Facilitators to accessing primary and preventive care for immigrants and refugees in Canada: A Literature Review

By: Anjana Aery



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Wellesley Institute works in research and policy to improve health and health equity in the GTA through action on the social determinants of health.

By: Anjana Aery

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Statement on Acknowledgement of Traditional Land

We would like to acknowledge this sacred land on which the Wellesley Institute operates. It has been a site of human activity for 15,000 years. This land is the territory of the Huron-Wendat and Petun First Nations, the Seneca, and most recently, the Mississaugas of the Credit River. The territory was the subject of the Dish With One Spoon Wampum Belt Covenant, an agreement between the Iroquois Confederacy and Confederacy of the Ojibwe and allied nations to peaceably share and care for the resources around the Great Lakes.

Today, the meeting place of Toronto is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work in the community, on this territory.

Revised by the Elders Circle (Council of Aboriginal Initiatives) on November 6, 2014

10 Alcorn Ave, Suite 300 Toronto, ON, Canada M4V 3B2 416.972.1010 contact@wellesleyinstitute.com



TABLE OF CONTENTS

Introduction1
Methods2
Inclusion/Exclusion criteria2
Analysis
Mapping Key Barriers or Facilitators Targeted3
Results4
Culturally-tailored Interventions5
Intersectoral Collaboration
Innovative Screening Tools6
Community-based Care Models7
Discussion
Conclusion9
Endnotes12
Appendix A: Search Strategy15

Introduction

Primary care is an essential part of a high quality health care system, where care is well coordinated and integrated across the care continuum.¹ In Canada, regular access to primary care provides opportunities for early intervention and disease prevention. Primary care is the first point of contact with the health care system focusing on health care services for health promotion, illness and injury prevention and diagnosis and treatment of illness and injury.² Primary care providers are most familiar with their patients' medical history and can follow their health care needs.³ This ongoing relationship establishes a rapport between patient and provider and patients are more likely to be satisfied with their care and trust their provider.⁴ Higher continuity of care with primary care providers is associated with fewer hospital admissions for preventable conditions.⁵ Primary care providers can also promote preventive care such as screening for high blood pressure and depression and promoting uptake of cancer screenings.

Immigrants and refugees often have poor access to health care compared to the general population.^{6,7,8} In general, recent immigrants have lower rates of primary care and mental health care use compared to the Canadian-born population.9 Research has shown South Asian women have lower breast cancer screening rates and newcomers from East Asian and Pacific regions have lower mental health care use.^{10, 11} Immigrants and refugees may have lower health care service use but this doesn't necessarily mean they have less need for health care services. For example, Ontario has organized cancer screening programs where all eligible Ontarians are recommended to get screened.¹² Therefore, the lower breast cancer screening rates among some immigrant women indicates poor access to a service where women would have a similar level of need. Refugee women have a higher risk of severe maternal morbidity and risk of HIV than immigrants or non-immigrant women in Ontario.¹³ A study of Ethiopian immigrants and refugees in Toronto, found only 12.5% of individuals who reported a mental health concern received services from formal health care providers.¹⁴ In another study, immigrant seniors were screened less for diabetes than nonimmigrant seniors and many high risk ethnic groups had multiple physician visits before a test was administered.¹⁵ Facing barriers to accessing timely, appropriate primary care and screening may lead to poorer health outcomes, including illnesses that require acute care. For newcomers, a lack of awareness of available health services and delays in accessing health care can also lead to worsening health conditions.¹⁶

Many immigrants and refugees may not have access to a regular primary care doctor when they first settle in Canada and experience challenges in maintaining good health.¹⁷ Even immigrants and refugees who have a primary care provider may face challenges that impact their access to care. Barriers to accessing primary health care can include a lack of culturally appropriate services and cultural barriers that influence health care seeking behaviour.^{18, 19} For example, studies have shown that many South Asian immigrant women prefer a female physician.²⁰ Language barriers may also impact the ability to effectively communicate with a provider and immigrants and refugees may have limited knowledge of the health care system and how primary health care works in Canada.²¹ There are also challenges within the health care system such as long wait times for referrals to specialists and lack of coverage for prescription medications that can impact access to care.²²,²³ There is less known about effective interventions that can improve access to primary care for both immigrants and refugees. This literature review was conducted to gather evidence on facilitators that enhance access to primary and preventive care and interventions that have been implemented in Canada. The primary aim of this literature review is to explore:

- 1. What interventions or programs facilitate access to primary and preventive care for immigrants and refugees in Canada?
- 2. What has worked well and in what contexts?

