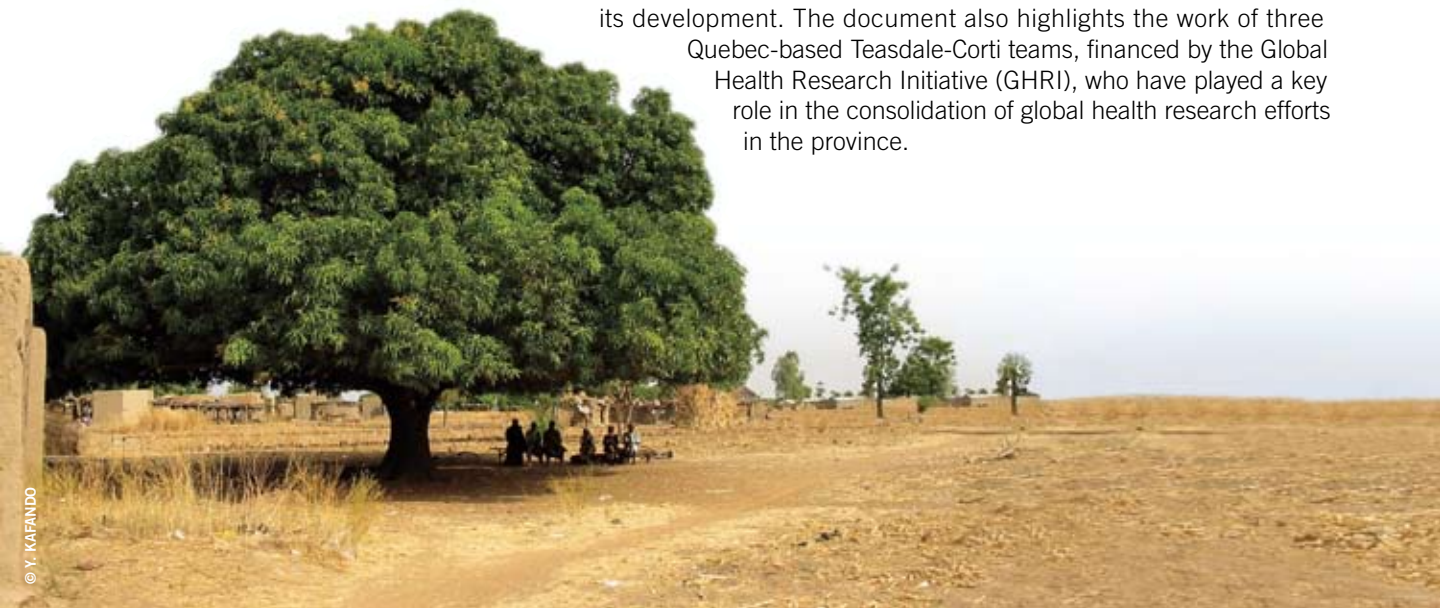


## GLOBAL HEALTH RESEARCH IN QUEBEC

Social inequality, the degradation of ecosystems, sedentarity, poor food habits and stress know no borders. It is these transnational issues that global health research addresses and seeks to improve through interventions in health protection and promotion.

This PopHealth Notes aims to foster awareness among the public health research community on the significant contributions of global health research in Quebec. A growing number of researchers across the province are investing themselves in this domain. This document therefore addresses issues pertaining to training, the development of research capacities, and career opportunities in the field of global health available to young researchers. It presents a brief portrait of global health research in Quebec and identifies several recommendations to further favour its development. The document also highlights the work of three Quebec-based Teasdale-Corti teams, financed by the Global Health Research Initiative (GHRI), who have played a key role in the consolidation of global health research efforts in the province.



## Global Health Research: An overview

Global health research responds to the need to produce and integrate knowledge for interventions and policies that contribute to the achievement of the Millennium Development Goals, three of which are health-related. Global health research is thus defined less in terms of a disciplinary approach, or a particular field of study, but rather by its engagement in public health issues that affect the entirety of the world's population. In this respect, it concerns primarily populations living in low and middle income countries (LMIC), where needs are great and far from being satisfied. These countries shoulder a disproportionate burden of the global preventable mortality and morbidity.

