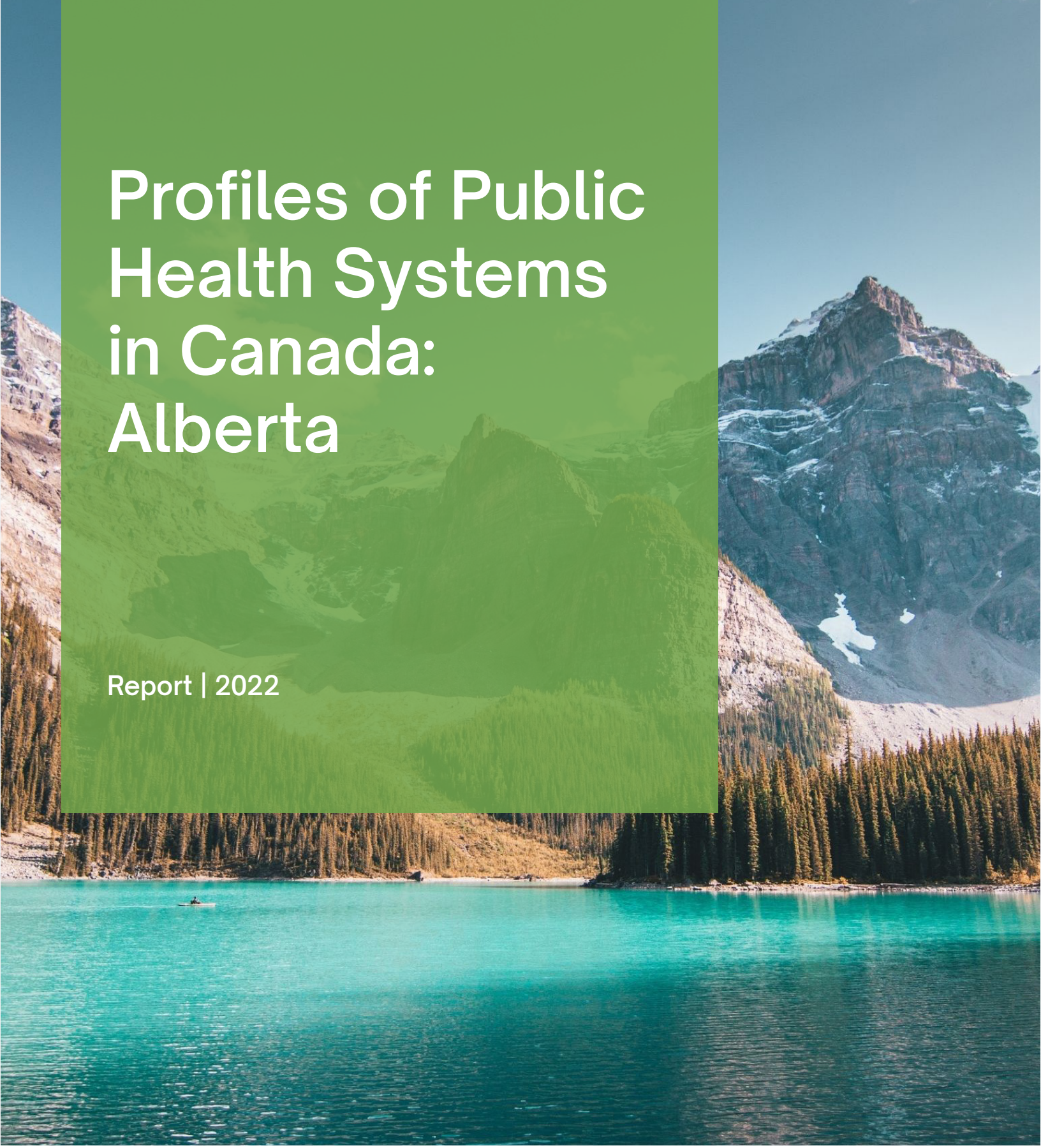
Profiles of Public Health Systems in Canada: Alberta



Report | 2022

NORTH AMERICAN OBSERVATORY on Health Systems and Policies

Dalla Lana School of Public Health

Institute of Health Policy, Management and Evaluation
UNIVERSITY OF TORONTO

UPSTREAMLAB

Population Health Analytics Laboratory

Centre de collaboration nationale sur les politiques publiques et la santé
National Collaborating Centre for Healthy Public Policy

Institut national de santé publique Québec

Profiles of Public Health Systems in Canada: Alberta

Report | 2022

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We would like to thank reviewers from the Government of Alberta and Deborah McNeil, Alberta Health Services, for their comments on an earlier version of this document.

Suggested citation

Smith, R. W., Allin, S., Luu, K., Jarvis, T., Thomas, M., Li, J., Rodrigues, A., Rosella, L. & Pinto, A. D. (2022). *Profiles of Public Health Systems in Canada: Alberta.* National Collaborating Centre for Healthy Public Policy. https://ccnpps-ncchpp.ca/profiles-of-public-health-systems-in-canadian-provinces-and-territories/

Acknowledgments

This series is the product of a partnership of interested health systems and public health researchers and teams across Canada, including the National Collaborating Centre for Healthy Public Policy, the North American Observatory on Health Systems and Policies, the Upstream Lab, the Population Health Analytics Lab, the Institute of Health Policy Management and Evaluation and the Dalla Lana School of Public Health at the University of Toronto. We are grateful for the research coordination support of Monika Roerig, and to working group members, Erica Di Ruggiero, Robert Schwartz, Amélie Quesnel-Vallée, Jasmine Pawa, Mehdi Ammi, Olivier Bellefleur, Susan Chatwood, and Gregory Marchildon for supporting study design and critically reviewing early drafts of the profile. We would also like to acknowledge the Public Health Physicians of Canada for their foundational work to describe public health systems in each province and territory published in December 2019.