Methods

A search strategy was developed in consultation with a University of Toronto Health Sciences librarian. Peer-reviewed, academic literature was searched in the SCOPUS and MEDLINE databases (see Appendix A for details). The search was restricted geographically to cities and regions in Canada. The main search terms included (a) immigrants or refugees as the target population, and (b) primary health care search terms for the MEDLINE database. To narrow the search on the SCOPUS database an additional search term for programs, interventions, policies, strategies, models or case studies was added to identify literature on facilitators to access to care. Search terms for access to primary care and preventive care services were cancer screenings, chronic disease management and mental health care. Mental health care in primary care settings and primary care doctors may screen for mental health.^{24, 25} Primary care and preventive care was defined as health care provided by a family physician or nurse practitioner or in a primary care setting. Preventive care could include Pap tests or breast cancer screening when delivered by a primary care provider or a team that included a primary care provider.

Inclusion/Exclusion criteria

The inclusion criteria were as follows: the study was conducted in Canada, articles were published in English from the year 2000 to present and articles described a program or intervention, that had been implemented and evaluated. Articles were included if they primarily focus on facilitators that improved access to primary and/or preventive care. Articles were excluded if they did not include primary care or if they focused only on barriers to care. Articles on undocumented or uninsured populations were also excluded because these subgroups lack access to basic provincial health coverage and may face unique barriers to care that were beyond the scope of this review.

Analysis

A data extraction table was created, and data was extracted by the author from each article. For all articles a description of the program or intervention was included and any details on how it was implemented or evaluated. Information on the aims of the intervention, target population, methods, sample size, study location, type of care and setting were also charted. The key findings and lessons learned from each article was summarized in the data extraction table. After charting the data, the findings and descriptions of lessons learned were analyzed thematically and compared across all articles to distill key themes on facilitating access to care for immigrants and refugees.

Mapping Key Barriers or Facilitators Targeted

Recent work by Batista et al. helps to identify the key barriers that may affect access to care for immigrants and refugees including eligibility for care, cultural barriers, language barriers, organization of services, geographic access, costs of services, health education, social networks and support and the patient-provider relationship (Table 1).²⁶ For each article the type of barrier(s) or facilitator(s) targeted was mapped to Batista et al.'s framework (Table 1). Although Batista et al.'s framework describes barriers that affect access to care, strategies or interventions that address any of the barriers will point to facilitators that support greater access to care. For example, language barriers were identified as a barrier to care so interventions that offer language interpretation services can act as a facilitator to care. The Batista et al. framework provides an overview of potential areas interventions or programs could focus on the facilitate access to care for this population. The framework was adapted to include intersectoral collaboration which can act as a facilitator to support access to care for immigrants and refugees.²⁷

Type of Barrier or Facilitator	Description
Insurance/eligibility	Insurance status and eligibility to receive health care services and right to health
Cultural barriers	Relevant aspects affecting access and use of services such as perceptions about health and health care, preference for specific health care options, distrust, stigmatization and discrimination, isolation

Table 1 – Types of barriers or facilitators to care affecting immigrants and/or refugees

Type of Barrier or Facilitator	Description
Language/communication barriers	Low ability to speak the official language and communication difficulties
Organization of services/quality of care	Lack of knowledge of the health system, no regular source of care, long waiting lists, shortage of services, low quality of care
Geographic access	Unavailability of services in the area, long distances from health services, lack or difficulties with transportation
Economics/costs of services	Economic issues such as low income and costs of some health services
Education/health literacy	Low health education, lack of information on health risks
Social networks/support	Social networks and social support, community participation
Patient-provider relationship	Patient-provider relationships, provider's cultural sensitivity, trust between patient and provider
Intersectoral collaboration*	Coordination and integration of services between health and other sectors such as settlement agencies

