

PROTECTING LIVES PREVENTING HIV

A RESEARCH THINK TANK ON THE USE OF PRE-EXPOSURE PROPHYLAXIS (PREP) IN CANADA

Meeting and report recommendations, March 10, 2016

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ONTARIO
HIV TREATMENT
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CONTENTS

Meeting summary	1
Background	1
Priorities and next Steps	1
Introduction	3
Context	4
PrEP research globally	4
PrEP research in Canada	4
Challenges to implementing PrEP in Canada	5
Discussions	6
1. What should our key PrEP research objectives and questions be?	6
2. How should the national PrEP research team be composed and structured?	8
3. How can we embed mentorship and training in a PrEP program of research?	8
4. How should the PrEP program of research be evaluated and what are the impact indicators?	8
5. What KTE strategies should be implemented?	8
6. What should be the role and composition of an International Advisory Team?	9
Emerging priorities	10
Next steps	12
Appendices	13
Appendix A. Participant list	13
Additional appendices available online	14

MEETING SUMMARY

Background

On March 10, 2016, more than 40 participants from across Canada came together to discuss the research needed to support the most effective possible implementation and use of pre-exposure prophylaxis (PrEP) therapies for HIV. The meeting was funded by REACH 2.0 and sponsored by four HIV research funders: CANFAR, CTN, OHTN, and REACH 2.0. Stanley Read (CANFAR Scientific Advisory Committee Chair) and Sean B. Rourke (OHTN/REACH 2.0) co-chaired the meeting.

The think tank included people living with HIV and HIV researchers, as well as representatives of AIDS Service Organizations serving at-risk communities, Canada's major HIV funding agencies (CANFAR, CIHR, OHTN), CIHR-funded national centres (CTN and REACH 2.0), HIV information providers (CATIE, CTAC) and relevant governmental organizations and decision-makers (Public Health Agency of Canada, First Nations Inuit Health Branch, Correctional Service Canada and the Ontario AIDS Bureau).

Participants share common goals: to prevent HIV transmission and protect the health of Canadians at risk.

The objective of the think tank was to discuss the possibilities of a national PrEP research initiative and its potential to contribute to equitable, evidence-based implementations of PrEP across Canada. What would such effort(s) try to achieve? How would health care providers, community-based agencies and policymakers be engaged? How could research help shape effective accessible PrEP services that reduce HIV transmission and promote well-being of people at risk? How might such a research initiative be structured? What metrics would be used to measure impact and success?

Priorities and next steps

The meeting sponsors (CANFAR, CTN, OHTN and REACH 2.0) are committed to supporting an inter-connected program of research that will inform/enhance PrEP implementation across Canada. Through the discussions, participants identified five research /implementation science priorities:

1. Developing a national PrEP/prevention database/platform

A central database would gather common data from patients/clinicians, making it possible to track/monitor all people on PrEP and/or involved in other prevention interventions across the country and to compare different prevention programs and approaches. The database would help answer questions for researchers, health care providers and policy makers, and provide the infrastructure that would enable Canada to participate in future international prevention trials of emerging forms of PrEP or other prevention modalities, such as vaccines. The platform would also provide a mechanism to collect important treatment data on PrEP including side effects from health care providers prescribing PrEP.

Next steps: The meeting sponsors are discussing ways to mobilize resources for this initiative, including leveraging existing expertise (e.g. CTN) to build and manage the database. They will also consult with international colleagues to ensure the database will be able to support Canada's participation in future PrEP/prevention studies.



This report can be downloaded at:

https://www.ohtn.on.ca/prep_report/

2. Modelling the cost-effectiveness of potential PrEP interventions

Funding for the PrEP drugs themselves is still an access barrier in most provinces/territories. Different strategies are now underway to overcome this barrier (e.g. conversations with pharmaceutical companies, conversations with drug funding programs about the information they need to approve funding for and access to PrEP). To develop effective PrEP policies and programs, policy makers need timely data about the benefits and costs of implementing PrEP.

Next steps: Dr. Sharmistha Mishra at St. Michael's Hospital in Toronto has funding in place and has begun this modeling for Ontario. The process, which will include discussions with policy makers to ensure the modeling provides the information they need, will inform similar analyses in other jurisdictions.

