Physicians of Canada's Section of Researchers in November 2014, representatives of the Section of Researchers and the College sought to identify 10 noteworthy research studies conducted in Canada that had affected practice and improved patient care.
- The 10 articles described here address key topics of interest in family medicine and represent various geographic regions in Canada. They illustrate the unique and important contribution Canadian research in family medicine makes to patient well-being in Canada and around the world.

POINTS DE REPÈRE DU RÉDACTEUR

- En novembre 2014, à l'occasion du dixième anniversaire du jour de la recherche en médecine familiale de la section des chercheurs du Collège des médecins de famille du Canada, des représentants de cette section ont voulu identifier 10 études de recherche particulièrement notables qui ont été effectuées au Canada et qui ont influencé la pratique et amélioré les soins des patients.
- Les 10 articles décrits ici portent sur des sujets de médecine familiale du plus haut intérêt et représentent diverses régions géographiques du Canada. Ils montrent bien que la recherche canadienne en médecine familiale contribue de façon unique et importante au bien-être des patients, tant au Canada que dans le reste du monde.

Report The top 10 most noteworthy family medicine research studies are presented in this article and represent the unique contribution that Canadian family medicine research brings to health care in Canada. They have helped advance health care quality and improve care delivery, beneficially influencing health care practices, health care policy, and patient experiences.

Conclusion This project has identified 10 classic Canadian family medicine research studies that continue to influence practice today. In addition to their usefulness as tools for teaching, advocating, and championing the contribution of research to modern family practice, these studies are important examples of the value of research to patient health in Canada and around the world.

Dix des plus remarquables études sur la médecine familiale au Canada

Résumé

Objectif Identifier 10 études canadiennes de recherche en médecine familiale particulièrement remarquables qui ont influencé la pratique de manière à démontrer la valeur unique de la recherche canadienne en médecine familiale.

Composition du comité Des représentants de la Section des chercheurs (SDC) et du Département des politiques en matière

de santé et des relations gouvernementales du Collège des médecins de famille du Canada ont élaboré un cadre de travail et identifié une première liste d'articles. Les membres du Conseil de la SDC et les directeurs de recherche de 17 départements canadiens de médecine familiale ont révisé cette liste préliminaire et suggéré d'autres études.

Méthodes Les auteurs ont d'abord cerné une liste d'études effectuées par des chercheurs canadiens en médecine familiale ayant été primées par le Collège des médecins de famille du Canada depuis 2002. D'autres études ont été proposées par les membres du conseil de la SDC et par les directeurs de recherche universitaire. Au total, 36 de ces publications ont été révisées par les auteurs de la SDC, cette liste étant ensuite réduite à 16 articles annotés. À partir de cette dernière liste, les autres auteurs ont identifié 7 études dignes de mention, qui ont servi de base pour la liste définitive. Enfin, de concert avec 3 autres membres de l'exécutif de la SDC, les auteurs de la SDC ont utilisé un processus de consensus informel pour choisir les 3 articles complétant la liste des 10 meilleurs.

Présentation du résultat Cet article présente les 10 études canadiennes de recherche en médecine familiale les plus remarquables, lesquelles illustrent la contribution unique de ce type de recherche aux soins de santé au Canada. Ces études ont contribué à améliorer la qualité et la prestation des soins, et ont eu une influence positive sur les façons de soigner, les politiques en matière de santé et sur le vécu des patients.

Conclusion Ce projet a permis d'identifier 10 études canadiennes de recherche en médecine familiale qui continuent d'influencer la pratique aujourd'hui. En plus de leur utilité comme outils pour enseigner, faire valoir et défendre la contribution de la recherche à la pratique moderne de la médecine familiale, ces études sont des témoins exemplaires de la valeur de la recherche pour la santé des patients au Canada comme dans le reste du monde.

Family medicine is the cornerstone of the health care system in Canada. Every day in Canada, family physicians provide more than 55% of all health care encounters to hundreds of thousands of patients.¹ Family medicine researchers create the evidentiary base that supports and challenges our practice every day. Many family physicians in Canada contribute to the study of our discipline and have produced a body of research that helps guide the profession.

The College of Family Physicians of Canada's (CFPC's) Section of Researchers (SOR), a section of the College with more than 1000 members that promotes and

supports family medicine research and researchers, held its annual Family Medicine Research Day in November 2014. Research Day is a superb opportunity to highlight new and exciting family medicine research and to champion the work of our members. Researchers present free-standing oral papers and posters, and the SOR, along with the CFPC and the CFPC's Research and Education Foundation, presents awards for outstanding contributions to research and research publications.

In 2014, the SOR celebrated the 10th anniversary of Family Medicine Research Day with a retrospective review of family medicine research that was carried out since the 1990s. The retrospective highlighted 10 research studies that were viewed by members of the SOR as having become the classics in the increasingly vital field of family medicine research. Chosen for their importance as models of inquiry that have affected practice in their approach, these 10 studies are as relevant to practice today as they were when they were initially published. In addition, they demonstrate the unique value that Canadian family medicine research brings to health care quality.