We gratefully acknowledge the Canadian Institutes of Health Research for funding this work (grant number 170320).

Production of this document has been made possible through a financial contribution from the Public Health Agency of Canada through funding for the National Collaborating Centre for Healthy Public Policy (NCCHPP). The National Collaborating Centre for Healthy Public Policy is hosted by the Institut national de santé publique du Québec (INSPQ), a leading centre for public health in Canada. The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.

This document is available in its entirety in electronic format (PDF) on the Institut national de santé publique du Québec website at: www.inspq.qc.ca/english and on the National Collaborating Centre for Healthy Public Policy website at: https://ccnpps-ncchpp.ca.

La version française est disponible sur les sites Web du Centre de collaboration nationale sur les politiques publiques et la santé (CCNPPS) au https://ccnpps-ncchpp.ca/fr/ et de l'Institut national de santé publique du Québec au www.inspq.qc.ca.

Legal deposit – 4th Quarter 2022
Bibliothèque et Archives nationales du Québec
ISBN: 978-2-550-90457-1 (French PDF [Set])
ISBN: 978-2-550-93431-8 (French PDF)
ISBN: 978-2-550-90461-8 (PDF [Set])
ISBN: 978-2-550-93432-5 (PDF)

About this research project: context, team and partners

The *Profiles of Public Health Systems in Canada* are part of a research project titled *Platform to Monitor the Performance of Public Health Systems,* led by Principal Investigators Dr. Sara Allin, Dr. Andrew Pinto and Dr. Laura Rosella from the University of Toronto. The project involves the participation of knowledge users, collaborators and an interdisciplinary team of scholars from across Canada, and aims to develop a platform to compare public health system performance across Canada. To achieve this aim, the project comprises three phases:

1. Produce detailed descriptions of the public health financing, governance, organization, and workforce in each of the 13 provinces and territories using a literature review with results validated by decision makers.
2. Conduct a set of comparative in-depth case studies examining implementation and outcomes of reforms, and their impacts on responses to the COVID-19 pandemic.
3. Define indicators of public health system performance with structure, process, and outcome measures.

The National Collaborating Centre for Healthy Public Policy (NCCHPP) joined the research project working group in the early months of the COVID-19 pandemic, and is now proud to publish their work as a series of 13 Canadian Public Health System Profiles, with supplementary methodological materials. The series of public health system profiles are available on the NCCHPP website at: https://ccnpps-ncchpp.ca/profiles-of-public-health-systems-in-canadian-provinces-and-territories/.

About the National Collaborating Centre for Healthy Public Policy (NCCHPP)

The NCCHPP seeks to increase the expertise of public health actors across Canada in healthy public policy through the development, sharing and use of knowledge. The NCCHPP is one of six centres financed by the Public Health Agency of Canada. The six centres form a network across Canada, each hosted by a different institution and each focusing on a specific topic linked to public health. The NCCHPP is hosted by the Institut national de santé publique du Québec (INSPQ), a leading centre in public health in Canada.

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List of Abbreviations

AHS	Alberta Health Services
CEO	Chief Executive Officer
CMOH	Chief Medical Officer of Health
ED	Executive Director
EPHOs	Essential Public Health Operations
FNIHB	First Nations and Inuit Health Branch
HCoM	Health Co-Management
MOH	Medical Officer of Health
PHA	*Public Health Act*
PPH	Population and Public Health
RHA	Regional Health Authority
SCN	Strategic Clinical Network

Introduction

Objectives

As Canada deals with the COVID-19 pandemic, one of the biggest public health challenges of our time, the need to strengthen public health systems has never been greater. Strong public health (PH) systems are vital to ensuring health system sustainability, improving population health and health equity, and preparing for and responding to current and future crises. There are considerable variations across provinces and territories in how public health is organized, governed and financed, as well as in how public health systems have been reformed and restructured in recent years. This report builds upon prior reports and describes Alberta's public health system prior to the COVID-19 pandemic, including its organization, governance, financing, and workforce. It is part of a series of 13 public health system profiles[1] that provide foundational knowledge on the similarities and differences in the structures of public health systems across provinces and territories. In addition to summarizing what is known, these profiles also draw attention to variations and gaps to inform future priorities. This series will serve as a reference for public health professionals, researchers, students, and decision makers seeking to strengthen public health infrastructure in Canada.

Approach

Details on the jurisdictional review methodology are presented in the document *Profiles of Public Health Systems in Canada: Jurisdictional Review Methodology*.[1] The research team sought out information from peer-reviewed journal articles and publicly available grey literature (e.g., governmental and non-governmental organization reports, documents, webpages, legislation), and data sources (e.g., provincial/territorial budget estimates). The World Health Organization's essential public health operations (EPHOs) were used to define programs and services that constitute public health activities, and enabler EPHOs were used to define public health governance, organizational structure, financing, and workforce (Rechel, Maresso, et al., 2018; World Health Organization, 2015). The search terms were also informed by the research questions presented in a standardized data abstraction form adapted from the European Observatory for Health Systems and Policies (Rechel, Jakubowski, et al., 2018). A narrative synthesis was used to develop detailed profiles that were reviewed internally by the research team and externally by experts from each jurisdiction (e.g., public health policy makers and practitioners) for accuracy, completeness, and reliability. The reports were reviewed by public health key informants in each jurisdiction to assess the validity of our findings. We incorporated their comments and formally acknowledge their contributions at the start of each report.

