2025-2030 Interim National Immunization Strategy

Public Health Agency of Canada
Agence de la santé publique du Canada

Canada

TO PROMOTE AND PROTECT THE HEALTH OF CANADIANS THROUGH LEADERSHIP, PARTNERSHIP, INNOVATION AND ACTION IN PUBLIC HEALTH.
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LAND ACKNOWLEDGEMENT

We respectfully recognize and acknowledge that the lands on which we developed this Strategy are the homelands of First Nations, Inuit, and Métis Peoples. We acknowledge our privilege to live and work on these lands and continue in striving to foster respectful partnerships with Indigenous Peoples and working collaboratively to advance reconciliation in Canada.

We invite you to take some time to reflect on the Indigenous lands which you call home and on the important historical impacts of colonialism that continue to generate inequities between Indigenous and non-Indigenous Peoples.

RECOGNITION OF CONTRIBUTORS

The renewed 2025-2030 Interim National Immunization Strategy (NIS) was developed through an engagement process which entailed gathering input from a variety of immunization partners and experts across Canada. Input from FPT* governments, some First Nations, Inuit, and Métis partners and experts, other key immunization partners, and community partners has helped shape the immunization pillars, goals, and objectives contained in this document. We extend our sincere appreciation to all who participated in the renewal process and in the two-day Summit held in Ottawa in May 2024. Special thanks to the members of the National Immunization Strategy Working Group under the Canadian Immunization Committee (CIC) for their dedication and guidance throughout the NIS renewal process.

Our gratitude extends to the National Collaborating Centre for Infectious Diseases (NCCID) for their partnership and contributions to the 2025-2030 Interim NIS renewal process, particularly in organizing the NIS Summit and developing the first draft of the 2025-2030 Interim NIS, as well as the National Collaborating Centre for Indigenous Health (NCCIH) for their leadership in identifying First Nations, Inuit and Métis partners and experts to participate at the Summit, organizing insightful panel sessions and an arts-based workshop that enriched discussions, and reviewing drafts of the 2025-2030 Interim NIS.

*Decisions regarding Quebec's immunization program are based on the recommendations of the Comité d'immunisation du Québec of the Institut national de santé publique du Québec. Quebec does not subscribe to the National Immunization Strategy but will continue to share information and best practices with other governments regarding immunization.

PREAMBLE

Adapting to New Realities: The Need for a Renewed National Immunization Strategy

The National Immunization Strategy (NIS), first established in 2003, serves as a foundational framework for Federal, Provincial and Territorial (FPT) governments for enhancing interjurisdictional collaboration, and the relevance, effectiveness, and efficiency of routine immunization programs in Canada.

The immunization landscape in Canada, and globally, has evolved significantly in recent years due to multiple factors, with the COVID-19 pandemic starting in 2020 as the key catalyst. The pandemic affected economies and health systems, disrupted health and immunization services and contributed to the erosion of trust in vaccines. Despite challenges brought on by the COVID-19 pandemic, significant successes in immunization efforts were achieved, including the rapid roll-out of COVID-19 vaccines and promotion of low-barrier access, a surge in community-led initiatives and enhanced collaborations, and the rapid development of immunization registries. These challenges and accomplishments have helped inform the Public Health Agency of Canada (PHAC)-led renewal of NIS for 2025-2030[1].

There has been a notable acceleration in vaccine development since the onset of the COVID-19 pandemic and advancements in vaccine research and development are expected to sustain this accelerated pace of new vaccines to the market. In the near future, Canada will likely see the introduction of new vaccines to prevent diseases that currently have no vaccine option, as well as additional vaccines or new vaccine technologies for diseases that already have several authorised vaccines in Canada. The immunization landscape continues to expand beyond the traditional focus on childhood vaccinations, and technological innovations such as mRNA vaccines, artificial intelligence, and machine learning have redefined possibilities.

Though the evolving vaccine landscape offers opportunities to strengthen public health, public health policymakers are now faced with the challenge of making critical decisions about the prioritization of new immunization products and how to integrate these into existing health systems, all while recognizing the reality of finite resources balanced with the health, economic and societal benefits of vaccination[1]. The introduction of new combination respiratory vaccines will further complicate the vaccine landscape but will equally reinforce the importance of life course immunization planning for adults. Against this dynamic backdrop, the 2025-2030 Interim NIS is focused on objectives that will strengthen Canada's immunization efforts to protect all people living in Canada against vaccine preventable diseases (VPDs), and includes vaccines and other immunizing agents

such as monoclonal antibodies (mAb) and immunoglobulins (Ig), used for children and adults, it therefore encompasses the full life span. It is not, however, intended to address immunization-related areas such as travel vaccines or pandemic preparedness.

The renewal of the NIS for the 2025-2030 period marks a pivotal moment in its evolution so that it remains responsive to the evolving immunization landscape and lessons learned from the COVID-19 pandemic, addressing Canada's needs and positioning the country for a resilient, sustainable approach to immunization now and in the years ahead.

With an enhanced and enduring focus on improving equitable access to vaccines, immunizing agents and routine vaccination coverage across the life course, as well as fostering widespread public and professional acceptance of recommended programs, the NIS continues to support immunization as a cornerstone in Canada's collective efforts to strengthen population health and mitigate impacts on the health system.

Though establishing a renewed Strategy for Canada is critical at this time, it should be noted that due to significant gaps in engagement with First Nation, Inuit and Métis partners and experts, this renewal is moving forward as an Interim Strategy, while PHAC takes steps towards addressing these gaps for future NIS renewals. Please refer to the National Immunization Strategy Renewal Process section further below for more information.

The renewal of the NIS for 2025-2030 signifies a renewed national commitment to strengthen immunization programming in Canada. This commitment is further highlighted by Canada's Chief Public Health Officer (CPHO) 2024 annual report, *Realizing the Future of Vaccination for Public Health*, which looks broadly into the state of vaccination in Canada and presents a vision for a future in which everyone in Canada can fully benefit from vaccination throughout their lives.

While the 2025-2030 Interim NIS focuses on strengthening immunization programs that protect against VPDs through routine childhood and adult immunization, the 2024 CPHO report presents a comprehensive vision for the future of public health in Canada, through the lens of vaccination that includes enhancing resilience to emerging threats and chronic diseases (e.g., vaccines for cancer prevention). Together, both documents signify Canada's commitment to improving health outcomes and addressing health inequities by emphasizing the importance of collaboration across governments and communities. Readers are invited to refer to the 2024 CPHO report for an overview of vaccination in Canada and for important context to consider with regards to vaccination and the implementation of the NIS.

