



Generating Knowledge to  
Inform Public Health System

# TRANSFORMATION



For the Chief Public Health Officer of Canada's Report  
on the State of Public Health in Canada 2021  
**A Vision to Transform Canada's Public Health System**

Canada



# Generating Knowledge to Inform Public Health System Transformation

## Introduction

The [2021 Annual Report of Canada's Chief Public Health Officer](#) (CPHO) provides a forward-looking vision to transform Canada's public health system.

One way to kickstart transformation is by generating the knowledge needed to inform and advance key areas of action. This knowledge may come from new research or be synthesized or mobilized from existing knowledge sources. It could also include exploring ideas from other sectors or disciplines that could be adapted or scaled for the public health context.

This document outlines high-level research priorities to support advancement of Dr. Theresa Tam's vision for the future of public health in Canada. The priorities are based on key themes that emerged from the development of her annual report, *A Vision to Transform Canada's Public Health System*. The report was informed

by a wide range of evidence sources including peer reviewed and grey literature, community expertise, traditional ways of knowing, as well as consultations with public health leaders, practitioners, researchers, and policy-makers. While not exhaustive, and not representative of a full research agenda, these priorities can guide researchers, funding agencies, community members, governments, or other institutions in developing future research or knowledge-generation initiatives.

Advancing knowledge for public health transformation will require diverse approaches. There is a need to advance research that has a clear path to practice, that can be applied in real world settings, and that considers the rapidly changing and complex landscape of health in Canada.

The promotion and protection of health and well-being among First Nations, Inuit, and Métis Peoples is an essential component of a strong and transformed public health system. In support of this, Dr. Tam commissioned the development of an independent companion report led by Indigenous public health experts, Dr. Margo Greenwood and Dr. Evan Adams, entitled [Visioning the Future: First Nations, Inuit, & Métis Population and Public Health](#). The current document includes Indigenous public health research priorities identified by Dr. Greenwood and Dr. Adams. These priorities can provide guidance for research proposals on First Nations, Inuit, and Métis Peoples public health. In addition, considerations towards the roles of self-determination, reconciliation, engagement, and cultural safety are included throughout all priority areas of research for system transformation.

## Cross-Cutting Principles

The CPHO report articulates a set of [principles to guide public health transformation](#) that can also be applied to supporting research and knowledge generation initiatives.

- ▶ **Population Health Approach** – Population health is a shared goal and responsibility among many sectors, organizations, and actors. Inquiries should aim to take multidisciplinary approaches and engage cross-sectorally.
- ▶ **Equity Driven** – Long-standing inequities have an impact on populations' health. Inquiries should consider equity in design and implementation and aim to reduce inequities. Particular attention is needed to ensure that research and knowledge is collected in a culturally safe way.
- ▶ **Trustworthy** – A public health system that is credible and trusted translates into better health outcomes. New knowledge should consider approaches to build trust, including ensuring open access to information, clear communication, equitable partnerships, accountability, and transparency.
- ▶ **Evidence Informed and Effective** – Effectiveness refers to policies and programs achieving their potential impact under real world conditions, while also promoting equitable outcomes. Solution-focused inquiries should incorporate efforts to monitor and evaluate outcomes across settings.
- ▶ **Participatory** – Inquiries related to improving population health and well-being should be informed by those with lived experience. This means working in collaboration with community partners and promoting community self-determination through authentic engagement and co-production.

# Research Priority Areas for Public Health System Transformation

The following table presents list of potential research areas that would support advancement of the CPHO's vision for public health system transformation, aligned to the [six building blocks of Canada's public health system](#). The building blocks represent how public health systems are organized in Canada and are used as a frame throughout the CPHO 2021 annual report.

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## Impactful and Lasting Public Health Policies and Programs



- ▶ Advance understanding of how to engage communities and populations in culturally safe and meaningful ways in the design and implementation of public health system solutions and transformations
  - ▶ Evaluate the effectiveness of public health measures implemented during the COVID-19 pandemic (e.g., border controls, testing, mandatory vaccination)
  - ▶ Measure the indirect impacts of public health measures implemented during the COVID-19 pandemic on population health and health equity outcomes, including mental health and well-being, and evaluate strategies to prevent and mitigate the negative impacts and promote well-being
  - ▶ Design, implement, and evaluate upstream interventions that address the social determinants of health and have the potential for significant impact across multiple public health priorities
  - ▶ Identify effective intervention frameworks or models to stimulate inter-sectoral action on priority public health challenges that emphasize co-benefits of coordinated action across sectors (e.g., collective impact approach)
  - ▶ Develop and evaluate policy and program interventions to build trust in public health and decrease the impacts of mis- and disinformation
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**Connected,  
Responsive, and  
Equitable Knowledge  
and Information  
Systems**