Limitations

Despite this comprehensive iterative review process and our attempt to highlight information gaps, it should be noted that the process used to compile information was not a formal systematic search, and thus information sources may have been missed. Further, a detailed review of the role of the federal government and of First Nations, Inuit and Métis approaches to public health was beyond this project's scope and should be made a priority for future work. Moreover, by relying in large part on the published documents and websites of the key government actors and agencies in public health, we may not have fully captured how the system functions in practice, and whether and how actual roles and relationships may deviate from what is written in legislation and policy documents. Finally, these profiles describe the public health system prior to the COVID-19 pandemic; we do not review the governance structures, advisory groups and partnerships that were established in response to the COVID-19 pandemic.

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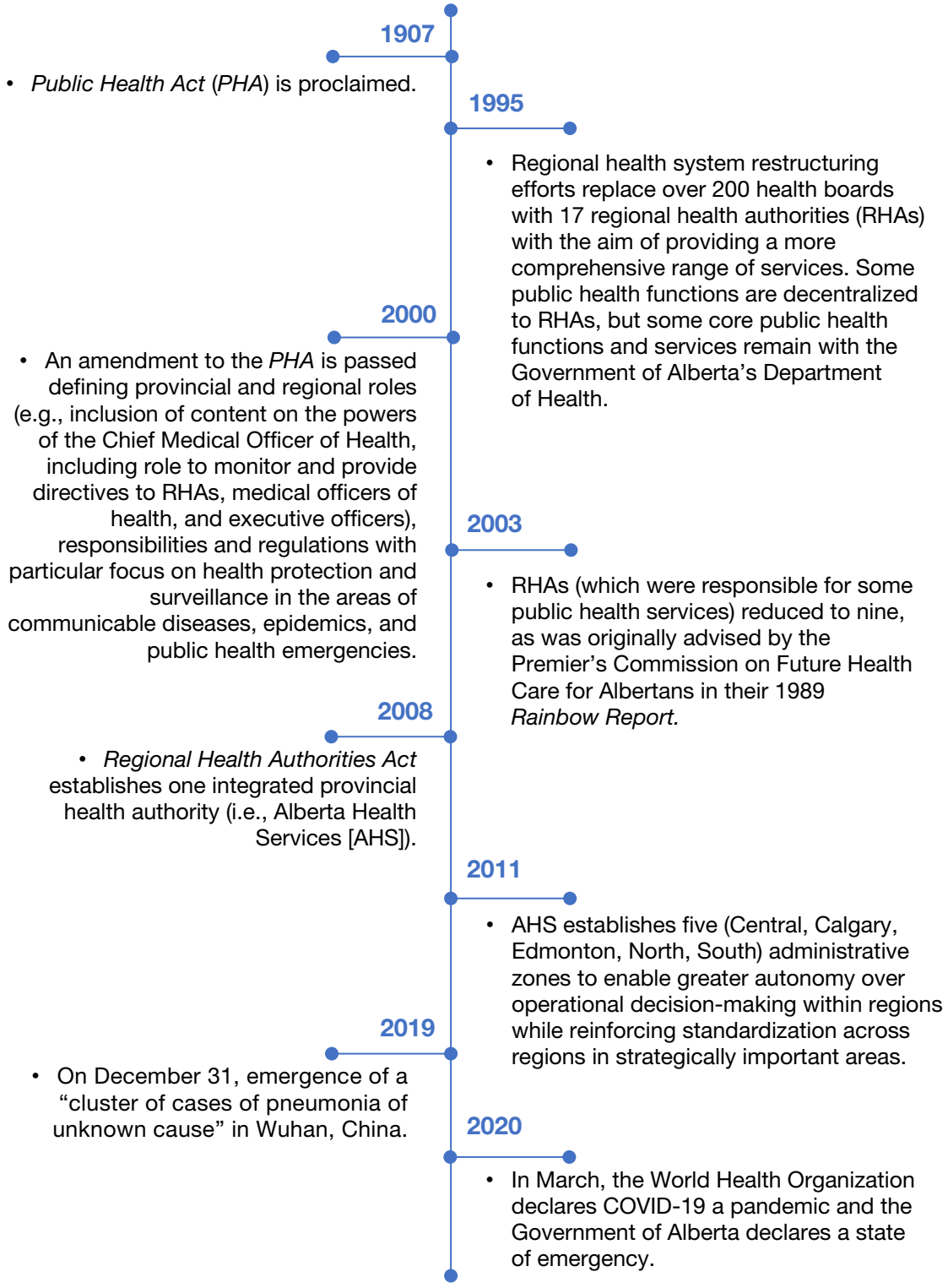
[1] The series of 13 public health system profiles and the jurisdictional review methodology document are available at: https://ccnpps-ncchpp.ca/profiles-of-public-health-systems-in-canadian-provinces-and-territories/.

1 Historical and Contextual Background

The timeline below presents the main recent reform initiatives and relevant policy changes affecting the governance, organization, financing and workforce of Alberta's public health system. It should be noted that the timeline below focuses primarily on major legislative changes and organizational reforms impacting the delivery of public health programs and services, and the timeline does not include detailed information on the changes to public health roles and functions within Alberta Health. Major reforms that impacted public health in Alberta included amendments to the *Public Health Act* (*PHA*) in 2000 and 2021, and structural changes to the health system that shifted some public health programs and services to regional health authorities (RHAs) in 1995, and then consolidated these into Alberta Health Services (AHS) in 2008.

Figure 1 **Timeline of proposed and enacted reforms impacting Alberta's public health system**



Sources: Alberta Health, 2013; Alberta Health Services, 2011a; Ernst & Young LLP, 2019; Government of Alberta, 2020; Philippon & Braithwaite, 2008; Public Health Act, 2000; Regional Health Authorities Act, 2008; World Health Organization, 2020a, 2020b.