National Immunization Strategy Renewal Process

This Strategy is informed by the collective expertise and input from a diverse range of immunization health professionals, partners and other experts. In the fall of 2023, a comprehensive review of the ten 2013 NIS priority areas and objectives was initiated. This renewal process involved extensive engagement with FPT governments and known key immunization partners, as well as input from some First Nations, Inuit, and Métis partners and experts, which culminated in a Renewal Summit held in May 2024 to deliberate on the Strategy. Subsequently, this input helped inform the development of the 2025-2030 Interim NIS, which was further refined through a review process. For further details of the renewal process, please refer to the Methodology section in Annex A.

It is important to note and acknowledge the limitations of this renewal process, particularly regarding engagement with First Nations, Inuit, and Métis partners and experts. As noted, while there were renewal discussions with and input from some First Nations, Inuit, and Métis partners and experts, the PHAC recognizes that engagement with First Nations, Inuit and Métis partners was challenged given the constraints of tight timelines, limited funding, gaps in relationship-building with National Indigenous Organizations (NIOs), and gaps in the engagement process, resulting in not being fully representative or as comprehensive as needed. These limitations were discussed with the FPT Public Health Network (PHN) and a decision was made to move forward with an interim NIS for 2025-2030 to keep pace with the critical immunization needs in Canada, while working towards meaningful engagement with First Nations, Inuit, and Métis partners and experts, with the commitment to strengthen engagement to develop a more comprehensive Strategy for the next renewal.

Partners with knowledge of other populations at higher risk of VPDs or severe outcomes of VPDs, including community partners and other experts, were also not extensively engaged in the NIS renewal process. Specifically, engagement with experts with knowledge of other populations facing inequities such as Black Canadians, persons with disabilities, and 2SLGBTQ+ communities was limited.

This renewal process highlighted key lessons which include, but are not limited to: gaining consensus on timelines with key partners and experts, confirming available resources for engagement, and diversifying methods to cultivate meaningful engagement.

For further details, please refer to the Limitations section in Annex A.

Working Towards More Meaningful Engagement with First Nations, Inuit, and Métis Partners and Experts

Despite limitations in this renewal process, establishing an Interim NIS at this time is critical given the evolving immunization landscape in Canada. PHAC is committed to take steps towards addressing gaps in meaningful engagement with First Nations, Inuit, and Métis experts for future NIS renewals, including through continuous discourse and relationship-building. Concurrent with the publication of the 2025-2030 Interim NIS, a review of the Interim Strategy from an Indigenous public health expert perspective, led by the National Collaborating Centre for Indigenous Health, is also taking place to identify gaps and recommend improvements for the next renewal process. Through these efforts and by acknowledging past shortcomings, we remain committed to working collaboratively with First Nations, Inuit, and Métis partners and experts towards a more equitable future.

In the context of the NIS, the application of rights-based frameworks for urban and on-reserve Indigenous Peoples will be important for the implementation of its goals and objectives, with the continued collaborative efforts of FPT governments, community and local leaders, and Indigenous communities and governments, recognizing their individual and collective roles and responsibilities in immunization. It must be noted that an equitable future and the achievement of equitable health outcomes for First Nations, Inuit and Métis Peoples requires knowledge and application of rights-based frameworks for Indigenous Peoples. Within the public health system, this means recognizing colonial injustices, systemic racism, and the inherent rights of Indigenous Peoples in Canada. Protecting these rights, including the right to self-determination is fundamental to the health and well-being of urban and on-reserve Indigenous Peoples. Moreover, Canada is committed to the advancement and implementation of the Truth and Reconciliation Commission of Canada's (TRC) Calls to Action to address discrimination and health inequities experienced by Indigenous Peoples[2]. In particular, PHAC continues to seek alignment with Calls to Action 18-24 of the TRC which aim to eliminate anti-Indigenous racism in the health system.

EXECUTIVE SUMMARY

Immunization is one of the most beneficial and cost-effective public health interventions to prevent infectious diseases[3,4]. While notable progress has been made in preventing infectious diseases in Canada, there remain specific areas where continued collaboration and coordination are required to address pressing immunization issues that are essential to the prevention of illnesses and outbreaks, which in Canada for some VPDs are more prevalent since the COVID-19 pandemic. Strengthening these efforts will support protecting the health of all people living in Canada and enhance overall public health.

A Vision for a Healthier Canada

This Strategy is anchored in a vision where **all people living in Canada are protected against vaccine-preventable diseases through immunization programs and infrastructure**.

With an enhanced and enduring focus on improving equitable access to vaccines, immunizing agents and routine vaccination coverage across the life course, as well as fostering widespread public and professional acceptance of recommended programs, the NIS continues to support immunization as a cornerstone in Canada's collective efforts to strengthen population health and mitigate impacts on the health system.

It is also guided by foundational principles that shape its development and future implementation, aiming for immunization programs and approaches that are:

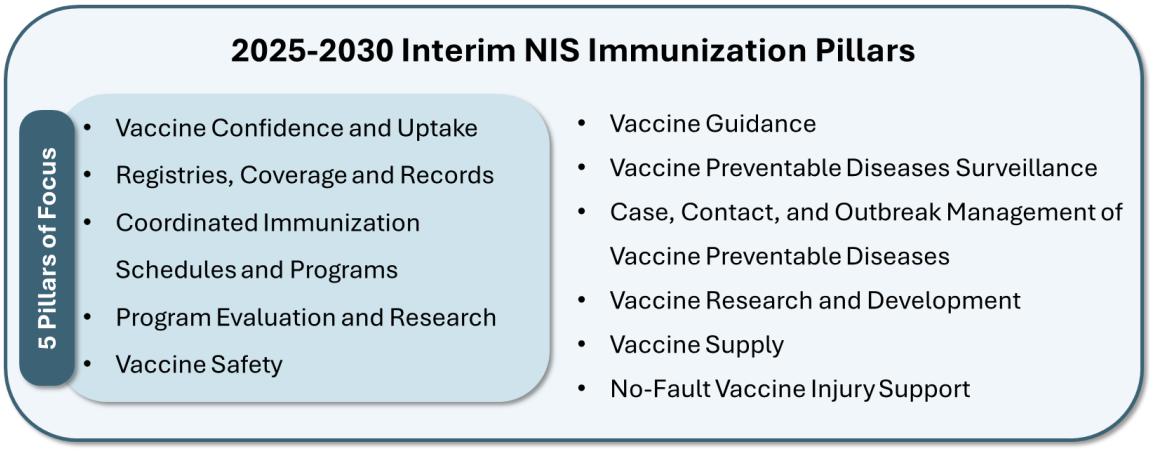
- public-health driven,
- equity-informed,
- evidence-informed,
- culturally safe,
- collaborative and coordinated,
- focused across the life course, and
- prepared for the future.

