



PUBLIC HEALTH AGENCY OF CANADA 2021-22 DEPARTMENTAL RESULTS REPORT

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TABLE OF CONTENTS

FROM THE MINISTERS.....	1
RESULTS AT A GLANCE.....	3
RESULTS: WHAT WE ACHIEVED.....	7
CORE RESPONSIBILITIES.....	7
1. HEALTH PROMOTION AND CHRONIC DISEASE PREVENTION	7
2. INFECTIOUS DISEASE PREVENTION AND CONTROL.....	23
3. HEALTH SECURITY	43
INTERNAL SERVICES.....	55
SPENDING AND HUMAN RESOURCES.....	61
Spending	61
Human Resources	64
Expenditures by vote	65
Government of Canada spending and activities.....	65
Financial statements and financial statements highlights	65
CORPORATE INFORMATION	71
Organizational Profile	71
Raison d’être, mandate and role: who we are and what we do	71
Operating context	72
Reporting framework.....	74
SUPPORTING INFORMATION ON THE PROGRAM INVENTORY.....	77
SUPPLEMENTARY INFORMATION TABLES.....	77
FEDERAL TAX EXPENDITURES.....	77
ORGANIZATIONAL CONTACT INFORMATION.....	77
APPENDIX: DEFINITIONS	78
ENDNOTES.....	82



The Public Health Agency of Canada acknowledges that this report was written on the traditional, unceded territory of the Algonquin Anishinabeg Nation.

FROM THE MINISTERS

As the Minister of Health and the Minister of Mental Health and Addictions and Associate Minister of Health, we are pleased to present the Public Health Agency of Canada's (PHAC) 2021-22 Departmental Results Report. This Report highlights the Agency's leadership over the last year as we fought against COVID-19 to promote and protect the health of Canadians and worked to improve health care so it serves everyone.




The immense dedication, efforts and expertise of PHAC's public servants would not have been possible without the significant and collective efforts of other federal government departments, provinces, territories, external partners, Indigenous peoples and Canadians from coast to coast to coast. These efforts represent Canadians' care for our fellow citizens and for this, we thank you.

PHAC's response to COVID-19 and other public health issues has been and continues to be guided by the latest science, evidence and research. Working with national and international experts, PHAC has gathered evidence on the public health impacts of COVID-19. This evidence contributed to reducing the transmission of SARS-CoV-2, the virus that causes COVID-19, and informing PHAC's pandemic response and transition planning. Canadians were kept informed of the latest and most up-to-date information on COVID-19 as the Agency worked diligently to counter false statements and misinformation.

The COVID-19 pandemic has amplified long-standing health inequities. PHAC has been working hard to bridge these gaps by delivering services such as safe voluntary isolation sites which provided a safe place for Canadians to rest and recover while reducing the spread of COVID-19 within homes and in communities. The pandemic disproportionately affected the mental health and physical well-being of many groups in society. These included Indigenous peoples, Black and racialized communities, lower income households, children, youth and older adults. There is no question that the pandemic added significant challenges for many Canadians, including those living alone and those with dementia, as well as individuals close to them, in particular their caregivers.

Despite these challenges, COVID-19 vaccination coverage is high in Canada. As of September 16, 2022, more than 82% of Canadians have received their full primary series of COVID-19 vaccines. This incredible vaccination progress reflects PHAC's commitment and leadership in promoting vaccine confidence and mitigating barriers to access, delivered through vaccine campaigns and communications to Canadians.

Budget 2021 supported actions to promote safe relationships and prevent family violence, including elder abuse. It also allowed PHAC to provide funding for mental health initiatives that supported populations disproportionately impacted by COVID-19, such as youth and older adults. PHAC also took action to address systemic health challenges by identifying priority areas in the [2021 Report from the](#)



[Chief Public Health Officer of Canada](#),¹ which highlights the need for public health systems to be equity driven.

In collaboration with partners and stakeholders in other government departments, provinces, territories, Indigenous communities and organizations, academia and community-based organizations across the country, PHAC's efforts have been firmly focused on equipping Canadians with the tools and information needed to protect and improve their health.

Now and in the future, PHAC will use all of the tools and resources at its disposal to remain ready to successfully adapt and respond to any potential public health threats or risks. Through continuing to foster cooperative partnerships and closely monitoring new and emerging public health issues, PHAC will focus its efforts on finding innovative ways to promote and protect the physical and mental health of all Canadians.

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Minister of Health

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Minister of Mental Health and Addictions and Associate Minister of Health

¹ Full report: A Vision to Transform Canada's Public Health System, <https://www.canada.ca/en/public-health/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/state-public-health-canada-2021/report.html>

RESULTS AT A GLANCE

Throughout 2021-22 PHAC continued to fight the spread of COVID-19 through its work to roll out vaccines to Canadians and promote awareness of public health measures. Its efforts were enhanced through close collaboration with other federal government departments, provinces, territories, municipalities and Indigenous communities, which resulted in better outcomes for Canadians. Through these efforts, Canadians were kept informed of the risks of COVID-19 through the dissemination of timely and sound public health guidance, founded on science-based evidence and innovative methods such as mathematical modelling to make predictions depending on the actions of the population.

Despite the unique and unprecedented challenges that the Agency faced while leading Canada's public health response to COVID-19, PHAC continued to make strong inroads regarding public health issues such as health promotion and chronic disease prevention, infectious disease prevention and control and health security.

Recognizing that mental health and physical health are intrinsically linked, PHAC placed emphasis on raising the profile of mental health issues so that they would be prioritized as much as physical health. To lead this effort, Canada's first Minister of Mental Health and Addictions and Associate Minister of Health was appointed to work alongside the Minister of Health in 2021. One of the Minister's key areas of responsibility is supporting PHAC in fostering a healthier population, with a particular focus on understanding and addressing mental health inequities faced by Indigenous peoples, Black Canadians and marginalized Canadians. Among the Minister's initial accomplishments was the launch of [Wellness Together Canada](#),ⁱ an online mental health portal to improve digital access to mental health and substance use resources during the COVID-19 pandemic.

Highlights from PHAC's 2021-22 results achieved:

Leading Canada's public health response to COVID-19, PHAC:


- Enhanced chronic disease monitoring to increase Canada's understanding of the extent to which COVID-19 impacts or worsens chronic diseases (e.g., dementia, diabetes, cancer, and cardiovascular disease). This contributed to the development of monitoring activities for post-COVID-19 condition among Canadians;
- Minimized significant COVID-19 illness, death, and health care strain through vaccination and therapeutics to prevent severe illness and complement other prevention methods aimed at reducing exposure and protecting high risk populations. Through the implementation of a [Federal, Provincial, Territorial Public Health Response Plan for Ongoing Management of COVID-19 - Canada.ca](#),ⁱⁱ PHAC secured more than 120 million doses of COVID-19 vaccines for Canadians. By March 20, 2022, PHAC had distributed more than 96 million doses of COVID-19 vaccines to provincial and territorial immunization programs, resulting in 84.7% of Canada's eligible population having received at least one dose, 82.2% having completed a primary series and 45.9% having received an additional dose;

- Built on federal initiatives to increase vaccine confidence and uptake among Canadians in communities across Canada through PHAC's Immunization Partnership Fund;
- Funded close to 100 community-based projects that aim to address misinformation and disinformation about COVID-19 and the vaccines used to protect against it;
- Provided four new evidence-based public health measures guidance products² to federal, provincial and territorial public health authorities as well as updated various guidance products to support the prevention and transmission of COVID-19 within communities and individually. Notable examples included [Adjusting Public Health Measures in the Context of COVID-19 Vaccination](#)ⁱⁱⁱ and [Summary of Evidence Supporting COVID-19 Public Health Measures](#);^{iv}
- Invested \$175 million in 113 studies relating to COVID-19 immunity and trends in Canada, including potential immunity gaps, vaccine safety and efficacy;
- Developed and disseminated over 130 unique epidemiological reports and evidence syntheses relating to COVID-19, helping to ensure Canadians and public health decision makers had timely access to the best-available evidence to make informed decisions to protect themselves, their families and their communities;
- Leveraged existing programming to expand capacity to allow for the genomic sequencing of over 313,000 COVID-19 specimens from across Canada;
- Expanded wastewater monitoring to support communities in preventing the spread of COVID-19 by providing 60% coverage of the Canadian public, with up to 64 unique sites serviced in a given month;
- Responded to recommendations made in the [final Report](#)^v from [the independent review of the Global Public Health Intelligence Network \(GPHIN\)](#)^{vi} to review processes, identify improvements, and clarify and streamline the decision-making process for the issuance of GPHIN products and alerts; and
- Continued to ensure that PHAC's workforce is diverse, inclusive and reflective of the Canadian population it serves.

Advancing work in priority areas:

- Collaborated with community-based organizations, researchers and Black communities to inform culturally-focused programs and interventions that address mental health and its determinants for Black Canadians. As part of these efforts, three new projects focusing on the

² Evidence-based public health measures guidance products developed include: [Summary of Evidence Supporting COVID-19 Public Health Measures](#), [Adjusting Public Health Measures in the context of COVID-19](#), [Planning for the 2021-20-22 School Year in the Context of COVID-19](#), and [Reducing COVID-19 Risk in Community Settings: A Tool for Operators](#).



needs of Black, two-spirit, lesbian, gay, bisexual, transgender, queer, questioning and intersex (2SLGBTQQI+) communities were launched;

- Introduced new programming to promote and address mental health issues, including Post-Traumatic Stress Disorder (PTSD) and trauma in populations most affected by the COVID-19 pandemic;
- Began work to launch a three-digit number to connect Canadians with suicide prevention and mental health crisis services;
- Released new evidence on the prevalence, health status, and daily life experiences for children and youth diagnosed with autism spectrum disorder and published the [Autism Spectrum Disorder – Highlights from the 2019 Canadian Health Survey on Children and Youth \(CHSCY\) Report](#);vii
- Fostered collaborative efforts to prevent substance-related harms through evidence-based approaches that promoted equity, reduced stigma, improved access to care and addressed its root causes;
- Established a dedicated Antimicrobial Resistance (AMR) Task Force to centralize key federal functions and advance policies, programs, and actions to combat AMR in Canada and internationally to respond to the public health threat it poses; and
- Provided leadership, expertise, and coordination in developing new national laboratory guidance documents, including [Practical guidance for clinical laboratories using serology testing](#)viii and [Specific guidance on Point-of-Care Serology Testing in COVID-19](#).ix

For more information on PHAC's plans, priorities and results achieved, see the "[Results: what we achieved](#)" section of this report.



RESULTS: WHAT WE ACHIEVED

CORE RESPONSIBILITIES

1. HEALTH PROMOTION AND CHRONIC DISEASE PREVENTION

Description

Promote the health and well-being of Canadians of all ages by conducting monitoring and public health research and supporting community-based projects which address the root causes of health inequalities and the common risk and protective factors that are important to promoting better health and preventing chronic disease.

Results

The Departmental Results are:

- ❖ Canadians have improved physical and mental health;
- ❖ Canadians have improved health behaviours; and
- ❖ Chronic diseases are prevented.

Result 1.1: Canadians have improved physical and mental health

Supporting Canadians and their mental health — everyone deserves to feel well

PHAC's [Mental Health Promotion Innovation Fund](#)^x explored promising approaches for advancing mental health promotion among young Canadians with an emphasis on increasing health equity. In 2021-22, PHAC's Mental Health Promotion Innovation Fund invested in 20 projects at over 120 sites across 11 provinces and territories engaging Indigenous, newcomer, refugee, immigrant, transgender and other groups. Project information and infographics are available on the [Knowledge Development and Exchange \(KDE\) Hub](#),^{xi} providing mental health promotion for Canadians that is evidence-based, sensitive to diverse contexts and cultures, equitable and sustainable.

Did you know?

To date, the Mental Health Promotion Innovation Fund has reached over 100,000 individuals through knowledge exchange activities carried out by funding recipients. Knowledge gained from the implementation of these community-based activities has informed public health policies and practices such as KDE's [Parents Empowering Kids Program](#).^{xii}

To support the promotion of health equity, PHAC collaborated with community-based organizations, researchers and Black communities to generate new evidence on culturally focused programs and interventions that address mental health and its determinants for Black Canadians. For example, in

2021-22, PHAC's Mental Health of Black Canadians Fund invested \$2.9 million in seven projects which included three dedicated to supporting Black 2SLGBTQI+ communities. The Youth Project provided counselling for youth who want to talk to someone about sexual orientation or gender identity, and the Barbados Association of Winnipeg developed an anti-oppressive and culturally appropriate toolkit for mental health promotion and equity.

Funding recipients ranged from local community organizations to academic institutions, operating across a wide variety of settings and sectors. All of these initiatives were implemented to advance health equity in Black communities and build capacity for interventions that are effective and culturally focused.

Did you know?

The [Mental Health of Black Canadians initiative](#)^{xiii} aims to foster culturally informed approaches to improving mental health for Black communities by promoting cultural diversity and well-being, and addressing key underlying factors such as anti-Black racism. Guided by the advice of an external working group comprised of mental health practitioners, researchers, advocates and those with lived experience representing Black communities across Canada, it ensures mental health and its intersections with anti-Black racism, discrimination, stigma, and other social determinants of health are considered. This work supports the development and implementation of culturally appropriate, effective and accessible mental health programs.

Supporting the mental health of those most affected by COVID-19


Stress associated with COVID-19 significantly impacted the mental health of Canadians, with its effects compounded by changes to work and routines, financial stress, social isolation, grief and bereavement, and reduced access to services and supports.

Recognizing these challenges, PHAC prioritized investments in projects that strengthened capacity among communities to support Canadians' mental health and well-being. PHAC supported various interventions designed to promote good mental health while preventing mental illness and incorporated an evaluation to determine the most effective approaches to promoting mental health and preventing mental illness in the context of the pandemic.

These investments included \$100 million in funding over three years to support projects that aimed to promote mental health and prevent mental illness among populations disproportionately impacted by COVID-19 (e.g., youth, seniors, First Nations, Inuit, Métis, Black Canadians, and other racialized Canadians). An additional \$50 million in funding over two years followed to support projects that address PTSD and trauma in those most affected by the pandemic, including front-line, healthcare and other essential workers.

Working to prevent suicide

To advance federal mental health and suicide prevention initiatives, PHAC initiated the development of a National Suicide Prevention Action Plan which integrates suicide-related research and data, responsible reporting, best practices, training and tailored programs for populations most affected by



suicide. The Agency consulted subject-matter experts and people with lived and living experiences (e.g., groups disproportionately affected by suicidal thoughts, suicide attempts and loss), such as Indigenous peoples, older adults, males and those living in rural and remote communities to develop a meaningful Plan. Development of the Action Plan will also be informed and complemented by the outcome of the Canadian Radio-television and Telecommunications Commission's (CRTC) proceeding on the implementation of a national three-digit suicide prevention and mental health crisis line.

In collaboration with the Mental Health Commission of Canada, PHAC identified gaps and opportunities for suicide-related research and knowledge translation by co-leading the development of a Research and Knowledge Translation Agenda for Suicide and its Prevention in Canada. This Agenda aims to align research across the country, putting valuable information into the hands of people and organizations who can put it into practice.

Through funding 57 distress centres across Canada, PHAC played an important role in suicide prevention by supporting programs that aim to improve Canadians' mental health and well-being, including in northern, rural and remote areas. These centres provided crisis support for at-risk populations, such as older Canadians, Indigenous peoples and 2SLGBTQI+ people. PHAC also provided funding for the curation and development of resources to assist distress centres in meeting the needs of populations whose mental health/distress needs have increased during the pandemic.

PHAC continued to work with the Centre for Addiction and Mental Health and other interested parties to implement an expanded [pan-Canadian suicide prevention service](#),^{xiv} providing access to information and resources as well as bilingual crisis support from trained responders 24 hours a day, seven days a week. Previously known as the Canada Suicide Prevention Service, Talk Suicide Canada provides suicide crisis support in English and French over the phone to anyone in Canada, 24 hours a day, seven days a week and by text in the evenings (Tel:1-833-456-4566 (24/7) or text 45645 (4 p.m. - 12 a.m. EST)).

Building on funding provided to [Kids Help Phone](#)^{xv} in 2020-21, PHAC committed an additional 15 months of funding to the service to provide young people with the mental health supports they needed during the COVID-19 pandemic.

PHAC closely followed the regulatory proceeding on the introduction of a three-digit number for suicide prevention and mental health crisis, which included a public consultation from June 2021 to March 2022. This proceeding focussed on establishing the need for the three-digit number. Concurrently, PHAC began to explore the service delivery needs associated with the three-digit number to prepare for its launch in 2023.

PHAC also developed the [Positive Mental Health Surveillance Indicator Framework](#)^{xvi} to provide information on positive mental health outcomes as well as risk and protective factors in individuals, families, communities and society. Frameworks for adults and youth are now complete and include an [online interactive data tool](#)^{xvii} that provides disaggregated results by many sociodemographic characteristics, such as sex, age, household income, immigrant status, and ethnicity. PHAC is continuing efforts to develop frameworks for youth and for children.

Developing a National Autism Strategy – one step closer

PHAC continued to lead the development of a national autism strategy. In 2021-22, the Agency supported the Canadian Academy of Health Sciences in conducting both a public engagement and an evidence and scientific review to inform work on the development of a national autism strategy. Their report, [Autism in Canada: Considerations for future public policy development](#)^{xviii} highlights the breadth and complexity of needs of people with autism and their families. It also underlines the need for ongoing collaboration at all levels of government to meet the needs of this population during their lifespan. Findings were divided into three key themes: social inclusion, economic inclusion and evidence-based supports that cut across the multiple levels of government (federal, provincial and territorial) and are responsible for providing support for Canadians with autism.

PHAC released new evidence on the prevalence, health status and daily life experiences in Canadian children and youth with diagnosed Autism Spectrum Disorder (ASD) prior to the COVID-19 pandemic in a report titled [Autism Spectrum Disorder – Highlights from the 2019 Canadian Health Survey on Children and Youth](#).^{xix} The Report used data from the 2019 Canadian Health Survey on Children and Youth (CHSCY), which collected health-related information on children and youth aged one to 17 years. Behind the scenes, PHAC collaborated with Statistics Canada, the Canadian Institutes for Health Research (CIHR) and the Offord Centre for Child Studies at McMaster University to develop a second cycle of the CHSCY to take into consideration the wider impacts of the COVID-19 pandemic and trends over time. Data collected will be used to generate evidence for more flexible, developmentally appropriate policies and practices across Canada.

Preventing violence and supporting the health of survivors

Family and gender-based violence can have serious and lasting negative impacts on both the physical and mental health of survivors. In 2021-22, PHAC supported projects that identified effective means of preventing and addressing family and gender-based violence, improving health outcomes for survivors, and equipping health and allied professionals to recognize and respond safely and effectively. For example, through PHAC's [Supporting the Health of Survivors of Family Violence](#)^{xx} program, the Agency invested in 11 projects that address intimate partner violence and child maltreatment and build knowledge capacity among professionals.

PHAC also invested in 34 projects through its [Preventing Gender-Based Violence: The Health Perspective](#)^{xxi} program which is part of Canada's Strategy to Prevent and Address Gender-Based Violence, a horizontal initiative led by Women and Gender Equality Canada. This program includes projects to prevent youth dating violence and child maltreatment, and to build the capacity of professionals to respond to gender-based violence in communities. The Agency funded two communities of practice that supported [family violence projects](#)^{xxii} and [teen/youth dating violence projects](#)^{xxiii} through networking, capacity building, and knowledge mobilization. These communities of practice were also recognized for supporting funded projects in navigating challenges relating to project delivery, participant recruitment and intervention research due to ongoing public health measures.