2 Organizational Structure

This section describes the organizational structure of Alberta's public health system as of December 2020. We present the roles, responsibilities, and supervisory relationships of governmental and arms-length governmental institutions with a legislated role in public health, including health authorities, public health units, and key figures within each that lead the planning and delivery of public health services. Our focus is on those with public health as their primary role; therefore, we do not provide a detailed description of organizations and service providers in other sectors (e.g., primary care, mental health and addictions, social services, and non-governmental organizations that may perform essential public health functions as part of their work (e.g., immunization, health promotion).

2.1 Provincial

2.1.1 Ministry of Health

The Ministry of Health (also referred to as Alberta Health) includes the Department of Health, Alberta Health Services (AHS) and the Health Quality Council of Alberta (Government of Alberta, 2020b). It is overseen by the Minister of Health, who has legislated responsibility for developing a strategic plan for the health system; policies, legislation and standards governing it; administering the Alberta Health Care Insurance Plan; resource allocation; planning capital infrastructure; supporting information systems development; and overseeing health system performance (Government of Alberta, 2020c, 2020d). These roles and responsibilities are delegated across several divisions. "Protecting public health and promoting wellness" is a function primarily fulfilled by the Office of the Chief Medical Officer of Health (CMOH) and the Public Health and Compliance Division (Government of Alberta, 2020c; Public Health Physicians of Canada, 2019).

2.1.2 Office of the Chief Medical Officer of Health

The Office of the Chief Medical Officer of Health (CMOH) fulfills a leadership and advisory role supporting stakeholders in the government, AHS, and other stakeholders as appropriate with expertise on a range of population and public health areas. The Office of the CMOH, as well as the Public Health and Compliance Division, deals with all six core functions of public health, taking a population health, determinants of health, and equity perspective. The Public Health and Compliance Division and the Office of the CMOH are jointly accountable for all public health functions, with some functions also assumed by other divisions, such as public health surveillance. The CMOH also has a legislated mandate to monitor the "health authority" (AHS) as it carries out its duties under the *PHA*. The office is led by a CMOH, a Deputy CMOH, and Deputy Medical Officers of Health (MOHs) (Government of Alberta, 2020e). The CMOH is equivalent to an Assistant Deputy Minister and reports to the Deputy Minister of Health.

2.1.3 Chief Medical Officer of Health

The powers of the Chief Medical Officer of Health (CMOH) are outlined in the *PHA* under Section 14 (Public Health Act, 2000). The CMOH role is characterized as fulfilling the "Loyal Executive" typology whereby the CMOH fulfills the managerial duties of a senior civil serviceperson without clearly defined authority to communicate directly with the public or legislature (Fafard et al., 2018). The CMOH is also a public health expert advisor to Department of Health executives and the Minister of Health. The CMOH recommends and advocates for provincial policies and program initiatives to improve population health and advance health equity. The CMOH is the lead public health spokesperson for the Ministry and the lead spokesperson for public health programs or issues of significant public

health importance or risks. The CMOH recommends the need for and content of public health legislation, regulation, and standards in collaboration with the Assistant Deputy Minister, Public Health and Compliance Division.

Under the *PHA,* the CMOH has additional powers beyond all other MOHs. The CMOH monitors the actions of AHS's MOHs, and may give direction, assume powers and act in their place. The CMOH also manages and leads Deputy CMOHs and Deputy MOHs in the Department of Health. Furthermore, the CMOH plays a key liaison role with AHS and the Senior MOH as they liaise with other ministries on issues pertaining to the health of Albertans and is the representative at the federal, provincial, and territorial levels. Inter-organizational liaison also is under the responsibility of the CMOH as the he is the key Department of Health liaison with the Senior MOH, Indigenous Services Canada, First Nations and Inuit Health Branch (FNIHB) in collaboration with the Assistant Deputy Minister, Public Health and Compliance. The CMOH monitors the health of Albertans and makes recommendations to the Minister, Deputy Minister and AHS on improving population health outcomes. According to local experts, the CMOH also prepares and releases reports on specific issues related to population health outcomes, such as substance abuse and notifiable sexually transmitted and blood-borne infections (e.g., opioids or syphilis). Amidst an emergency response, the CMOH provides recommendations to the Lieutenant Governor in Council in public health emergencies.

2.1.4 Public Health and Compliance Division

Working collaboratively with the CMOH, the Public Health and Compliance Division of the Department of Health is led by an Assistant Deputy Minister and provides "strategic direction and leadership through the assessment, development and implementation of provincial policies, regulations, strategies, and standards" (Government of Alberta, 2020a). The division monitors compliance with public health regulations, health promotion, emerging public health crises, emergency preparedness, response and recovery, and health protection (including environmental public health, communicable disease prevention and control [e.g., immunization]) (Government of Alberta, 2020a).

The Health Standards, Quality and Performance Division's Epidemiology and Surveillance Unit (within the Analytics and Performance Reporting Branch) supports the Office of the CMOH and the Public Health and Compliance Division, performing analytic activities required for health surveillance and population health assessment (Government of Alberta, 2020a). This branch comprises epidemiologists, data scientists and other analysts and is led by an Executive Director and Provincial Health Analytics Officer who reports to an Assistant Deputy Minister (Government of Alberta, 2021b, 2021a). The Health Standards, Quality and Performance Division does however have a broad analytics mandate spanning several other health sectors (e.g., acute, primary, and continuing care, mental health and addictions, pharmaceuticals, etc.) (Government of Alberta, 2020a).