The 2025-2030 Interim NIS will serve as an overarching framework for FPT governments for the next five years to address the evolving immunization landscape, as well as strengthen immunization programming and advance efforts toward equitable health outcomes for all people living in Canada. The NIS aims to:

- facilitate a coordinated, national approach to address the complex vaccine and monoclonal antibody pipeline and maintain momentum to support public health and the health care system;
- offer a roadmap for the Canadian Immunization Committee to help foster and guide collective efforts on the most pressing routine immunization issues in Canada;
- serve as a tool for all levels of government to effectively advocate for, prioritize and align resources and vaccination efforts across the lifespan; and
- ensure Canada has a current strategy that is aligned with the World Health Organization's (WHO) Immunization Agenda 2030.

This renewed Interim Strategy seeks to enhance interjurisdictional collaboration and promote immunization efforts that are relevant, effective, efficient and culturally safe. It builds on past successes, aims to address current and emerging challenges, and takes into account lessons learned from the COVID-19 pandemic, striving to support immunization outcomes and enhance overall population health.

The eleven immunization pillars listed below are central to the 2025-2030 Interim NIS. While all of these pillars are important to immunization programming overall and will continue to advance, there is agreement among FPT partners, other engaged experts, as well as Summit participants, that specific focus is needed on the below identified five areas to collaboratively address the most pressing immunization issues in Canada.



At the time of developing this Interim Strategy, agreement among partners and experts was reached to focus on the above five identified immunization pillars. However, shifts in domestic and global policy, resource availability, and emerging challenges, may require FPT priorities to shift to ensure they remain aligned with the most pressing needs in Canada. Any shifts in focus would be agreed upon at the Public Health Network Council (PHNC).

With the implementation of the Interim Strategy across jurisdictions, efforts will also focus on developing a national monitoring and reporting approach to assess and document progress on key pillars and objectives. This will help inform future renewal efforts and ensure that the Strategy remains responsive to emerging public health needs and government priorities.

As Canada embarks on this renewed commitment to enhancing immunization programming, the 2025-2030 Interim NIS provides a roadmap for navigating future challenges and opportunities. The Interim NIS, now anchored with an overarching vision and foundational principles, serves as a guiding document for FPT governments and partners, to work together towards a more resilient immunization system in Canada where all individuals are confident in and experience the benefits of immunization for health and wellbeing throughout their lives.

INTRODUCTION

Immunization has notably improved population health status by significantly reducing the rates and impacts of VPDs[5,6]. Many diseases that were once widespread have now been eliminated and classified as rare because of comprehensive and coordinated immunization efforts. Immunization programs also reduce healthcare costs and result in productivity gains by allowing people to live longer, healthier lives free of diseases that previously caused significant illness and death.

Studies show that investments in vaccination programs continue to yield substantial economic returns[7,8]. By decreasing the number of people who get sick with VPDs, vaccination helps make health systems more resilient and can improve health system capacity[7,8,9]. The economic benefits of vaccination are often underestimated because the positive impacts of health system strengthening, equity achievements and long-term macroeconomic gains can be difficult to fully quantify. Although the costs of some newer vaccines may be high, necessitating prioritization among new programs, they may still provide good value for money when their economic benefits to society is considered.

Roles in Immunization

In Canada, the federal government provides national leadership by regulating vaccines, facilitating access to vaccines including through the Bulk Procurement Program, monitoring vaccine coverage and safety in collaboration with PTs, coordinating national strategies and guidelines, and promoting informed decision-making around immunization. It is also responsible for planning, funding and the delivery of immunization programming and services to certain sectors of the population under federal jurisdiction.

Provincial and territorial governments are primarily responsible for designing, implementing and delivering immunization programs and services, including vaccine procurement, distribution, program monitoring, surveillance of vaccine coverage, safety and VPDs, and public health management at the local level.

First Nations, Inuit and Métis organizations and communities deliver culturally appropriate immunization services within their communities and lead and/or collaborate with FPT governments to deliver programs that are Indigenous-led, culturally safe, accessible, and effective. Furthermore, as part of its commitment to contribute to the advancement of the TRC, the federal government works towards ensuring enhanced and sustained partnership with First Nations, Inuit and Métis governments and communities for better health outcomes for all living in Canada.

Together, these entities work towards immunization goals that are comprehensive, equitable, and reflective of the diverse needs of people living in Canada.

Historical Context of the National Immunization Strategy

Since its inception in 2003, the NIS has facilitated ongoing work through FPT engagement and collaboration via the PHN which includes the PHNC and various Steering Committees and their subcommittees, including the Communicable and Infectious Disease Steering Committee (CIDSC) and its respective working groups such as the Canadian Immunization Committee (CIC).

In 2011, the CIDSC initiated a review of the NIS by approving the creation of an *ad hoc* National Immunization Strategy Task Group. The Task Group was charged with evaluating the NIS and providing recommendations for the future of immunization in Canada. As a result, in 2013, the NIS Task Group established 10 priority areas for immunization programming:

- Overarching Direction and Coordination
- Common Vaccine Guidance
- Coordinated Immunization Schedules and Programs
- Program Evaluation and Research
- Surveillance: Vaccine Preventable Diseases, Registries & Coverage, Vaccine Safety
- Response to Outbreaks and Adverse Events
- Vaccine Acceptance and Uptake
- Security of Vaccine Supply
- Vaccine and Development
- No-Fault Compensation

Following the review of the NIS in 2013, the Canadian Immunization Research Network (CIRN) was established as a national multi-disciplinary network of vaccine and immunization researchers with a mandate to coordinate and collaborate on vaccine evaluation, examining various aspects of the vaccine life cycle.

In 2016, FPT governments agreed upon six short-term objectives aimed at increasing immunization coverage rates, leveraging this new investment, and building on the 2013 priorities to provide focus for the next five years. These objectives were:

- establishing evidence-based goals for VPD rates and immunization coverage,
- developing and implementing evidence-based interventions,
- understanding the key barriers to best practices in improving immunization coverage,

- identifying under-immunized and unimmunized populations,
- providing people living in Canada with the information and tools needed to make immunization decisions, and
- ensuring timely and equitable access to immunization for all people living in Canada.

In 2016, the federal government allocated $25 million over 5 years (2016-2021) in its budget, to increase and maintain vaccination coverage in Canada by creating the Immunization Partnership Fund (IPF) to support initiatives that help close the gap among populations with lower vaccine uptake, highlighting the priority placed on this initiative. The launch of this initiative was instrumental to accelerate the introduction of new vaccines.

Purpose and Scope

Canada's NIS was developed to provide an FPT framework for effective interjurisdictional collaboration that enhances the relevance, effectiveness, and efficiency of immunization programming across the country. It aims to support jurisdictions' ability to manage challenges in meeting current and future vaccination needs of all people living in Canada and to support immunization outcomes by promoting equitable access, as well as public and professional acceptance of recommended programs to achieve high vaccine coverage and optimal prevention and control of VPDs. It should be noted that the NIS focuses on immunization programs for VPDs including childhood routine vaccination and adult vaccines, thereby encompassing the entire life course. It is not intended to address immunization-related areas such as travel vaccines or pandemic preparedness.