3. Generating national guidelines, education/training and other resources to support PrEP interventions and scale-up

The prescribing and monitoring of PrEP is new to most physicians, and there continues to be debate about which care providers (e.g. physicians, nurses, counselors) are best positioned to do the initial and ongoing counseling and monitoring. Guidelines would provide standards for PrEP patient care, and be a resource for potential prescribers. To ensure equitable access, health care providers, including community-level providers will need training on how to discuss, prescribe and monitor PrEP. There is also a need to develop, collect and evaluate resources aimed at communities at risk and individuals considering taking PrEP. Note: the national database/platform (see #1) can also support the implementation and evaluation of the uptake of clinical guidelines.

Next steps: Dr. Darrell Tan and colleagues across Canada have received funding to develop national PrEP guidelines and to develop innovative (patient-

initiated) on-line education resources for primary care physicians. More discussion will be needed about how to support the roll out of the guidelines and tools, and to provide ongoing support/training for care providers and at-risk individuals and communities.

4. Implementation science research focused on men who have sex with men

Demonstration projects with cohorts in Toronto, Montreal, Vancouver and Ottawa were funded in the recent CIHR Implementation Grant, Phase 1. The next step will be to scale-up these initiatives as part of a comprehensive prevention program that focuses on making PrEP accessible and widely available for gay men across Canada. Funding for research to support scale up of existing demonstration projects could be provided by a CIHR Phase 2 Implementation science grant in 2017. The competition will launch this summer.

Next steps: Organizations will support existing PrEP teams and cohorts to develop a competitive CIHR Phase 2 application for scale up of PrEP delivery to men who have sex with men. The meeting sponsors will explore partnerships to support this grant.

5. Community-engaged feasibility studies and demonstration projects with other populations

Most of the PrEP research to date has been with gay men. There is an urgent need for PrEP feasibility studies and demonstration projects with other at-risk communities (i.e. African Caribbean black communities, Indigenous communities, people who use drugs, trans people). The objective is to identify and develop effective strategies to deliver PrEP in an equitable, accessible and non-coercive way in these communities.

Next steps: The meeting sponsors will work with these communities to develop funding opportunities for these initiatives.

INTRODUCTION

Pre-exposure prophylaxis (PrEP) is an emerging biomedical strategy for HIV prevention. It involves the regular use of anti-retroviral medications to prevent HIV infection. Large scale trials of PrEP first began in 2007, and the use of the first PrEP medication (Truvada, a combination of tenofovir disoproxil fumarate and emtricitabine) was approved for prophylactic use in the United States in 2012. Four years later, on February 23, 2016, Health Canada granted a similar approval.

On March 10, 2016, more than 40 participants from across Canada came together to discuss the research needed to support the most effective possible implementation and use of PrEP therapies in Canada (see [Appendix A](#) for participant list). The think tank included:

- People living with HIV
- HIV researchers with an interest in PrEP
- Representatives of AIDS Service Organizations serving at-risk communities
- Representatives of Canada's major HIV funding agencies, including the Canadian Institutes of Health Research (CIHR), Canadian Foundation for AIDS Research (CANFAR), the CIHR Canadian HIV Trials Network (CTN), and the Ontario HIV Treatment Network, and CIHR Centre for REACH in HIV/AIDS (REACH 2.0).
- Representatives of government agencies, including the Public Health Agency of Canada, First Nations Inuit Health Branch and the Ontario AIDS Bureau.

The one-day meeting was held in Toronto with meeting support from REACH 2.0. It was chaired by Stanley Read (CANFAR Scientific Advisory Committee Chair) and Sean B. Rourke (OHTN/REACH 2.0).

Participants were invited to discuss the development of a ***national PrEP research initiative***: what its research objectives should be, how it might be structured and how its impact should be measured and its lessons shared. A pre-meeting briefing note ([Appendix B](#)) highlighted the need to improve communication and coordination between the research groups that have begun to develop PrEP research studies. It also suggested that a coordinated research initiative could “create a national registry of social/behavioural, clinical/safety outcomes and health economic data on PrEP to inform real-world practice and policy decision-making” and “serve as a coordinating network and platform so Canada can participate in international efforts to develop pragmatic intervention trials for emerging forms of PrEP and other interventions to reduce HIV infections.”