Composition of the committee

Representatives from the SOR and the Health Policy and Government Relations (HPGR) department of the CFPC developed a framework for inclusion and identified an initial short list of articles. Members of the SOR Council and research directors from the 17 Canadian departments of family medicine reviewed the preliminary list and suggested additional studies.

Methods

The project began in November 2013 as a collaboration between the CFPC's HPGR department and the SOR. The HPGR department had set out to identify the most notable family medicine research as part of its advocacy work with government and health policy representatives who might be positioned to influence the course of health care delivery in Canada, including funding for research.

The HPGR department developed a framework for inclusion that examined 2 main areas: first, research that highlighted certain topics of interest (ie, aboriginal health, social determinants of health, interprofessional teams, community or population health, chronic disease management, use of electronic records, accessibility of care, and patient-centred care); and second, research that was geographically representative of Canadian regions (Quebec, Atlantic Canada, the Prairies, and 2 studies of national scope).

To begin the task, the SOR authors (C.L. and A.K.) developed a list of studies carried out by Canadian family medicine researchers from those researchers who had received awards from the SOR at previous Research

Days. These awards were for the CFPC Outstanding Family Medicine Research Article, the *Canadian Family Physician* Best Original Research Article, and the Family Medicine Researcher of the Year from 2002 forward.

Members of the SOR Council and research directors from the 17 Canadian departments of family medicine were sent the preliminary list and invited to suggest additional studies. There were 11 articles that had won the CFPC Outstanding Family Medicine Research Article award (from 2002 to 2012) and 4 articles that had won the *Canadian Family Physician* Best Original Research Article award (2009 to 2012) included in the list. We focused on studies carried out since the year 2000; however, studies carried out before 2000 were also considered to provide a historical context. In addition to the 15 articles on the initial list, another 17 articles were added by the SOR Council and the research directors. After some discussion and to ensure that all the categories were addressed, the SOR authors (C.L. and A.K.) added another 4 articles to the list. A total of 36 published articles were reviewed by C.L. and A.K., and an annotated short list of 16 articles was prepared. The short list was shared with the HPGR authors (E.M. and A.S.). Together, E.M. and A.S. chose the 7 they found most noteworthy, which they included in an advocacy document called the *Seven Wonders of Family Medicine Research*.² This document is used by the CFPC and SOR as the basis for communication and advocacy materials that help various audiences, including CFPC Chapters, Canadian universities, and decision makers, understand the value of family medicine research and its effects on patient care.

From the remaining 9 papers, C.L. and A.K. tried to reach consensus on 3 additional studies from the short list to make up the top 10 most noteworthy studies. They could only reach consensus on 1 further study, so 3 additional members of the SOR Executive were asked to weigh in with their opinions. There was a majority opinion on the other 2 studies chosen, for a total of 10 studies. The authors then developed a poster entitled the "The 10 Most Noteworthy Family Medicine Research Studies: a Retrospective" in recognition of the SOR's 10th annual Family Medicine Research Day in November 2014.

Report

The top 10 most noteworthy family medicine research studies are presented in this article and illustrate the unique contribution that Canadian family medicine research brings to health care in Canada. They have helped advance the quality of health care and improve care delivery, beneficially influencing health care practices, health care policy, and patient experiences. These Canadian studies in family medicine have contributed to improving the delivery of family medicine in Canada and throughout the world.

1. A primary care pragmatic cluster randomized trial of the use of home blood pressure monitoring on blood pressure levels in hypertensive patients with above target blood pressure.³ In this award-winning paper by Dr Marshall Godwin and colleagues, it was demonstrated that home blood pressure (BP) monitoring did not improve BP compared with usual care at 12 months' follow-up, but that it might improve BP monitoring in men. Further studies are needed.

2. Does episiotomy prevent perineal trauma and pelvic floor relaxation? First North American trial of episiotomy.⁴ Dr Michael Klein questioned the use of episiotomy in childbirth, which was being widely used, because he suspected that it caused many of the problems it was supposed to prevent. He and his colleagues carried out the first North American trial of episiotomy in childbirth. The work of Dr Klein and colleagues is often credited for the dramatic reduction in the use of episiotomy.

3. The impact of patient-centred care on outcomes.⁵ Published in 2000 by a team of family medicine researchers at Western University, this study was one of the first to demonstrate that the patient-centred clinical method improved health outcomes. Since the publication of this study, patient-centredness has become a foundation of the practice of family medicine.

4. The Kahnawake Schools Diabetes Prevention Project: intervention, evaluation, and baseline results of a diabetes primary prevention program with a Native community in Canada.⁶ Published in 1997 by Dr Ann Macaulay and colleagues, this study demonstrated the feasibility of implementing a community-based diabetes prevention program in an aboriginal community through the use of participatory research.