By defining pillars and objectives, the NIS guides efforts to align immunization programs and partners across the country and within PHAC and other relevant government departments with the common goal of increasing vaccination coverage, reducing VPDs, and enhancing overall population health.

The 2025-2030 Interim NIS renewal process has taken into consideration both current and emerging challenges as well as lessons learned, particularly from the COVID-19 pandemic. These considerations include:

- the importance of providing equitable and inclusive immunization services across the life course for all people in Canada;
- the need for an integrated vaccination system that includes comprehensive immunization registries, vaccine distribution and administration, domestic vaccine

production capacity, strengthened FPT coordination, initiatives to support vaccine confidence, vaccine-related injury compensation and vaccine program surveillance;

- the deployment of scientific advancements enabling the development of new vaccines and vaccine platforms;
- the increase of vaccine hesitancy since the onset of the COVID-19 pandemic and the proliferation of mis- and disinformation about vaccines, exacerbated by social media and digital platforms, which reach a wide audience[10];
- diminished public trust in some health authorities, perceived inconsistencies, experiences of discrimination, and conflicting messages during the COVID-19 pandemic[11];
- the present and increasing threat of antimicrobial resistance; and
- the WHO's Immunization Agenda 2030, which underscores the global commitment to making vaccines universally accessible, improving immunization coverage and ensuring equity[12].

For an overview of current and emerging vaccination challenges, including evolving diseases and technology landscapes in Canada, please refer to the 2024 CPHO report.

Development of the 2025-2030 Interim National Immunization Strategy

Due to the COVID-19 pandemic response efforts, the renewal process for the 2025-2030 Interim NIS, initially planned for 2021, was not initiated until mid 2023. The process began with initial engagement of key experts and immunization partners to review the 2013 and 2016 NIS priority areas and objectives to determine their relevance in the current context. This engagement took place through virtual platforms and culminated in the NIS Renewal Summit, held in May 2024, which brought together FPT partners, some First Nations, Inuit, and Métis partners and experts, and key immunization partners from across Canada to deliberate on input received and to come to a shared understanding of goals and objectives for the 2025-2030 Interim NIS.

For details of the renewal process, please refer to the Methodology section in Annex A.

OVERVIEW OF THE 2025-2030 INTERIM NATIONAL IMMUNIZATION STRATEGY

Vision

A vision was developed to solidify the aspiration of immunization in Canada:

> ***All people living in Canada are protected against vaccine-preventable diseases through immunization programs and infrastructure.***

Foundational Principles

The 2025-2030 Interim NIS is built upon the following foundational principles, which jurisdictions should bear in mind as they implement the pillars of the Strategy.

Components of the Immunization Pillars

Immunization pillars in the NIS encompass the components necessary for the effective planning, delivery, management, and sustainability of immunization programming and infrastructure. The 2025-2030 Interim NIS pillars are:

- Vaccine Confidence and Uptake
- Registries, Coverage and Records
- Coordinated Immunization Schedules and Programs
- Program Evaluation and Research
- Vaccine Safety
- Vaccine Guidance
- Vaccine Preventable Disease Surveillance
- Case, Contact, and Outbreak Management of Vaccine Preventable Diseases
- Vaccine Research and Development
- Vaccine Supply
- No-Fault Vaccine Injury Support

While all pillars are critical to immunization programming in Canada, there was agreement among partners and experts involved in the initial engagement process, as well as Summit participants, that specific focus is needed on certain areas for the next five years to help foster and guide enhanced collective efforts on the most pressing immunization issues in Canada. It is also important to note that this does not preclude the ongoing work on the other pillars; these efforts will continue.

Based on feedback received during the virtual engagement process and at the Summit in May 2024, the following have been identified as pillars of focus for 2025-2030:

At the time of developing this Interim Strategy, agreement among partners and experts was reached to prioritize focus on these five immunization pillars. However, given the evolving landscape, including any potential shifts in domestic and global policy, resource availability, and emerging challenges, FPT priorities may shift to ensure they remain aligned with the most pressing needs in Canada. Any shifts in focus would be agreed upon at the PHNC.

Each immunization pillar includes a goal, which sets the direction and defines what the pillar aims to achieve.

In addition, while each pillar includes specific key attributes which describe its desired characteristics, there are common attributes that apply to all pillars; notably, approaches should aim to be ethical, collaborative, and respectful of Indigenous data sovereignty principles (e.g., First Nations principles of ownership, control, access, and possession (OCAP®[13]), Métis principles of ownership, control, access, and stewardship (OCAS[14]), Inuit principles of Qaujimajatuqangit[15], and self-determination in research[16]).

Finally, each pillar includes objectives which reflect the specific, measurable actions that must be taken to drive progress towards achieving the goal of the pillar.

National Immunization Strategy Pillars

The following section describes each of the eleven pillars along with their components, starting with the five pillars of focus for 2025-2030.

VACCINE CONFIDENCE AND UPTAKE

Goal	Canada uses evidence-informed, community-centred and, where possible, community-led approaches to address inequities in vaccine access and uptake; support vaccine literacy; enhance confidence; and address mis- and disinformation about vaccines.
Key Attributes	These approaches should be timely, credible, effective, appropriate for the audience, trauma-informed, equity-promoting, culturally safe, and use a range of strategies (e.g., education, policies, programs).
Objectives	• Design and implement strategies based on evidence and community knowledge to support vaccine literacy and confidence, identify and address barriers to vaccine uptake, access, and confidence, including systemic and programmatic barriers, and address and mitigate the effects of mis- and disinformation, and vaccine hesitancy. • Design and implement evidence-informed strategies, including accessible educational programs and resources for healthcare providers to support their ability to provide culturally safe and positive vaccination experiences, build trust with clients, and effectively discuss and support vaccine literacy and confidence, including addressing mis- and disinformation.

COORDINATED IMMUNIZATION SCHEDULES AND PROGRAMS

Goal	Canada has coordinated and/or compatible immunization programs and schedules to provide optimal, safe and equitable protection across the life course for an increasingly mobile population.
Key Attributes	These programs and schedules should be timely, cost-effective, agile and based on local epidemiology and coordinated discussion across jurisdictions.
Objectives	• Processes are developed to consider new National Advisory Committee on Immunization (NACI) recommendations for implementation in a coordinated, timely and collaborative manner. • Programs incorporate community-led strategies, where possible, to address structural issues and inequities, with ongoing collaboration and leadership from First Nations, Inuit, Métis and other communities. These strategies are informed by local epidemiology and provide flexibility while aiming to harmonize schedules where possible.