Sean B. Rourke, Scientific and Executive Director of OHTN, Tristan Michela from the CANFAR Board of Directors, and CTN National Director, Dr. Anis Aslam made opening remarks. They emphasized the need to learn from the experiences of researchers and community members across the country and to move forward with research that will support equitable access to PrEP in Canada. Both CANFAR and OHTN have made funding commitments to this initiative; CTN pledged to assist with access to its pan-Canadian research infrastructure. Reach 2.0 will provide leadership in program/implementation science support.

“It is critical as a next step that [PrEP research] groups coalesce to share information and work with health care providers, community-based agencies and policy makers across the country to develop and drive Canadian implementation of PrEP.”

— Pre-meeting briefing note

CONTEXT



PrEP research globally

Stefan Baral, Associate Professor at the Johns Hopkins School of Public Health, gave a presentation on the current “State of the Art” in PrEP research. He reviewed the major trials that have led to the approval of the current oral PrEP formulation, and what has been learned about supporting PrEP delivery and adherence. (See [Appendix D](#) for slides.)

- Most trials of oral PrEP have focused on prevention for gay men and other men who have sex with men; efficacy is high (86% in both PROUD and IPERGAY), with adherence appearing to be the primary barrier to efficacy. Four of the seven daily doses provided adequate protection.
- Topical vaginal microbicides have not been effective; oral PrEP has also shown less efficacy for women. The reasons are likely both biological and associated with acceptability/adherence.
- Truvada persists in rectal tissue for many days, but this is not the case in vaginal and cervical tissues. The bar for adherence appears to be higher in women; four pills a week may not be enough.

In people treated with PrEP, there is more forgiveness for rectal exposure than for vaginal exposure. Levels of protective drug in rectal tissue are higher and persist longer than in vaginal tissue. The practical outcome is that the bar for adherence may be higher in women.

— Stefan Baral

- There is some (in vitro) evidence of interaction with exogenous estrogen; research is needed about appropriate doses for trans women.
- Over 8000 people are now involved in PrEP demonstration projects across the US; adherence does not appear to vary with age, education, alcohol or drug use; race, and socioeconomic variables such as the stability of a person’s living situation, were key factors in treatment interruptions.
- Adverse effects are generally modest; loss of bone mineral density is reversible when the drug is discontinued.
- Use of PrEP is associated with an increase in sexually transmitted infections in men who have sex with men suggesting a marked increase in condomless anal sex.
- Studies of long lasting injectable PrEP drugs are beginning; fears around forced use are emerging in some marginalized communities.
- Details of PrEP trials can be found at <http://www.avac.org/pxrd>.



PrEP research in Canada

Before the meeting, invitees were asked to answer survey questions about the current state of PrEP research in Canada. Twenty-eight people responded — including some individuals who were not able to attend. Sean B. Rourke and Stan Read summarized the responses. (See [Appendices E](#) and [F](#) for the slides.) Research is currently exploring:

- Attitudes of health care providers to PrEP
- Community needs and attitudes to PrEP
- Trials of PrEP efficacy and adherence
- Pilot studies of the role of different providers in delivering PrEP
- Cost effectiveness and modelling of PrEP use.

To date, the trials implementing PrEP in Canada have primarily enrolled men who have sex with men. PrEP cohorts of men who have sex with men are available or being developed in Montreal, Toronto, Ottawa and Vancouver. Work with other at-risk communities has focused on early exploratory studies of attitudes and acceptability.



Challenges to implementing PrEP in Canada

In terms of challenges to implementing PrEP, invitees highlighted:

- Variable provincial approaches to PrEP funding
- Diverse needs, attitudes and access for at-risk populations
- Lack of cohesive systems and strategies to support PrEP roll out.

In Canada, health care is primarily a provincial responsibility and drug approval and purchase strategies vary across the country. This creates an immense challenge for the roll-out of any national PrEP strategy. However these different systems of drug access, public health and monitoring are opportunities for “natural experiments”. Coordinated comparisons could help identify the most effective systems and strategies.