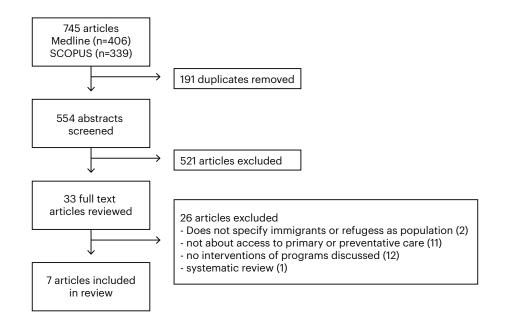
*Added to Batista et al. framework

Results

The SCOPUS and MEDLINE search resulted in 745 articles and was conducted as of May 1, 2017. After removing duplicates and articles that did not meet the inclusion criteria there were 7 articles included in the final review (see Figure 1 for details). These 7 articles described an intervention or program that had been implemented and evaluated (see Table 2). 3 articles focused on access to mental health care in primary care, 1 article on breast cancer screening, 2 articles on access to cervical and breast cancer screening and 1 article on access to primary care more broadly. Geographically, the articles reflect the following cities and regions: 5 studies in Toronto, Ontario, in the Greater Toronto Area (GTA)¹, Ontario, 1 in Kitchener, Ontario. The studies were primarily located in urban settings, reflecting the settlement patterns of the majority of immigrants and refugees arriving to Canada.²⁸ The main elements of the interventions, intersectoral collaboration, the use of innovative screening tools and community-based care models are described below.

¹ The Greater Toronto Area includes the city of Toronto and four regional municipalities: Durham, Halton, Peel, and York.

Figure 1 - Overview of Search Strategy



Culturally-tailored Interventions

All 7 studies indicated the importance of addressing language, culture and health education needs for newcomer populations. For example, a breast cancer screening intervention for South Asian immigrant women aimed to increase overall knowledge about breast cancer and risk factors to encourage screening.²⁹ The research team published information on breast cancer screening in Hindi and Urdu in community newspapers. The information was tailored to be culturally appropriate for South Asian immigrant women. By using a community newspaper, the health promotion messages were shared not only with immigrant women but with their families. This can be important for South Asian women who seek medical advice not only from medical professionals but from close family members and friends.³⁰ South Asian immigrant women had intense fears of breast cancer so the information presented the risk factors and the benefits of early detection in simple language to alleviate fears. It also provided evidence to address misperceptions of low susceptibility to breast cancer and low survival rates after diagnosis. To be sensitive to the social and cultural context of the target population the messages also emphasized the improvement to women's health as well as the quality of family life.

The series of articles also included information on how to get referred, what breast cancer screening involves and the availability of female health professionals. Participants who had never been screened before were recruited and completed a pre-survey about their knowledge of breast cancer screening. Participants were mailed the health promotion articles and after 2 weeks a post-survey was conducted to assess change in knowledge about breast cancer

screening. After the intervention, there was a significant increase in self-reporting having a routine physical checkup and clinical breast exam.³¹

Intersectoral Collaboration

One article focused on intersectoral collaboration and reorganizing care delivery. The article evaluated the impact of a new refugee health clinic on access to primary care for government assisted refugees settling in Kitchener, Ontario.³² The dedicated health clinic for refugees used a community-based primary care approach where primary care providers and a local settlement agency, Reception House, worked collaboratively to facilitate access to care. Reception House staff completed intake of new refugees. After intake, refugees were referred to a nurse and resident from the refugee health clinic accompanied by an interpreter or case worker from Reception House. The case worker provided support in navigating the health care system and refugees were transferred to a permanent primary care provider. The settlement agency and health clinic staff worked closely together to ensure newly arrived refugees would have access to health care while receiving other settlement related services as they establish themselves in a new city.

After opening the new refugee clinic, refugees had a 30% decrease in wait time to see a health care provider, and an 18% increase in refugees finding a permanent family physician in the community in the year after their arrival.³³ The collaboration with a settlement agency could be replicated in other primary care settings and illustrates the benefits of intersectoral collaboration and the co-location of services to serve the refugee population.

Innovative Screening Tools

Another key intervention was the use of innovative screening tools to increase access to appropriate services.^{34, 35, 36} Researchers in Toronto developed a tablet-based survey for patients to complete prior to their appointment. The survey was tested in several languages and gathered patient data related to mental health and social situations. After completing the survey, patients received a tailored list of resources in their language. If they were at risk for mental health concerns they were encouraged to discuss the concerns with their provider. The provider also received a summary of the patient's responses attached to the patient's medical record. A feasibility study showed patients found the tool to be acceptable and providers gained a greater understanding of mental health issues impacting immigrants or refugees.³⁷

A randomized control trial of the intervention showed patients who received the tool were more likely to discuss mental health concerns with their provider with 58.7% of patients in intervention group discussing mental health compared to 40.3% in the usual care group (p \leq 0.05).³⁸ This innovative tool gathered routine information that providers could use during a consultation to facilitate better care. These discussions can create opportunities to raise sensitive topics as part of a primary care consultation, contributing to better detection rates of mental health problems in primary care. In this case, the tool was piloted in a community health centre that had access to social workers and mental health supports at limited cost to patients. Enhanced screening practices in primary care can improve awareness of services that could benefit patients and facilitate referrals to existing services and supports.