2.1.5 Alberta Health Services

Alberta Health Services (AHS) is the health system's delivery arm and is responsible for operationalizing Department of Health strategic priorities and achieving their objectives (Government of Alberta, 2020c). AHS plans and allocates provincial funding to support a large portion of health services and programs across five administrative zones (Government of Alberta, 2020c). AHS works together with the five zones to deliver a spectrum of province-wide services such as ambulance services, population and public health services, Indigenous health services, diagnostic imaging, and quality and safety (Alberta Health Services, 2020b). AHS has public health leadership and staff at both the provincial level (for the province-wide programs and services) and regional (zone) level. It follows a distributed model where the AHS zones deliver programs such as Well Child clinics and immunization. There is an Executive Director and Lead MOH who spearhead the zone programming.

AHS is governed by a board whose members and Chair are appointed by and are solely accountable to the Minister of Health (Alberta Health, 2013). The AHS board governs AHS business and operations and oversees the development of a Health Plan which outlines how AHS will carry out its responsibilities and measure performance (Alberta Health Services, 2016a). The board provides the Health Plan, quarterly performance reports, and annual management and financial reports to the Minister of Health, and may appoint a Chief Executive Officer (CEO) (Alberta Health Services, 2016a). A 2013 governance review taskforce report suggested that governance is enhanced when the AHS board, Chief Executive Officer (CEO), and senior leadership team have sufficient autonomy over enacting their respective responsibilities (Alberta Health, 2013).

According to the *PHA*, "a regional health authority shall provide the health promotional, preventive, diagnostic, treatment, rehabilitative and palliative services, supplies, equipment and care that the regulations require it to provide" (Public Health Act, 2000, p. 15). Section 2 of the *Regional Health Authorities Act* defines AHS's responsibility for planning and delivering services related to health promotion, protection, injury and disease prevention, and population health assessment and surveillance (Regional Health Authorities Act, 2008). These activities are predominantly administered by the population and public health portfolio (a province-wide program that works with zones) and supported by Cancer Care Alberta (e.g., cancer screening, surveillance and research), Alberta Precision Laboratories (e.g., Public Health Laboratory microbiological testing and diagnostic services), and Indigenous Wellness Core (e.g., facilitating equitable and culturally safe service and program design) (Alberta Health Services, 2015b, n.d.-d, 2020g, 2019a, 2020a, n.d.-l).

Environmental Health is a provincial program led by a MOH and an Executive Director. Environmental Public Health services throughout the province are listed on the AHS website (Alberta Health Services, n.d.-j). Under the *PHA,* Environmental Health Officers are delegated authority (from the MOH) to conduct public health regulation compliance inspections (e.g., of restaurants, aquatic facilities, drinking water sanitation), to enforce orders, and to assist in the management of environmental hazards (Public Health Act, 2000; Public Health Physicians of Canada, 2019).

2.1.6 Senior Medical Officer of Health and Medical Director of Population and Public Health

The Senior Medical Officer of Health (MOH) is a public health physician who is the provincial lead for public health within AHS and acts as Medical Director of the AHS Population and Public Health Division (Alberta Health Services, 2011b, 2020e; Public Health Physicians of Canada, 2019). Programs within the division cover emergency and disaster preparedness, safe and healthy environments, communicable disease control, population health assessment and surveillance and research, health promotion, disease and injury prevention, and the PPH Strategic Clinical Network (SCN) (Alberta Health Services, n.d.-p, n.d.-i, n.d.-e, n.d.-h, n.d.-q, n.d.-u, 2019a). The Senior MOH leads PPH with a non-medical dyad partner, the Senior Program Officer, who oversees an Executive Director and MOH dyad for each PPH program (e.g., Healthy Living, Communicable Disease, etc.).

The Senior MOH is an expert advisor to the AHS executives and board of directors, and a key liaison with the Department of Health and the CMOH on organizational and strategic planning with a focus on promoting coordination of provincial programs and services (e.g., as of 2020, Sexually Transmitted Infections, Dental Public Health, Tuberculosis, Healthy Living, and Screening) (Alberta Health Services, 2020e). The Senior MOH reports to the AHS Chief Medical Officer who reports to the AHS President and CEO. Each of the MOHs and the Provincial Dental Public Health Officer report to the Senior MOH, whether they lead provincial programs or lead a zone.

The Senior MOH is responsible for ensuring consistent application of the *PHA* and regulations by AHS staff. The Senior MOH is consulted during the development of public health legislation, regulations and standards. Furthermore, the Senior MOH serve as clinical department head of the AHS Clinical Department of Public Health and Preventive Medicine. The Senior MOH aims to use population health data to monitor health outcome indicators and support collaborations with other sectors, engage communities and guide activities to improve population health outcomes. The Senior MOH also leads the AHS response to public health threats and emergencies.

2.1.7 Population and Public Health Strategic Clinical Network

Strategic Clinical Networks (SCNs) are committees of health service providers, management, policy and scientific staff from across each zone, as well as external stakeholders (e.g., university faculty, other organizations), responsible for developing, testing, and the continuous quality improvement of evidence-based health services and programs. The Population and Public Health Strategic Clinical Network (PPH SCN) (now separate from the Indigenous Health SCN) aims to "drive innovation that creates opportunities and conditions for all people in Alberta to reach their full health potential" (Population, Public and Indigenous Health Strategic Clinical Network, 2020, p. 17). The PPH SCN falls under a Vice President's Portfolio of Provincial Clinical Excellence, and this Vice President reports to the AHS President and CEO. The PPH SCN is intended to function across AHS sectors, advising on issues related to population health and health equity, and to support partnership building with community-based organizations. The PPH SCN and the AHS PPH provincial program are led by a Senior Provincial Director and Senior Medical Director (who is an MOH) dyad.