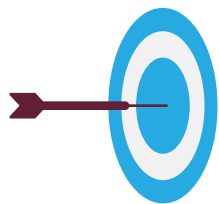
Canada has 19 different public drug plans and over 1000 private plans, with different systems for delivering and monitoring treatments in different jurisdictions.

In terms of the role of research in addressing these challenges, invitees proposed many research approaches - although the most common was some form of implementation research. They also frequently suggested cost effectiveness studies - although there was some concern that this might slow approval in some jurisdictions as decision makers waited for results. Another options was an open phase 4 study making drugs widely available across the country to physicians and patients.

The discussion about challenges reinforced the fact that different communities are at different places when it comes to PrEP. This is true geographically and in different at-risk populations, which means that different interventions and education strategies are warranted.

DISCUSSIONS

The remainder of the think tank included small and large group discussion about the components of a national PrEP Initiative in response to six key discussion questions.



1. What should our key PrEP research objectives and questions be?

Participants discussed the research questions and objectives of any research program in small groups. A number of themes emerged where participants felt more research attention was needed.

Improving access to PrEP for men who have sex with men

Participants agreed that international studies, supported by Canadian initiatives, have produced enough evidence to justify the scale-up of PrEP programs for men who have sex with men. They are impatient to get on with making PrEP accessible to men who have sex with men in a low (or no) cost way.

Research questions focused on:

- the pragmatic questions of routine service delivery — what interval is appropriate for follow-up, what supports/systems are needed and how might they be different for larger and smaller communities, what is the role of sexual health clinics and AIDS Service Organizations in service delivery
- the challenges of getting the word about these prevention options to service providers and men themselves
- the impact on sexually transmitted infections.

Participants favoured PrEP delivery strategies that: presented it as part of a spectrum of sexual health options for men who have sex with men (a combination prevention approach); and engaged men in services that will support ongoing sexual health.

There is enough evidence to justify the scale-up of PrEP programs for men who have sex with men. Expanding access is a key priority.

Conducting feasibility studies and demonstration projects for non-MSM populations

For populations other than men who have sex with men, there are many unanswered questions about both the acceptability and utility of PrEP, including:

- the acceptability of PrEP use in African, Caribbean and Black communities and among Indigenous peoples
- how best to deliver PrEP to populations of people who use drugs as part of a spectrum of harm reduction approaches (taking into account potential drug interactions)
- biological/clinical questions about the pharmacology of Truvada for cis and trans women.

In other at-risk communities, there are still questions about the use of PrEP and its acceptability that need to be answered.

The discussion acknowledged that many of the populations most at risk of HIV are quite marginalized in terms of health care delivery, and are often not receiving appropriate overall preventative care. Participants generally thought that the best approach to answering these questions was through highly community engaged feasibility studies and demonstration projects that would partner with community representatives to create models of care.

This would build awareness of PrEP and prevention/harm reduction within each community and shape services based on specific community needs.

Addressing systems issues

Participants recognized that fully implemented PrEP programs might affect health care systems in many ways, and that investigating and understanding the burden on the system will be important to health decision-makers. This includes questions about cost and the resources needed to deliver PrEP and to provide appropriate follow-up and care for those on PrEP, including follow-up for sexually transmitted infections.

Modeling (looking at likely numbers of PrEP patients and the demands their needs will create within health care systems) may answer some of these questions while demonstration projects can investigate the impact of using different health care providers (e.g. nurses, harm reduction counsellors, sexual health clinic personnel) and locations to deliver care. A key goal of systems studies must be equitable access for all who could benefit from PrEP - including access outside of major urban centres.

Modelling and demonstration projects of unique delivery approaches can provide policy-relevant answers about potential costs and resource needs.

Closing the communication gap

Many different targeted communications tools will be needed to implement PrEP including:

- broad (potentially national) clinical guidelines for primary care doctors and other health care professionals
- very targeted education pieces for specific communities at risk, which use forms of information valued within that community

- tools to help health decision makers analyze PrEP cost and resource needs and compare delivery strategies.

While some of these resources will be community specific, participants agreed that national guidelines and standards be developed when possible, and that we share the outcomes of targeted communications efforts - both the tools themselves and evaluations of their efficacy. Development and evaluation of communication tools should be part of PrEP research.