Community-based Care Models

The Cancer Awareness: Ready for Education and Screening (CARES) program on promoting cervical cancer and breast cancer screening in Toronto included language-specific group educational sessions, peer-based support and partnering with community agencies for outreach to immigrant women. 42 peer leaders attended a 3-day training to lead group educational sessions. Sessions were conducted in English, Bengali, Urdu, Punjabi, Hindi, Tamil, Vietnamese, Khmer, Karen, Mandarin, Cantonese, Farsi, Dari, Arabic, Spanish and Portuguese reflecting the diversity of immigrant and refugee populations in Toronto. Additionally, the program used a health bus for Pap testing, assisted with appointment booking and transportation and conducted outreach through community agencies and peer leaders.³⁹ This multi-pronged approach employed peer leaders to promote awareness on breast cancer and cervical cancer screening in the community and facilitated access through outreach and offering transportation. Women in the CARES program intervention were more likely to get screened compared to women who did not attend the program after an 8-month follow-up period.

Similarly, a mobile health clinic focusing on access to reproductive health care including cancer screening was based out of a van so the care team could travel to central locations where many immigrant women in the community worked and lived.⁴⁰ These two interventions sought to address geographic barriers to access for women who had never been screened or were under screened by bringing services out into the community.^{41, 42}

Discussion

Despite the limited evidence, the programs identified in this review point to promising practices to improve access to primary and preventive care. In all cases, the primary care settings were interprofessional in nature and employed team-based care models. However, many newcomers have primary care physicians in the community that have independent practices. Consequently, it's important to connect these physicians with resources that could support their immigrant and refugee patients. Three studies showed the importance of building networks and partnerships with community organizations to support access to health care for immigrants and refugees.^{43, 44, 45}

Increasing primary care providers' capacity in recognizing mental health problems and educating patients is an important step in promoting mental health care for immigrants and refugees who often seek care in primary care. The tablet-based screening tool from Ahmad and colleagues (2017) is an effective tool that could be translated and used in other primary care settings, particularly team-based settings with co-located mental health supports. In addition, to being translated in other languages the mental health screening questions had cross-cultural validity and providers were trained on cultural issues related to mental health. The language used in the questions and summary reports were also tested to ensure the concepts were simple and easy to understand for patients.

Most studies targeted linguistic barriers, cultural barriers, health education and the organization of services as described in Table 1. However, there was a lack of attention on structural barriers such as geographic access, the cost of mental health services and reorienting service delivery. For breast cancer and cervical cancer screening, transportation was often cited as a major barrier to accessing care but only two programs provided transportation services for cancer screening.^{46,47} Many community organizations and community health centres offer counselling to patients at no cost but for many patients in Ontario this is not the case. Therefore, mental health care remains inaccessible to many Ontarians who cannot afford to seek professional mental health support which can include recent immigrants and refugees.

Programs attempt to address both individual and structural level barriers but programs targeted to individuals are easier to implement.⁴⁸ Although language supports, cultural competency and health education are important to address for the diverse populations of immigrants and refugees, these supports tend to focus on the provider and patient and not look at upstream factors that may be affecting access to high quality and timely care. The benefits of co-locating services and promoting outreach models illustrate how community health centers and interprofessional teams are promising practices for serving immigrants and refugees.⁴⁹ Only 1 intervention evaluated a care delivery model with intersectoral collaboration and showed promising results. Investing in interprofessional care and reducing geographic inequities that limit the accessibility of existing health care services are necessary to advance immigrant and refugee health.

This literature review demonstrates the need for comprehensive health care where primary care services are better integrated, prioritizing community engagement providing culturally sensitive training and leveraging intersectoral collaboration to improve access to care for immigrants and refugees. At a systems-level, organizations can consider maintaining links with community-based organizations, ensuring a strong representation of racial and cultural communities among staff and creating specific policies and programs on professional language interpretation to better serve diverse immigrant and refugee populations.⁵⁰

There were, however, some limitations to this review. The search strategy did not include articles focused specifically on ethnocultural groups. While there are many shared characteristics between immigrants and refugees and racialized populations in general, if the article did not specify that people born outside of Canada were a part of the target population it was not included. There is considerable value in looking at how interventions have been developed, implemented and tested for populations whose experiences may be closely aligned with those of refugees and immigrants. However, interventions that focused on specific ethnocultural communities were beyond the scope of this review. Additionally, the literature review only focused on academic literature but there may be more implementation evidence in grey literature and program evaluations. However, there is a need for more evidence on rigorously tested interventions that are adequately described and much of the grey literature does not include detailed descriptions of interventions that can be scaled up or replicated in other settings.