*Further information on the Millennium Development Goals of the United Nations can be found at <http://www.un.org/millenniumgoals/>*



Global health does not only concern LMIC, however. The interconnection of people, of goods and of ideas is accompanied by a globalisation of environments, of lifestyles, and of public health issues. Recent zoonotic diseases, the extension of the basin of communicable and noncommunicable diseases formerly confined to developing areas of the world or particular climates, are expressions of the globalization of health and illness risks. These issues illustrate the need to implement transnational solutions based on informed knowledge of global processes of production and communication of knowledge.

Global health research is, of course, usually carried out in the context of North-South research partnerships and reflects the concern of the international community to correct the existing imbalances in the allocation of research funding. Nonetheless, it does not only serve LMIC and it does not inscribe itself in a development aid philosophy. Global health research responds to the realities of a multicultural Quebec society open to the world.

This is referred to as the “10/90 Gap”; 10% of health research funds target the needs of 90% of the world's population living in low and middle income countries.



The Quebec community of researchers is particularly active and renowned for its work in several key themes of study: environmental health, women's health, migrants and indigenous peoples, maternal mortality, the epidemiology of the response to HIV/AIDS, international nutrition, the analysis of inequities in health and access to health care, financing and the evaluation of health systems.

# The Teasdale-Corti Teams of Quebec

In 2007, 13 teams across Canada were awarded the prestigious GHRI-Teasdale-Corti Team Grants, averaging \$1.5 million each over a four-year period. Four of the successful teams are housed in Quebec's four major universities: Laval, McGill, Montreal and UQAM. The research programmes are representative of the wide spectrum of themes that constitute global health:

- land use, environment and eco-system health [UQAM];
- mental health of populations exposed to organized violence and complex emergencies [MCGILL];
- foodborne, waterborne and zoonotic diseases [LAVAL];
- vulnerability and equity in public policies and health systems [MONTRÉAL].

The Teasdale-Corti teams are widely recognized as an important asset in the consolidation of global health research efforts in Quebec. They dispose of considerable resource-mobilizing potential and may act as catalysts and grounds for convergence of global health research in the province. Above and beyond research programmes, the teams each include strong components in capacity strengthening and knowledge translation. They are led by established researchers and partners in Canada, Africa, Asia and Latin America and the Caribbean. The teams therefore constitute exceptional training environments for students and emerging researchers from Quebec and LMIC.

The following examples of knowledge translation illustrate the contributions of the Teasdale-Corti teams to global health research in Quebec.



## POOR LAND USE AND POOR HEALTH: A PROJECT OF SOUND LAND-USE FOR SMALL-SCALE FARMERS OF THE HUMID TROPICS TO IMPROVE HUMAN HEALTH

### COUNTRIES

**Canada, Brazil**

### PRINCIPAL INVESTIGATORS

**Marc Lucotte**

Université du Québec à Montréal,  
Canada

**José Drummond**

Centro de Desenvolvimento  
Sustentável, Universidade  
de Brasília, Brazil

The PLUPH project (acronym for *Poor Land Use, Poor Health*) is a participative research programme targeting capacity strengthening and knowledge translation, that aims to reduce the severity of two emerging and synergistic health problems widespread in the small-scale farming communities of the Amazon: chronic exposure to mercury through the ingestion of contaminated fish, and the transmission of Chagas disease by triatomines, insect vectors of a potentially deadly protozoa. Recent studies suggest that the two problems – which can lead to serious and insidious effects on the immune, neurological and cardiac systems of humans – are linked to the rapid and generalized degradation of the environment, and in particular to slash-and-burn agricultural practices in the humid tropical forest. The PLUPH project therefore aims to contribute to the primary prevention of these problems by developing and testing sustainable land use practices in three typical pilot communities of the Rio Tapajós region, spanning traditional riverside communities to those recently established as a result of planned government colonization initiatives. The project also aims to spatially model the risk of exposure to mercury and Chagas disease at the regional level taking into consideration geological, topographical, edaphic, vegetation and land use characteristics of the area. The project was developed using a collective approach and is lead by a multidisciplinary team of university researchers from Brazil, Canada, and France, representatives from the Brazilian government (specialized in agricultural development, settlement practices and public health) and local opinion leaders.