Canada would benefit from national guidelines for PrEP delivery/care and from the sharing of delivery and education strategies.

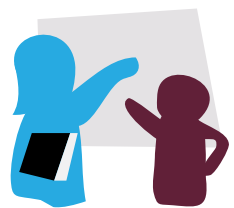
Sharing local experience on a national scale

Participants recognized that a national PrEP program is unlikely, given the provincial nature of health care in Canada. However there is great value in collecting information about PrEP outcomes on a national basis to facilitate shared learning and the exchange of effective models. A national prevention database/registry would be one means to create the capacity to gather evidence about the impact of introducing PrEP on HIV transmission, the influence of different payment and delivery models as well as the availability and uptake of PrEP in at-risk communities. This type of infrastructure would allow us to monitor the “natural experiment” of different approaches to PrEP in different jurisdictions and would be a useful resource for researchers, health care providers and policymakers. It could also make it easier for Canada to participate in future prevention trials for emerging forms of PrEP or other prevention modalities (e.g. vaccines).



2. How should the national PrEP research team be composed and structured?

In discussions about a possible national research team, there was tension between wanting to create a small effective research team that could get things done and the perceived need for a nationally representative structure that would take direction/input from stakeholders in many regions and communities. Participants also discussed how the team would interact with both provincial decision makers and the pharmaceutical manufacturers supplying PrEP. One proposed model was the Canadian HIV Cure Enterprise (CanCURE) with its central steering committee and networks of regional, community and industry partners. Participants stressed that form should follow function, and that it was difficult to suggest a structure until the research questions have been narrowed. For example, a national database/registry gathering information from multiple regional teams would require a different structure than a team trying to coordinate community demonstration projects.



3. How can we embed mentorship and training in a PrEP program of research?

Discussions about training focused on three groups of individuals: a next generation of researchers; primary care and other providers (PrEP prescribers), and community members/peer educators who

would support PrEP implementation and help research projects learn from community experience. In particular, participants identified training for health care providers, including community agencies, as critical to successful PrEP implementation in Canada. To that end, participants suggested that research funders co-operate to direct some existing scholarship funds to emerging PrEP researchers and clinician scientists.

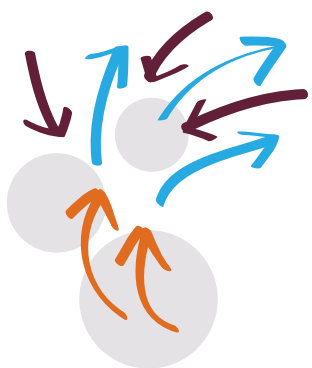


4. How should the PrEP program of research be evaluated and what are the impact indicators?

Participants discussed a wide range of potential metrics, which was difficult to narrow without clear objectives and research questions. Possible indicators include:

- a decline in new HIV transmissions — although most groups stressed the impact of PrEP on HIV transmission should not be considered in isolation but as part of an overall evaluation of preventative health care and the well-being of at risk communities
- measures of uptake and access in marginalized populations
- health care burden and costs
- measures of long-term care engagement.

At least one group suggested that the HIV Care Cascade measure be adapted to include preventative care.



5. What KTE strategies should be implemented?

KTE strategies were seen as essential to any research because engaging at-risk

individuals and health care providers is a critical part of the role out of PrEP services. The research team(s) must clearly articulate in their proposal who they will work with, and consider KTE at every stage of the process. There is a particular need to communicate with and respond to the needs of government decision makers; researchers must be required to articulate their approach in their initial research proposal. It was also suggested that the project include some fora for sharing models and lessons from PrEP implementations projects across the country.



6. What should be the role and composition of an International Advisory Team?

In small group discussions, there was little support for a formal International Advisory Team. While it would be beneficial for the research team to have relationships with international colleagues — and these relationships should be one criteria for research funding — the team should determine how that is done. If a national database/registry is established to gather data from regional teams, international input may help ensure that the database will support Canada's participation in future clinical trials of PrEP medications and other prevention interventions.