Conclusion

This literature review summarizes key Canadian evidence in facilitating access to primary and preventive health care for immigrants and refugees. The results highlight the effectiveness of interprofessional and team-based care models in serving immigrant and refugee populations, the importance of peer-based support to address social, cultural and language barriers and leveraging the networks of community-based organizations that serve these diverse populations for outreach and system navigation. There is a need for more rigorous evaluation of targeted interventions that improve care for immigrant and refugee populations and have been adapted for different settings. This can support the development of evidence-informed strategies and policies that advance the health of diverse of immigrant and refugee populations.

Study	Target Population	Method	Sample	Location	Type of care	Aim	Intervention or Program Description	Barrier/ Facilitator Targeted*	Key Findings
McMurray, Breward, Alder & Arya (2014)	refugees	quantitative (before and after survey design)	466 patients before and 406 patients after	Kitchener, ON	primary care	assessment impact of a dedicated refuge health clinic on primary care access	A refugee health clinic was developed where comprehensive care is delivered by family physicians in collaboration with a settlement agency that provided language supports and case workers to help refugees navigate the health system.	Cultural Barriers Language/ communication barriers Organization of services/ quality of care Education/Health Literacy Social Network/support Patient-provider relationship Intersectoral Collaboration	After establishment of the refugee health clinic there was a 30% decrease in wait times to see a health care provider, and a 18% increase in refugees finding a permanent family physician in the community in the year after the community in the year after their arrival. Also, there was a decrease in referrals for specialist care and increased support from primary care team.
Ferrari, Ahmad, Shakya, Ledwos, McKenzie (2016)	immigrant, refugee and racialized population (almost all were immigrants)	mixed methods (survey and focus groups)	74 patients	Toronto, ON	primary mental health care	measuring patient and provider acceptance of web-based tool for mental health assessment	A tablet-based, survey to assess mental health completed by clients in waiting room before appointment in a community health centre. Tailored output on risks and recommendations generated for both client and provider.	Cultural Barriers Language/ communication barriers Organization of services(quality of care Education/ Health Literacy	A touch-screen based surveywas acceptable and easy to use for the majority of clients. Clients and providers agreed with perceived benefits of tool. Clients had mixed opinions about privacy mixed opinions about privacy and privacy was not identified as a major barrier to using the survey.
Ahmad, Shakya, Li, Norman, Lou, Abuelaish & Ahmadzi (2012)	adult Afghan refugees	quantitative (RCT)	49 patients (25 in intervention and 24 in usual care group)	Toronto, ON	primary mental health care	examine potential of web-based tool to integrate medical and social services by assessing psychosocial risk	A tablet-based, survey in Farsi or Dari to assess psychosocial completed by clients in waiting room before appointment in a primary care setting. Tailored output on risks and recommendations generated for both client and provider.	Cultural Barriers Language/ communication barriers Organization of services(quality of care Education/ Health Literacy	72% of participants in intervention group had intention to visit a psychosocial counselor compared to 46 % in usual care group. Intervention group had similar patient satisfaction to usual care and agreed on benefits of tool.
Ahmad, Lou, Shakya, Ginsburg, Ng, Rashid, Dinca- Panaitescu, Ledwos & McKenzie (2017)	immigrant, refugee and racialized ethnoracial communities	quantitative (RCT)	148 patients (75 in intervention and 72 in usual care group)	Toronto, ON	primary mental health care	measure efficacy of web-based tool for improving discussion about mental health issues and detection of mental illness	A tablet-based, survey to assess mental health completed by clients in waiting room before appointment in a primary care setting. Tailored output on risks and recommendations generated for both client and provider.	Cultural Barriers Language/ communication barriers Organization of services(quality of care Education/ Health Literacy	Mental health discussion occurred for 58.7% of patients in the intervention group vs 40.3% in the usual care group.