### Sustainable development of communities and research capacities

The expected results – which will effectively link health, environment and social factors – will contribute to case studies of best practices in sustainable development in small-scale farming communities in humid tropical regions. The case studies will be applicable to other regions of the Brazilian Amazon, or neotropical regions with similar characteristics. Significant knowledge gaps will be addressed through the capacity strengthening of several masters and doctoral students; training comprising an integral component of the programme. All knowledge gained through this project will contribute to the development of a dynamic conceptual model that will serve to communicate integrated findings to knowledge users.



## TRAUMA & GLOBAL HEALTH (TGH) PROGRAM

### COUNTRIES

**Canada, Guatemala, Nepal,  
Peru, Sri Lanka**

### TEAM LEADERS

**Duncan Pedersen**

McGill University, Canada

**Víctor López**

Centro de Investigaciones  
 Biomédicas y Psicosociales,  
 Guatemala

**Bhogenra Sharma**

Centre for Victims of Torture, Nepal

**Marina Piazza**

Universidad Peruana Cayetano  
 Heredia, Peru

**Laksiri Priyadarshana**

**Chamindra Weerackody**  
 People's Rural Development  
 Association, Sri Lanka

There is growing consensus that political violence, civil wars and armed conflict as well as natural disasters have both short- and long-term health consequences for individuals and communities, substantially increasing the risk of disease, disability, injury, and death from a wide range of causes. In order to better understand this issue, the Trauma & Global Health (TGH) Program aims to build a sustainable research environment in partnership between McGill University and research teams and their host institutions from four LMIC: Guatemala, Nepal, Peru, and Sri Lanka. TGH will enable country teams to conduct a research and action program of advanced studies, capacity building, continuing education, and knowledge translation in the social and cultural dimensions of mental health. The ultimate objective of the program is to reduce the mental health burden of civilian populations exposed to protracted and endemic political violence and episodic natural disasters, foster the process of healing, psychosocial rehabilitation and recovery, and generate improved mental health policies and services in partner countries.



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The research and action program is currently underway in all four countries. A range of capacity building activities have been carried out, among them the First International Global Mental Health Course (GMHC-1), held in Guatemala City, Guatemala, in April 2007, and the GMHC-2 held in Colombo, Sri Lanka, in January 2008. The two courses drew more than 280 participants in both countries. In addition, the “McGill 13th Summer Program in Social and Cultural Psychiatry” was successfully carried out in May-June 2007, within which a Seminar entitled “Rethinking Trauma: Social, Cultural and Psychological Perspectives” was held with 35 students enrolled.

*The TGH web page is updated on a regular basis. It contains programme details, and a Resource Centre including a collection of documents, conference videos, opportunities for McGill students, and other relevant materials.*

<http://www.mcgill.ca/trauma-globalhealth>



### Fast-acting knowledge translation

Peru's coastal areas were hit by an earthquake in August 2007. The epicentre was close to an active fault line 200 km south of the capital city, Lima, and measured 8.0 on the Richter scale. The quake affected the departments of Pisco, Ica and Chincha, killing over 500 people and injuring more than a thousand others. Some 100,000 people were also left homeless. The TGH-JEC team immediately approved \$20,000 in additional funding to respond to the emergency. Marina Piazza, TGH-Peru team leader, in collaboration with McGill-based TGH team, the Peruvian Ministry of

Health, PAHO/WHO, Paz y Esperanza (Peruvian NGO), and the Coordinadora Nacional de Derechos Humanos, organized a field visit to the affected areas. A national workshop (145 participants), followed by a series of workshops at the local level (135 participants) were organized in September 2007 to train professionals, health workers and other first responders from the affected areas in disaster management and psychosocial interventions. The workshops aimed to equip local actors with the necessary skills to effectively respond to emerging needs of earthquake victims.

This example of rapid and timely knowledge translation is only one of the many possibilities that derive from the formation of a team of international experts who work in close collaboration with local partners on the field. Making evidence-informed knowledge readily available contributes to capacity building of local health actors and, ultimately a more effective response to urgent health questions posed by complex emergencies.

## “VULNÉRABILITÉ ET ÉQUITÉ EN SANTÉ EN AFRIQUE” TEAM

### COUNTRIES

Canada, Burkina Faso, Mali

### TEAM LEADERS

**Slim Haddad**

**Pierre Fournier**

Université de Montréal, Canada

**Baya Banza**

Université de Ouagadougou,  
Burkina Faso

The health components of the strategic frameworks on poverty reduction and programmes that work toward the attainment of the Millennium Development Goals suffer from a double deficit in terms of available evidence and the development of policies that respond to local realities. The *Vulnérabilité et équité en santé en Afrique* team aims to improve the development and the effectiveness of health policies and programmes in order to better respond to the needs of vulnerable groups and populations.