To further influence policy and practice relating to child maltreatment, the Agency hosted a series of four webinars from May to September 2021 in collaboration with experts, service providers and researchers. The webinar series was part of the Global Partnership to End Violence Against Children's

[Together to #ENDviolence](#)^{xxiv} campaign, and engaged more than 800 diverse participants in Canada and internationally.

Leading and coordinating efforts to improve healthy aging

As part of its activities as the federal lead on healthy aging, PHAC advanced the [Age-Friendly Community](#)^{xxv} initiative to promote good health among older Canadians by encouraging living safely, maintaining good health and staying active.

In 2021-22, PHAC funded the [World Health Organization's \(WHO\) Participatory Video Voice Project](#)^{xxvi} which engaged older adults from three countries, including Canada, to help launch the United Nations' Decade of Healthy Ageing which runs from 2021 to 2030.

Did you know?

Recognized by the WHO, the [Pan-Canadian Age-Friendly Communities Reference Group](#)^{xxvii} is co-chaired by PHAC and includes representatives from provinces, territories, municipalities, and non-governmental organizations with the goal of sharing knowledge, resources, and best practices related to the implementation of age-friendly communities in Canada.

Advancing efforts to prevent dementia and improve the quality of life of people living with dementia and their caregivers

PHAC continued to invest in initiatives that raise awareness about dementia with a focus on reducing risk and stigma, improving the quality of life of people living with dementia as well as their family, friends and caregivers and enabling dementia-inclusive communities. In January 2020, PHAC launched its first national dementia awareness campaign during Alzheimer's Awareness Month to reduce the stigma associated with dementia. The campaign also contributed to increased knowledge of dementia through a bilingual multimedia advertising campaign and media tour which featured spokespersons with lived experience.

PHAC launched 18 new projects to support the [National Dementia Strategy](#),^{xxviii} including three projects to address challenges faced by people living with dementia and family/friends/caregivers in the context of COVID-19.

PHAC continued to share information to help Canadians monitor the state of dementia in Canada and its impact over time. In the [2021 Annual Report](#),^{xxix} PHAC provided several new data points relevant to the strategy's national objectives, helping to document Canada's collective progress on Canada's National Dementia Strategy. This Report also highlighted a variety of dementia-related initiatives and efforts conducted in collaboration with several organizations across the country.

Did you know?

Dementia is an umbrella term that describes a set of symptoms affecting brain function. It is a chronic condition that becomes more severe over time and is often characterized by a decline in memory, planning, language, and judgement. This is often accompanied by physical changes, such as muscle loss, mobility challenges, and a decline in coordination. There may also be changes in mood and/or behaviour.

Result 1.2: Canadians have improved health behaviours

Supporting Canada's response to the opioid crisis and emerging drug threats

PHAC continued to work with provinces and territories to conduct national monitoring on opioid- and stimulant-related deaths and harms to provide a timely picture of the public health impact of fatal and non-fatal overdoses across the country.

PHAC also continued to undertake additional work to monitor the crisis. PHAC's modelling allowed the Agency to anticipate future directions of the crisis as well as carry out research to better understand the circumstances surrounding overdose deaths. PHAC also published additional reports on opioid pain relief medication use and mood disorders, neonatal abstinence syndrome, and homelessness. Its report on opioid pain relief medication use and mood disorders in Canada demonstrated the need to further our understanding of the associations between opioid medication, pain, and mental health conditions, to better inform comprehensive clinical and public health action.

Through the [Supporting Pathways to Care for People Who Use Drugs Program](#),^{xxx} PHAC remained committed to a collaborative, compassionate, and evidence-based approach to the drug toxicity crisis. The Drug Overdose Crisis in Canada: Funding for Actions to Protect Canadians and Prevent Overdose Deaths Program provided funding to initiatives including [Pathways to Care](#),^{xxxii} which supported projects implementing sustainable system-level changes to improve access to care for people who use drugs by reducing barriers such as stigma. In addition to identifying best practices and developing policies, practice guidelines, and tools, all projects resulted in improved knowledge and skills, helping to reduce barriers to care for people who use drugs.

In recent years, there has been greater attention on the role of schools in addressing substance use and related harms among youth. Through meaningful engagement with Canadian school stakeholders, PHAC released the [Blueprint for Action: Preventing substance-related harms among youth through a Comprehensive School Health approach](#),^{xxxiii} a resource that integrates evidence-based approaches for addressing substance use issues with an internationally recognized framework for building healthy school communities. Educational tools and workshops were launched by PHAC and the Students Commission of Canada to further support school communities with the implementation of the Blueprint for Action.

Encouraging healthy living and physical activity

Through the [Healthy Canadians and Communities Fund](#),^{xxxiii} PHAC invested in projects that encourage healthy living and physical activity, including:

- [Gathering Voices Society's](#)^{xxxiv} initiative, which works to support the connection between ecological health and human health and well-being outcomes in two Indigenous communities in south-central British Columbia;
- [Cowichan Green Community Society's](#)^{xxxv} initiative to increase social connections and healthy eating behaviours in isolated older adults; and
- McMaster University's EMBOLDEN project which focused on community-based interventions that encourage healthy eating, social participation, physical activity, and systems navigation³ for older adults.

In fall 2021 and winter 2022, as part of its efforts to support healthy living behaviours and its multi-sectoral approach to chronic disease prevention, PHAC initiated work to develop a national framework for diabetes in Canada in accordance with the [National Framework for Diabetes Act](#)^{xxxvi} which received Royal Assent in June 2021. The Act requires the Minister of Health, in consultation with provincial and territorial governments responsible for health, Indigenous groups and other relevant stakeholders, to develop a national framework designed to support improved access to diabetes prevention and treatment to ensure better health outcomes for Canadians.

Did you know?

ParticipACTION 2021 – The grades are in!


The [2021 ParticipACTION Report Card on Physical Activity for Adults](#)^{xxxvii} represents a comprehensive summary of the literature and national-level surveys in the field of physical activity, recreation and sport. The Report Card assigns letter grades to 18 different indicators grouped into four categories and examines the impact of the COVID-19 pandemic on physical activity. It highlights some differences in physical activity according to age, income, and gender, and identifies the need for more research on specific populations such as Indigenous Peoples, individuals with disabilities, newcomers, and older adults. Eleven of these indicators are new this year as the organization strives to collect as much data as possible in order to take meaningful action and deliver more targeted engagement initiatives to help all Canadians make physical activity a part of their everyday life.

Promoting healthy built environments

PHAC continued its collaboration with CIHR to increase knowledge and understanding of the impact of healthy built environments on health outcomes and equity through an innovative grant initiative.

In 2021-22 PHAC funded the [University of Alberta's Housing for Health](#)^{xxxviii} project with \$4.4 million over five years (2018—2023) through the Healthy Canadians and Communities Fund. The project secured a new pilot development site in addition to a new affordable housing site for older adults. This

³ Systems navigation is a participant-centered support that will provide improved access to and facilitate use and integration of existing public health and social services, with a particular focus on programs that address physical activity and nutrition (both healthy eating and food access).



collaborative relationship now has over 150 members representing developers, architects, provincial and municipal stakeholders from across the country, and non-governmental organizations.

Supporting positive early development and stronger beginnings for Canadians

PHAC, along with Health Canada, the Canadian Pediatric Society and [Baby's Breath](#)^{xxxix} released [new guidance](#)^{xl} to promote safe sleep practices for infants. PHAC and Health Canada released a new [safe sleep booklet](#)^{xli} for parents and caregivers, and Canada's first annual "Safe Sleep Week" was launched on March 14, 2022.

To promote the health and well-being of young children from birth to age six that experience health risks, PHAC's [Community Action Program for Children \(CAPC\)](#)^{xlii} continued to fund approximately 400 projects serving approximately 225,000 children and parents/caregivers in vulnerable situations across Canada. CAPC projects provide comprehensive, culturally appropriate, prevention and early intervention activities, promoting the knowledge and skills, health behaviours and overall health and well-being of program participants.

Building on the Indigenous Early Learning and Child Care (IELCC) Framework, PHAC collaborated with the National Aboriginal Head Start Council (NAHSC), the Indigenous-led governance body for the Aboriginal Head Start in Urban and Northern Communities (AHSUNC) program to ensure an Indigenous-led approach to implementing new investments announced in Budget 2021. Investments will support the implementation of culturally-appropriate early learning activities. For example, 100% of AHSUNC sites (133 in total) offered activities such as elder participation, storytelling, and traditional ceremonies to participants, children and families living off-reserve in urban and northern areas. These activities served to increase Indigenous knowledge, languages and cultures.

Promoting breastfeeding and healthy pregnancies

To ensure that parents receive the information, care, and support they need to give their babies the best start in life, PHAC disseminated several resources to promote and support breastfeeding in a population health context including [10 Great Reasons to Breastfeed Your Baby](#)^{xliii} and [Your Guide to a Healthy Pregnancy](#)^{xliiv} to provide Canadians with accurate information to help with making good decisions about taking care of themselves before, during, and after pregnancy. In addition, PHAC updated guidance in [Your Guide to a Healthy Pregnancy](#)^x and [Chapter 3 of the Family-Centred Maternity and Newborn Care: National Guidelines](#)^{xliv} to ensure parents and healthcare providers are aware of the significance of fetal movement in the third trimester for stillbirth prevention.

PHAC also supported the implementation of a \$1.3 million grant over five years to the Breastfeeding Committee for Canada to strengthen the Baby-Friendly Initiative. The grant has supported the development of new public health guidance documents, tools and resources, as well as a national project aimed at increasing the number of health facilities designated as "Baby-Friendly"—helping to support parents in providing the highest quality of care to their babies.

PHAC continued to fund approximately 240 projects serving about 45,000 pregnant people, parents, and caregivers annually across Canada through the [Canada Prenatal Nutrition Program](#),^{xlvi} to improve the health of pregnant people, new parents and babies, who face challenges that put their health at risk.

Advancing a Pan-Canadian Concussion Strategy

PHAC took steps to improve concussion monitoring in support of the Minister of Health's shared mandate commitment with the Minister of Canadian Heritage to implement a pan-Canadian Concussion Strategy. PHAC carried out the following activities in support of this goal:

- Collaborated with Statistics Canada to initiate a Rapid Response Survey on Head Injuries/Concussions to allow more precise estimates of the annual number of concussions in Canada among those 12 years and older from 2019. Analysis was divided by age, sex and household income and included information on location, mechanism (e.g., sports, falls), treatment and recovery. Findings will be published in 2022-23 following data analysis;
- Published the [Concussions and their Association with Mental Health in Canadian Adolescents](#)^{xlvii} report, based on the [Health Behaviour in School-aged Children study](#).^{xlviii} This Report describes the prevalence of concussions among Canadian youth (i.e., grades six to 10) by examining the relationship between concussions and indicators of mental health status among young people;
- Raised awareness through concussion social media campaigns that ran twice during the year and supported the first annual Concussion Awareness Week in September 2021; and
- Continued work with federal, provincial and territorial bodies for Sport, Physical Activity and Recreation (SPAR) to pursue a harmonized approach to concussions.

Promoting tobacco cessation and prevention for Canadians

To contribute to Canada's Tobacco Strategy, which aims to achieve less than five percent tobacco use by Canadians by 2035,⁴ PHAC collaborated and coordinated efforts with Health Canada and Indigenous Services Canada to expand their reach to groups with higher rates of smoking through increased resources in tobacco programs. The Canadian Cancer Society's Walk or Run to Quit project received strong support from Indigenous communities. About 61.8% of participants completed the program and 100% of them had reduced their smoking by the end of the program, with 12.5% maintaining prolonged abstinence after six months.

Through the University of Toronto's "[All Together Now!](#)"^{xlix} project, PHAC engaged queer and transgender youth in conversations about nicotine and commercial tobacco use. PHAC also supported the Ottawa Hospital Research Institute in launching a peer-based model to reduce tobacco and co-occurring substance use in marginalized and underserved populations, including Indigenous, racialized, low income and street-involved people.

In partnership with Ottawa Public Health and EllisDon, PHAC funded the delivery of the [Canadian Cancer Society's Build Smoke-Free – Foundations for a Healthier Worksite](#)^l program. Overall, the program has reached more than 900 construction workers, with 390 participating in 2021-22. Participants at the EllisDon sites were offered free resources and information to help them:

⁴ [Canada's Tobacco Strategy](https://www.canada.ca/en/health-canada/services/publications/healthy-living/canada-tobacco-strategy.html), <https://www.canada.ca/en/health-canada/services/publications/healthy-living/canada-tobacco-strategy.html>

- Increase their attempts to quit smoking or vaping;
- Get support and self-help resources; and
- Build social and physical work environments that support quitting smoking or vaping.

The recent [Evaluation of the Health Portfolio Tobacco and Vaping Activities 2016-17 to 2020-21](#)^{li} found prevention and cessation projects funded by PHAC-supported participants in their efforts to quit smoking. While newer projects highlighted in this Evaluation and funded by PHAC are focused on reaching groups that experience health inequalities and face higher rates of tobacco use to align with Canada's Tobacco Strategy, external stakeholders praised the program for its focus on populations with higher rates of smoking.

Result 1.3: Chronic diseases are prevented

Understanding COVID-19 and chronic disease

The impact of COVID-19 has been particularly profound for those with chronic diseases. PHAC has enhanced chronic disease monitoring activities to better understand the extent to which COVID-19 exacerbates chronic diseases (e.g., diabetes, cancer, and cardiovascular disease). Chronic disease monitoring activities also informed the development of recommendations to enhance the [Canadian Chronic Disease Surveillance System](#)^{lii} to include evidence from confirmed COVID-19 cases.

Some people who have been infected with COVID-19 can experience long-term effects from their infection, known as post-COVID condition or long COVID. PHAC and its partners are working to better understand post-COVID conditions and whether groups disproportionately impacted by COVID-19 are at higher risk. For example, PHAC, Statistics Canada, and the COVID-19 Immunity Task Force developed a second cycle of the [Canadian COVID-19 Antibody and Health Survey](#)^{liii} which aims to better understand the impacts of the pandemic on the health and well-being of Canadians, including the prevalence of post COVID-19 condition (e.g., information on the risk factors, symptoms, and impacts of this condition on daily functioning). The survey took place from April 2022 to August 2022 and the results and findings will be communicated subsequently.

The recent "[Evaluation of the Evidence for Health Promotion, Chronic Disease and Injury Prevention Program: Focus on COVID-19 Activities](#)"^{liv} found that PHAC was able to rapidly pivot its chronic disease work plan activities to collect key data on COVID-19 and its wider impacts in support of the Agency's information needs.

Promoting healthy living and chronic disease prevention in priority populations

PHAC's [Healthy Canadians and Communities Fund](#)^{lv} encourages all levels of society to participate in supporting healthy living. In 2021-22, PHAC's Healthy Canadians and Communities Fund continued to fund 41 projects that aimed to prevent chronic disease. For example, between 2018 and 2022, Western University's [Hockey Fans in Training](#)^{lvi} supported close to 1000 adult male hockey fans in improving their health through a 12 week off-ice exercise and healthy lifestyle program across 42 sites in seven provinces. At the end of the program, participants demonstrated improved systolic blood pressure and overall fitness, as well as reduced body weight.

Did You Know?

Diabetes Canada's [Canadian Diabetes Prevention Program](#),^{lvii} also funded through PHAC's Healthy Canadians and Communities Fund, found that for people at risk for developing type 2 diabetes, losing weight (just five to seven per cent of body weight) and making other lifestyle changes reduced their chances of developing type 2 diabetes by almost 60% in one year.

Sex and Gender-based Analysis Plus (SGBA Plus)

Improving mental health services and support for Canadians

PHAC recognizes the importance of disaggregating data by key socio-demographic variables such as gender, ethnicity and income to improve the development and delivery of mental health services and support for Canadians. For example, in 2021-22, PHAC collaborated with Statistics Canada to launch the [Survey on COVID-19 and Mental Health](#)^{lviii} and the [Survey on Mental Health and Stressful Events](#).^{lix} Data collected through these surveys will be used to better understand how stressful events can impact a person's mental health.

Addressing data gaps in Autism Spectrum Disorder

Addressing the complex and diverse needs of Canadians on the autism spectrum requires a coordinated effort with all levels of government and service providers. By working closely with federal, provincial, and territorial partners, researchers and stakeholders, PHAC continued to enhance its autism monitoring and follow up activities to address gaps in information. Efforts to date are focused on collecting data pertaining to people of all ages living with autism, reporting on indicators beyond prevalence (e.g., demographics such as age, sex, education and income as well as diversity and equity factors including gender, ethnicity and disability), synthesizing the evidence on the wider health impacts of the COVID-19 pandemic and expanding monitoring to all the provinces and territories.

SGBA Plus was embedded into solicitation processes for grant and contribution funding opportunities (e.g., Dementia Community Investment, Healthy Canadians and Communities Fund, etc.). This required applicants to incorporate both a health equity lens to address the needs of diverse populations that are at higher risk for poor health outcomes, as well as SGBA Plus considerations into their application.

The evaluation process for all funded projects was also enhanced to include SGBA Plus considerations, disaggregated data, and outcomes in support of determining what projects, programs, or initiatives work for whom and why. This enhanced evaluation challenged projects to increase their knowledge and understanding of the lived experience of individuals and population-based needs of people (e.g., people living with dementia, people accessing suicide prevention services and/or mental health supports) and modify their programs to increase equity, diversity and inclusion considerations.

An SGBA Plus lens was also applied to the development of unique information, tools, and resources tailored to specific diverse populations (e.g., dissemination of substance use related information to pregnant and/or breastfeeding people), as well as monitoring products through the analysis of data disaggregated by socio-demographic and socio-economic factors.

United Nations' 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals (SDGs)

PHAC advanced the United Nations' (UN) 2030 Agenda for Sustainable Development (specifically SDG 3: "Good Health and Well-being") through the following actions:

- Launched phase two of the Mental Health Promotion Innovation Fund program, which included projects to work with partners to deliver mental health promotion interventions that aim to build protective factors during infancy, childhood and adolescence, as well as for their caregivers among key populations, including First Nations, Inuit, and Métis;
- Reviewed the effectiveness of the [Federal Framework on Post-Traumatic Stress Disorder](#)^{lx} and conducted analysis for reporting to Parliament;
- Prevented and reduced substance-related harms by investing in projects that gathered existing evidence to improve access and reduce barriers to care for people who use drugs;
- Mobilized knowledge on approaches for the prevention of substance-related harms in youth. For example, PHAC worked with communities to build capacity and support evidence-based interventions that help enhance youth resilience, reduced stigma and promoted equity and harm reduction approaches;
- Developed public education resources on substance use to support informed decision-making among priority populations; and
- Continued to participate in the Health Working Group under the Canada-United States Joint Action Plan on Opioids to enhance bilateral efforts and information sharing. The Agency collaborated on the development of a paper that outlines substance use and drug toxicity deaths in the U.S. and Canada, the impacts of the COVID-19 pandemic, and monitoring and response efforts undertaken by both countries' federal governments to address these issues.

Driving experimentation

PHAC's [Mental Health Promotion Innovation Fund](#)^{lxi} (MHP-IF) promotes continuous learning to better discover and understand mental health promotion interventions that promise to be effective. The MHP-IF funds population health intervention research using a socio-ecological model that recognizes multiple factors influencing mental health and well-being. Emphasis is placed on interventions that build protective factors and reduce risk factors for the general population as well as children to improve outcomes for people and groups for children, youth, young adults and other at-risk groups. Sustainable policy and program development are among the greatest benefits of population-based mental health promotion interventions.

Through the MHP-IF, PHAC invested \$4.9 million to support experimentation with the goal of identifying evidence-based health interventions for target populations. Early results showed improvements in

protective factors for mental health, such as improved emotional regulation, resiliency, self-efficacy and greater well-being among participants.