2.2 Regional

2.2.1 AHS Zones

AHS segments the province into five health service planning and delivery zones. The organizational structure of each AHS zone varies according to the characteristics and unique needs of the region; therefore, each zone is set up slightly differently and the portfolios have different names (e.g., public health, community health).

2.2.2 Zone Medical Officers of Health

Every zone has a Lead Zone MOH who is part of the zone leadership that guides acute and community care and population public health. All MOHs from the zones report to the Senior MOH in AHS. MOHs are responsible for monitoring and reporting on the overall health of the population, enforcement of food, water, and facility sanitation and safety standards, the leadership of communicable disease control activities, and guiding noncommunicable disease and injury prevention program development and implementation (Alberta Health Services, 2020d). MOHs tend to share accountability with "dyad partners" who provide administrative oversight for the delivery of provincial programs and zonal public health programs and services.

2.3 Local

Frontline public health service providers are predominantly public health nurses, dieticians, and environmental health officers (Public Health Physicians of Canada, 2019). Services are delivered through AHS public health centres and community health centres (Alberta Health Services, n.d.-s, n.d.-f). The staff (e.g., public health nurses) who work in public health at the zone level report up through the managers of clinics who report to program directors who then report up to the Executive Director.

While team-based primary care networks are forming in partnership with AHS, most physicians in Alberta have independent practices within which some preventive services are performed (e.g., Well Child checks) (Alberta Health, 2013; Alberta Health Services, n.d.-r). Almost all publicly funded vaccines are provided by public health professionals, with few exceptions, such as physicians and pharmacists participating in the influenza program.

2.4 Integration, Intersectoral Coordination and Inter-Jurisdictional Partnership

Integrated health services involve seamless and easy navigation of the health system for users, and coordination of delivery (e.g., programs, services, information), governance (e.g., policies, stewardship), and financial arrangements (e.g., funding models and agreements) between providers and formal and informal partners (World Health Organization, 2008, 2018). Our search identified several programs and services that may constitute integration and intersectoral coordination within and beyond health sectors, as well as inter-jurisdictional partnerships aimed at supporting public health systems within First Nations and Métis communities. It should be noted that our search did not yield an exhaustive list of relevant activities. A key gap identified was detailed information on the participation of Alberta Health with federal-provincial-territorial committees (e.g., Pan-Canadian Public Health Network, Antimicrobial Resistance), and the CMOH's participation on the pan-Canadian Council of CMOHs (Government of Canada, 2019; Pan-Canadian Public Health Network, 2016, 2018).

2.4.1 First Nations and Métis Public Health Systems

Health services resource allocation and planning within most Treaty 6, 7, and 8 First Nations communities are governed under the Health Co-Management (HCoM) Agreement and coordinated by the HCoM Committee (Health Co-Management, 2021). The HCoM Committee is convened by a First Nations co-chair and a First Nations and Inuit Health Branch (FNIHB) Indigenous Services Canada co-chair and comprises two Chiefs from each Treaty area and FNIHB Alberta region representatives (Health Co-Management, 2021). This committee oversees subcommittees (modelled after the HCoM Committee) responsible for coordinating resource allocation, service and program planning and support in the following six functional areas: Health Protection; Prevention; Operations and Support (which includes Public Health Surveillance infrastructure); Children and Youth; Mental Health and Addictions; Non-Insured Health Benefits (Health Co-Management, 2021).

First Nations communities work with the FNIHB of Indigenous Services Canada who support the funding and delivery of public health services on reserve. FNIHB works closely with the CMOH, AHS MOHs and Indigenous Wellness Core, and is represented on the majority of public health initiatives under Alberta Health. Overseeing FNIHB PPH programs and services in Alberta are a Deputy MOH and Director of Primary and Population Health, a Deputy MOH Primary Care and Telehealth, and a Senior MOH (Alberta Health Services, n.d.-n; Government of Canada, 2020; Public Health Physicians of Canada, 2019). These regional actors report to the Senior Assistant Deputy Minister of First Nations and Inuit Health (Indigenous Services Canada) and to program directors within the Population Health and Primary Care Directorate (Indigenous Services Canada, 2019). The MOHs provide leadership and public health and preventive medicine expertise for regional management teams responsible for program/service delivery and monitoring and responding to public health hazards (Government of Canada, 2020; Public Health Physicians of Canada, 2019). The Senior MOH also liaises with AHS to "assure seamless access and equitable services" for Indigenous communities (Government of Canada, 2020).

In addition, some First Nations and Métis Settlements also contract AHS for communicable disease (e.g., sexually transmitted infections and tuberculosis) control services (Health Canada, 2012; Public Health Physicians of Canada, 2019) and work in conjunction with First Nations or Métis health organizations or with FNIHB and the individual First Nation or Métis Settlement. The Department of Health Public Health and Compliance Division also collaborates with the AHS Indigenous Wellness Core and Metis Settlements of Alberta who support public health program delivery with Métis Settlements (Alberta Health Services, n.d.-m; Metis Settlements of Alberta, 2018).

2.4.2 Intersectoral Partnerships Within Health System

Alberta's health system is built on an integrated governance model. Public health in Alberta is vertically integrated with the health care system, with a focus on coordinated community-based care and provincially delivered standardized programs (Ernst & Young LLP, 2019; Public Health Physicians of Canada, 2019). Public health postnatal services are one area of health care-public health integration, as they provide families of newborns with post-hospital discharge health assessments and referrals to community health centre services (e.g., Well Child Services) (Alberta Health Services n.d.-t).