The team is composed of Canadian and African researchers, among whom seasoned researchers act as mentors for researchers who are beginning their careers or still in training. The programme consists of several research projects grouped into four thematic axes that each target a priority vulnerable group: young girls in urban areas in a context of

vulnerability, pregnant women exposed to an elevated risk of maternal mortality, people infected with HIV or at risk of contracting the virus, poor people at risk of exclusion from health services. The implementation of the projects is enriched by transversal themes of work (analysis of the World Health Surveys, pooling of evidence-based results to guide health systems), and by the systematic integration of the gender dimension – a key determinant of vulnerability. The translation of research results into practice



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Further information on the  
 “Vulnérabilité et équité en santé en  
 Afrique” team can be found at

<http://www.medsp.umontreal.ca/vesa-tc/>



and the strengthening of research capacities in partner countries are central activities that are favoured by the composition of the team, which unites Canadian researchers with African researchers, decision-makers, and practitioners.

### Access to Healthcare: The selection of indigents

#### ACCESS TO HEALTHCARE TEAM

Valéry Ridde  
Abel Bicaba  
Slim Haddad  
Yamba Kafando  
Maurice Yaogo  
Moctar Ouedraogo  
Omar Sanfo  
Norbert Coulibaly

The access to healthcare component of the *Équipe vulnérabilité et équité en santé en Afrique* initiated their first project in the fall of 2007 in the district of Ouargaye. This project builds upon an action-research project financed by the International Development Research Centre that aims to improve access to the healthcare system for indigents in Burkina Faso. The research project seeks to compare the efficacy of two indigent selection processes that allow a limited group of poor people to benefit from the gratuity of medications and medical consultations in a context where all patients must pay out-of-pocket for health services. To do so, the researchers compared the characteristics of indigents selected by health centre nurses at the time of medical consultation with those selected by a village committee through a participative process prior to medical consultation. Predetermined criteria were not used by either the nurses or the village committee. Preliminary results indicate that the nurses selected people living in households whose characteristics revealed a degree of poverty slightly higher than that of the general population. The village committee, on the other hand, identified individuals who are much poorer and live in the most precarious situations in a general context of extreme scarcity of resources. Analyses led to possible explanations for the difference observed between the two methods of selection. In the case of the nurses, medications provided free of charge come from State allocations. In the case of the village selection committee, the care of indigents is ensured with funds from the local management committee using the profits of medication sales (Bamako Initiative). The villagers believe that in a context of generalized poverty – such as that of Burkina Faso – those who are most extremely affected deserve to be qualified as indigent.



Since the study was carried out, a list of 20 criterion based on the characteristics issued from the community selection has been given to nurses in other health centres who will now use them to select indigents. It remains to be determined whether this targeting process is more effective than the former system.

# Training Needs for Global Health in Quebec

One of the main conclusions drawn by young researchers from Canada and LMIC following a workshop for new researchers organized by the Canadian Coalition of Global Health Research in Halifax in 2004 was that doctoral students and postdoctoral researchers need to be recognized as an important resource in the development

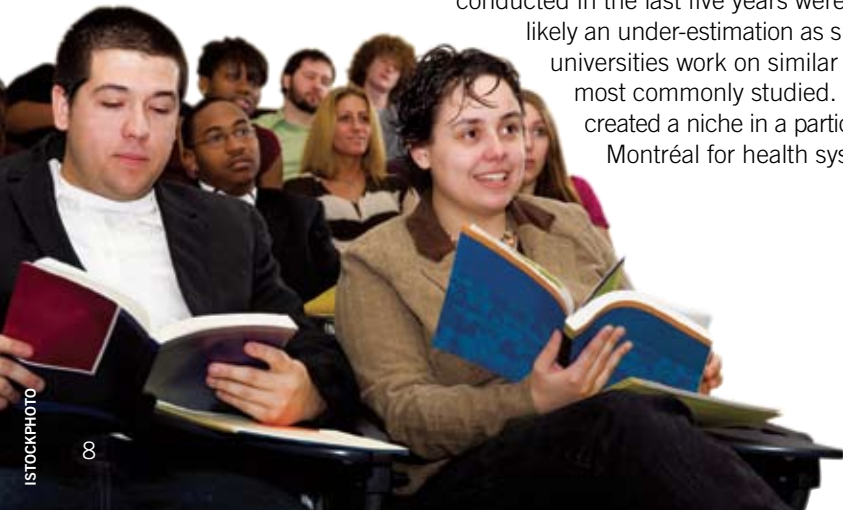
For more information on the methods and results of this study, please consult articles 3 and 4 listed in the reference section (page 12).