Results achieved

The following table shows, for Health Promotion and Chronic Disease Prevention, the results achieved, performance indicators, targets and target dates for 2021–22, and the actual results for the three most recent fiscal years for which actual results are available.

Departmental results	Performance indicators	Target	Date to achieve target	2019-20 Actual results	2020-21 Actual results	2021-22 Actual results
Canadians have improved physical and mental health	% of low-income children in very good or excellent health	At least 80%	Mar. 31, 2025	84.1% (CHSCY 2019)	Not available	Expected date of data availability is 2024-25
	% of population who have high psychological well-being ⁵	At least 75%	Mar. 31, 2025	75% (CCHS 2019)	75% (CCHS 2019) ⁶	75% (CCHS 2019) ⁷
Canadians have improved health behaviours	% increase in average minutes/day of physical activity among adults	At least 20% above baseline (with a baseline of 25 min/day, a 20% increase represents 30 min/day)	Mar. 31, 2025	+4% 26 min/day (CHMS 2016-17)	+10% (27.4 min/day), (CHMS 2018-2019)	+10% (27.4 min/day), (CHMS 2018-2019) ⁸

⁵ High psychological well-being is an indicator of positive mental health and it measures the number of participants surveyed with a mean score of 20 or higher on a scale of 0-28, based on the six psychological well-being questions contained in the Canadian Community Health Survey (CCHS) Mental Health Continuum Short-Form (MHC-SF). This is for adults 18+ only—improved psychological well-being may be measured differently for youth and children.

⁶ There are no 2020-21 results available from the CCHS. The results from 2019 are the most recent and will be used until new data is available.

⁷ Data for 2021-22 is not available as the CCHS's current collection period runs from February 7, 2022 to December 31, 2022.

⁸ Data for 2021-22 is not available as the CHMS Cycle 6 took place from 2018-19 and Cycle 7 is taking place from fall 2022 to fall 2024. The results from 2018-19 are the most recent and will be used until new data is available.

	% increase in average minutes/day of physical activity among children/youth	At least 10% above baseline (with a baseline of 58 min/day, a 10% increase represents 64 min/day)	Mar. 31, 2025	+9% 63 min/day (CHMS 2016-17) (Baseline: 58 min/day, CHMS 2012-13)	+2% (59.2 min/day), (CHMS 2018-2019)	+2% (59.2 min/day), (CHMS 2018-2019) ⁹
Chronic diseases are prevented	% increase in years lived in good health by seniors	At least 4% (HALE at age 65 = 17.0 years. The baseline value for the % increase in years lived in good health by seniors is 14.9 years.)	Mar. 31, 2022	1% 15 years (Statistics Canada, 2010-2012 to 2015-2017)	1% 15 years (Statistics Canada, 2010-2012 to 2015-2017)	1% 15 years (Statistics Canada, 2010-2012 to 2015-2017) ¹⁰
	Rate of new diabetes cases among Canadians ¹¹	At most 6.2 cases per 1,000 age 1 and older	Mar. 31, 2025	6.2 cases per 1,000 age 1 and older (CCDSS 2016-17)	6.0 per 1000 age 1 and older (CCDSS 2017-18)	6.0 per 1000 age 1 and older (CCDSS 2017-18)
	% of adults who are obese ¹²	At most 28%	Mar. 31, 2025	24% (CHMS 2018-19)	24.4% (CHMS 2018-19)	24.4% (CHMS 2018-19)
	% of children and youth who are obese ¹³	At most 13%	Mar. 31, 2025	10% (CHMS 2018-19)	10% (CHMS 2018-19)	10% (CHMS 2018-19)

Legend: CCDSS – Canadian Chronic Disease Surveillance System; CCHS – Canadian Community Health Survey - Annual Component; CHMS – Canadian Health Measures Survey; CHSCY – Canadian Health Survey on Children and Youth; HALE – Health Adjusted Life Expectancy

⁹ Data for 2021-22 is not available as the CHMS Cycle 6 took place from 2018-19 and Cycle 7 is taking place from fall 2022 to fall 2024. The results from 2018-19 are the most recent and will be repeated until new data is available.

¹⁰ There are no 2020-21 results available from Statistics Canada. The results from 2015-17 are the most recent and will be used until new data is available.

¹¹ This indicator measures the number of new cases of diabetes diagnosed in the population in a particular year over the total population at risk for diabetes in a particular year.

¹² This indicator measures the number of adults aged 18 and older that are classified as obese according to Body Mass Index (BMI). For adults, obesity is defined as BMI ≥ 30.0 kg/m².

¹³ This indicator measures the number of children and youth aged 5-17 that are classified as obese according to Body Mass Index (BMI).

Budgetary financial resources (dollars)

The following table shows, Health Promotion and Chronic Disease Prevention, budgetary spending for 2021–22, as well as actual spending for that year.

2021-22 Main Estimates	2021-22 Planned spending	2021-22 Total authorities available for use	2021-22 Actual spending (authorities used)	2021-22 Difference (Actual spending minus Planned spending)
340,038,576	340,398,576	400,862,350	288,018,815	(52,379,761)

Actual spending is less than planned primarily due to the reclassification of expenditures related to safe voluntary isolation sites from Health Promotion and Chronic Disease Prevention to Infectious Disease Prevention and Control.

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the Agency needed to fulfill this core responsibility for 2021–22.

2021-22 Planned full-time equivalents	2021-22 Actual full-time equivalents	2021-22 Difference (Actual full-time equivalents minus Planned full-time equivalents)
581	564	(17)

Variance explanation can be found under the [Actual Human Resources](#) section.

Financial, human resources and performance information for the Public Health Agency of Canada's Program Inventory is available in [GC InfoBase](#).^{lxii}



2. INFECTIOUS DISEASE PREVENTION AND CONTROL

Description

Protect Canadians from infectious diseases by predicting, detecting, assessing and responding to outbreaks and new threats, and contribute to the prevention, control and reduction of the spread of infectious diseases.

Results

The Departmental Results are:

- ❖ Infectious diseases are prevented and controlled;
- ❖ Infectious disease outbreaks and threats are prepared for and responded to effectively.

Result 2.1: Infectious diseases are prevented and controlled

Improving vaccination rates

Vaccines remain a cornerstone of public health protection. Their use has significantly contributed to the prevention and control of infectious diseases in Canada and globally. In recent years, misinformation and disinformation have eroded public trust and contributed to reduced vaccination rates around the world, including in Canada. Lower vaccination rates may mean that more Canadians will become infected, get sick or die from vaccine preventable diseases.

PHAC undertook initiatives at the federal level to build and promote vaccine confidence among Canadians through a wide array of approaches to support a diverse range of communities and populations. These initiatives complemented ongoing efforts by provinces, territories, and Indigenous stakeholders. PHAC's [Immunization Partnership Fund](#)^{lxiii} invested in 100 organizations across Canada that aimed to reduce childhood and adult vaccine hesitancy, mitigate barriers to vaccine access and increase vaccine uptake through targeted initiatives at the local, regional, and national level. This included dozens of targeted investments to bolster COVID-19 vaccine confidence, supporting at-risk populations. Continued engagement with more than 200 stakeholder organizations through expert roundtable discussions, multi-lateral networks and bilateral meetings and program outreach has contributed to Canada leading G7 countries with the highest COVID-19 vaccination coverage rates.^{lxiv}

Using data from the [2021 Canadian Community Health Survey](#),^{lxv} PHAC assessed inequalities in COVID-19 vaccine uptake and intent at the national level through the identification of sociodemographic factors associated with non-vaccination and low vaccination rates. This information contributed to the development of PHAC's monthly Vaccine Confidence InfoBulletins, which were distributed to over 700 public health professional stakeholders to counter misinformation and disinformation. Stakeholders included organizations with significant reach to mobilize healthcare providers in promoting vaccine uptake among hesitant populations.

PHAC also collaborated with stakeholders such as CANVax and the National Collaborating Centre for Infectious Diseases to deliver timely and informative webinars and information sessions to healthcare

providers across Canada. Training was delivered on the effective management of immunization programs, recommendations from the National Advisory Committee on Immunization (NACI), and the authorization of new vaccine products based on new and emerging science (e.g., real-world evidence) on COVID-19 and the evolution of COVID-19 vaccines. PHAC also published the third edition of [Federal, Provincial, and Territorial Public Health Response Plan for Ongoing Management of COVID-19](#)^{lxvi} which supported continued collaboration with key stakeholders—including other government departments, provinces, territories, and Indigenous communities and non-governmental organizations—on future planning to increase vaccination rates, confidence and public trust.

PHAC also convened national and international partners and industry stakeholders for five summits, including over 50 bilateral engagements and numerous other exchanges for sharing best practices and lessons learned on the COVID-19 vaccine rollout. As a result, PHAC hopes to drive improvements and enhanced collaboration across jurisdictions by fostering continued vaccine uptake, particularly in the areas of boosters and pediatric vaccination.

As of March 20, 2022, provincial and territorial data indicated that over 81.2% of the total population received their full primary series of a COVID-19 vaccine. Age-specific vaccine coverage data showed that over 88% of people 12 years or older had at least one dose, 45.9% had received an additional dose (i.e., third dose, booster dose) and 57% of children between five to 11 years of age had at least one dose.

To reduce the risk of severe illness that could potentially arise from co-infection with SARS-CoV-2 and seasonal influenza, PHAC secured the purchase of 320,000 Fluzone® High Dose Quadrivalent influenza vaccines. These vaccines are intended to help protect Canada's most vulnerable populations, while promoting equitable allocation in collaboration with Indigenous Services Canada, provinces and territories.

Did You Know?

In an effort to inform the Canadian population and increase accessibility, NACI released 24 technical vaccine guidance statements and statement updates in 2021-22 to support Canada's COVID-19 vaccine rollout. Each statement included a plain-language summary to improve accessibility.

Ensuring access to COVID-19 vaccines

Ongoing cooperation with other government departments and provincial and territorial partners enabled the successful procurement of more than 120 million doses of COVID-19 vaccines. As of March 20, 2022, PHAC had distributed more than 96 million doses to provincial and territorial immunization programs.

Following regulatory approval in October 2021, Canada began providing pediatric COVID-19 vaccine doses to provinces and territories to support the vaccination of children aged 5-11 years old. In response to the emergence of Omicron, a variant of concern circulating in December 2021, PHAC accelerated the delivery of mRNA vaccines to ensure sufficient supply was available to support jurisdictional booster campaigns.

Canada also donated over 14.2 million surplus doses of COVID-19 vaccines through the COVID-19 Vaccine Global Access (COVAX) facility, a worldwide initiative aimed at equitable access to COVID-19

vaccines. Moreover, through bilateral agreements with countries in Latin America and the Caribbean, Canada donated an additional 762,080 doses of COVID-19 vaccines.

Monitoring adverse events following immunization

Building on Canada's vaccine safety monitoring system, PHAC expanded activities to [monitor](#)^{lxvii} and communicate to Canadians on common and less serious adverse events associated with the safety of COVID-19 vaccines. Based on data collected, of the 43,105 individual reports or 0.053% of doses administered in Canada, 8,925 were considered serious, representing 0.011% of all doses administered. These findings were published by PHAC's Centre for Immunization Surveillance through [weekly reports on Vaccine Safety](#)^{lxviii} and the data contributed to Health Canada's [publicly accessible on-line database on Vaccine Vigilance Adverse reactions](#).^{lxix}

To build national causality assessment capacity and provide additional support to provinces and territories, PHAC also re-established the Advisory Committee on Causality Assessment. This complemented the causality assessment activities undertaken by Health Canada and vaccine manufacturers. The Advisory Committee selected Thrombosis and Thrombocytopenia Syndrome on Causality Assessment as the first adverse events to review following immunization.


On June 1, 2021, in collaboration with provinces and territories, PHAC launched a pan-Canadian no-fault [Vaccine Injury Support Program](#)^{lxx} for all vaccines approved by Health Canada. The program is administered independently by a third party through a funding agreement with PHAC. It provides all individuals in Canada with access to fair and timely financial support in the rare instance that they experience a serious and permanent injury from a Health Canada authorized vaccine administered in Canada on or after December 8, 2020. PHAC and the Government of Québec finalized a contribution agreement to fund the ongoing administration of its existing provincial program in March 2022. The Vaccine Injury Support Program brings Canada in line with its G7 counterparts who have similar programs and ensures that Canada remains competitive in accessing new vaccines as they become available.

Expanding COVID-19 monitoring and guidance

Did You Know?

To protect the health and well-being of Canadians, PHAC worked with several organizations to research possible transmission of COVID-19 among wildlife, farm animals, pets, and humans. It was discovered that while animal-to-human transmission of COVID-19 is possible, the likelihood of it occurring is very low. Details on this important research and how it informed federal responses to the pandemic can be found on PHAC's Animals and COVID-19 [webpage](#).^{lxxi}

PHAC continued to lead Canada's public health response to COVID-19 by working with other government departments, provinces, territories, and frontline healthcare organizations to monitor COVID-19 transmission, severity and changes in epidemiology to identify trends (e.g., geographic and demographic impacts of COVID-19), emerging issues (e.g., variants of concern) and analyze the effectiveness of public health measures, such as masks.



Data was used to inform the ongoing public health response, including the development of federal public health guidance, policies and national vaccination recommendations. This data supported PHAC in assisting provinces and territories in combatting COVID-19 and mitigating severe health impacts of the pandemic on Canadians. In 2021-22, PHAC:

- Led the expansion of the [Canadian Nosocomial Infection Surveillance Program](#)^{lxxii} to monitor patients admitted to hospitals with COVID-19, including those who contracted COVID-19 in hospital settings. This facilitated the provision of guidance, improved knowledge and understanding of COVID-19 transmission and severity, and the identification of risk factors and possible outcomes among patients;
- Developed web pages to provide crucial information to the public, including daily, weekly and monthly updates on COVID-19, with PHAC's [COVID-19 epidemiology update](#)^{lxxiii} web page gathering over 8.2 million views since March 2020;
- Continued work to strengthen Canada's global public health surveillance, including the launch of an independent review of PHAC's GPHIN to support improved identification of international public health threats that could pose risks to Canada;
- Conducted research and analysis to model possible COVID-19 trajectories and potential outcomes of different public health measures, such as the strengthening or relaxing of social distancing rules and masking; and
- Invested \$53 million in new funding to develop a Variants of Concern Strategy to help improve the federal government's capacity to identify and monitor COVID-19 variants of concern.

PHAC's National Microbiology Laboratory (NML) played an integral role in Canada's response to the pandemic. Its mathematical modelling was utilized to help predict the course of the pandemic, inform policy decisions and monitor the impact of public health measures. Since the onset of the pandemic, the NML conducted over 190 modelling studies, with 80 studies conducted in 2021-22. These studies integrated data on cases, deaths, vaccine doses administered, social vulnerability, and hospitalizations to support decision making around public health interventions. The NML provided 17 modelling reports that captured detailed outputs and unique analysis using insights to federal, provincial, territorial and academic stakeholders to support their decision-making. These reports were also available through the National Collaborating Centre for Infectious Diseases' [website](#).^{lxxiv} PHAC's modelling was included in 10 public epidemiology and modelling presentations by the Chief Public Health Officer during 2021-22.

Wastewater monitoring to determine levels of COVID-19 virus in the community was an important means of tracking the virus' spread. This work was expanded to better support communities in preventing the spread of COVID-19. Wastewater surveillance was expanded to include eight provinces and two territories, covering 60% of the Canadian public with up to 64 unique sites serviced in a month by March 2022. The NML continued to support the expansion of wastewater surveillance with the help of other government departments, provinces, territories and academia.

Did You Know?

The [COVID-19 Virtual Library of Health Data and Evidence](#)^{lxxv} provides centralized access to Canadians on a searchable collection of 149 links to knowledge products, data and evidence on the impacts of COVID-19 on priority populations,¹⁴ on health care systems¹⁵ and on wider health issues.¹⁶

Advancing COVID-19 research and testing support

PHAC's ability to conduct research and provide COVID-19 testing support was central to advancing the Agency's understanding of COVID-19 and variants of concern. In 2021-22, the NML completed 160 research activities and authored 68 scientific publications on a variety of COVID-19-related topics including:

- [Assessing the effectiveness of mRNA vaccines to variants of concern in older Canadians, health care workers, patients with immune-mediated inflammatory diseases and the general population](#),^{lxxvi}
- [Assessing point-of-care and rapid testing for the purposes of vaccine efficacy monitoring](#),^{lxxvii}
- [Comparing the infectivity and transmission of COVID-19 in children and adults](#),^{lxxviii} and
- [Assessing aerosol concentrations of SARS-CoV-2 in hospitals and long-term care homes](#).^{lxxix}

In collaboration with the [Canadian Public Health Laboratory Network](#)^{lxxx} (CPHLN), PHAC provided leadership, expertise, and coordination in developing seven new national laboratory guidance publications, including [practical guidance for clinical laboratories using serology testing](#)^{lxxxii} and [specific guidance on the use of a rapid antigen test](#).^{lxxxii} Agency scientists reviewed over 300 abstracts and clinical trial summaries to identify emerging therapeutics and inform decision makers of evolving therapeutics and potential future procurement opportunities, resulting in the successful procurement of eight therapeutics, capable of providing approximately 2.6 million treatments to Canadians.

PHAC also distributed over 240 million rapid tests, administered urgent and required rapid testing, and committed nearly \$2 billion to bulk procurement efforts with the assistance of its federal health portfolio partners to provide better support to provincial and territorial partners. As a result, PHAC:

- Increased access to COVID-19 diagnostic testing for areas in greatest need by providing 2.4 million COVID-19 tests, 708 testing devices/instruments and training related to COVID-19 testing in 400 northern, remote and isolated communities since the onset of the pandemic;
- Facilitated 2,473,943 COVID-19 tests under the Canada Border Testing Program through the establishment and oversight of program-funded contractual agreements with 10 airports and three testing providers; and

¹⁴ Healthcare workers, racialized populations, First Nations, Inuit, and Métis populations.

¹⁵ Emergency Department visits, hospitalizations, long-term care, and home care.

¹⁶ Chronic conditions, mental health, and substance use.

- In partnership with Environment and Climate Change Canada, the Canadian Food Inspection Agency and the Department of Fisheries and Oceans Canada, PHAC's NML established the Federal Surge Laboratory Network which provided accredited COVID-19 testing across Canada in laboratories located in Vancouver, Lethbridge, Winnipeg, Guelph, Ottawa, and Moncton. This helped reduce turnaround times and prompt test results to support public health measures.
 - These laboratories also provided extra testing capacity to support provinces, territories, other government departments, travellers arriving to Canada and the emergence of the variants of concern (e.g., Delta and Omicron) which resulted in over 449,939 samples tested since its inception.

Providing guidance on public health measures

As COVID-19 continued to circulate in Canada and more people became vaccinated, public health measures guidance were adjusted to reflect the current situation in Canada as the pandemic evolved. The Minister of Health, the Chief Public Health Officer and other PHAC officials provided media briefings and promoted public outreach through ongoing public awareness campaigns on public health measures. PHAC's public health measures guidance considered the Canadian context and the best available scientific evidence and expert opinion. PHAC also:

- Developed four new public health measures guidance products¹⁷ for public health authorities, and various risk mitigation tools and many other awareness products for Canadians;
- Funded and collaborated in the development, ongoing maintenance, and promotion of the National Institute on Ageing's [My COVID-19 Visit Risk Decision Aid](#),^{lxxxiii} which helped Canadians in making informed decisions about gathering with others in a way that reduces their risks of spreading COVID-19 and other respiratory diseases;
- Continued monitoring, reviewing and synthesizing available information to inform technical guidance for the public;
- Monitored 31 different sources of COVID-19-related evidence, including:
 - Various email distribution lists related to COVID-19 evidence scans;
 - External evidence networks and organizations;
 - Guidance from domestic and international jurisdictions;
- Analyzed over 134,500 COVID-19 articles, including pre-print, peer-reviewed, and scientific commentaries to identify potentially relevant emerging evidence;

¹⁷ The four new public health measures guidance products developed include: [Summary of Evidence Supporting COVID-19 Public Health Measures](#), [Adjusting Public Health Measures in the context of COVID-19](#), [Planning for the 2021-20-22 School Year in the Context of COVID-19](#), and [Reducing COVID-19 Risk in Community Settings: A Tool for Operators](#).