EMERGING PRIORITIES

Based on the discussions at the PrEP Think Tank, five key areas of potential PrEP research in Canada emerged:

1. A national prevention database/platform (infrastructure)

A central database would allow users to gather common data about PrEP delivery from patients and clinicians across the country, and use it to compare different prevention programs and approaches for patient care. This project could:

Facilitate regional/provincial comparisons about the impact of PrEP on HIV transmission

- Inform the development of best practice treatment standards
- Study the influence of payment and delivery models on clinical and socioeconomic barriers
- Assess the availability and uptake of PrEP in at-risk communities
- Monitor the implementation and uptake of guidelines and other tools
- Facilitate the sharing of effective models and tools between research groups.

PrEP would be the initial focus but, ultimately, it would be a resource to study/compare many prevention strategies from counselling interventions to vaccines. This initiative would answer questions for both researchers and policy makers, and could support future participation in international prevention trials.

2. Modeling the cost-effectiveness of potential PrEP interventions

Policy makers need timely information about the benefits and costs of implementing PrEP to inform government decisions and plan implementation

research. While governments currently use a number of different approaches to assess cost-benefit, they lack approaches related to the impact and cost-effectiveness of implementing a new program/service. This project could:

- Create models of PrEP outcomes in different at-risk communities and in different geographic contexts
- Explore the impact of PrEP therapies on resource use such as the impact of increased transmission of sexually transmitted disease that might be associated with PrEP use

Modeling provides a relatively quick way to address impact and cost-effectiveness questions across diverse socio-geographic and risk context and capacity to do this work is already in place.

3. Generating national guidelines, education/training and other resources to support PrEP interventions

The prescribing and monitoring of PrEP is new to most physicians, and there continues to be discussion about which care providers (e.g. physicians, nurses, counsellors) are best positioned to do the initial and ongoing counselling and monitoring. Guidelines would provide standards for PrEP patient care, and are the first step in training potential prescribers. In addition, resources will be needed to:

- educate/train health care providers, including community-level providers in accordance with the guidelines
- develop, collect and evaluate community targeted education resources.

Many of the researchers and clinicians who participated in the think tank have already begun to develop these resources and there is a clear role for the Public Health Agency of Canada in training and education.

4. Implementation science research focused on men who have sex with men

Demonstration projects with cohorts in Toronto, Montreal, Vancouver and Ottawa were funded in the recent CIHR Implementation Grant, Phase 1. The next step will be to provide resources to scale-up PrEP as part of a comprehensive prevention program for gay men. The goal is to make PrEP widely accessible and available to gay men across Canada.

5. Community-engaged feasibility studies and demonstration projects

Most of the PrEP research to date has been with gay men. There is an urgent need for PrEP feasibility studies and demonstration projects with other at-risk communities (i.e. African Caribbean black communities, Indigenous communities, people who use drugs, trans people) that will explore questions about:

- the acceptability of PrEP use in African, Caribbean and Black communities and among Indigenous peoples
- the role of community leaders and agencies in introducing and supporting PrEP use
- how best to deliver PrEP to populations of people who use drugs as part of a spectrum of harm reduction approaches (taking into account potential drug interactions)
- how to address biological/clinical questions about the pharmacology of Truvada for cis and trans women when introducing PrEP to these users.

These questions must be addressed in collaboration with at risk communities.

NEXT STEPS

Over the next six months to a year, the meeting sponsors will work with other organizations and individuals involved in the think tank to move forward on these five priorities. In many cases, discussions about how to address these priorities have already begun. A brief summary of next steps for each priority is offered below:

Infrastructure for a national prevention database

The meeting sponsors are discussing ways to mobilize resources for this initiative, including leveraging existing expertise (e.g. CTN) to build and manage the database. They will also consult with international colleagues to ensure the database will be able to support Canada's participation in future PrEP/prevention studies.

Modelling the cost-effectiveness of potential PrEP interventions

Dr. Sharmistha Mishra at St. Michael's Hospital in Toronto has funding in place and has begun this modeling for Ontario. The process, which will include discussions with policy makers to ensure the modeling provides the information they need, will inform similar analyses in other jurisdictions.