of research in the field of global health<sup>1</sup>. Two young researchers, Valéry Ridde and Katia S. Mohindra, recently undertook a study to explore ways of encouraging students and young researchers to pursue graduate studies in global health. Their study, whose main conclusions are presented below, identifies “opportunities and threats” that global health research faces in the Quebec context and discusses career perspectives in the field.

## Main observations of the study

The majority of the main universities in the province offer post-graduate training in public health. Twenty-seven courses were identified that broach the subject of global health from various disciplinary perspectives, including epidemiology, economics, demography, health services administration, etc. In three of these universities (Laval, McGill, Montreal) an introductory course to global health is offered.

The authors counted 36 researchers who actively engage in the field of global health. The proportion of their time devoted to this area of work is variable; ranging from 15 to 100%. Using available information, 56 global health research projects conducted in the last five years were identified in the four universities. This is quite likely an under-estimation as such information is not readily available. Several universities work on similar themes, for instance HIV/AIDS, which is the most commonly studied. Nonetheless, each university seems to have created a niche in a particular area of study; McGill for infectious diseases, Montréal for health systems and UQAM for environmental health.



To further understand the internal and external contexts of the universities with respect to global health, a survey, interviews, and a symposium were held with various stakeholders. Through these activities, the perspectives of students, researchers, professors, deans, and representatives of funding agencies were collected. Table 1 provides a summary of their responses.

TABLE 1 OPPORTUNITIES AND THREATS FOR A QUEBEC UNIVERSITY THAT OFFERS COURSES AND CONDUCTS RESEARCH IN GLOBAL HEALTH

**OPPORTUNITIES**

- Context of globalizing health problems
- Political will of the university with respect to international issues
- Quebec a leader in the field as compared to other provinces
- Research that is close to populations and their needs
- Recognized importance of reducing prejudices with respect to Southern researchers and promoting the quality of their research
- Outcomes of intercultural exchanges
- More occasions to meet with high level researchers outside the local/national context

**THREATS**

- Barriers to financing innovative projects
- Limited availability of young professors to forge partnerships that take long to develop
- Requirement for students to focus on other aspects of their basic training
- Universities must offer global health in order to stay competitive and avoid being marginalized
- Possibility of aggravating North-South imbalances if partnerships are not equitable

In summary, the study identified a strong and growing involvement of Quebec universities in the field of global health. Despite variations across settings, there exist several excellent opportunities to further develop this field of research. These results were presented and discussed at a symposium held in May 2007 in Trois-Rivières. The recommendations below reflect these discussions and identify ways to favour the involvement of students, young and new researchers in the field of global health (Table 2, page 10).

TABLEAU 2 RECOMMENDATIONS

To researchers

- Create operational alliances with nongovernmental organizations and civil society
- Systematically foresee the involvement and training of students in research projects
- Participate in the development of a teaching manual and involve students and young researchers in the writing process

To university authorities

- Create teaching and research positions in global health
- Create an internal position on information regarding education and research in global health
- Develop programmes specific to global health (MSc in global health with intervention and research components) and/or include a global health component to all public health courses
- Develop new courses specific to global health, taught in an interdisciplinary perspective in universities where these do not yet exist
- Create a visiting professor position to regularly accommodate professors from abroad

To funding agencies

- Mobilize all the funding agencies in Quebec to organize a doctoral and master's bursary competition specific to global health, without disciplinary restrictions
- Systematically foresee a budget for travel and for the communication of results after data collection in doctoral and master's research bursaries
- Organize a competition for the creation of research chairs in global health for young researchers with support for the development of research partnerships with one or more researchers abroad
- Organize a funding competition for the partnership development and support to emerging projects specific to global health
- Allow postdoctoral researchers to be principal investigators on funding proposals