- Reviewed and critically appraised over 576 articles and international guidance documents related to COVID-19 public health measures; and
- Provided timely and evidence-based guidance to Canadians on indoor ventilation in combination with individual public health measures to help prevent the spread of COVID-19—receiving 150,000 page views for infographics and informational videos hosted on PHAC’s COVID-19 webpage and over 14 million social media views to PHAC’s Ventilation Awareness advertising campaign between February and March 2022.

Through these activities, PHAC delivered evidence-based information, guidance and recommendations for the use of public health measures to reduce the risk of COVID-19 transmission (e.g., staying home when sick, wearing a well-fitting respirator or mask in public indoor settings, improving ventilation, etc.). Technical guidance for the public on public health measures were developed based on the best available evidence and assessed and updated when there were shifts in evidence as the COVID-19 pandemic evolved. PHAC reviewed these products through an equity lens to ensure that the guidance was relevant to all Canadians and integrated considerations for an accessibility, cultural relevance and socio-economic context.

Establishing the COVID-19 Proof of Vaccination Fund


PHAC developed and implemented a standardized Canadian COVID-19 Proof of Vaccination Credential issued by provinces and territories. This initiative required extensive federal, provincial, territorial and Indigenous engagement to help Canadians safely return to the activities and interactions they valued most. Building on this work, PHAC also established the COVID-19 Proof of Vaccination Fund to provide ongoing support to provincial and territorial COVID-19 proof of vaccination initiatives.

Increasing public knowledge and awareness of climate-driven infectious diseases

PHAC collaborated with other government departments and agencies to complete Phase I of Canada’s National Adaptation Strategy on Climate Change. Once complete, this Strategy aims to advance a shared vision and blueprint for whole of society action to help communities and residents better adapt to and prepare for the impacts of climate change. Phase I included the establishment of an expert advisory table and the development of a framework for the Strategy with a long-term transformational goal and medium-term objectives. This input informed a [draft discussion paper](#)^{lxxxiv} that is now available online as part of a broader public engagement process to inform the National Adaptation Strategy.

PHAC also supported the delivery of the [Pan-Canadian Framework on Clean Growth and Climate Change](#)^{lxxxv} for Canadians, by developing public education tools and resources (e.g., interactive risk maps, videos, and infographics) for health professionals, communities, and individuals in multiple languages to support accessibility. Resources included the February 2022 publication of the [Mosquito-borne diseases surveillance report: Annual edition \(2019 - Preliminary\)](#)^{lxxxvi} and a manuscript¹⁸ for the May 2022 issue of the Canada Communicable Disease Report. These resources and tools provided

¹⁸ An overview of the National West Nile Virus Surveillance System in Canada: A One Health Approach. D Todoric, L Vrbova, ME Mitri, S Gasmı, A Stewart, S Connors, H Zheng, A-C Bourgeois, M Drebot, J Paré, M Simmer, P Buck.



health professionals, communities and individuals with the information they need to understand the risks and take measures to protect their health from climate-driven infectious diseases.

Through the [Infectious Disease and Climate Change Fund](#),^{lxxxvii} PHAC provided over \$2.2 million and continued to invest in projects that address the impact of climate change on human health in Canada, such as a national poster contest for grade six students by the Canadian Public Health Association, a national baseline survey of tick-borne disease awareness by the Canadian Veterinary Association, videos and innovative content via the Climate Atlas of Canada, and the expansion of a citizen-science based app to all provinces and territories to support tick-borne disease surveillance as well as education and awareness on the eTick platform and mobile app.

PHAC also continued to provide funding for projects to identify gaps, programming needs, and future interventions to address the ill health effects of climate change on the Métis Nation through the Infectious Disease and Climate Change Fund.

Reducing the emergence and spread of antimicrobial resistance

Antimicrobial resistance threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses, and fungi. Addressing the drivers and the impact of antimicrobial resistance presents significant challenges both domestically and internationally.

Existing antimicrobial drugs are becoming less effective at treating infections, and drug-resistant strains are emerging. Without effective antimicrobial drugs, routine medical interventions such as surgeries, chemotherapy, and even treatments for common infections or minor injuries could become life-threatening.

Antimicrobial use is necessary; however, the overuse and misuse of these drugs in humans, animals, and crops is amplifying the threat of antimicrobial resistance. Compounding the issue, Canadians lack access to life-saving antimicrobials that are currently available in other countries and the global pipeline for the development of these critical drugs is facing challenges.

In 2021-22, PHAC supported efforts to reduce the emergence and spread of antimicrobial resistance by taking a [One Health Approach](#),^{lxxxviii} PHAC:

- Created a dedicated Antimicrobial Resistance Task Force, which serves to centralize key federal functions and drive progress on policies, programs, and actions to combat antimicrobial resistance both domestically and globally;
- Secured access to critical funding in Budget 2021 to expand monitoring activities in key areas including rural and remote hospitals, communities, animals, and the food chain to inform and contribute to preventing and controlling antimicrobial resistance and supporting the appropriate use of antimicrobials in Canada;
- Identified One Health antimicrobial resistance initiatives that prioritize equity and advance actions that will have the greatest impact;

- Published an integrated analysis of antimicrobial resistance and antimicrobial use in humans, animals, food and crops across Canada in the 2021 edition of the [Canadian Antimicrobial Resistance Surveillance System Report](#),^{lxxxix}
- Published [an interactive dashboard on antimicrobial use in Canada](#),^{xc} increasing access to information for Canadians on the quantities and types of antimicrobials dispensed by Canadian retail pharmacies;
- Collaborated with global partners on an ambitious international agenda to address the threat of antimicrobial resistance, including at the G7, G20 and other multilateral tables, such as the Quadripartite organizations (e.g., WHO, World Organisation for Animal Health, Food and Agriculture Organization of the United Nations, United Nations' Environment Programme) and the Transatlantic Taskforce on Antimicrobial Resistance; and
- Strengthened federal governance on antimicrobial resistance to coordinate action across federal institutions under a One Health approach.

Taking action to prevent Lyme disease

PHAC played a leadership role in preventing and detecting tick-borne diseases and coordinating national responses to inform the public about risks and protective measures. In 2021-22, PHAC's annual education and awareness campaign helped Canadians improve their awareness of Lyme disease and preventative actions to reduce their health risks. This campaign included:

- Social media posts and a digital advertising campaign targeting caregivers of children from five to 14 years old (e.g., Facebook, YouTube, search engine marketing, web banners); and
- A suite of [educational and awareness products](#)^{xcii} (e.g., "How to properly remove a tick" wallet card, "Top 10 Tick Hiding Spots on Your Body" poster, an Indigenous adaptation of printed and online products, and a series of videos on: "[How to properly remove a tick](#)"^{xciii} and "[How to reduce ticks around your home](#)").^{xciii}

Recognizing the importance of making tick bite prevention information accessible to Canadians, PHAC translated Lyme disease awareness resources to Arabic, Cantonese, Mandarin, Spanish, Italian, Punjabi, and Tagalog. PHAC also translated resources to the Indigenous dialects most commonly spoken in risk areas for Lyme disease: Mi'kmaq, Mohawk and Ojibwe.

PHAC provided monthly updates to the public with information about PHAC's tick-borne disease projects, programs, activities and engagement opportunities through its [Lyme and Other Tick-borne Diseases Email Subscription List](#).^{xciv} Currently there are almost 700 subscribers from across Canada and around the world. PHAC also optimized its web content to ensure that the Lyme disease information on the Canada.ca web portal offered users clear and easy to find information.

To inform future knowledge mobilization initiatives, Lyme and tick-borne diseases advertising campaigns, PHAC conducted a national survey in August 2021 with adults living in at-risk areas with a

focus on parents of children under 15 years of age, outdoor enthusiasts, people with occupational exposure, those living in rural areas and people with pets.

In 2021-22, PHAC published a [Lyme disease surveillance in Canada: Preliminary annual report 2019](#)^{xcv} and an [interactive map for Lyme disease risk areas](#).^{xcvi} PHAC also drafted two surveillance manuscripts¹⁹ ²⁰ for the May 2022 issue of the [Canada Communicable Disease Report Vector-Borne Infections-Part 1: Ticks & Mosquitoes](#).^{xcvii} This report provides timely, authoritative, and practical information on infectious diseases to clinicians, public health professionals and decision-makers to inform policy, program development and practice.

Reducing the health impacts of sexually transmitted and blood-borne infections

Sexually Transmitted and Blood-Borne Infections (STBBIs) are a significant public health concern in Canada. They can have sexual, reproductive, and maternal-child health consequences, including genital and extragenital symptoms, pregnancy complications, cancer, infertility, and psychosocial consequences. Certain STBBIs can also enhance the transmission of human immunodeficiency virus (HIV). However, with treatment, most STBBIs are curable or manageable. To combat the issue, PHAC has committed \$88.5 million annually to address STBBIs.


PHAC strengthened monitoring for STBBIs by coordinating a pan-Canadian approach to data collection and informing Canadians of six monitoring products that summarized epidemiological trends and Canada's progress towards eliminating STBBIs in 2021-22:

- [Report on sexually transmitted infection surveillance in Canada, 2019](#);^{xcviii}
- [Report on Hepatitis B and C Surveillance in Canada: 2019](#);^{xcix}
- [Hepatitis C in Canada: 2019 surveillance data](#);^c
- [Hepatitis B in Canada: 2019 surveillance data](#);^{ci}
- [Chlamydia, gonorrhoea and infectious syphilis in Canada, 2019 \(infographic\)](#);^{cii} and
- [Report on Hepatitis B and C in Canada: 2018](#).^{ciii}

PHAC's Centre for Communicable Disease and Infection Control published the [National Report "Findings from the survey on the impact of COVID-19 on the delivery of STBBI prevention, testing, treatment and harm reduction services in Canada"](#),^{civ} as well as an [infographic](#)^{cv} that presented findings generated from

¹⁹ Surveillance for Ixodes scapularis and Ixodes pacificus ticks and their associated pathogens in Canada, 2019. CH Wilson, S Gasmí, A-C Bourgeois, J Badcock, N Chahil, MA Kulkarni, M-K Lee, LR Lindsay, PA Leighton, MG Morshed, C Smolarchuk, JK Koffi.

²⁰ Surveillance for Lyme disease in Canada, 2009-2019. S Gasmí, JK Koffi, MP Nelder, C Russell, S Graham-Derham, L Lachance, B Adhikiari, J Badcock, S Baidoobonso, BA Billard, B Halfyar, S Jodoin, M Singal, A-C Bourgeois.



an online survey conducted among STBBI service providers, community-based organizations, and local public health units providing STBBI-related services.

Reducing the stigma around STBBIs is an important aspect in combatting their spread. To promote inclusion and fight stigma, PHAC prioritized projects committed to providing services in a culturally safe environment that included plans to integrate people with lived experience and key populations throughout the life-cycle of the project. A funding opportunity supported by PHAC's HIV and Hepatitis C Community Action Fund and Harm Reduction Fund recommended 173 project proposals in 2021-22 with funding set to begin in 2022. New evidence generated through these projects informed the development and updating of guidance products (e.g., [Sexually Transmitted and Blood-Borne Infections: Guides for Health Professionals](#)).^{cvi}

In collaboration with the University of British Columbia's Division of Continuing Professional Development, PHAC developed an engaging and accessible online course for public health professionals to increase their knowledge of STBBI barriers to care and screening options. This course received recognition as an accredited learning option for training public health professionals in providing safe and culturally responsive STBBI services.

To reduce blood-borne infections, PHAC collaborated with provinces and territories to monitor adverse events related to the transfusion of blood components and blood products. This work helped identify potential areas for improvement in the transfusion chain and improve transfusion safety in Canada. In 2021-22, PHAC enhanced capacity by:


- Identifying and assessing the risks associated with the use of blood, blood products or transplantation of cells, tissues and organs;
- Surveying and assessing populations at greater risk; and
- Developing mitigation strategies for risks associated with the use of blood, blood products, or transplantation of cells, tissues and organs.

Result 2.2: Infectious disease outbreaks and threats are prepared for and responded to effectively

Leading the COVID-19 vaccine rollout

PHAC worked with federal, provincial, territorial governments and Indigenous communities to coordinate the rollout of COVID-19 vaccines to ensure that Canadians had timely access to COVID-19 vaccines when they needed them the most.

To better manage nationwide vaccination administration programs and the rollout of COVID-19 vaccines, PHAC purchased an information technology (IT) system called [VaccineConnect](#). This allowed PHAC to work with pre-existing provincial and territorial IT systems and processes to enhance planning, managing and reporting. The system also provided analytics to enhance population health management, a function that will help public health decision makers in Canada plan for future epidemics and pandemics early on.



In an effort to protect Canadians against COVID-19, PHAC worked with Public Services and Procurement Canada to procure enough doses of COVID-19 vaccines in Canada for all eligible individuals to receive a full primary series of COVID-19 vaccines, and encouraged those who hadn't been vaccinated to do so. PHAC also ensured the availability of COVID-19 vaccines for use in provincial and territorial pediatric and booster campaigns as eligibility expanded throughout 2021-2022.

PHAC continued to manage Canada's COVID-19 vaccine supply strategically based on the:

- Most recent scientific data, including regulatory decisions and guidance from the NACI;
- Needs of provinces and territories, who are responsible for vaccine administration programs; and
- Identification of surplus doses that could be offered for international donations.

This approach ensured we had sufficient vaccine supply for Canadians to stay up-to-date on their vaccines.


PHAC also supported the ongoing implementation of Canada's [Biomufacturing and Life Sciences Strategy](#)^{cvii} to maximize Canada's preparedness for future pandemics and other health emergencies by providing public health expertise and establishing long-term access to domestic pandemic vaccine supply. PHAC also effectively negotiated pandemic vaccine preparedness contracts with current domestic vaccine manufacturers.

Leading the COVID-19 Immunity Task Force

PHAC's [COVID-19 Immunity Task Force](#),^{cviii} a group comprised of leading scientists and experts from universities and healthcare facilities across Canada, mobilized a comprehensive suite of studies to measure the level of potential underlying immunity to COVID-19 in the population through the investment of \$175 million in 113 research studies. The Task Force also increased its focus on vulnerable populations and select occupational groups to measure potential immunity among these groups. Using an integrated dashboard and data platform for SARS-CoV-2, PHAC conducted a systematic review to track serosurveys (i.e., antibody testing-based monitoring). This allowed the Agency to identify the degree and duration of immunity following infection with SARS-CoV-2 and the safety and effectiveness of COVID-19 vaccines in various sub-populations.

These insights enriched scientific research efforts and contributed to the publication of 149 papers, including pre-prints. Findings also helped to inform evidence-based decision-making at all levels of government and continued to generate insights in priority areas such as seroprevalence, immune science, immune testing, vaccine monitoring, boosters, pediatric vaccination and immunity synthesis.

Scientists from PHAC's NML also supported the COVID-19 Immunity Task Force by providing leadership and specialized technical expertise. For example, the NML contributed diagnostics and research to increase our understanding of immunity in certain populations, such as long-term care workers and immunocompromised patients, as well as the transmission of COVID-19 and Canadians' responsiveness to COVID-19 vaccines. The COVID-19 Immunity Task Force also made use of the dried blood spot sample



collection, pioneered by PHAC's NML for other infectious disease testing and for the [Canadian COVID-19 Antibody and Health Survey](#).^{cix} These samples were analyzed by the NML and results and information about the antibody testing conducted were returned to participants.

Enhancing laboratory capacity and laboratory modernization

As Canada's leading public health laboratory, PHAC's NML continued to enhance laboratory capacity and modernization with the goal of improving national access to infectious disease diagnosis and treatment.

Genome sequencing has served as a critical tool in the fight against infectious diseases for many years. It has continued to be leveraged in Canada's pandemic response, allowing the Agency to identify COVID-19 variants. This activity has contributed to a better understanding of the virus to support decision-making related to the use of public health measures. In 2021-22, PHAC's NML leveraged existing programming to expand capacity to allow for the genomic sequencing of over 313,000 COVID-19 specimens across Canada. This was facilitated by the [Canadian Public Health Laboratory Network COVID-19 Genomics Program](#), which placed Genomics Liaison Technical officers in nine provincial public health laboratories and provided training and quality management processes to ensure a consistent basis for national and inter-jurisdictional comparisons.


PHAC commissioned work in the NML to strengthen capacity for the development of pre-clinical medical countermeasures for COVID-19 and prepare Canada for emerging novel or orphan pathogens. This work consisted of new activities and augmentation of pre-existing activities within NML. It focused on research, the development of vaccines and therapeutics, the management of animal colonies for laboratory research and testing purposes, and the expansion of scientific and support operations. Expanded laboratory infrastructure also increases opportunities to pursue strategic partnerships with academia and industry partners, facilitating a more integrated approach to pandemic response efforts. In addition, the NML provided expertise to support initiatives that identified and mitigated public health risks related to travel.

Scientists from PHAC's NML maintained capacity and expertise for preparedness and response to emerging threats such as pandemic influenza viruses during the COVID-19 response effort. For instance, the NML supported the response to the influenza H5N1 (clade 2.3.4.4B) outbreak in birds in Canada by providing testing expertise and reference materials to public health partners.

Making safe voluntary isolation sites available to at-risk populations

Crowded housing or lodging conditions for families or workers can make it unsafe or impossible for them to self-isolate, potentially putting themselves, their families and communities at risk. To reduce the spread of COVID-19 and its variants, PHAC provided over \$181 million in funding to municipal, provincial, and territorial health partners to support the establishment and operation of 63 safe voluntary isolation sites in 50 communities across Canada through its [Safe Voluntary Isolation Sites Program](#). In 2021-22, two of these sites focused exclusively on temporary foreign agricultural workers – one in Ontario and one in British Columbia.

Since December 2020, over 20,000 people in Canada have accessed safe voluntary isolation sites. Many of the sites were located in hot-spots and areas with populations disproportionately impacted by COVID-



19, such as people with lower-incomes, those living in crowded or multi-generational housing and Black, Indigenous or racialized Canadians. Approximately 70% of the individuals who accessed these sites were visible minorities, about 85% had incomes below \$50,000 year, and about 66% were under the age of 40.


Reducing the impact of foodborne illness outbreaks

PHAC analyzed foodborne illness trends to support the development of food safety policies for the long-term prevention of foodborne illnesses and outbreaks. In 2021-22, PHAC:

- Led the response for six multi-jurisdictional enteric illness outbreaks, which included conducting 102 interviews with affected individuals in order to gather information about the source of the outbreak. PHAC's efforts led to the identification of four outbreak sources and contributed to multiple product recalls from the Canadian marketplace and consumer's homes, eliminating the risk of additional illnesses;
- Published several public health notices, an online update and various messages via social media channels to provide Canadians with timely information about multi-jurisdictional enteric illness outbreaks under investigation and provided guidance on how to prevent foodborne illness;
- Assessed signals for 262 instances of enteric illness to determine if additional investigation was required;
- Provided technical expertise and support to provincial and territorial public health partners for five foodborne illness outbreak investigations in single jurisdictions;
- Published two infographics on [How you can help solve a national foodborne illness outbreak investigation](#)^{cx} and [Key steps to help reduce zoonotic disease transmission from rodents](#)^{cx} to inform Canadians how they can help prevent enteric illnesses; and
- Generated foodborne illness surveillance data to support the detection and response to foodborne illness clusters and outbreaks and the development of food safety policies.