PROGRAM EVALUATION AND RESEARCH

Goal	Canada has program evaluation, research, and infrastructure that inform guidance development and improve decision-making regarding vaccine programs.
Key Attributes	The program evaluations and research are ethical, accountable, credible, timely, responsive, flexible, collaborative, community-engaged, cost effective and have adequate and sustainable infrastructure. Research and evaluation results are community-focused, reported by sociodemographic characteristics and risk factors when possible, and transparent to the public. Indigenous organizations are engaged at all stages (e.g., planning through to implementation), their data is collected and represented fairly, and the research and program evaluations are respectful of Indigenous data sovereignty principles.
Objectives	• Vaccine programs incorporate an evaluation component, with attention to economic factors, achieving equity, and the program's ability to achieve meaningful community engagement. Where possible, evaluations should compare various strategies used across jurisdictions to identify effective practices. The results from the evaluations are published where appropriate and regularly shared with local, provincial, territorial, and federal governments and other partners, including the public, and tailored to the audience. • Research is conducted to increase understanding of vaccination behaviours, knowledge, attitudes and beliefs; barriers to vaccination; the spread of mis- and disinformation; intentions to get vaccinated; trusted sources of information; and effective strategies and interventions to improve vaccine confidence and uptake. • Research networks and infrastructure, including human resource capacity and expertise, are established, maintained, or enhanced to undertake and/or coordinate timely and relevant research to inform vaccination programs, particularly in vaccine safety, vaccine effectiveness, program impact, design and optimization, and knowledge mobilization.

REGISTRIES, COVERAGE AND RECORDS*

Goal	Canada has interoperable systems supported by legislation, infrastructure, and expertise across federal, provincial, and territorial governments to monitor and report on immunization coverage. This should allow healthcare providers and the public to have access to their immunization records and relevant information in a timely manner.
Key Attributes	These systems (including registries and other repositories that include vaccination data) should be comprehensive, up-to-date, accurate, reliable, secure, confidential, and easy to use. They should also support immunization-related functions when possible (e.g., immunization coverage estimates, safety monitoring, effectiveness estimation, vaccine supply monitoring) and should allow the public to access their records and notify them of needed vaccines. Interoperable systems allow for sharing and linking data in accordance with relevant jurisdictional legislation, security protocols, and best practices.
Objectives	Establish, maintain and/or enhance interoperable systems and infrastructure that are respectful of Indigenous data sovereignty principles and support: • A network of secure systems (including registries and other repositories that include vaccination data) that facilitate the timely sharing of vaccination information/records between providers and jurisdictions, as well as allow the public to access their information across jurisdictions. This contributes to: reporting coverage in a standardized manner; meeting international reporting requirements; and improving access and use of immunization data. • The provision of aggregated and stratified coverage estimates at national and subnational levels, including by sociodemographic variables where/if possible that are made publicly available as appropriate. • The public's access to their personal digital immunization records, available in a standardized format that is interoperable across Canada. • Enhancing the completeness and accuracy of registry data by collecting and recording individual and guardian/parental consent for data sharing, when feasible/applicable. • Optimizing the use of data available in registries by adopting a standardized approach for reporting vaccinations and calculating coverage.

*Availability of broadband internet or other technologies is particularly important in the context of this pillar. Whenever possible, solutions are designed to function in low-resource or low-connectivity environments, tailored to meet local conditions and the needs of the population.

VACCINE SAFETY

Goal	Canada has collaborative and effective processes that enable rapid detection, assessment, and response to emerging vaccine safety concerns to protect health, support vaccine confidence, and communicate to the public.
Key Attributes	Vaccine safety information is standardized, timely, appropriate, transparent, meaningful, and accurate. It allows for aggregated and stratified analyses. It supports transparent communication of vaccine safety information, signal detection, assessment, investigation, and response. Information is shared among all partners, is well communicated publicly, and requires domestic, international, and industry collaboration.
Objectives	• Enhance coordinated and collaborative post-market passive and active vaccine safety surveillance and monitoring, including signal detection and investigation, by public health, regulatory, industry, and global partners, which aligns with international best practices for vaccine vigilance. • Enhance communication, education, training, and strategies for individuals and healthcare professionals to increase public understanding of the importance of vaccine safety and improve reporting of adverse events following immunization, in alignment with global best practices. • Enhance the sharing and availability of data on adverse events following immunization to support evidence-based decision making for individuals, healthcare professionals, and immunization programs.

VACCINE PREVENTABLE DISEASES SURVEILLANCE

Goal	Canada has infrastructure and resources to monitor vaccine preventable diseases and detect emerging and re-emerging diseases/strains.
Key Attributes	Surveillance systems enable collection of data appropriate for public health objectives and action. The systems are supported by infrastructure and resources that prioritize transparency, particularly in addressing privacy, stewardship, confidentiality, and ethical considerations. They allow for disaggregated analyses by sociodemographic characteristics, including distinctions-based analyses when possible/applicable, which consider the unique identities and rights of specific population groups. Where data about Indigenous Peoples are involved, data sovereignty principles are respected. Surveillance systems should be interoperable, allowing for easy linkage to vaccination registries and other data sources as relevant. Evidence gained will be shared in a timely manner with all stakeholders and the general public.
Objectives	• Establish, maintain or enhance VPD surveillance systems that provide detailed socio-demographic information (e.g., by age, sex, gender identity, geography, other sociodemographic variables), complete and detailed histories of vaccination and other data required to meet surveillance objectives such as risk factor information, to include treatment, complications and health outcomes (including indicators of severity), and linkages to laboratory data in order to provide information on laboratory confirmation and circulating strains/variants of concern. • Streamlining technical, policy, and business processes to ensure interoperability across different systems within jurisdictions, enabling efficient data integration and exchange. These systems support national reporting requirements as required or appropriate for each disease and should include frameworks that respect urban and on-reserve Indigenous governance structures for data sharing, reporting, and access. • Establish, maintain and enhance linkages between VPD epidemiological and laboratory data, administrative data and vaccination data from registries within and across jurisdictions to better understand the impact of vaccination programs on Canadian communities and priority populations.

VACCINE PREVENTABLE DISEASES SURVEILLANCE (CONTINUED)

Objectives (continued)

- Establish, maintain or enhance approaches to VPD surveillance, including evaluation of surveillance systems, programs, and methodologies as new technologies emerge (e.g., sero-epidemiology, wastewater monitoring).
- The systems should have the ability to translate knowledge into practical applications that can be used by healthcare providers, policy makers, and the general public for informed decision-making.

CASE, CONTACT, AND OUTBREAK MANAGEMENT OF VACCINE PREVENTABLE DISEASES

Goal	Canada has the data, resources, standard operating procedures and technical guidance to effectively manage vaccine-preventable disease cases and their contacts, and to respond to VPD outbreaks in all settings, including rural, remote, and urban and on-reserve Indigenous communities.
Key Attributes	These data, resources, policies and guidance should be coordinated, timely, adaptive, accessible, and interoperable.
Objectives	• Create, update and maintain relevant guidance documents as needed, to adapt for evolving and/or new evidence and knowledge, and epidemiological changes. • Establish, maintain and/or enhance capacity (including collection and assessment of data) to effectively and rapidly respond to emerging and re-emerging issues and outbreaks. • Establish, maintain and/or enhance capacity, policies and processes for interjurisdictional management of cases and contacts.