Several public health programs partner with other health care professionals. For example, the Alberta Influenza Immunization Policy, which became effective in September 2020, enables community pharmacists to obtain influenza vaccines from the Department of Health through Pharmacy Wholesale Distributors (Province of Alberta, 2020). Afterwards, the pharmacists help monitor the influenza vaccine by sending their claims to Alberta Blue Cross within three business days (Province of Alberta, 2020).

Healthier Together is a partnership between the Department of Health, AHS, AHS partners (e.g., PPH and Indigenous Health SCNs), and external partners aimed at developing an interactive healthy living and chronic disease prevention website consisting of tools, information and resources to promote healthy behaviour change (Alberta Health Services, n.d.-a).

In 2015, the Alberta Cancer Prevention Legacy Fund collaborated with 16 rural Alberta communities and three First Nations communities to develop a comprehensive community Cancer Prevention and Screening approach (Alberta Health Services, n.d.-c). This approach then developed into the Alberta Healthy Communities Initiatives. AHS supports the Alberta Healthy Communities Initiatives, which are community-based collaborative projects that aim to address the social determinants of health and living and working conditions (Alberta Health Services, n.d.-c). Drawing on the lessons of the past, in 2019 the Alberta Healthy Communities Initiative aimed to expand and assist 20 more rural communities and three Metis Settlements with their efforts to develop community projects (Alberta Health Services, n.d.-c).

Other joint initiatives include the sexually transmitted and blood-borne infections strategy for Alberta, which was developed by AHS and partners across the province. The objectives of this strategy are to reduce infection rates, increase awareness, improve testing, service, and treatment accessibility, and better coordinate relevant health services/supports (Government of Alberta, 2018). Key action areas of this strategy are "prevention; early detection and diagnosis; treatment; support and care; raising awareness; addressing stigma" (Government of Alberta, 2018, p. 5).

2.4.3 Intersectoral Partnerships Outside Health System

The Department of Health and AHS partner with non-governmental and private service providers and organizations to fund and deliver health services throughout the province. Integration across government occurs between different departments, with the Ministry of Education (also referred to as Alberta Education) being an example of a key partner. Alberta Health and Alberta Education share a School Wellness Manager who works half-time in each ministry.

Public health activities shared between the Ministry of Health and the Ministry of Education are primarily school-based health promotion and disease and injury prevention programs. For example, there is currently a focus on "Comprehensive School Health" which focuses on building healthy school communities. Alberta Health is a member of Canada's Joint Consortium for School Health. AHS also has school health resources. Alberta school boards are supported by health promotion coordinators to access funding and deliver programs (Alberta Health Services, n.d.-g). Other public health activities include the following: providing routine immunizations of students in grades one through nine; and the Provincial Injury Prevention Program which, through the Smart Risk Approach, provides information for teachers and families on how to promote risk reduction and management for school-aged youth (Alberta Health Services, n.d.-k, n.d.-v).

There are several additional examples of collaborations and public health programs and services offered through other public sectors. For example, Alberta Health collaborates with the Ministry of Children's Services on early intervention services, including childcare and early childhood development (National Collaborating Centre for Healthy Public Policy, 2018). The Ministry of Community and Social Services manages some public health programs, including community-based supports, the Fetal Alcohol Spectrum Disorder program, and family violence prevention (National Collaborating Centre for Healthy Public Policy, 2018). Drinking water quality testing is coordinated between the Environmental Public Health Division of AHS, the Ministry of Environment and Parks, and municipalities (Alberta Health Services, n.d.-i). The Department of Health environmental public health program and the Office of the CMOH are also involved in water hygiene, but not testing specifically. Drinking water is regulated and monitored by health authorities under the *Environmental Protection and Enhancement Act* and the *PHA* (Alberta Environment and Parks, 2009).

3 Governance

Public health system governance comprises the legal, regulatory and policy frameworks (e.g., public health legislation, regulations, standards, guiding policies) which define the roles and responsibilities of key actors and the strategic vision, mission and goals directing the public health system (World Health Organization, 2015). Performance measurement and evaluation of public health activities are fundamental to assessing whether systems produce the intended outcomes and facilitate the continuous improvement of programs and services (World Health Organization, 2015).

3.1 Legal and Policy Framework for Public Health

The *Public Health Act* (*PHA*) is the key piece of legislation governing Alberta's public health system (Public Health Act, 2000). Originally passed in 1907, the 2000 amendment to the *PHA* defined provincial and regional roles (e.g., describing the powers of the CMOH, including to monitor and provide directives to health authorities, MOHs and executive officers) and responsibilities and regulations, with particular focus on health protection and surveillance in the areas of communicable diseases, epidemics, and public health emergencies. The *PHA* is separated into four sections:

1. *Public Health Appeal Board*: detailing the duties of and appeal process to the Public Health Appeal Board;
2. *Administration*: outlining the powers and responsibilities of the RHA, Minister, and CMOH;
3. *Communicable Diseases and Public Health Emergencie*s: outlining protocols for isolation, quarantine, epidemics, and recalcitrant patients and;
4. *General*: including information on conducting and enforcing inspections and regulations (Public Health Act, 2000).

A unique aspect of the *PHA* is that FNIHB MOHs are recognized as MOHs in Alberta under the Act (Public Health Act, 2000). Under the *PHA* Section 16, the Minister may appoint one or more physicians as MOHs for the purpose of part 3 of the *PHA*, Communicable Diseases and Public Health Emergencies.