Reducing cases of tuberculosis in Canada

Addressing the high rates of tuberculosis (TB) within affected communities as well as those factors that contribute to the spread of the disease is a priority for PHAC. The Agency increased coordination of TB monitoring to identify potential underlying risk factors that influence transmission and progression (e.g., from latent TB infection to active TB disease) and contributed to addressing the social determinants of health related to it (i.e., poverty, housing overcrowding, poor ventilation, and homelessness). This helped to identify populations most affected by TB, which informed complementary programs supported by the Agency and by other jurisdictions, such as the Inuit TB Elimination Framework.




It also supported the Canadian Thoracic Society in publishing the 8th edition of [Canadian Tuberculosis Standards](#),^{cxi} an important resource for health-care professionals to guide decision-making related to TB screening and management.

Sex and Gender-based Analysis Plus (SGBA Plus)

The Agency continued to advance efforts to include an SGBA Plus lens in programs, projects, and initiatives under Core Responsibility 2. For example, PHAC:

- Integrated age group, sex, and the quantity of vaccines received in its COVID-19 vaccination coverage monitoring and made this disaggregated data publicly available;
- Used vaccination coverage surveys to complement provincial and territorial data and provided in-depth information on sociodemographic characteristics, such as:
 - age
 - sex and gender
 - ethnicity
 - Indigenous status
 - rural versus urban settings
 - country of birth
 - years spent in Canada
 - education
 - income
 - presence of disability and/or chronic condition(s)
 - vaccination status
 - barriers and facilitators to vaccination
 - reasons for not having been vaccinated
 - knowledge, attitudes and beliefs about COVID-19 vaccines, flu vaccine, and routine vaccines among various populations such as children, adults, and pregnant people;
- Enhanced COVID-19 monitoring of case reports to include key SGBA Plus data such as sex, gender, occupation, and race;
- Encouraged public health authorities to recognize the needs, risks and barriers experienced by certain populations when developing COVID-19 public health measures and recommendations. For example, some priority populations may have difficulty accessing health care services, could be disproportionately or negatively impacted by quarantine and isolation requirements, or may have challenges following recommended public health measures (e.g., practicing proper hand hygiene in settings that lack access to running or clean water, or adequately separating a sick individual in settings with overcrowding or housing shortages);
- Improved the data collection of several foodborne disease monitoring programs to collect sex, age, and geographic location; and
- Integrated SGBA Plus principles in the development of policy documents.



For vaccine safety (i.e., reporting of adverse events following immunization), PHAC updated its reporting tool to include additional fields for data collection on race/ethnicity and Indigenous status of reported cases, as applicable. As of October 27, 2021, 48% of current routine monitoring and epidemiological products developed included at least one key SGBA Plus diversity factor, while 33% included at least two. The analysis of sex, age, and other identifying factors contributed to informed program responses and improvements with monitoring to ensure equity in addressing issues of variable risk factors among various groups.

United Nations' (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals (SDGs)

PHAC's Core Responsibility 2 contributed to SDG 3: Good Health and Well-being in the following ways:

- Led the efforts of eight federal departments in contributing Government of Canada input to the UNAIDS's [Global AIDS Monitoring](#)^{cxiii} 2022 guidance document;
- Addressed barriers to COVID-19 vaccination by engaging vulnerable groups to increase their knowledge and understanding of the importance of vaccine uptake and sharing excess COVID-19 vaccines through COVAX;
- Shared best practices and lessons learned related to STBBIs with public health representatives from Australia and the United States during bilateral meetings that aimed to identify greater opportunities for collaboration on STBBIs;
- Provided timely, evidence-based public health measures' guidance and advice for preventing and reducing COVID-19 transmission; and
- Increased the capacity of public health professionals to respond to the rising demands posed by climate-driven infectious diseases by providing them with the information needed to advise patients on preventing infections and reducing associated risks.

Experimentation

For information on PHAC's innovative approach to wastewater surveillance, please refer to Result 2.1, sub-header: [Expand COVID-19 surveillance and guidance](#).

For information on PHAC's experimentation in genomic sequencing, please refer to Result 2.1, sub-header: [Enhance laboratory capacity and laboratory modernization](#).

In collaboration with Innovation, Science, and Economic Development Canada, PHAC continued developing and implementing the [Canadian Immunization Guide's interactive portal](#). This tool provides healthcare providers and Canadians with immediate access to relevant and trustworthy public health information about new and pre-existing Health Canada approved vaccines.

PHAC's [Canadian Integrated Program for Antimicrobial Resistance Surveillance](#) experimented using innovative methods to disseminate, modernize, and optimize data. In 2021-22, the program developed visuals and dashboards to report on antimicrobial resistance and antimicrobial use, which were viewed favorably by a number of stakeholders.

Results achieved²¹

The following table shows the results achieved, performance indicators, targets and the target dates for 2021–22 for Infectious Disease Control and Prevention. This table also includes the actual results for the three most recent fiscal years for which actual results are available.

Departmental results	Performance indicators	Target	Date to achieve target	2019-20 Actual results	2020-21 Actual results	2021-22 Actual results
Infectious diseases are prevented and controlled	% of 2 year old children who have received all recommended vaccinations	At least 95%	Dec. 31, 2025	68%	Data is collected bi-annually	68%
	Proportion of national vaccination coverage goals met for children by 2 years of age	Exactly 7 ²²	Dec. 31, 2025	0/7	Data is collected bi-annually	Expected date of data availability is 2023
	Rate per 100,000 of new diagnosed cases of Human Immunodeficiency Virus (HIV) ²³	0.6 Cases per 100,000 population	Dec. 31, 2030	6.9 Cases per 100,000 (2018)	5.6 Cases per 100,000 (2019)	4.3 cases per 100,000 (2020)

²¹ The Departmental Results process requires indicators to be established two years in advance of the reporting cycle. The indicators in this report were established in 2019-20, prior to the COVID-19 outbreak. As a result, performance indicators specific to COVID-19 have not been included. The Departmental Results Framework is meant to be enduring and so COVID-19 indicators may ultimately not be included, similar to previous health crises such as SARS, Ebola and H1N1.

²² In 2019-20, the number of national vaccination coverage goals changed from 12 to 7.

²³ In Canada, health and health care are the responsibility of provincial/territorial governments, and other partners, including different levels of government, hospitals, and non-government organizations. As a result, the lowering of this rate is a shared, common goal among all stakeholders.

	Rate of a key antimicrobial resistant infection identified among people in hospitals	At most 0.7 cases per 1,000 patient admissions ^{24,25}	Jun. 30, 2025	0.82 Cases per 1,000 patient admissions (2019)	0.83 Cases per 1,000 patient admissions (2020)	0.83 Cases per 1,000 admissions (2020) ²⁶
Infectious disease outbreaks and threats are prepared for and responded to effectively	% of foodborne illness outbreaks responded to within 24 hours of notification	At least 90%	Mar. 31, 2022	98%	93%	97%
	% of new pathogens of international concern that Canada has the capacity to accurately test for	At least 90%	Mar. 31, 2022	100% (2019)	100% (2020)	100% (2021)

Budgetary financial resources (dollars)

The following table shows, for Infectious Disease Control and Prevention, budgetary spending for 2021–22, as well as actual spending for that year.

2021-22 Main Estimates	2021-22 Planned spending	2021-22 Total authorities available for use	2021-22 Actual spending (authorities used)	2021-22 Difference (Actual spending minus Planned spending)
6,028,125,406	6,027,645,406	13,398,387,866	6,863,543,133	835,897,727

Actual spending is greater than planned spending primarily due to the procurement of COVID-19 rapid tests and therapeutics for which the Agency received funding over the course of the fiscal year.

²⁴ A target of "at most 0.7 per 1,000 patient admissions" is meant to be an upper limit target based on observed fluctuations in the rate over time.

²⁵ As of 2018, data for this indicator will no longer be used due to a change in methodology. Based on World Health Organization/Global Antimicrobial Resistance Surveillance System requirements, in 2018, the Canadian Nosocomial Infection Surveillance Program (CNISP), has started to collect data only on methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections and not on all (total) MRSA infections (as reported above), which included blood and non-blood infections such as skin/soft tissue, respiratory, etc. For 2020-21 the target will be at most 0.7 cases per 1,000 patient admissions.

²⁶ Rate information is obtained from CNISP, which collects data related to healthcare-associated infections including antimicrobial resistant organisms from Canadian acute-care hospitals. There were no 2021-22 results available. The results from 2020 were the most recent available results in 2021-22 and will be used until new data for 2021-22 is made available.

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the department needed to fulfill this core responsibility for 2021–22.

2021-22 Planned full-time equivalents	2021-22 Actual full-time equivalents	2021-22 Difference (Actual full-time equivalents minus Planned full-time equivalents)
2,134	1697	(437)

Variance explanation can be found under the [Actual Human Resources](#) section.

Financial, human resources and performance information for the Public Health Agency of Canada's Program Inventory is available in [GC InfoBase](#).^{cxiv}



3. HEALTH SECURITY

Description

Prepare for and respond to public health events and emergencies (e.g., floods, forest fires, and outbreaks such as COVID-19); address health and safety risks associated with the use of pathogens and toxins; and address travel-related public health risks.

Results

The Departmental Results are:

- ❖ Public health events and emergencies are prepared for and responded to effectively;
- ❖ Public health risks associated with the use of pathogens and toxins are reduced; and
- ❖ Public health risks associated with travel are reduced.

Result 3.1: Public health events and emergencies are prepared for and responded to effectively

Strengthening PHAC's surge support role

Canada's readiness to respond to natural, accidental, and intentional emergencies and events with health consequences, such as the COVID-19 pandemic, is core to PHAC's mandate. In 2021-22, PHAC continued to work collaboratively with other government departments, provinces, territories, Indigenous communities, international partners and other domestic stakeholders to mitigate the impact of public health events and emergencies on Canadians. For example, PHAC continued to maintain and deploy urgently needed medical health supplies (e.g., personal protective equipment), medical equipment (e.g., ventilators), and medical countermeasures for chemical, biological, radiological, and nuclear threats via its [National Emergency Strategic Stockpile](#)^{cxv} (NESS) in response to requests for assistance from provinces and territories.

While continuing to respond to requests for assistance, PHAC continued to implement incremental improvements to the NESS. These included improving its inventory management system and establishing capacity to undertake robust quality assurance processes to ensure that medical supplies and equipment distributed by PHAC were safe and effective.

PHAC committed to addressing the recommendations from the [Office of the Auditor General Report 10: Securing Personal Protective Equipment and Medical Devices](#). Analysis is underway for the development of a comprehensive management plan for the National Emergency Strategic Stockpile within one year following the end of the pandemic. The comprehensive management plan will focus on:

- Strengthening governance;
- Optimizing life cycle materiel management;
- Enhancing infrastructure and systems; and

- Working closely with provinces, territories, and other key stakeholders to define public health needs and clarify roles and responsibilities.

Bolstering emergency management operations

PHAC worked with provinces and territories to support a coordinated response to COVID-19 resurgences and provided emergency management governance support (e.g., COVID Incident Management Structure). It also provided operational communications and guidance to stakeholders through sustained activation of the Agency's COVID-19 incident management governance structure.

In addition to continuing to adapt and support the sustained COVID-19 response effort, the Health Portfolio Operations Centres also coordinated responses to other public health events and emergencies. Actions included:

- Activation of a full incident management structure to respond to the Russian invasion of Ukraine as the Health Portfolio contribution to a whole of government response to a complex international emergency with potential public health impacts to Canadians; and
- Activation of an emergency response cell to coordinate Health Portfolio contributions to cyclical events such as the 2021 British Columbia floods, and the 2021 British Columbia and Ontario forest fires.

PHAC also invested in emergency management operations and the development of a sustainable support structure to enable a scalable, timely, and coordinated response to the COVID-19 pandemic, as well as future emergency events with health consequences. PHAC:


- Strengthened the Health Portfolio Operations Centre's surge capacity to mobilize resources for emergency response efforts; and
- Developed a robust mechanism to capture lessons learned and implemented corrective actions to address areas in need of improvement.

Improving public health intelligence capacity

PHAC remained committed to scientific excellence by continuously adapting its processes to enable effective responses to emerging public health issues. For example, PHAC established a dedicated team to address the recommendations in the [final report](#)^{cxvi} from the independent review of GPHIN and developed an action plan. Using lessons learned, PHAC committed to reviewing its processes, identifying improvements, and clarifying and streamlining the decision-making process for the issuance of GPHIN products, including alerts.

Providing expert advice and support to combat disease outbreaks and emergencies

In 2021-22, PHAC provided ongoing expert advice and support to public health partners through the placement of over 30 Public Health Officers in public health organizations throughout the country to support Canada's COVID-19 response efforts, substance-related harm responses, and to work on other



important public health files. In addition, in response to 13 provincial and territorial requests for assistance (nine related to COVID-19), PHAC deployed 16 epidemiologists to provide short-term surge capacity to Saskatchewan, Ontario, Québec, New Brunswick, Newfoundland and the Northwest Territories. This surge capacity enabled provinces and territories to be more responsive to ongoing and emerging public health events.

PHAC also provided multi-faceted training to enhance capacity among its employees as well as public health professionals to enable them to combat COVID-19 and other disease outbreaks. Training was provided to over 900 public health professionals in support of COVID-19 response efforts across Canada and included blended virtual courses in outbreak investigation, public health surveillance, vaccinology, applied learning on 2SLGBTQI+ epidemiology, and analytical software for applied public health action.

To address learning needs stemming from rapid hiring in the pandemic context, and to build the Agency's internal capacity to leverage emergency management concepts, 150 PHAC employees completed online foundational Emergency Management training and more than 300 participants attended redesigned Incident Management Systems training in a live virtual environment. Outside of the Agency, over 11,000 Canadians completed newly released free online learning modules to become contact tracers.

Building a robust emergency preparedness and response program

While emergencies tend to raise awareness about the significance of adequate preparation, PHAC's emergency preparedness activities operate largely in the background until such an event occurs. Recognizing the importance of upstream readiness, PHAC made efforts over the past year to advance its preparedness for future events by initiating work to update key emergency management plans. Up-to-date emergency management plans identify clear roles, responsibilities, and processes to enable an effective response to an emergency to better protect Canadians. This work supports commitments made in response to the [2021 Report of the Auditor General of Canada on Pandemic Preparedness, Surveillance, and Border Control Measures](#) to update key emergency plans within two years of the end of the pandemic.

Emergency exercises were also an effective means to prepare employees for future events by helping them develop a deeper understanding of key activities of an emergency response. In October 2021, PHAC engaged over 500 participants from across the Government of Canada to work together in a large-scale exercise simulating a nuclear scenario. Employees reported that the exercise increased their knowledge on what to do during a potential nuclear emergency.

The Agency also supported Elections Canada as millions of voters headed to the polls in fall 2021 to vote in the first federal election during the COVID-19 pandemic. PHAC provided public health guidance that Elections Canada incorporated into their election planning to help keep voters safe.

Leading the Pan-Canadian Health Data Strategy

PHAC recognizes that reliable, timely, and relevant data is crucial to help officials provide their best advice in public health emergencies, and to improve health outcomes for Canadians in the short, medium and long-term.

In collaboration with provinces, territories, stakeholders, and Indigenous groups, PHAC led the co-development of a [Pan-Canadian Health Data Strategy](#)^{cxvii} to identify and address systemic barriers that limit the ability to collect, share, access and use data (e.g., lack of interoperable health data systems, antiquated health data policies, lack of trust, unclear accountabilities). The strategy was informed by the advice of an Expert Advisory Group that published three [reports](#)^{cxviii} and through engagement with targeted stakeholders.

Result 3.2: Public health risks associated with the use of pathogens and toxins are reduced

Promoting compliance and increase openness and transparency

PHAC actively supported compliance with the [Human Pathogens and Toxins Act](#) by regulated parties, by publishing scientific, technical, and regulatory information and guidance. It developed a variety of activities, training and guidance to promote awareness. To this end, PHAC:

- Developed and delivered innovative and risk-based training and educational resources for external stakeholders to promote compliance with the *Human Pathogens and Toxins Act*; and
- Developed and delivered two webinars in 2021-22: “What is New From the Centre for Biosecurity” (464 participants); and “Effective Management of Dual Use in Life Science Research” (264 participants), in addition to the Safeguarding Science series of webinars which consisted of 19 webinars organized for 19 individual institutions.

The results of the recent [Evaluation of the Human Pathogens and Toxins Act and Regulations Framework](#) underscores the importance of PHAC’s activities in this area, having found that PHAC’s activities have led to a decrease in the risk of accidental or deliberate release of pathogens and toxins.

PHAC has also increased openness and transparency in its approach to increasing compliance by releasing a greater number of publications, including:

- [Scientific Research Policy for Human Pathogens and Toxins](#),^{cxix} which provides guidance on the definition of scientific research to clarify when a [Plan for Administrative Oversight](#)^{cxx} is required for regulated parties under *Human Pathogens and Toxins Regulations*. This guidance is expected to reduce the number of unnecessary Plan for Administrative Oversight submissions from organizations whose regulated activities do not meet the intent of the regulations;
- [Canadian Biosafety Guideline: Incident Investigation](#), which provides further elaboration on the incident investigation process introduced in the Canadian Biosafety Handbook and serves as a supplementary resource for stakeholders seeking additional information and guidance in responding to biosafety and biosecurity related incidents;
- [Human Diagnostic Activities Biosafety Guideline](#)^{cxxi} to enhance biosafety within facilities where activities for the diagnosis of human infectious diseases are performed; and

- The [Surveillance of laboratory exposures to human pathogens and toxins, Canada 2020](#),^{cxxii} which describes the laboratory exposures that were reported in Canada.

Additionally, PHAC completed a national consultation on the draft Canadian Biosafety Standard (third edition) which is anticipated to be published in 2022-23.

Modernizing regulatory oversight

Human pathogens and toxins can pose a significant risk to human health and safety through either an accidental or deliberate release. By modernizing PHAC's regulatory oversight, the Agency continued to ensure Canadians' health and safety is protected against risks posed by human pathogens. In 2021-22, PHAC:

- Enhanced risk-based oversight of Canadian laboratories by implementing a virtual inspection program and was informed by extensive engagement with domestic (Health Canada, Transport Canada, the Canadian Food Inspection Agency) and international (U.S. Centers for Disease Control and Prevention) regulatory counterparts on visual inspection program best practices. After having ended on-site inspection in fiscal year 2020-21 due to the COVID-19 pandemic, this new approach enabled PHAC to ramp up risk-based inspections and meet annual targets for all categories of laboratories regulated under the *Human Pathogens and Toxins Act* (HPTA). PHAC conducted a total of 87 virtual inspections;
- Streamlined regulatory operations by launching a new system that allows applications for security clearances required under the HPTA to be submitted online and processed digitally. This resulted in greater program efficiencies and enhanced service delivery; and
- Worked with Health Canada to advance the development and future implementation of a Health Portfolio solution to implement the Canada Border Services Agency's Single Window Initiative, which allowed for the advance screening and clearing of imported regulated products, including human pathogens and toxins regulated under the HPTA.

Advancing global health priorities in biosafety and biosecurity

PHAC continued to advance global health priorities in biosafety and biosecurity through its various activities with the WHO. In 2021-22, PHAC submitted Canada's Annual Global Polio Eradication and Containment Report which contributed to the [Global Polio Eradication Initiative](#). PHAC also continued to engage Polio Essential Facilities in support of safe handling and storage of poliovirus materials.

The Agency further supported the WHO's Collaborating Centre by providing:

- Policy support and technical expertise for the development and implementation of a project on the Biological Proliferation Risks Posed by Dual Use Research of Concern; and
- Technical expertise through the WHO's [Scientific Advisory Group for the Origins on Novel Pathogens](#) and the Technical Advisory Group on Biosafety.