- ▶ Identify strategies or models to incorporate other ways of knowing and underutilized sources of knowledge and evidence into public health decision-making
- ▶ Design and evaluate methods, tools, and approaches to facilitate moving evidence into public health policy and practice, including more rapid integration of emerging information into decision-making
- ▶ Inform policies, regulations, and frameworks that allow for the use of disaggregated data to design equitable policies and programs while protecting the privacy and safety of populations, particularly those experiencing conditions of marginalization
- ▶ Inform the development and evaluation of models for national data standards for public health and their potential for implementation in Canada
- ▶ Determine how data sovereignty, including Indigenous data sovereignty, can be prioritized in strong and resilient public health data systems in Canada

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**State-of-the-Art  
Medical and Digital  
Health Technology**



- ▶ Evaluate effectiveness and efficiency of digital health initiatives implemented in response to the COVID-19 pandemic to identify lessons learned and opportunities for equitable and inclusive scaling
- ▶ Identify or evaluate tools and approaches to measure and improve public health system pandemic or health emergency readiness and effectiveness, including coordination with global partners
- ▶ Leverage foresight tools (e.g., predictive modeling and artificial intelligence) from an equity lens to improve public health emergency preparedness
- ▶ Leverage “big data” and technology to improve the effectiveness of public health surveillance tools
- ▶ Design, implement, and evaluate innovations related to rapid data sharing, data linkage, and integration of public health data with primary care

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## A Strong and Supported Public Health Workforce



- ▶ Identify the competencies required for a resilient, world-class public health workforce
- ▶ Design, implement, and evaluate strategies to train and build capacity to support a world-class public health system
- ▶ Establish priorities for action to build a public health system workforce that is responsive and resilient to future shocks and emergencies

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## Sufficient and Stable Financing Across Public Health Systems



- ▶ Determine the most effective, sustainable, and equitable public health financing and delivery models
- ▶ Inform the design and implementation of a system and methodology to measure, monitor, and report on pan-Canadian public health investments and evaluate the value/impact of those investments
- ▶ Develop approaches to track effectiveness of public health systems, including cost effectiveness of public health programs and services
- ▶ Measure and communicate the impact and economic value of public health investments in prevention to inform health system planning and prioritization

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## Effective Governance across Jurisdictions and Sectors



- ▶ Identify effective governance models (federal, provincial, territorial, municipal levels, and with Indigenous organizations) to support an inclusive and equitable public health system
  - ▶ Examine best and wise practices in public health leadership and communication that build public trust by promoting transparency, accountability, and legitimacy in public health systems
  - ▶ Design, implement, and evaluate governance mechanisms that support self-determination among First Nations, Inuit, and Métis Peoples in public health decision-making, and consider how these can be appropriately adapted to multiple contexts
  - ▶ Develop and/or test equity indicators (similar to the [Marmot Indicators](#)) that can be used to guide cross-sectoral priority actions to protect populations from health emergencies
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## Indigenous Public Health Research Priorities

*In addition to the above priorities on public health system transformation, the following research priorities build on issues identified by Indigenous public health experts to support catalyzing action on the commissioned report on Indigenous public health.*

- ▶ Understand the impacts of the climate crisis on First Nations, Inuit, and Métis communities and explore potential mitigation strategies
- ▶ Measure infectious diseases and their impacts in First Nations, Inuit, and Métis communities (special focus on COVID-19), including the long-term and indirect impacts of COVID-19, and propose solutions
- ▶ Identify approaches to improve distinctions-based data: governance, gathering, and matching
- ▶ Understand drivers and develop interventions to improve mental wellness among First Nations, Inuit, and Métis Peoples and communities
- ▶ Better measure and understand substance use in First Nations, Inuit, and Métis communities, including the opioid toxicity crisis, and develop effective approaches to reduce harm in First Nations, Inuit, and Métis populations relating to substance use
- ▶ Develop approaches to address the social determinants of health and reduce inequities, including racism and gender across the public health system, for First Nations, Inuit, and Métis Peoples