VACCINE GUIDANCE

Goal	Canada has national-level evidence-based vaccine guidance that informs and supports immunization program decision makers and health professionals.
Key Attributes	The guidance is clear, concise, timely, efficient, effective and credible.
Objectives	• NACI guidance is produced in a timely manner for new vaccines and vaccine updates of importance that are of high public health impact, or when changes are needed due to evolving evidence and/or new indications. • When providing guidance on new products, NACI considers the current NACI workplan, timing of evidence availability, economic analysis timelines, and Health Canada's regulatory review schedule, to determine guidance publication dates. NACI is working on strategies to accelerate onboarding new vaccines by requesting evidence submissions from industry and using the Canadian Immunization Guide to address new vaccines that are less likely to impact public health policy. • NACI workplan topics are strategically prioritized, informed by input from provincial and territorial decisions makers, and reviewed regularly to adjust and adapt to changing situations. • NACI considers populations at higher risk of disease or severe outcomes when formulating guidance. When appropriate to the VPD and epidemiology, NACI guidance is developed engaging with immunization experts from First Nations, Inuit and Métis health systems, as well as from populations at higher risk of VPDs or severe outcomes of VPDs where appropriate. NACI guidance development integrates Canadian specific considerations related to ethics, equity, feasibility, and acceptability, as well as cost-effectiveness.

VACCINE RESEARCH AND DEVELOPMENT

Goal	Canada has a robust domestic research and development infrastructure and biomanufacturing capacity that is sufficient to respond and adapt to both emerging and ongoing vaccine-related public health need.
Key Attributes	This infrastructure is proactive, innovative, collaborative, credible, sustainable, and responsive to public health priorities.
Objectives	• Establish a prioritization process to integrate public health needs into the Canadian vaccine research, development and biomanufacturing ecosystem including through Health Emergency Readiness Canada (HERC)*. • Continue to support domestic vaccine research and development through various means, including collaboration among federal/provincial/territorial governments, and academic/industry/government/community partnerships. • Establish, maintain or enhance processes to support domestic vaccine biomanufacturing and use.

*HERC is a new a special operating agency within Innovation, Science, and Economic Development (ISED), supported by the Public Health Agency of Canada and Health Canada, focused on supporting the development and production of medical countermeasures for health emergencies, including vaccines, therapeutics, and diagnostic tools.

VACCINE SUPPLY

Goal	Canada has access to an uninterrupted and sustainable vaccine supply for immunization programs, driven by Canadian vaccination needs.
Key Attributes	This vaccine supply is timely, reliable, cost-effective, trackable, responsive to global need, meets the needs of all people living in Canada and is supported by domestic production capacity as applicable. The vaccine supply chain is secure and resilient to meet these attributes.
Objectives	• Maintain or increase the number of vaccines and/or immunizing agents accessed through the Bulk Procurement Program in collaboration with Public Services and Procurement Canada (PSPC). • Ensure domestic production, manufacturing and procurement are driven by Canadian public health vaccination needs, including response to emerging/re-emerging risks. • Develop and implement an end-to-end inventory management system that supports the management of vaccine supply, demand, usage and minimizes wastage.

NO-FAULT VACCINE INJURY SUPPORT

Goal	Canada has a system that provides financial support to those who have sustained serious and permanent vaccine injuries.
Key Attributes	This system is fair, timely, impartial, efficient, effective, credible, evidence and expert informed, protects privacy, accessible, known by the public and health professionals and has transparent processes.
Objectives	• Continue to provide timely financial support to individuals who have sustained a serious and permanent vaccine injury after receiving a Health Canada authorized vaccine in Canada. • Maintain and enhance the communication, education and awareness strategy with health care providers regarding the Vaccine Injury Support Program, including how it operates and how to access it. • Develop and implement an independent, evidence-based evaluation mechanism for the Vaccine Injury Support Program, focusing on protecting privacy, equity, and timelines.

CONCLUDING REMARKS

Immunization remains one of the most beneficial and cost-effective public health interventions[17,18,19]. The challenges and opportunities emerging within the immunization space and public health more broadly, emphasize the importance of sustained effort in immunization, even with resource constraints and competing priorities that can make it difficult to prioritize prevention over response. The 2024 CPHO report offers key considerations for sustaining and scaling vaccination resources and funding to meet the needs of the future.

The NIS aims to align and guide FPT jurisdictional efforts across Canada, enhancing collaboration and collective efforts to drive progress on shared immunization priorities and face emerging public health challenges in immunization. By providing a national framework, the NIS supports FPT governments and implicated partners in shaping immunization programs, advancing research, and engaging with diverse partners to enhance vaccine access, uptake, and system resilience. The renewed 2025-2030 Interim NIS strives to set a path forward for a healthier Canada where every individual can be protected against VPDs through immunization and supported by effective immunization programs and infrastructure.

The NIS's vision is further bolstered by the 2024 CPHO report, which calls for public health system transformation in the context of vaccination across the full life span. While the NIS focuses on enhancing protection against VPDs through routine childhood immunization and adult vaccines, the 2024 CPHO report examines the public health system through vaccination with a broader scope that also includes responding to emerging and chronic diseases through vaccination. Complementary in their visions, these two documents signify Canada's commitment to improving health outcomes and addressing health inequities by emphasizing the importance of collaboration across governments and communities.

The future success of this Interim Strategy will lie in the continued collaborative efforts of FPT governments, community and local leaders, and Indigenous communities and governments, recognizing their individual and collective roles and responsibilities related to the implementation of the NIS and advancement of its immunization pillars and objectives.

As implementation moves forward, efforts will also focus on developing a national monitoring and reporting approach to assess and document progress on key pillars and objectives. This will help inform future renewal efforts and ensure that the Strategy remains responsive to emerging public health needs and government priorities.

Looking ahead, there is great opportunity to respond to the evolving immunization landscape and lessons from the COVID-19 pandemic and to take strategic action to

strengthen immunization programming and promote more equitable health outcomes for all people living in Canada.

ANNEX A: METHODOLOGY

Initial Engagement

Planning for the NIS renewal began in Summer 2023. The initial engagement process included:

- immunization experts (e.g., NACI voting members, liaisons, and ex-officio);
- those involved in immunization programming in the provinces and territories through the CIC;
- PHAC program staff with subject matter expertise related to each of the pillars;
- other government departments with immunization programs, and key immunization partners (e.g., Canadian Paediatric Society, Canadian Nurses Association);
- community partners aligned with the IPF;
- the Native Women's Association of Canada;
- First Nations, Inuit and Métis experts involved with the Vaccine Preventable Diseases Working Group as well as the Public Health Working Group on Remote and Isolated Communities, both led by Indigenous Services Canada (ISC).