Additionally, PHAC submitted its 2022 Confidence Building Measures under the Biological Weapons Convention to Global Affairs Canada in March 2022. These measures support Canada's continued compliance as a signatory (member country) of the Convention in prohibiting the development, production, acquisition, transfer, stockpiling, and use of biological and toxin weapons. This is a key element in the international community's efforts to address the proliferation of weapons of mass destruction.

Did you know?

The International Experts Group of Biosafety and Biosecurity Regulators (IEGBBR) was established in 2007 under the leadership of PHAC. One of the goals of the IEGBBR is to strengthen biosafety and biosecurity globally by sharing expertise and lessons learned, including capacity-building reference tools.

Under Canada's leadership, in 2021-22, the IEGBBR launched the IEGBBR mobile app for biosafety, biosecurity and dual-use oversight. The app is a reference tool for countries that aim to develop or strengthen their national biosafety, biosecurity, or dual-use oversight. By providing 11 examples of national oversight systems and approaches from IEGBBR member countries, the app contributes to improved national and regional compliance with international commitments. This free resource is a publicly available mobile app in English and French and can be found in both the Google Play and Apple app stores.

Result 3.3: Public health risks associated with travel are reduced

Improving public awareness of travel-related public health risks

Ensuring that Canadians were informed of the health and safety risks of travelling outside Canada and understood how to protect themselves and their loved ones while travelling was a key priority. For example, PHAC's [travel health notices](#)^{cxixiii} outlined potential health risks to Canadian travellers and recommended ways to help reduce the risk of exposure and of becoming ill. At Canada's ports of entry, PHAC disseminated printed pamphlets informing travellers of Canada's measures at its borders. Furthermore, in collaboration with the [Committee to Advise on Tropical Medicine and Travel](#), PHAC updated the [Statement on COVID-19 and International Travel](#) and disseminated it to the medical community caring for travellers.

Did you know?

PHAC released five new travel health advisories and outbreak monitoring alerts and 29 updates for several diseases, including COVID-19, polio, malaria, Japanese encephalitis, yellow fever, Middle East respiratory syndrome coronavirus, Rift Valley fever, lymphatic filariasis (also known as elephantiasis), and cholera.

Rapidly identifying and mitigating public health risks related to travel

To ensure that the public was aware of the risks of travel, PHAC reinforced the Government of Canada's messaging discouraging non-essential travel in light of COVID-19. For Canadians who chose to travel, PHAC provided timely information about existing and emerging health risks while travelling outside Canada, as well as up-to-date information on border requirements for returning travellers. PHAC developed and enforced Emergency Orders in Council under Canada's [Quarantine Act](#) to continue the

movement of essential workers and goods across the border, while preventing the spread of COVID-19 and variants of concern first identified in other countries. This included screening, performing health assessments, verifying Orders in Council requirements at points of entry or remotely with the Central Notification System, distributing handouts to travellers at points of entry, testing travellers and maintaining compliance and enforcement measures after border clearance.

PHAC distributed 15,598,879 printed handouts to travellers returning to Canada at ports of entry, providing instructions to support compliance promotion based on requirements outlined under the [Minimizing the Risk of exposure to COVID-19 in Canada Order](#) related to quarantine, isolation and other obligations. Handouts were updated regularly, translated into multiple languages to reach a broader audience and digitized to reduce reliance on paper and increase accessibility.

For Canadians returning home with a confirmed case of COVID-19, PHAC provided safe lodging at designated quarantine facilities and continued to monitor their well-being to prevent further transmission. PHAC also improved the new Quarantine Case Management System to strengthen the Agency's capacity to manage traveller data in relation to quarantine and other border measures. As needed, PHAC continued to adapt its compliance and enforcement model to effectively promote, verify, and enforce traveller compliance with federal requirements related to quarantine and other border measures. These actions resulted in better monitoring of the spread of COVID-19 in Canada.

Did you know?

Collaboration with other federal government departments was key to supporting the effective planning and implementation of evidence-based border measures in 2021-22. For example, PHAC:

- Collaborated with Transport Canada on Notices to Airmen that controlled flights from certain foreign countries (e.g., countries with early outbreaks of the Omicron variant of concern) and controlled the number of Canadian airports that were eligible to receive international flights;
- Supported immigrants from Afghanistan, Hong Kong, and Ukraine through granting exemptions from certain travel restrictions; and
- Supported the Ministers of Immigration, Refugees and Citizenship Canada, Public Safety Canada, and Global Affairs Canada in granting exemptions from travel restrictions for foreign nationals determined to be in the national interest.

Managing travel-related public health risks on passenger conveyances and ancillary services

In 2021-22, PHAC conducted 316 potable water, food, and sanitation inspections of public conveyances and ancillary services, with resources prioritized to focus on areas of greatest risk to public health. PHAC conducted follow-up activities when violations were found, and 97% of inspections were in compliance with the requirements. PHAC reviews and analyzes inspection data to inform future policy and risk-based programming to mitigate travel-related public health risks. The Agency also continued to modernize its inspection program which included making updates to the Traveling Public Program's webpage and online service request applications to enhance accessibility and usability.

In close collaboration with its counterparts at Transport Canada, Canada Border Services Agency, provinces, territories, and in consultation with the U.S. Centers for Disease Control and Prevention and industry groups, PHAC laid the groundwork for the safe restart of the Canadian cruise industry early in the next fiscal year of 2022-23.

Sex and Gender-based Analysis Plus (SGBA Plus)

PHAC engaged employees in diversity, equity and inclusion training that encouraged them to reflect on the cultural competency factors needed to work with members of the community. In this context, a newly launched Applied Learning on 2S Epidemiology course was developed and delivered to train epidemiologists in the skills needed to work effectively with sexual and gender minority populations, explore issues with 2S+ data collection and usage, and apply these considerations to public health practice and emergency response.

PHAC's frontline employees at Canada's ports of entry and designated quarantine facilities were provided training that aimed to increase their awareness of bias and its impact on gender inclusion in security management and de-escalation.

PHAC also applied an SGBA Plus lens to the procurement of medical supplies and equipment to ensure all Canadians were considered. This involved PHAC's National Emergency Strategic Stockpile procuring products in various sizes and considering alternatives for certain populations (e.g., pregnant people, people with underlying health conditions) that may have contraindications to certain medical countermeasures (e.g., vaccines and therapeutics).

In response to recommendations outlined in the [Office of the Auditor General of Canada's Enforcement of Quarantine and COVID-19 Testing Orders Report](#), and notwithstanding the exemption of emergency orders issued under section 58 of the *Quarantine Act* from the Cabinet Directive on Regulation, the Agency initiated an update of its SGBA Plus for border measures. The border measures in force during fiscal year 2021-22 included exemptions to mitigate disparate impacts on a range of cohorts; for example, trans-border communities, regions where essential activities such as schooling have historically been undertaken cross-border, for compassionate circumstances such as end-of-life, etc.

United Nations' (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals (SDGs)

PHAC's Core Responsibility 3 contributed to SDG 3: Good Health and Well-being by advancing global targets related to strengthening the capacity of all countries to detect and report potential disease or other health threats around the world.

PHAC's Biosecurity program provided other countries with technical expertise and tools to help them meet commitments under the International Health Regulations by enhancing their national biosafety and biosecurity oversight frameworks. For example, the [International Experts Group of Biosafety and Biosecurity Regulators](#),^{cxxiv} whose Secretariat is located in the Centre for Biosecurity, developed capacity-building reference tools and information for global beneficiaries towards the development or strengthening of the national oversight of biosafety and biosecurity.

PHAC supported territorial governments in reducing health disparities and improving health outcomes through the Northern Wellness Approach initiative, which consolidated a suite of programs into a single agreement with each territory to provide maximum recipient flexibility over the design and implementation of programming. Program results for 2021-22 included a 33% reduction in premature mortality from non-communicable diseases (e.g., mental health). PHAC also placed public health officers



in northern, rural, and remote jurisdictions across Canada to support monitoring efforts to prevent and reduce TB and substance-related harms.

Did you know?

Yukon was identified as having the highest opioid death rate in Canada. Episodic/binge drinking also remains high within the Territories. The following projects funded by PHAC highlight the successes of the Northern Wellness Approach initiative:

- Workshops that taught participants traditional skills (such as kamiks and ulu-making), while raising educational awareness of tobacco reduction; and
- Providing “Quit Kits” tool-kits to people who are trying to quit smoking.

Experimentation

To ensure that PHAC could continue leading Canada’s public health response to COVID-19, the Agency deferred its original plans for experimentation under this Core Responsibility to focus efforts on responding to the COVID-19 pandemic, stabilizing the organization and implementing recommendations from the [2021 Report of the Auditor General of Canada on Securing Personal Protective Equipment and Medical Devices](#).

Results achieved

The following table shows, for Health Security, the results achieved, the performance indicators, the targets and the target dates for 2021–22, and the actual results for the three most recent fiscal years for which actual results are available.

Departmental results	Performance indicators	Target	Date to achieve target	2019-20 Actual results	2020-21 Actual results	2021-22 Actual results
Public health events and emergencies are prepared for and responded to effectively	Level of Canada's readiness to respond to public health events and emergencies as assessed independently by the WHO	4 (Rating out of 5)	Jun. 30, 2023	4.5	4.5	4.5
	% of provincial and territorial requests for assistance responded to within negotiated timelines	Exactly 100%	Mar. 31, 2022	100%	100%	100%
Public health risks associated with the use of pathogens and toxins are reduced	% compliance issues in Canadian laboratories successfully responded to within established timelines	At least 85%	Mar. 31, 2022	98%	100%	98%
Public health risks associated with travel are reduced	Level of Canada's capacity for effective public health response at designated points of entry into Canada	4 (Rating out of 5)	Mar. 31, 2023	5	5	5
	% of inspected passenger transportation operators that meet public health requirements	95%	Mar. 31, 2022	96%	100%	97%

Budgetary financial resources (dollars)

The following table shows, for Health Security, budgetary spending for 2021–22, as well as actual spending for that year.

2021-22 Main Estimates	2021-22 Planned spending	2021-22 Total authorities available for use	2021-22 Actual spending (authorities used)	2021-22 Difference (Actual spending minus Planned spending)
2,138,394,806	2,138,514,806	2,374,083,828	1,350,729,504	(787,785,302)

As public health measures evolved over the course of the year, spending for personal protective and medical equipment was less than expected in 2021-22 which primarily led to the difference between planned and actual spending.

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the department needed to fulfill this core responsibility for 2021–22.

2021-22 Planned full-time equivalents	2021-22 Actual full-time equivalents	2021-22 Difference (Actual full-time equivalents minus Planned full-time equivalents)
1,253	1448	195

Variance explanation can be found under the [Actual Human Resources](#) section.

Financial, human resources and performance information for the Public Health Agency of Canada's Program Inventory is available in [GC InfoBase](#).^{cxxv}



INTERNAL SERVICES

Description

Internal services are those groups of related activities and resources that the federal government considers to be services in support of programs and/or required to meet corporate obligations of an organization. Internal services refers to the activities and resources of the 10 distinct service categories that support program delivery in the organization, regardless of the internal services delivery model in a department. The 10 service categories are:

- ❖ acquisition management services
- ❖ communication services
- ❖ financial management services
- ❖ human resources management services
- ❖ information management services
- ❖ information technology services
- ❖ legal services
- ❖ material management services
- ❖ management and oversight services
- ❖ real property management services

Policy development


Working with domestic and international stakeholders, PHAC continued to apply a strategic policy lens to the development of public health programs, policies, and activities to advance public health objectives. Policy directions were informed by the latest science, ensuring evidence-based decision-making in conjunction with meaningful stakeholder engagement, coordination and collaboration.

PHAC secured policy and funding authorities to establish, expand and extend new and existing business lines to support robust and responsive public health policy frameworks in support of the COVID-19 response and other public health issues.

PHAC worked with its federal partners to ensure that the Agency's organizational structure could effectively manage COVID-19 in the short term, while ensuring readiness to respond to emerging issues.

In addition, PHAC supported the development and implementation of multiple horizontal policy initiatives including the tracking of PHAC-led mandate letter commitments for the Minister of Health and the Minister of Mental Health and Addictions and Associate Minister of Health.

PHAC engaged in a range of bilateral and multilateral fora to advance policy responses to health-related topics, including the involvement of non-traditional actors to support comprehensive policy analysis research and development. Through the FPT-led [Special Advisory Committee on COVID-19](#), PHAC supported a pan-Canadian coordinated approach to support governments' decisions in the transition to



living with COVID-19 in Canada. PHAC worked closely with partners and stakeholders to strengthen information sharing and coordination.

PHAC Renewal

The Public Health Agency of Canada launched a Renewal initiative to chart a course for the future as a leading interdisciplinary science-informed public health agency for all Canadians. To do so, it is advancing a deliberate, iterative and structured approach that applies best practices and lessons learned, fortifying pan-Canadian public health leadership and capacity to position the Agency to meet the public health needs of the future.

Federal, Provincial, and Territorial engagement

PHAC maintained strong FPT engagement on COVID-19-related issues, while maintaining focus on other public health priorities in leading or supporting over 150 meetings through FPT tables for Chief Medical Officers of Health, Deputy Ministers of Health, and Ministers of Health. While engagement has begun to stabilize, this still represents nearly a four-fold increase in the level of FPT engagement that PHAC either led or supported prior to the pandemic.

In January 2020, the Public Health Network Council activated the FPT Special Advisory Committee (SAC) on COVID-19 and associated governance structure to facilitate formal coordination of FPT responses to the COVID-19 pandemic. Since its activation, the SAC on COVID-19 has been the engine of the pan-Canadian response to COVID-19. In 2021-2022, the SAC on COVID-19 met 102 times and published two new editions of [the FPT Public Health Response Plan for Ongoing Management of COVID-19](#)^{cxxvi} and [nine joint statements](#)^{cxxvii} from the Council of Chief Medical Officers of Health. The SAC on COVID-19 facilitated the national approach to COVID-19 immunization planning, guidance and vaccine rollout, as well as ongoing recovery and forward planning.

Amid sustained FPT engagement on public health issues, PHAC has continued to provide policy advice and guidance on engagement across jurisdictions to ensure cohesive approaches to the implementation of pan-Canadian initiatives.

Indigenous relations

PHAC contributes to the reduction of public health inequities faced by Indigenous peoples through policy, engagement and the steps it is taking to become a culturally safe organization. In 2021, PHAC completed seven Assessments of Modern Treaty Implications on its policy proposals and led over 20 engagements across the Health Portfolio and with Indigenous public health leaders and stakeholders to inform policy directions. This was a significant year for PHAC in its efforts to increase cultural competency, humility and safety. In response to the [Truth and Reconciliation Commission of Canada's Calls to Action #57](#)^{cxxviii}, and following extensive policy research, PHAC developed an Indigenous cultural competency policy and implementation framework as well as hosted 11 Indigenous awareness and learning events for PHAC employees, reaching over 2,000 participants.

Taking a sound financial approach to manage effectively in times of uncertainty

PHAC introduced new governance, tools and mechanisms to improve and strengthen financial stewardship and results-based program management. It established the Operations and Resourcing Committee for governance, which provided oversight for financial management, procurement and investment decisions at the level of Vice President in accordance with the Agency's Financial Accountability Framework. The Committee also provided corporate management oversight to enable a consistent approach to operations and programs management, including effective management of complex horizontal issues. It served to ensure that resources were optimized for the delivery of programs, assets were safeguarded, and Agency-wide management frameworks remained in place with balanced controls that enabled flexibility and effective management of enterprise risks.

PHAC also renewed its five-year investment plan to ensure that it had the necessary assets and services in place to support program delivery to Canadians and remained responsive to emerging public health risks, government priorities and a dynamic operational environment.


As part of transparency to Canadians, Agency senior officials and the Minister made six Parliamentary committee appearances on Main and Supplementary Estimates and one appearance at the Committee of the Whole to discuss the financial plans of the Agency.

Providing timely, trusted, and evidence-based information

Canadians continued to rely on PHAC for timely information related to COVID-19, such as [COVIDTrends^{cxix}](#), which provided COVID-19 data to Canadians in their own communities. To raise awareness of COVID-19 and the measures Canadians could take to protect themselves and others, PHAC ran the highest number advertising and educational campaigns in its history, with 13 campaigns in total. Advertising focused on several public health issues in the context of COVID-19, including mental health and substance use. These ads generated over a billion impressions, more than 8.5 million web clicks and ultimately contributed to high levels of vaccine uptake. PHAC used an array of communication tools to reach audiences such as website material, social media posts, and targeted outreach.

PHAC supported Canada's Chief Public Health Officer and Deputy Chief Public Health Officer in providing regular COVID-19 updates and advice in the context of evolving scientific knowledge. In total, 89 press conferences were held. In addition, 112 statements were issued, 224 interviews were provided and 2,879 tweets were shared. COVID-19 related data and information was published on the Government of Canada's Open Government Portal, empowering Canadians to make informed decisions and reconfirming PHAC's commitment to openness and transparency.

During this time PHAC worked with its domestic and international stakeholders to raise awareness of other important public health issues and events, including AMR and the application of the WHO's One Health lens. PHAC equipped key stakeholders and industry associations with digital toolkits and marketing materials to promote engagement and to inform audiences of critical public health issues such as border measures.



Finally, the Agency launched a new Behavioural Science Office dedicated to understanding human behaviours in order to support evidence-based decision-making and better responses to future public health events.

Building a healthy, diverse and inclusive workforce

Our greatest strength is an engaged, empowered and well-equipped workforce with employees that have the competencies, tools and opportunities to succeed.

PHAC continued to build an exemplary workplace in 2021-22 by encouraging employees to champion positive physical and mental health, build meaningful connections, foster personal and collective resilience and enjoy a work-life balance. For example, the Agency established a service agreement with Employee Assistance Services to provide centralized funding for mental health supports, including support for frontline pandemic response workers.


Building a diverse and inclusive workplace remains an important priority for the Agency to better understand and effectively reach the population it serves. To foster a workplace free of racism and discrimination, PHAC conducted anti-racism listening sessions to increase understanding of barriers faced by racialized and Indigenous employees in recruitment processes and in accessing developmental and promotional opportunities. The Agency also established a working group to review staffing policies and practices to make staffing processes more inclusive by implementing the use of plain language in job postings. Following the launch of an internal self-identification campaign, PHAC was successful in achieving its employment equity targets for Women, Indigenous Peoples, and Visible Minorities. Underrepresentation remained an issue for persons living with disabilities despite efforts towards improved representation and career progression initiatives for this group, such as implementation of the Mentorship Plus Program and the Mosaic Leadership Development Program.

In consultation with employees from across the organization, PHAC took strategic and deliberate steps to create and sustain an equitable and inclusive workplace. This included the development of PHAC's first Accessibility Plan and the release of a Statement of Action against systemic racism, bias and discrimination. The Agency took steps to ensure compliance and measured progress towards a workplace free of racial bias, harassment and discrimination through regular monitoring of the Multi-Year Diversity and Employment Equity Plan and the Workplace Violence and Harassment Prevention Regulations.

PHAC continues to support employee networks to support diverse communities within its workforce.

Modernizing the workplace to enable a safe and productive workforce with access to modern tools and facilities

PHAC focused on procuring and evolving modern solutions to enable its employees to work from various locations, both on and off-site. For example, the Agency quickly adopted the use of digital networking platforms to enhance collaboration and community. It streamlined business processes, and tools such as digital signatures were introduced. In addition, business intelligence automated much of the work that a data analyst would normally perform. The Agency also provided employees with the necessary tools,



supplies, and virtual ergonomic assessments to increase efficiency and productivity and conducted regular employee engagement through surveys and training (e.g., security awareness).