	there tad' up and up and trathe trast	after and and and and and and argona, screened sinonths ssions, vere tched tched	s care was tisfied with and offered pecific
dings	After the intervention, there was a significant increase in self-reporting 'ever had' routine physical checkup and clinical breast exam. After the intervention participants had greater knowledge of breast cancer risk factors.	Of women eligible for screening, after program 26% and 36% had Pap and mamnography, respectively, versus 9% and 14% of under or never-screened (UNS) controls. In the 8 months following education sessions, program participants were significantly more likely to be screened than their matched controls.	Clients found receiving care in mobile health clinic was acceptable and were satisfied with care. It was accessible and offered language and culture-specific support.
Key Findings	After th was a si was a si in self- routine clinical interve greater cancer	Of wome after pro had Pap; rrespectiv 4% of uu (UNS) co followin program significa screened controls.	Clients f in mobil acceptal anguagy support.
Barrier/ Facilitator	largener Cultural Barriers Language/ communication barriers Education/Health Literacy	Cultural Barriers Language/ communication barriers Organization of services/quality of care Geographic access Education/ Health Literacy Social Networks/ support	Insurance/ Eligibility Cultural Barriers Language/ communication barriers Geographic access Education/Health Literacy Social Networks/support Patient-provider relationship
Intervention or Program	uescription A series of socioculturally tailored breast-health articles published in Urdu and Hindi community newspapers	A community-based program aimed to improve breast and cervical screening among marginalized women. Key components include Key components include outreach through a network of community agencies and peer leaders, language- specific group educational sessions cofacilitated by peer leaders, and offered transportation, or language support	Mobile health clinic (MHC) staffed with a primary care nurse practitioner, a physician, a counsellor, and an intake person Provides access to reproductive access to reproductive ontraception, pregnancy ontraveption, pregnancy and abortion counselling, sexually transmitted infections, and cervical and breast cancer screening
Aim	increase overall knowledge about breast cancer and screening	assess the impact of CARES (Cancer Awareness: Ready for Education and Screening) intervention on cervical and mammography screening	describe experiences of clients using mobile health clinic for reproductive health care
Type of care	breast cancer screening	breast and cervical cancer screening	breast and cervical cancer screening
Location	Greater Toronto Area (GTA), ON	Toronto, ON	Toronto, ON
Sample	74 participants	331 cases for Pap- eligible group and 206 cases for mammography- eligible group	7 immigrant women
Method	quantitative (pre- post design)	quantitative (matched cohort)	qualitative (interviews)
Target Population	South Asian immigrant women	immigrant, refugee and marginalized (low-income) women	Portuguese- speaking immigrant women
Study	Ahmad, Cameron & Stewart (2005)	Dunn, Lofters, Ginsburg, Meaney, Ahmad, Moravac, Nguyen & Arisz (2016)	Guruge, Hunter, Barker, McNally & Magalhaes (2010)

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Appendix A: Search Strategy

SCOPUS Search

((TITLE-ABS-KEY (immigra* OR refugee* OR migrant* OR newcomer* OR "asylum seeker*") AND TITLE-ABS-KEY ("preventive care" OR "preventive health" OR "preventative care" OR "preventative health" OR "mental health" OR "chronic disease" OR "chronic condition" OR "cancer screening" OR "primary PRE/3 care" OR "primary health*") AND TITLE-ABS-KEY (program* OR practice* OR project* OR pilot* OR strategy OR "strategies" OR initiative* OR intervention* OR policy OR policies OR model OR "case study")) AND TITLE-ABS-KEY (canad* OR quebec* OR ontario* OR "New Brunswick*" OR newfoundland* OR alberta* OR "British Columbia*" OR manitoba* OR saskatchewan* OR "Prince Edward Island*" OR "Northwest Territories*" OR nunavut* OR yukon* OR "Nova Scotia*")) AND (PUBYEAR > 1999) AND (LIMIT-TO (LANGUAGE, "English"))

MEDLINE Search

1. exp "Emigrants and Immigrants"/

2. exp Refugees/

3. 1 or 2

- 15. exp Primary Health Care/
- 16. exp Family Practice/ or exp General Practice/
- 17. exp Chronic Disease/
- 18. exp Preventive Medicine/
- 19. exp Health Services Accessibility/
- 20. exp "Delivery of Health Care"/
- 21. "mental health".mp.
- 22. exp "mental health service"/
- 23. 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22

24. (Canad* or Quebec* or Ontario* or "New Brunswick*" or Newfoundland* or Alberta* or "British Columbia*" or Manitoba* or Saskatchewan* or "Prince Edward Island*" or "Northwest Territories*" or Nunavut* or Yukon* or "Nova Scotia*" or Toronto* or Vancouver* or Montreal*).mp.

- 25. exp "Canada"/
- 26. 24 or 25
- 27. 3 and 23 and 26

28. limit 27 to (english language and yr="2000 -Current" and journal article)