# The Role of the Global Health Research Network of the QPHRN

The union of four major federal institutions (CIHR, IDRC, CIDA, and Health Canada) under the umbrella of the GHRI constitutes an important source of opportunities for Quebec-led global health research. Within this context, the Global Health Research Network of the Quebec Population Health Research Network (QPHRN) was created in 2005 with the aim of promoting competitive Quebec-led research in the domain and to maximize the existing potential in the province. The Network plays an important role in the favourable positioning of researchers from the province in national funding competitions.

## Conclusion: Challenges

The diversity in research themes in global health illustrates both the scope and the complexity of the field. The commitment to population health from a global perspective situates it at the crossroads of a variety of fields of study and scientific traditions – fundamental and biomedical sciences, population and social sciences. Global health research is also a field that demands varying degrees of coexistence between fundamental research, strategic research (research on causal mechanisms) and intervention research (development, implementation, evaluation).<sup>2</sup> This diversity constitutes both a strength and a challenge for researchers in the field who must be able to converge around common interests, values, or practices to contribute to collectively forging an identity distinct to global health research.

The challenge is therefore to engage the community of researchers in a process of appropriation of the complexities of global health and a firm commitment to the formidable task of developing common theories, methods and techniques. Such a commitment would contribute to the redefinition and enrichment of our understanding of the social and biological determinants of health and favour the development, the implementation and the sustainability of effective and equitable health interventions destined for vulnerable populations around the world.

### THE ACHIEVEMENTS OF THE GLOBAL HEALTH NETWORK OF THE QPHRN

The Global Health Research Network of the QPHRN devotes its work to three types of activities:

#### 1 Strengthening of Quebec's competitive research advantage

Regular contributions seek to ensure the favourable positioning of Quebec researchers with respect to federal and international funding agencies who promote or finance research in global health. The principal modality consists of granting funds to researchers through a competitive selection process to assist in the preparation of research proposals or the development of partnerships (five competitions held since 2005).

#### 2 Research capacity strengthening

Research capacity strengthening targets primarily students or researchers in the early stages of their careers. Bursaries are offered to encourage student participation in events taking place in Quebec and abroad. The Network supports an annual student-led initiative called the WHO Simulation. It backed a study that sought to analyze the involvement of young researchers and career perspectives in global health (see page 8) and played a leadership role in the development of a proposal that was submitted to CIHR for a strategic training programme that unites the four Quebec-based Teasdale-Corti teams.

#### 3 Support to the research community

Support to the research community is provided in various forms: networking, monitoring, exchange and communication activities, and support to emerging partnerships in Quebec or abroad. Three conferences have been held that brought together the majority of the Quebec community of global health researchers (2003, 2006, 2007). The Network also encourages the *Fonds de recherche en santé du Québec* to support the development of Quebec capacities in the domain.

## QPHRN

Created in 2002, the Québec Population Health Research Network (QPHRN) is a network of approximately 600 researchers working in the fields of public health, population health, health care services, health policy and health and society. Its mission is to support research infrastructure, innovative, multidisciplinary scientific activities and publications, champion a new generation of young researchers by funding graduate studies, and foster knowledge sharing. Its ultimate goal is to identify, understand and act on the social determinants of health to improve the health of populations. The scientific director is Dr. Gilles Paradis.

## Knowledge Sharing and Application Group

The *PopHealth Notes* series is an initiative of the QPHRN's Knowledge Sharing and Application Group (*Axe Partage et utilisation des connaissances*). The group's research mandate is to sensitize researchers, public policy decision-makers, central and regional managers, and local workers in the field to the findings of health and population research and the issues raised by them. The group's activities reflect a two-pronged role – supporting other research themes of the QPHRN and initiating new projects designed to increase the sharing and application of knowledge in population health. The group is composed of Pierre Bergeron (INSPQ [*Institut national de santé publique du Québec*] and QPHRN), Marie-Claire Laurendeau (INSPQ and QPHRN), Pierre Joubert (INSPQ and QPHRN), Joseph Lévy (UQAM [*Université du Québec à Montréal*] and QPHRN) and Karine Souffez (QPHRN).

# PopHealthNOTES

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