PHAC developed plans that supported a phased and gradual re-entry to the workplace. These plans reflected the Agency's need for an agile and responsive workforce and utilise a phased and gradual approach to protect the health and safety of employees.

Sex and Gender-based Analysis Plus (SGBA Plus)

In 2021-22, PHAC strengthened its SGBA Plus accountability and governance through the renewal and revitalization of its internal SGBA Plus Policy. PHAC also strengthened capacity-building efforts through in-house SGBA Plus training, delivering 40 presentations and interactive sessions to nearly 1000 employees.

PHAC continued to integrate an SGBA Plus lens in daily operations, marketing campaigns, and employee training. For example, in the ongoing dementia awareness campaign, an SGBA Plus lens was applied to the target audience selection, media strategy, creative development, and messaging. This was done to highlight important variations in risk, prevalence, diagnosis, and care of people with dementia based on gender, race/ethnicity, sexual orientation, ability, and urban/rural residency (e.g., women and men are differentially affected by dementia, with gender norms and gender discrimination potentially contributing to the inequalities that create this differential risk profile). This was an example of how a "one-size-fits-all" approach to raising public awareness and understanding of dementia is unlikely to be equally effective for everyone and that messaging and advertising tactics will need to be tailored to different segments of the target population.

An SGBA Plus lens was also kept at the forefront in the development of new tools and strategies. Specific data standards to support SGBA Plus were applied to innovative new tools, such as the COVID-19 Virtual Library of Health Data and Evidence where evidence related to children and youth, First Nations, Inuit and Métis peoples, and racialized communities is disaggregated in support of developing equitable and inclusive knowledge products. PHAC's Data Portal also utilized an SGBA Plus lens, capturing sex and gender data through the tool's core functionality.

In collaboration with Health Canada, PHAC developed a staffing governance framework that aims to promote employment equity and SGBA Plus considerations in collective staffing processes to ensure that the Agency is reflective of the population it serves.

United Nations' (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals (SDGs)

PHAC's International Health Grants program facilitated the Agency's participation in international activities in 2021-22, strengthening inter-sectoral collaboration and promoting increased awareness of current and emerging global health issues of priority to Canada. The program provided \$2.3 million in funding to support 16 projects aimed at advancing global health issues of interest to Canada and improving environmental, economic, and social contexts for various populations around the world.

Furthermore, PHAC advanced SDG 3: “Good Health and Well-being” objectives through engagement with United Nations’ institutions, the WHO, the Pan-American Health Organization, and other key partners such as the Caribbean Public Health Agency and the Asia-Pacific Economic Cooperation Forum. PHAC also represented Canada at several other international fora to advance initiatives such as the [WHO’s Framework Convention on Tobacco Control](#)^{cxxx} and the [International Agency for Research on Cancer](#).^{cxxxi}

Experimentation

PHAC established a new Behavioural Science Office in 2021-22, which acts as a centre of expertise to generate evidence-based insights, provide advice, and build internal capacity to better integrate behavioural science in public health policies, communications, and programs.

Several Behavioural Science Fellows have been recruited through the [Privy Council Office’s Impact Canada Behavioural Science Fellowship](#)^{cxxxi} to conduct topic-relevant experimental research projects. This includes addressing the growing spread of misinformation and disinformation related to public health and COVID-19.

Budgetary financial resources (dollars)

The following table shows, for Internal Services, budgetary spending for 2021–22, as well as spending for that year.

2021-22 Main Estimates	2021-22 Planned spending	2021-22 Total authorities available for use	2021-22 Actual spending (authorities used)	2021-22 Difference (Actual spending minus Planned spending)
244,501,486	244,501,486	271,764,217	203,141,045	(41,360,441)

Actual spending is less than planned primarily due to reallocations of expenditures related to communications from Internal Services to Health Promotion and Infectious Disease Prevention and Control.

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the Agency needed to carry out its internal services for 2021–22.

2021-22 Planned full-time equivalents	2021-22 Actual full-time equivalents	2021-22 Difference (Actual full-time equivalents minus Planned full-time equivalents)
1,027	659	(368)

Variance explanation can be found under the [Actual Human Resources](#) section.

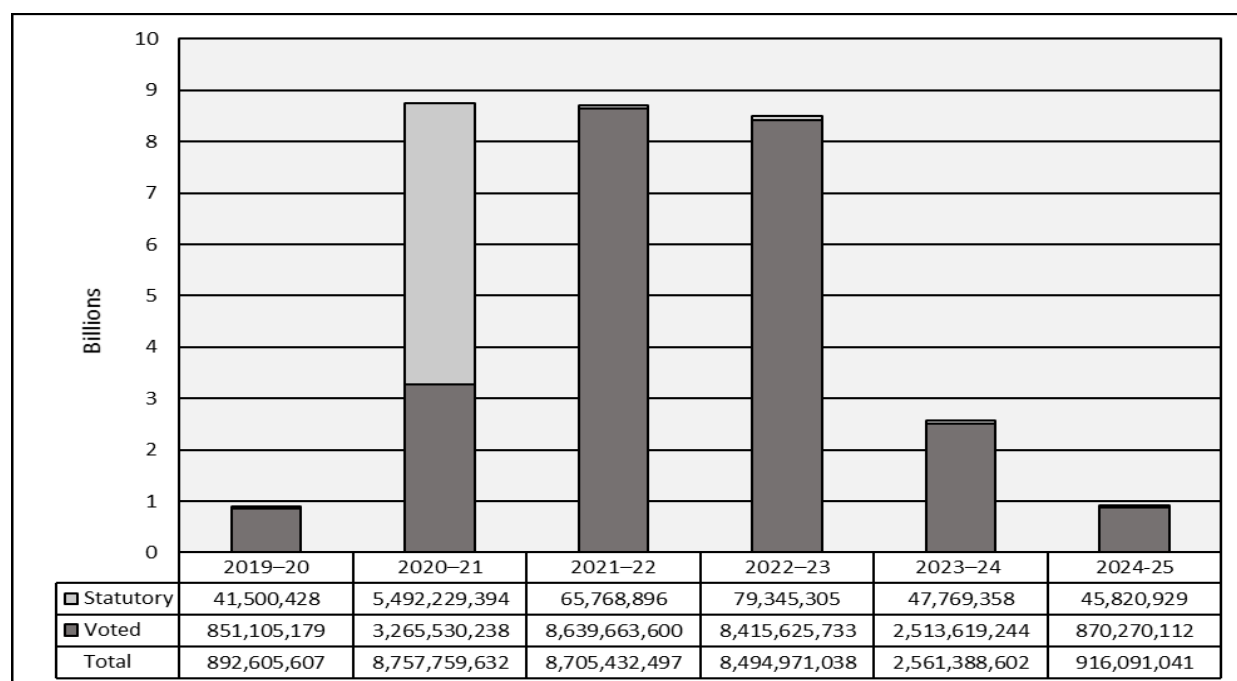
Financial, human resources and performance information for the Public Health Agency of Canada's Program Inventory is available in [GC InfoBase](#).^{cxxxiii}

SPENDING AND HUMAN RESOURCES

Spending

Spending 2019–20 to 2024–25

The following graph presents planned (voted and statutory spending) over time.



The Agency's spending has increased substantially since 2019-20 in support of its COVID-19 pandemic response. In 2020-21, the Agency's spending focused primarily on the acquisition of personal protective and medical equipment; medical research and vaccine developments; border and travel health; isolation sites and additional personnel, related to surge capacity at the Agency. The majority of the 2020-21 spending was provided as statutory funding through the Public Health Events of National Concern Payments Act.

The Agency continued its COVID-19 response with significant investments in the following areas:

- Procurement and distribution of vaccines, rapid tests kits, therapeutics, and personal protective equipment;
- Border testing and travel measures including quarantine and isolation sites;

- Promotion and support of mental health;
- Serosurveillance activities to measure and track underlying COVID-19 immunity;
- Development of innovative testing technologies at the NML; and
- Surge capacity to sustain the Agency’s pandemic response.

With the Agency maintaining its pandemic response, most COVID-19 related funding continues until 2022-23. A gradual decrease is noted for 2023-24 and a return to near pre-pandemic funding levels for 2024-25.

Budgetary performance summary for Core Responsibilities and Internal Services (dollars)

The “Budgetary performance summary for Core Responsibilities and Internal Services” table presents the budgetary financial resources allocated for PHAC’s Core Responsibilities and for Internal Services.

Core responsibilities and Internal Services	2021–22 Main Estimates	2021–22 Planned spending	2022-23 Planned spending	2023-24 Planned spending	2021-22 Total authorities available for use	2019-20 Actual spending (authorities used)	2020-21 Actual spending (authorities used)	2021-22 Actual spending (authorities used)
Health Promotion and Chronic Disease Prevention	340,038,576	340,398,576	404,242,333	353,075,646	400,862,350	273,405,685	291,289,487	288,018,815
Infectious Disease Prevention and Control	6,028,125,406	6,027,645,406	7,439,195,456	1,817,697,218	13,398,387,866	257,498,145	3,794,133,883	6,863,543,133
Health Security	2,138,394,806	2,138,514,806	432,712,693	289,650,244	2,374,083,828	248,500,491	4,459,284,771	1,350,729,504
Subtotal	8,506,558,788	8,506,558,788	8,276,150,482	2,460,423,108	16,173,334,044	779,404,321	8,544,708,141	8,502,291,452
Internal Services	244,501,486	244,501,486	218,820,556	100,965,494	271,764,217	113,201,286	213,051,491	203,141,045
Total	8,751,060,274	8,751,060,274	8,494,971,038	2,561,388,602	16,445,098,261	892,605,607	8,757,759,632	8,705,432,497

In 2021-22, the Agency spent \$8,705.4 million, a decrease of \$52.3 million over the previous year. As the COVID-19 pandemic evolved over time, the Agency adapted its response accordingly. This has resulted in a shift in spending from the Health Security core responsibility to the Infectious Disease Prevention and Control core responsibility.

Under Health Security, in 2020-21, the Agency invested significantly in the procurement of personal protective equipment for the NESS as demand increased drastically at the start of the pandemic. As public health measures evolved over time, spending for personal protective and medical equipment decreased in 2021-22 and spending to support border, travel and quarantine measures increased.

Spending increased in 2021-22 over the previous year for Infectious Disease Prevention and Control. The changes to public health measures and border travel at the beginning of 2021-22 saw an increase in domestic and international travel by Canadians and visitors alike. This resulted in significant investment in border testing services to support the increased volume at borders, with almost 2.5 million tests completed through the Canada Border Testing Program.

In order to secure a reliable supply of COVID-19 vaccines in a globally competitive market, significant investments were made in 2020-21 through advance purchase agreements with potential vaccine manufacturers. In 2021-22, as vaccine availability and demand increased, the Agency made significant investments in the procurement and delivery of 120 million doses of vaccines and distribution of 96 million doses across Canada. PHAC also increased spending to procure eight different therapeutics capable of treating 2.6 million Canadians for COVID-19 and funded 240 million rapid test kits. Other COVID-19 measures such as serosurveillance and innovative testing capabilities also contributed to the increase in spending in Infectious Disease Prevention and Control.

Spending for internal services in 2021-22 is consistent with 2020-21 as the Agency continued to surge its support capabilities to sustain its COVID-19 response.

2021-22 Budgetary actual gross spending summary (dollars)

The following table reconciles gross planned spending with net spending for 2021-22

Core responsibilities and Internal Services	2021-22 Actual gross spending	2021-22 Actual revenues netted against expenditures	2021-22 Actual net spending (authorities used)
Health Promotion and Chronic Disease Prevention	288,018,815	0	288,018,815
Infectious Disease Prevention and Control	6,863,543,133	0	6,863,543,133
Health Security	1,351,468,180	(738,676)	1,350,729,504
Subtotal	8,503,030,128	(738,676)	8,502,291,452
Internal Services	203,141,045	0	203,141,045
Total	8,706,171,173	(738,676)	8,705,432,497

As signatory to the [WHO's International Health Regulations](#) (2005), PHAC earns revenue from inspections conducted on international maritime vessels and issuing Ship Sanitation Certificates and Ship

Sanitation Exemption Certificates. Fees are charged in accordance with Canada’s *Service Fees Act*. In 2021-22, PHAC collected \$0.7 million in revenue from the inspection of maritime vessels.

Human Resources

Human resources summary for Core Responsibilities and Internal Services

The “Human resources summary for Core Responsibilities and internal services” table presents the full-time equivalents (FTEs) allocated to each of PHAC’s Core Responsibilities and to Internal Services.

Core responsibilities and Internal Services	2019-20 Actual full-time equivalents	2020-21 Actual full-time equivalents	2021-22 Planned full-time equivalents	2021-22 Actual full-time equivalents	2022-23 Planned full-time equivalents	2023-24 Planned full-time equivalents
Health Promotion and Chronic Disease Prevention	524	542	581	564	623	556
Infectious Disease Prevention and Control	1,054	1,149	2,134	1,697	2,491	1,216
Health Security	385	743	1,253	1,448	949	496
Subtotal	1,963	2,434	3,968	3,709	4,063	2,268
Internal Services	333	426	1,027	659	856	654
Total	2,296	2,860	4,995	4,368	4,919	2,922

Since the start of the pandemic, the Agency’s size has almost doubled from 2,296 full-time employee equivalents in 2019-20 to 4,368 full-time equivalents by the end of 2021-22. This increase is primarily related to temporary and permanent staffing to support the Agency as it implemented various initiatives in support of COVID-19 public health measures.

In 2020-21, Health Security saw the largest increase in employees as the number of full-time equivalents increased to support the management of the NESS and the increased demand for personal protective and medical equipment. The Agency also increased staffing levels to provide the necessary support for border testing and travel measures in 2020-21, and further increased its full-time equivalents presence in 2021-22 as borders gradually reopened.

Full-time equivalent levels in Infectious Disease Prevention and Control increased significantly in 2021-22 to support the procurement and distribution of vaccines, therapeutics and rapid tests to provinces and territories and to support new initiatives to strengthen capacity for the development of pre-clinical countermeasures, and to invest in innovative technologies to enhance capacity and response to emerging threats.

The increase in Internal Services reflects the surge capacity required to sustain the core support services of the Agency’s COVID-19 response.

Looking into the future, the Agency's full-time equivalent levels remain steady in 2022-23 as the pandemic response continues. Full-time equivalent levels gradually return to near pre-pandemic levels starting in 2023-24 as COVID-19 funding decreases over time.

Expenditures by vote

For information on PHAC's organizational voted and statutory expenditures, consult the [Public Accounts of Canada 2021–22](#).^{cxxxiv}

Government of Canada spending and activities

Information on the alignment of PHAC's spending with the Government of Canada's spending and activities is available in [GC InfoBase](#).^{cxxxv}

Financial statements and financial statements highlights

Financial statements


PHAC's financial statements (unaudited) for the year ended March 31, 2022, are available on [PHAC's website](#).^{cxxxvi}

Financial statement highlights

Condensed Statement of Operations (unaudited) for the year ended March 31, 2022 (dollars)

Financial information	2021-22 Planned results	2021-22 Actual results	2020-21 Actual results	Difference (2021-22 Actual results minus 2021-22 Planned results)	Difference (2021-22 Actual results minus 2020-21 Actual results)
Total expenses	10,550,659,444	10,366,298,959	3,687,827,930	(184,360,485)	6,678,471,029
Total revenues	14,122,048	15,177,376	22,277,818	(1,055,328)	(7,100,442)
Net cost of operations before government funding and transfers	10,536,537,396	10,351,121,583	3,665,550,112	(185,415,813)	6,685,571,471

The 2021-22 planned results information is provided in the Public Health Agency of Canada [2021-22 Departmental Plan – Future Oriented Statement of Operations](#).^{cxxxvii}



Highlights of the 2021-22 financial statements reflect the changing nature of the Agency's pandemic response. Total expenses and net cost of operations before government funding or transfers increased by \$6,678.5 million. This is explained by the following events which significantly reduced the 2020-21 expenditures:

- Contracts with advance purchase agreements for vaccines and other COVID-related commodities were recorded as prepaid assets; and
- Purchases of personal protective equipment and other COVID-related equipment that were held by the Agency as of March 31st, 2021, were classified as inventory assets.

These events reduced the 2020-21 expenses by \$5,385.6 million and led to an equivalent increase in non-financial assets (below).

These investments to secure COVID-19 vaccines, personal protective and medical equipment were made in 2020-21. In 2021-22 the Agency shifted its pandemic response and the following events contributed to an increase in expenses:

- Procurement and distribution of vaccines, therapeutics and rapid test kits as well as the amortization of prepaid expenses in 2021-22 for the advance purchase agreements related to vaccines that were initially recorded in 2020-21 to support demand by the provinces and territories;
- Activities to support border and travel measures including testing, and quarantine operations; and
- Ongoing distribution of personal protective and medical equipment to provinces and territories and inventory valuation adjustments due to expired, obsolete, surplus or damaged items and pricing adjustments to reflect market replacement values.

Revenues earned in 2021-22 decreased by \$7.1 million as compared to the previous year. Actual revenues earned were \$1.1 million over planned. The variance as compared to the previous year is primarily due to reduced gains on foreign exchange realized in 2020-21 and the donation of medical equipment.

Condensed Statement of Financial Position (unaudited) as of March 31, 2022 (dollars)

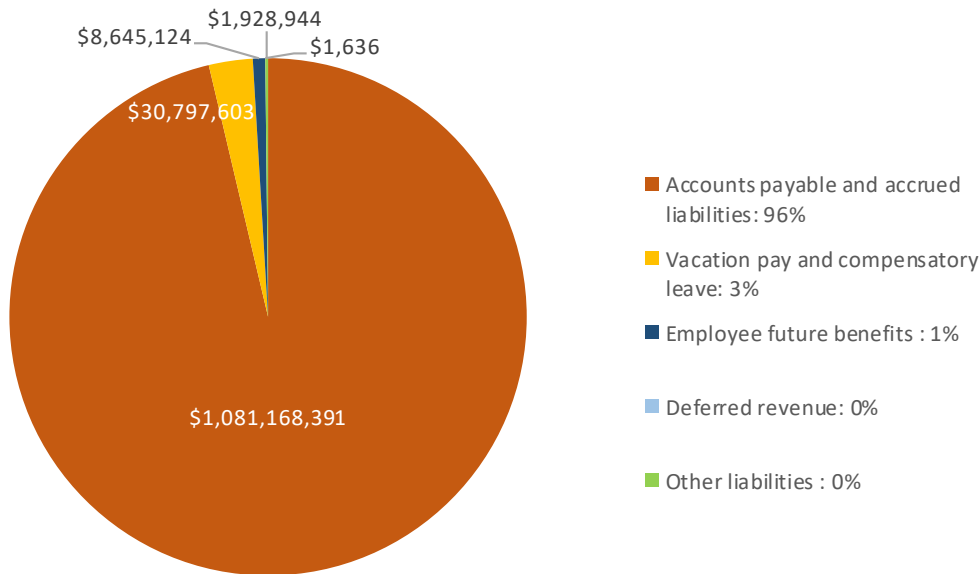
Financial information	2021-22	2020-21	Difference (2021-22 minus 2020-21)
Total net liabilities	1,122,541,698	894,450,073	228,091,625
Total net financial assets	1,083,078,387	859,480,476	223,597,911
Departmental net debt	39,463,311	34,969,597	4,493,714
Total non-financial assets	3,705,492,926	5,516,146,336	(1,810,653,410)
Departmental net financial position	3,666,029,615	5,481,176,739	(1,815,147,124)

PHAC's net debt increased over the previous year primarily due to the increase to the accrual for vacation and compensatory leave. This increase is directly related to the increase in the Agency's full-time equivalents for 2021-22.