To collect feedback, an engagement tool was developed based on the WHO's Implementing the Immunization Agenda 2030: A Framework for Action through Coordinated Planning, Monitoring & Evaluation, Ownership & Accountability and Communications & Advocacy. The adapted tool was designed to obtain feedback on the 10 priority areas of the 2013 NIS and their associated 45 objectives. Partners and experts with in-depth knowledge/input on the objectives received the tool. A shorter survey was also developed to focus primarily on the 10 original priority areas. First Nations, Inuit and Métis partners and experts were provided with both options.

Analysis of Initial Engagement

Input received from each group of partners and experts was analysed individually for each of the 2013 NIS priority areas. An overarching thematic analysis of all feedback was conducted to reveal themes relevant to the pillars across all partner groups. There was notably strong alignment of feedback across all partner groups. The analysis was presented back to NACI voting members, PHAC programs, CIC, CIDSC and the PHNC for review, and subsequently informed revisions to the 2013 NIS priority areas and objectives, which were presented for discussion at the Summit.

Review Process for Analysis of the Initial Engagement

Following the analysis, PHAC programs with subject matter expertise across the pillars were consulted to review and strengthen proposed revisions.

Additional Engagement through the National Immunization Strategy Renewal Summit

The NIS Renewal Summit, held in Ottawa on May 14 and 15, 2024, was organized by the NCCID in collaboration with the Public Health Agency of Canada and with leadership from the NCCIH to bring First Nations, Inuit, and Métis partners and experts together and to organize insightful Indigenous panel sessions. The Summit participants comprised close to 140 individuals including:

- provincial and territorial representatives from the CIC and some Chief Medical Officers of Health,
- known key immunization partners, including those from NACI and national health organizations with an interest in immunization,
- other government departments with an interest in immunization,
- First Nations, Inuit and Métis partners and experts, and with guidance from NCCIH, the First Nations, Inuit and Métis participant list was expanded to broaden the reach of summit participation. A full list of Summit participants is available on the NCCID website: NIS2024 Participants, and
- representatives from the Vaccine Industry Committee.

The Summit had two objectives:

- to build on the virtual engagement process with key immunization partners, communities and individuals and move towards a shared understanding of the overarching vision, pillars, goals, and objectives for a renewed 2025-2030 NIS, and
- to identify pillars of focus for the 2025-2030 Interim NIS.

Participants were presented with background information, along with the proposed vision, revised pillars, goals and objectives, which they discussed in a series of breakout sessions. Consideration was given to the ways in which equity concerns relate to the pillars and to the lessons learned from the COVID-19 pandemic. In addition, keynote presentations focused on data sovereignty principles and engagement, the roots of vaccine hesitancy around the COVID-19 vaccine for Indigenous Peoples, and examples of excellence with vaccine delivery programs and information campaigns.

Participants were asked to 'vote' on their agreement with and provide any comments on the title, goal and objectives of each pillar and the overarching vision, using the Slido platform. Notetakers were present in each break-out session. A debrief session was held with facilitators and notetakers to review and capture important points from the discussions.

Analysis of Additional Engagement through the Summit

NCCID led the analysis of the input received at the Summit. The feedback was analyzed and summarized for each pillar. The results from the votes were used to identify pillars that required more attention and/or revisions. Revisions focused on where voting indicated major concerns with the pillars.

Pillars were revised, based on the information gathered at the Summit, taking into account the relevance of suggested changes to the scope and goal of the NIS and the volume of feedback on the issue.

Development and Approval of the Draft 2025-2030 Interim Strategy

The first draft of the 2025-2030 Interim NIS incorporating feedback gathered at the Summit was developed by the NCCID. Finalization of the draft was led by PHAC and went through an extensive review process with internal and external partners and experts, prior to receiving approvals from the CIC, the CIDSC, the PHNC, and the Conference of Deputy Ministers of Health.

Limitations of the Renewal Process

Engagement with First Nations, Inuit, and Métis Partners and Experts

While the 2025-2030 renewal process aimed to include meaningful engagement with First Nations, Inuit, and Métis partners and experts and ensure that key insights were reflected, the depth of engagement did not meet the aspirations. The 2025-2030 Interim NIS includes input from some First Nations, Inuit, and Métis experts (as per the Methodology section above). It is important to acknowledge, however, that many other First Nations, Inuit and Métis voices are missing from this interim strategy.

The NIS renewal process was intended to be completed in 2021, and was delayed due to COVID-19 response efforts, which resulted in truncated timelines for the renewal process and reduced time available for in-depth engagement. Challenges, including tight timelines to publish the Interim NIS for 2025, limited funding, gaps in relationship-building with NIOs and gaps in the engagement planning processes, methods, and tools contributed to limitations in the engagement process.

Populations at Higher Risk of Vaccine Preventable Diseases

Partners with knowledge of other populations at higher risk of VPDs or severe outcomes of VPDs, including community partners and other experts, were also not extensively engaged in the NIS renewal process. Specifically, engagement with experts with knowledge of other populations such as Black Canadians, persons with disabilities, 2SLGBTQ+ communities, was limited.

National Immunization Strategy Tool and Survey

The initial virtual consultation tool and survey had some limitations inherent in their design, which included:

- The tool and survey did not prompt for feedback outside of the questions asked, which could have limited the scope of the feedback.

- The tool and survey do not provide the opportunity to indicate if additional consultation was done to inform the responses, which resulted in a lack of information on the extent of engagement.
- Some respondents found the tool long and/or difficult to use, which may have impacted their input.

ANNEX B: GLOSSARY AND TERMS

Canada has/is/does	In the context of the NIS, "Canada has/is/does" refers to Canada as a country and not the Government of Canada.
Community	A group of people (e.g., a neighborhood, village, or municipal or rural region or a social group) with a unifying common interest or trait, loosely organized into a recognizable unit. There is typically a sense of belonging and mutual self-interest and investment among its members. Elected or otherwise identifiable community leader(s) may represent, advocate on behalf of, and decide issues of importance to the community when it interacts with other groups or persons[20].
Cost Effectiveness	Cost-effectiveness refers to the gains in health relative to the costs of different health interventions[21]. In the context of the NIS this refers to achieving the greatest possible impact on immunization outcomes within available resources.
Culturally safe, Cultural safety	Cultural safety refers to the experience of the person involved. It is an outcome based on respectful engagement that recognizes and strives to address power imbalances inherent in the healthcare system. It results in an environment free of racism and discrimination, where people feel safe when receiving health care or other support and services. To be culturally safe requires positive anti-racism stances, tools and approaches and the continuous practice of cultural humility[22].
Data sovereignty principles	Refers to respect for community and population ownership and control of data (in this case health and vaccine-related data), including what data are collected, how data are collected, how data are presented, and who represents the data[23], [24]. First Nations, Inuit and Métis governments and organizations have defined their respective data sovereignty principles and protocols, as have other populations in Canada.
Decision-makers	Persons or organizations with the authority to decide upon matters related to vaccines and immunization programs.
Disinformation	False information that is intended to manipulate, cause damage and guide people, organizations and countries in the wrong direction[25]. The key difference between disinformation and misinformation is not the content of the falsehood but the knowledge and intention of the sender.
Distinctions-based	A distinctions-based analysis or approach ensures that the unique rights, interests and circumstances of First Nations, Inuit and the Métis are acknowledged, affirmed, and implemented[26].