5. Improving cardiovascular health at population level: 39 community cluster randomised trial of Cardiovascular Health Awareness Program (CHAP).⁷ This very large, well designed study, which involved 39 communities in 2 Canadian provinces, demonstrated how, at the community level with the support of family doctors, a simple BP test in older adults could be taken in a setting like a pharmacy by trained volunteers and could decrease death and hospitalization from heart disease.

6. The impact of not having a primary care physician among people with chronic conditions.⁸ Carried out by researchers at the Institute for Clinical Evaluative Sciences, this 2008 study shows how important having a family doctor can be in avoiding emergency department visits, reducing health care costs, and reducing demands on the health care system.

7. Building a pan-Canadian primary care sentinel surveillance network: initial development and moving forward.⁹ This study demonstrated the feasibility of the development of a pan-Canadian primary care research network that would help researchers collect longitudinal data from practices across Canada to assess the primary care epidemiology and management of 5 chronic diseases: hypertension, diabetes, depression, chronic obstructive pulmonary disease, and osteoarthritis.

8. Principles for the justification of public health intervention.¹⁰ This study by Dr Ross Upshur focuses on the intersection of primary care and public health, particularly with respect to the interrelationship between ethics and evidence. These principles are colloquially and widely referred to as the *Upshur principles*.

9. Evidence to action: a tailored multifaceted approach to changing family physician practice patterns and improving preventive care.¹¹ Ontario has been on the leading edge of primary care reform with its family health teams, aiming to demonstrate how teams of caregivers can improve performance and health outcomes in primary care. This rigorously designed study demonstrated the effectiveness of an intervention delivered by nurse facilitators in improving preventive care procedures in primary care settings.

10. Prevalence of multimorbidity among adults seen in family practice.¹² This study was the first in Canada to examine multimorbidity in the adult population receiving primary care from family physicians. It demonstrates the complexity of problems common in the Canadian population that confront family physicians daily.

Discussion

The 10th anniversary of Family Medicine Research Day marked an important milestone for research in family practice. The Research Day program is multifaceted and includes opportunities for researchers to share their work and for us to celebrate our champion researchers. New and experienced researchers alike benefit from a historic retrospective such as we present here, highlighting some of the accomplishments that have informed practice today. The SOR seized the opportunity to develop, for the first time, a review that would demonstrate the power of Canadian family medicine research. In addition to serving as an appropriate recognition of the 10th anniversary of Research Day, this work will prove its ongoing worth in a number of ways.

The studies described here are remarkable in many respects. Individually and collectively, these studies are leading examples of the strength that exists in Canadian primary care and family medicine research. The retrospective can be used by those interested in family

medicine and primary care research as a resource, and it can be used as a tool for educating family physicians, advocating for high-quality health care, and encouraging family physicians to engage in research. Research affects all members of the CFPC and their practices. Many family physicians have questions in their day-to-day practice, and some carry out research, either individually or as part of practice-based research teams or networks, in order to answer those questions. Family medicine research creates the evidentiary base of our discipline. High-quality care is informed by the evidence from such research, which is used to make decisions every day.


Dedicated to the development of new knowledge in family medicine, the authors of these 10 papers are among a group of researchers who have pioneered the discipline in Canada and nurtured it to what exists today. Having earned reputations as international leaders in family medicine research, these authors stand as role models for future generations.

Most important, these studies are examples of the important contribution by CFPC members to patients' well-being, to practice-level improvements, and to national health systems in Canada and around the world.

Limitations

The studies selected for this retrospective were based in large part on a framework for inclusion that would support advocacy in government and policy areas. Suggested topic areas, geographic parameters, and time frames restricted the choices, eliminating some studies that might have been equally notable. In addition, the included studies were chosen in a fairly arbitrary fashion, and there might be equally or more important studies that have been missed.

Conclusion

In spite of the methodologic limitations, we have identified 10 classic Canadian family medicine research studies that continue to influence practice today. In addition to their usefulness as tools for teaching, advocating, and championing the contribution of research to modern family practice, these studies are important examples of the value of research to patient health in Canada and around the world. 

Dr Levitt was Acting Research Director with the College of Family Physicians of Canada (CFPC) in Mississauga, Ont, and is Professor in the Department of Family Medicine at McMaster University in Hamilton, Ont. **Dr Katz** is Past Chair of the Section of Researchers of the CFPC and Professor in the Department of Family Medicine at the University of Manitoba in Winnipeg. **Mr Mang** is Executive Director of Member and External Relations for the CFPC. **Mr Safarov** is Director of Health Policy and Government Relations for the CFPC.

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Contributors

Mr Mang and Mr Safarov developed the framework for inclusion and selected 7 of the top 10 articles. Drs Levitt and Katz created the initial list of articles, participated in the process of generating the complete list, and developed the annotated short list. Drs Levitt and Katz also participated in the consensus process to select the final 3 studies. All authors contributed to preparing the manuscript for submission.

Competing interests

None declared

Correspondence

Dr Cheryl Levitt; e-mail clevitt@mcmaster.ca

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