The Agency's net financial position decreased over the previous year primarily due to the following reasons:

- The reduction in the total value of advance purchase agreements for vaccines through the contract completion and subsequent distribution of vaccine doses to provinces and territories; and
- Inventory valuation adjustments and distribution of personal protective equipment and medical equipment to provinces and territories.

Liability by Type



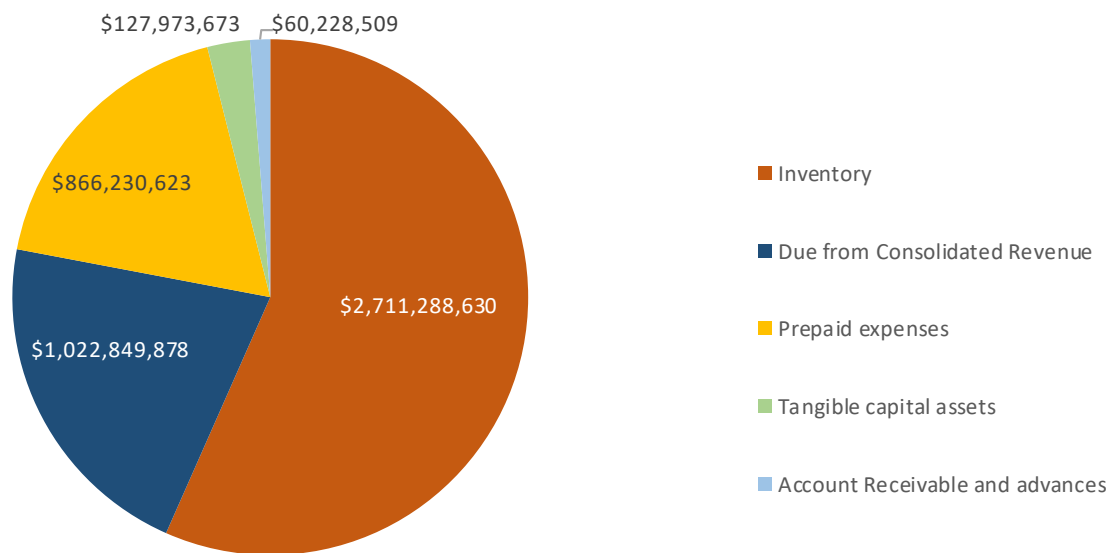
Source: Public Health Agency of Canada -Office of the Chief Financial Officer

Total net liabilities were \$1,122,541,698, an increase of \$228,091,625 (26%) over the previous year's total. The increase can be primarily attributed to temporary short-term liabilities created by the timing and volume of invoices for and the procurement of vaccines, therapeutics, rapid test kits and border testing services at year-end. These short-term liabilities are largely funded by the amount included in the Due from Consolidated Revenue Fund asset account.

Of the total liabilities:

- Accounts payable and accrued liabilities represented \$1,081,168,391 (96%);
- Vacation pay and compensatory leave represented \$30,797,603 (3%);
- Employee future benefits represented \$8,645,124 (1%);
- Deferred revenue represented \$1,636 (0%); and
- Other liabilities represented \$1,928,944 (0%).

Asset by Type



Source: Public Health Agency of Canada -Office of the Chief Financial Officer

Total net assets (including non-financial assets) decreased by \$1,587,055,500 since 2020-21 to a total of \$4,788,571,313. The variance can be primarily attributed to:

- Decrease in prepaid expenses due to the receipt of vaccines secured under advance purchase agreements signed in 2020-21. This decrease is partially offset by an increase in new advance purchase agreements for vaccines, therapeutics and rapid test kits in 2021-22.
- Decrease in inventory primarily due to distribution of personal protective and medical equipment to provinces and territories and inventory valuation adjustments. This decrease is partially offset by additional purchases of inventory held in storage as of March 31st, 2021.

The resulting increase in Due from Consolidated Revenue fund is also a temporary receivable affected by the volume and timing of invoices processed at year end.

Of the total assets:

- Inventory represented \$2,711,288,630 (57%);
- Due from Consolidated Revenue fund represented \$1,022,849,878 (21%);
- Prepaid expenses represented \$866,230,623 (18%);
- Tangible capital assets represented \$127,973,673 (3%); and
- Accounts receivable represented \$60,228,509 (1%).



CORPORATE INFORMATION

Organizational Profile

Appropriate minister(s):

The Honourable Jean-Yves Duclos, P.C., M.P., Minister of Health

The Honourable Carolyn Bennett, M.D., P.C., M.P., Minister of Mental Health and Addictions and Associate Minister of Health

Institutional head: Dr. Harpreet S. Kochhar

Ministerial portfolio: Health

Enabling instrument(s): [Public Health Agency of Canada Act](#),^{cxxxviii} [Department of Health Act](#),^{cxxxix} [Emergency Management Act](#),^{cxl} [Quarantine Act](#),^{cxli} [Human Pathogens and Toxins Act](#),^{cxlii} [Health of Animals Act](#),^{cxliii} [Federal Framework on Lyme Disease Act](#),^{cxliv} and ,the [Federal Framework for Suicide Prevention Act](#).^{cxlv}

Year of incorporation / commencement: 2004

Other: In June 2012, the Deputy Heads of Health Canada and the Public Health Agency of Canada signed a Shared Services Partnership Framework Agreement. Under this agreement, each organization retains responsibility for a different set of internal services and corporate functions. These include: human resources; real property; information management/information technology; security; internal financial services; communications; emergency management; international affairs; internal audit services; evaluation services.

Raison d'être, mandate and role: who we are and what we do

Information on the Public Health Agency of Canada's raison d'être, mandate and role is available on the [Public Health Agency of Canada's website](#).^{cxlvi}

Information on the Public Health Agency of Canada's mandate letter commitments is available in the mandate letters for the [Minister of Health](#)^{cxlvii} and [Minister of Mental Health and Addictions and Associate Minister of Health](#).^{cxlviii}

Operating context

PHAC operates in a complex, interconnected and evolving environment where drivers such as social determinants of health, climate change and advancements in technology affect the health of Canadians. PHAC continues to adapt its resources, such as human resources and skillsets, tools, processes and partnerships, to maintain the capacity to rapidly and effectively prevent, detect and respond to emerging global and domestic public health events and continue keeping Canadians healthy and safe from emerging threats.


The ongoing COVID-19 pandemic is reinforcing the importance of PHAC's role at the centre of the federal pandemic response. The health, social and economic policies and well-being of Canada's population are deeply interconnected and there is tremendous complexity in mobilizing resources and responding to a global public health crisis affecting all regions of Canada. Canada has taken unprecedented action to limit the spread of COVID-19 in the country. PHAC is continuing to support the Government of Canada in the implementation of public health measures to prevent the further spread of COVID-19 and combat misinformation and disinformation found online including through social media, which continues to be a direct contributor to the growing global and domestic concerns over vaccine hesitancy. This enduring spread of false information creates a barrier to managing the COVID-19 pandemic and it may lead to increasing rates of vaccine-preventable diseases among Canadians.

Canada remains one of the healthiest countries in the world. Life expectancy at birth for Canadians is 79.9 years for men and 84 years for women, well above international benchmarks. However, not all people experience the same health status. Health inequalities persist and are intensifying further among some segments of the population. Certain populations such as northern, rural and remote communities, low-income families, children living in conditions of risk, Indigenous Peoples, unemployed or underemployed adults, and older adults continue to experience poorer health outcomes than the average Canadian.

Canada will continue to face some persistent public health challenges in the coming years. As the population lives longer, the rates of chronic diseases such as diabetes and dementia are continuing to increase. Mental illness and mental health issues such as depression, anxiety and PTSD continue to be of concern, with approximately 12 people dying by suicide every day in Canada. Substance-related harms and deaths are also significant and ongoing public health challenges further exacerbated by the COVID-19 pandemic. Climate change also presents a range of risks to the health status of Canadians, including poor air quality and the increasing spread of vector-borne diseases, such as Lyme disease. PHAC is working to address these climate-related challenges at the population level.

Infectious diseases continue to be of concern as some vaccine-preventable diseases, such as measles, continue to increase globally. Concurrently, Canadians continue facing an increasing risk of antimicrobial resistance, which has been identified by the WHO as one of the top 10 risks to global health. There is also a steadily continuing rise in sexually transmitted infections, such as gonorrhoea, syphilis and chlamydia.

Timely and reliable data are essential to developing sound policies, ensuring effective programming that delivers results to Canadians, delivering accurate information to Canadians and supporting overall



government priorities (e.g., SGBA Plus, Sustainable Development Goals). In response to the pandemic, PHAC has evolved, which includes the creation of new Branches such as the Corporate Data and Surveillance Branch and Chief Financial Officer and Corporate Management Branch. This organizational realignment is contributing to Renewal efforts to ensure that the Agency has the necessary tools, resources and authorities to meet current and future needs.

PHAC continues to build capacity to ensure it can prepare for and respond to new public health events and emergencies that may arise, and this requires partners across all levels of government to respond to public health events and emergencies and maintain potentially long-term response efforts.

Public health is a shared responsibility in Canada, requiring coordination between the federal, provincial, territorial and municipal governments. By improving our understanding of the priorities, activities and concerns of partners and stakeholders, PHAC will be better able to adapt its programs, including those supported through grants and contributions, to respond to the diverse public health needs across Canada. PHAC's commitment to accountability, openness and results will help promote important multi-sectoral collaborations and the solutions needed to help improve the health of Canadians.

Reporting framework

The Public Health Agency of Canada's Departmental Results Framework and Program Inventory of record for 2021-22 are shown below.

CORE RESPONSIBILITY 1: HEALTH PROMOTION AND CHRONIC DISEASE PREVENTION	
RESULT 1.1: Canadians have improved physical and mental health	Indicator: % of low-income children in very good or excellent health
	Indicator: % of population who have high psychological well-being
RESULT 1.2: Canadians have improved health behaviours	Indicator: % of increase in average minutes per day of physical activity among adults
	Indicator: % of increase in average minutes per day of physical activity among children and youth
RESULT 1.3: Chronic diseases are prevented	Indicator: % increase in years lived in good health by seniors
	Indicator: Rate of new diabetes cases among Canadians
	Indicator: % of adults who are obese
	Indicator: % of children and youth who are obese
PROGRAM INVENTORY	
Health Promotion Chronic Disease Prevention Evidence for Health Promotion and Chronic Disease and Injury Prevention	
CORE RESPONSIBILITY 2: INFECTIOUS DISEASE PREVENTION AND CONTROL	
RESULT 2.1: Infectious diseases are prevented and controlled	Indicator: % of 2 year old children who have received all recommended vaccinations
	Indicator: Proportion of national vaccination coverage goals met for children by 2 years of age
	Indicator: Rate per 100,000 of new diagnosed cases of Human Immunodeficiency Virus (HIV)
	Indicator: Rate of key antimicrobial resistant infection identified among people in hospitals
RESULT 2.2: Infectious disease outbreaks and threats are prepared for and responded to effectively	Indicator: % of foodborne illness outbreaks responded to within 24 hours of notification
	Indicator: % of new pathogens of international concern that Canada has the capacity to accurately test for
PROGRAM INVENTORY	
Laboratory Science Leadership and Services Communicable Disease and Infection Control Vaccination Foodborne and Zoonotic Diseases	



CORE RESPONSIBILITY 3: HEALTH SECURITY	
RESULT 3.1: Public health events and emergencies are prepared for and responded to effectively	Indicator: Canada’s readiness to respond to public health events and emergencies as assessed independently by the WHO
	Indicator: % of provincial and territorial requests for assistance responded to within negotiated timelines
RESULT 3.2: Public health risks associated with the use of pathogens and toxins are reduced	Indicator: % of compliance issues in Canadian laboratories successfully responded to within established timelines
RESULT 3.3: Public health risks associated with travel are reduced	Indicator: Canada’s capacity for effective public health response at designated points of entry into Canada
	Indicator: % of inspected passenger transportation operators that meet public health requirements
PROGRAM INVENTORY	
Emergency Preparedness and Response Biosecurity Border and Travel Health	
INTERNAL SERVICES	
Management and Oversight Services Communications Services Legal Services Human Resources Management Services Financial Management Services	Information Management Services Information Technology Services Real Property Management Services Materiel Management Services Acquisition Management Services



SUPPORTING INFORMATION ON THE PROGRAM INVENTORY

Financial, human resources and performance information for the Public Health Agency of Canada's Program Inventory is available in [GC InfoBase](#).^{cxlix}

SUPPLEMENTARY INFORMATION TABLES

The following supplementary information tables are available on the [Public Health Agency of Canada's website](#)^{cl}:

United Nations 2030 Agenda and the Sustainable Development Goals
Reporting on Green Procurement
Details on transfer payment programs
Gender-based analysis plus

FEDERAL TAX EXPENDITURES

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the [Report on Federal Tax Expenditures](#).^{cli} This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs as well as evaluations and GBA Plus of tax expenditures.

ORGANIZATIONAL CONTACT INFORMATION

Public Health Agency of Canada
130 Colonnade Road
Ottawa, ON K1A 0K9
Canada

Phone: Toll-free: 1-844-280-5020

Website: [Public Health Agency of Canada](#)^{clii}

APPENDIX: DEFINITIONS

appropriation (crédit)

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (dépenses budgétaires)

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

core responsibility (responsabilité essentielle)

An enduring function or role performed by a department. The intentions of the department with respect to a core responsibility are reflected in one or more related departmental results that the department seeks to contribute to or influence.

Departmental Plan (plan ministériel)

A report on the plans and expected performance of an appropriated department over a 3-year period. Departmental Plans are usually tabled in Parliament each spring.

departmental priority (priorité)

A plan or project that a department has chosen to focus and report on during the planning period. Priorities represent the things that are most important or what must be done first to support the achievement of the desired departmental results.

departmental result (résultat ministériel)

A consequence or outcome that a department seeks to achieve. A departmental result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

departmental result indicator (indicateur de résultat ministériel)

A quantitative measure of progress on a departmental result.

departmental results framework (cadre ministériel des résultats)

A framework that connects the department's core responsibilities to its departmental results and departmental result indicators.

Departmental Results Report (rapport sur les résultats ministériels)

A report on a department's actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

experimentation (expérimentation)

Carrying out of activities that seek to first explore, then test and compare the effects and impacts of policies and interventions in order to inform evidence-based decision-making, and improve outcomes for Canadians, by learning what works, for whom and in what circumstances. Experimentation is related to, but distinct from innovation (the trying of new things), because it involves a rigorous comparison of results. For example, using a new website to communicate with Canadians can be an innovation; systematically testing the new website against existing outreach tools or an old website to see which one leads to more engagement, is experimentation.

full-time equivalent (équivalent temps plein)

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. For a particular position, the full-time equivalent figure is the ratio of number of hours the person actually works divided by the standard number of hours set out in the person's collective agreement.

gender-based analysis plus (GBA Plus) (analyse comparative entre les sexes plus [ACS Plus])

An analytical process used to assess how diverse groups of women, men and gender-diverse people experience policies, programs and services based on multiple factors including race ethnicity, religion, age, and mental or physical disability.

government-wide priorities (priorités pangouvernementales)

For the purpose of the 2020–21 Departmental Results Report, those high-level themes outlining the government's agenda in the 2019 Speech from the Throne, namely: Fighting climate change; Strengthening the Middle Class; Walking the road of reconciliation; Keeping Canadians safe and healthy; and Positioning Canada for success in an uncertain world.

horizontal initiative (initiative horizontale)


An initiative where two or more federal organizations are given funding to pursue a shared outcome, often linked to a government priority.

non-budgetary expenditures (dépenses non budgétaires)

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (rendement)

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.



performance indicator (indicateur de rendement)

A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

performance reporting (production de rapports sur le rendement)

The process of communicating evidence-based performance information. Performance reporting supports decision making, accountability and transparency.

plan (plan)

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally, a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead to the expected result.

planned spending (dépenses prévues)

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts presented in Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

program (programme)

Individual or groups of services, activities or combinations thereof that are managed together within the department and focus on a specific set of outputs, outcomes or service levels.

program inventory (répertoire des programmes)

Identifies all the department's programs and describes how resources are organized to contribute to the department's core responsibilities and results.

result (résultat)

A consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

statutory expenditures (dépenses législatives)

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.



target (cible)

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

voted expenditures (dépenses votées)

Expenditures that Parliament approves annually through an appropriation act. The vote wording becomes the governing conditions under which these expenditures may be made.

ENDNOTES

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- ⁱ Government of Canada improves digital access to mental health and substance use resources during the COVID-19 pandemic, <https://www.canada.ca/en/health-canada/news/2022/01/government-of-canada-improves-digital-access-to-mental-health-and-substance-use-resources-during-the-covid-19-pandemic.html>
- ⁱⁱ Federal, Provincial, Territorial Public Health Response Plan for Ongoing Management of COVID-19, <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/federal-provincial-territorial-public-health-response-plan-ongoing-management-covid-19.html>
- ⁱⁱⁱ Adjusting Public Health Measures in the Context of COVID-19 Vaccination, <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/adjusting-public-health-measures-vaccination.html>
- ^{iv} Summary of evidence supporting COVID-19 public health measures, <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/summary-evidence-supporting-covid-19-public-health-measures.html>
- ^v Global Public Health Intelligence Network (GPHIN) Independent Review Panel Final Report, <https://www.canada.ca/en/public-health/corporate/mandate/about-agency/external-advisory-bodies/list/independent-review-global-public-health-intelligence-network/final-report.html>
- ^{vi} Independent review of the Global Public Health Intelligence Network (GPHIN), <https://www.canada.ca/en/public-health/corporate/mandate/about-agency/external-advisory-bodies/list/independent-review-global-public-health-intelligence-network.html>
- ^{vii} Autism Spectrum Disorder: Highlights from the 2019 Canadian Health Survey on Children and Youth, <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/autism-spectrum-disorder-canadian-health-survey-children-youth-2019.html>
- ^{viii} Practical guidance for clinical laboratories for SARS-CoV-2 serology testing, <https://www.canada.ca/content/dam/phac-aspc/documents/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2021-47/issue-4-april-2021/ccdrv47i04a01-eng.pdf>
- ^{ix} Canadian Public Health Laboratory Network Statement on Point-of-Care Serology Testing in COVID-19, <https://doi.org/10.14745/ccdr.v48i01a01>
- ^x Mental Health Promotion Innovation Fund, <https://www.canada.ca/en/public-health/services/funding-opportunities/mental-health-promotion-innovation-fund.html>
- ^{xi} KDE Hub, <https://kdehub.ca/projects/>
- ^{xii} KDE Hub: Mental Health Promotion through knowledge development and exchange, <https://kdehub.ca/projects/parents-empowering-kids-keeping-it-simple-pek-kis/>
- ^{xiii} The Promoting Health Equity: Mental Health of Black Canadians Fund, <https://www.canada.ca/en/public-health/services/funding-opportunities/grant-contribution-funding-opportunities/promoting-health-equity-mental-health-black-canadians-fund.html>
- ^{xiv} Talk Suicide Canada, <https://talksuicide.ca/>
- ^{xv} Kids Help Phone, <https://kidshelpphone.ca/>
- ^{xvi} Positive Mental Health Surveillance Indicator Framework, <https://health-infobase.canada.ca/positive-mental-health/>
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- ^{xviii} Autism in Canada: Considerations for future public policy development, <https://cahs-acss.ca/autism-assessment/>
- ^{xix} Autism spectrum disorder: Highlights from the 2019 Canadian health survey on children and youth, <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/autism-spectrum-disorder-canadian-health-survey-children-youth-2019.html>

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- ^{xxx} Family Violence Prevention Investment: Currently funded projects, <https://www.canada.ca/en/public-health/services/health-promotion/stop-family-violence/investment-prevention-funded-projects.html>
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