Generating national guidelines and education/training for PrEP interventions

Dr. Darrell Tan and colleagues across Canada have received funding to develop national PrEP guidelines and to develop innovative (patient-initiated) on-line education resources for primary care physicians. More discussion will be needed about how to support the roll out of the guidelines and tools, and to provide ongoing support/training for care providers and at-risk individuals and communities.

Implementation science research to men who have sex with men

Funding has just been announced for multiple Phase I implementation science grants related to PrEP delivery to men who have sex with men including projects led by Joanne Otis, Mark Hull and Darrell Tan. These projects involve programs in four Canadian cities (Montreal, Ottawa, Toronto and Vancouver). The CIHR Phase 2 Implementation Science competition, launching this summer, is an appropriate venue to seek funding for the next step to scale-up these programs. The meeting sponsors will work to support existing teams and PrEP cohorts in coming together to create a competitive application for scale up of PrEP delivery to men who have sex with men supported to the CIHR Phase 2 Implementation competition. There are ongoing discussions about possible funding partnerships to support this grant.

Highly community-engaged feasibility studies and demonstration projects

Discussions will continue among the meeting sponsors and participating agencies and with community members to develop funding opportunities and build collaborative teams for these initiatives.

APPENDICES

Appendix A. Participant list

First name	Last name	Affiliation
Aslam	Anis	CIHR Canadian HIV Trials Network
Geri	Bailey	First Nations Inuit Health Branch
Rachel	Bennett	Public Health Agency of Canada
Glenn	Betteridge	CTAC
Christopher	Bunting	Canadian Foundation for AIDS Research
Tony	Di Pede	Ontario HIV Treatment Network
Cameron	Dunkin	Canadian Foundation for AIDS Research
Philippe	El-Helou	Ontario HIV Treatment Network
Bill	Flanagan	Queen's University
Jacqueline	Gahagan	Dalhousie University
Margaret	Gale-Rowe	Public Health Agency of Canada
Sonia	Gaudry	Ontario HIV Treatment Network
Mark	Gilbert	Ontario HIV Treatment Network
Lois	Jackson	Dalhousie University
Emily	Kom	Correctional Service of Canada
Colin	Kovacs	Ontario HIV Treatment Network
Lori	Lyons	Ontario HIV Treatment Network
Paul	MacPherson	Ottawa Hospital
Lydia	Makoroka	Ontario HIV Treatment Network
Enrico	Mandarino	CTAC/AIDS Committee of Toronto
John	Maxwell	AIDS Committee of Toronto
Frank	McGee	Ontario Ministry of Health and Long-Term Care
Tristan	Michela	CanDeal Inc.
Sharmistha	Mishra	St. Michael's Hospital
Ken	Monteith	COCQ-SIDA
Andy	Pringle	Canadian Foundation for AIDS Research
Stanley	Read	The Hospital for Sick Children
Timothy	Rogers	CATIE
Sean B.	Rourke	Ontario HIV Treatment Network
Gary	Rubin	University of Toronto
Stephanie	Rullo	Canadian Foundation for AIDS Research
Liz	Stirling	Canadian Institutes of Health Research

First name	Last name	Affiliation
Darrell	Tan	St. Michael's Hospital
Wangari	Tharao	Women's Health in Women's Hands CHC
Kednapa	Thavorn	Ottawa Hospital Research Institute
Cecile	Tremblay	Centre Hospitalier de l'Université de Montréal
Sharon	Walmsley	University Health Network
Kristin	Westland	CIHR Canadian HIV Trials Network (CTN)
Kit	WilsonYang	REACH Trans Research Initiative
James	Wilton	Ontario HIV Treatment Network
Kyle	Winters	Canadian Foundation for AIDS Research
Art	Zoccole	2-Spirited People of the 1st Nations

Additional appendices available online

Appendix B

[Pre-Meeting Briefing Note \(Protecting Lives, Preventing HIV: A Proposal to Create a National Coordinated Research Team for PrEP\)](#)

Appendix C

[Think Tank Agenda](#)

Appendix D

[Oral Pre-Exposure Prophylaxis; State of the Art — Stefan Baral](#)

Appendix E

[PrEP Research in Canada: What You Told Us — Sean B. Rourke](#)

Appendix F

[PrEP Challenges in Canada: What You Told Us — Stanley Read](#)