Equity, Equitable	Equity in health is the absence of systematic disparities in health (or in the major social determinants of health) between groups with different levels of underlying social advantage/disadvantage - that is, wealth, power, or prestige. Equitable means that systemic or structural disadvantages or injustices are recognized and mitigated or eliminated. [27]. Health equity is the absence of unfair, avoidable or remediable differences in health status among population groups defined socially, economically, demographically or geographically[28].
Equity-informed	In the context of the NIS, refers to decisions, policies, programs or actions that are designed to mitigate known and anticipated inequities. Assumes that populations at higher risk have been involved throughout.
Fair	In the context of the No-fault Injury Support program, as an injury program was only available to residents of Quebec previously, the implementation of a national program would remedy this inequity and provide financial coverage for all individuals immunized in Canada who experience a serious adverse events following immunization. The program provides equitable access for all in Canada to vaccine injury support.
Impartial	In the context of the No-fault Injury Support pillar, impartial refers to inclusion of policies and procedures to ensure program applications are objectively assessed and evaluated without bias or discrimination.
Infrastructure	In the context of the NIS, basic systems, services and human resources needed to function effectively.
International reporting requirements	Relates to disease and outbreaks, reporting of vaccination coverage is done through the annual reporting system through WHO and Pan American Health Organization (PAHO)[29]. More details on reporting requirements here: Frequent Asked Questions (FAQs): WHO-UNICEF Joint Reporting Form on Immunization (JRF) and Estimates of National Immunization Coverage (WUENIC) (paho.org)
Interoperable	In the health sector, interoperability refers to the ability to share and exchange data and health information across different systems and digital solutions to optimize health outcomes[30].
Inuit principles of Qaujimajatuqangit and self-determination in research	Inuit Qaujimajatuqangit (IQ) refers to Inuit epistemology and Indigenous knowledge of the Inuit, translating directly as "that which Inuit have always known to be true[15]." It should be expected that if IQ strengths were applied in policies and health-based practices and programs, health indicators for Inuit would significantly improve. Ensuring Inuit access, ownership, and control over data and information gathered on Inuit population, wildlife, and

	environment is a key pillar of achieving Inuit self-determination in research[16]. Inuit representational organizations are the rightful gatekeepers of Inuit Nunangat research and are best positioned to determine how Inuit information should be utilized and shared to maximize benefits and minimize harm.
Misinformation	Misinformation refers to news or information that is verifiably false, inaccurate, or misleading, but is not initially intended to cause harm. Misinformation can quickly spread across the Internet, when it is shared by readers and amplified through social media algorithms[31]. The spreading of false or misleading information has the potential to erode confidence in public institutions. Those who share the misinformation may believe it is true, useful or interesting, and have no malicious intent towards recipients[32].
No-fault	Does not assign fault for the purposes of providing benefits[33].
OCAP®	The First Nations principles of ownership, control, access, and possession – more commonly known as OCAP® – assert that First Nations have control over data collection processes, and that they own and control how this information can be stored, interpreted, used or shared. Given the diversity within and across Nations, the principles will be expressed and asserted in line with a Nation's respective world view, traditional knowledge, and protocols[13]. • Ownership: First Nations own their cultural knowledge, data, and information collectively, similar to how an individual owns personal information. • Control: First Nations have the right to control all aspects of research and information management processes that impact them. • Access: First Nations must have access to information and data about themselves and their communities, regardless of where it is held. • Possession: This refers to the physical control of data, ensuring that ownership is asserted and protected.
OCAS	The Manitoba Metis Federation subscribes to the following "OCAS principles[14]": • **Ownership:** Ownership refers to the legal possession of something. • **Control:** Control refers to the power to make decisions about something and decide what should happen.

	• **Access:** Access refers to the right or opportunity to use something that will bring benefits. • **Stewardship:** Stewardship speaks to issues of responsible planning and management of resources.
Partner(s)	In the context of the NIS, partner(s) refers to individuals or organizations with expertise, interest, and/or responsibility in immunization programming. These partners and experts contributed to shaping the Interim NIS based on their knowledge, roles and/or areas of expertise. In this context, partners does not refer to formal obligations or contractual agreements.
Populations at higher risk of VPDs or severe outcomes of VPDs	In the context of the NIS, the populations implicated in this term are unspecified to allow for localized application based on epidemiological data. The specific populations at higher risk may vary by jurisdiction, community, and VPD context, enabling targeted immunization efforts based on local needs.
Resilient	Defined according to the description of resilient in the *Emergency Management Strategy for Canada*[34]. The capacity of a system to adapt to change and maintain an acceptable level of functioning.
Sero-epidemiology	The study and understanding of the prevalence or incidence of particular infections in a population based on the presence of antibodies in specimens[35].
Timely	In the context of the NIS, timely refers to being done or occurring sufficiently early, promptly, coming early or at the right time, without undue delay and within stated service standards.
Vaccine coverage	The proportion of a given population who has received a vaccine, or a certain number of doses of a vaccine.[36]
Vaccine uptake	The number of people who have received a vaccine or a certain number of doses of the vaccine in a certain time period, which can be expressed as an absolute number or as the proportion of a given population[36]. In addition to being an indicator, vaccine uptake is often also used as a verb to describe the behaviour of receiving a vaccine[37].

ANNEX C: LIST OF ABBREVIATIONS

2SLGBTQ+	Two-Spirit, Lesbian, Gay, Bisexual, Transgender, Queer or Questioning and additional sexual orientations or gender identities
CIC	Canadian Immunization Committee
CIDSC	Communicable and Infectious Disease Steering Committee
CIRN	Canadian Immunization Research Network
COVID-19	Coronavirus Disease of 2019
CPHO	Chief Public Health Officer
IPF	Immunization Partnership Fund
ISC	Indigenous Services Canada
FPT	Federal, Provincial and/or Territorial (governments)
mRNA	Messenger ribonucleic acid (vaccines)
NACI	National Advisory Committee on Immunization
NCCID	National Collaborating Centre for Infectious Diseases
NCCIH	National Collaborating Centre for Indigenous Health
NIO	National Indigenous Organization
NIS	National Immunization Strategy
PHAC	Public Health Agency of Canada
PHN	Public Health Network
PHNC	Public Health Network Council
PSPC	Public Services and Procurement Canada
VPD	Vaccine-preventable disease
WHO	World Health Organization

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