Additional regulations and laws complement the *PHA* in promoting public health and governing programs and services. For instance, the *Communicable Diseases Regulation* (Communicable Diseases Regulation, 1985) outlines the Minister's and health authority roles in mitigating and addressing communicable disease, the MOHs' roles in enforcing isolation procedures and determining the cause and spread of communicable disease, as well as general reporting procedures for communicable disease cases. Furthermore, there is a *Bodies of Deceased Persons Regulation* (Bodies of Deceased Persons Regulation, 2008), which details practices for the handling and disinterring of deceased bodies (both uninfected or infected with communicable disease). The *Co-ordinated Home Care Program Regulation* explains the roles of health authorities in providing such programs, specific services that programs can deliver, admission criteria for potential program recipients, the roles of program managers, etc. (Co-ordinated Home Care Program Regulation, 2003). The *Immunization Regulation* defines reporting mechanisms related to immunizations and practices/requirements related to the storage and handling of vaccines (Immunization Regulation, 2018). The *Emergency Powers Regulation* describes procedures required to exercise emergency powers (Emergency Powers Regulation, 2009).

Both the *Skin Cancer Protection (Artificial Tanning) Act* (2015) and the *Tobacco and Smoking Reduction Act* (2005) have been replaced by the new *Tobacco, Smoking and Vaping Reduction Act*. The *Tobacco, Smoking and Vaping Reduction Act* was created to regulate and restrict the sale and consumption of tobacco and vaping products (Tobacco, Smoking and Vaping Reduction Act, 2021).

3.2 Performance Management and Evaluation

Alberta Health has defined a number of performance indicators to monitor progress on its objectives and anticipated outcomes for the health system (Government of Alberta, 2020c). Indicators used to evaluate PPH-specific programs and services include influenza immunization rates of older adults, child immunization rates, infant mortality, life expectancy, and smoking rates (Government of Alberta, 2020c). These program indicators are collected by AHS zones and reported to Alberta Health.

AHS has also defined performance measures that are regularly reported through quarterly and annual reports to both Alberta Health and the general public (Alberta Health Services, 2021b). AHS uses these to track progress on the Health Plan's objectives (Alberta Health Services, 2017a, 2021a, 2021b). Examples of indicators related to public health include "perinatal mortality among First Nations people" and "childhood immunization (Alberta Health Services Planning and Performance, 2019, p. 3 and p. 19). Additionally, AHS reports on a set of yearly and quarterly "monitoring measures" that are intended to evaluate programs or initiatives that the Health Plan does not explicitly outline or account for (Alberta Health Services, 2021b). Indicators related to public health include seasonal influenza immunization, life expectancy, potential life years lost, and cancer screening participation rates (Alberta Health Services, 2019b, 2020f). Each measure has a set of indicators that are calculated and reported for each geographical zone of Alberta (Alberta Health Services, 2019c). Cancer screening monitoring measures include early cancer diagnoses and annual screening participation rates for breast cancer, cervical cancer, and colorectal cancer (Alberta Health Services, 2019b).

While a comprehensive performance measurement framework for all public health programs and services in Alberta was not identified by our search, specific programs have defined evaluation frameworks. For example, in addition to AHS' defined monitoring measure, cancer screening is evaluated through frameworks established by AHS' Breast Cancer Screening Program, Cervical Cancer Screening Program, and Colorectal Screening Program (Alberta Health Services, 2015b). Each program defines one to two performance indicators related to screening participation and utilization rates, and time from screening result to diagnosis (Alberta Health Services, 2015b).

4 Financing

Among the EPHOs, financing refers to the "mobilization, accumulation and allocation of resources to cover population health needs, individually and collectively" (World Health Organization, 2015). Our search sought publicly available data from provincial budget reports and where public health expenditures were not specified, audited financial statements of key public health actors receiving provincial health funding (e.g., provincial, regional health authorities).

4.1 Background

Public health programs and services are funded by the provincial government through the General Revenue Fund (Ministry of Treasury Board and Finance, 2020). Guided by the Alberta Health Business Plan, resources are allocated to Alberta Health branches for public health policy development, governance, and advisory activities and to AHS for the implementation of public health programs and services aimed at achieving Business Plan objectives. AHS is funded by Alberta Health through the PPH funding envelope (Ministry of Treasury Board and Finance, 2020). Under section 5 of the *Regional Health Authorities Act*, AHS must "determine priorities in the provision of health services in the health region and allocate resources accordingly" (Regional Health Authorities Act, 2008). The AHS Health Plan, along with its reporting requirements, are the government's main mechanism for aligning resource allocation with provincial priorities and assessing performance on strategic objectives (Alberta Health, 2013). A recent performance review of AHS suggests that in addition to enabling accountability, the transfer funding structure provides AHS with autonomy to allocate resources as needed (Ernst & Young LLP, 2019). At the zone level, the responsibilities of senior leaders, including the MOH, include "strategic decision-making for local resource allocation and service delivery" (Alberta Health Services, 2011b). However, our search did not identify information detailing the processes and actors involved in zonal and provincial budget development for public health programs and services within AHS and Alberta Health.

4.2 Provincial Public Health Spending

The Alberta Health PPH budget covers salaries, supplies, and services to support PPH programs and services. These include programs coordinated by the Office of the CMOH or by other organizations (e.g., community agencies) leading health promotion and prevention initiatives, as well as research and support programs with federal nursing stations and Health Canada (Ministry of Treasury Board and Finance, 2020). This budget also includes funding for clinicians outside of AHS who provide immunizations and Provincial Vaccine Depot operations (Ministry of Treasury Board and Finance, 2020). Unless otherwise indicated, the consolidated operations expenditures presented in Table 1 account for transfer funding to AHS for the delivery of health promotion, protection, and disease and injury prevention services. Before 2016, public health expenditures were accounted for under the Community Programs and Healthy Living budget. It should be noted that these expenditures do not include those for epidemiological and analytic support funded through the Department of Health, Health Standards, Quality and Performance Division.

For fiscal year 2020/21, approximately 5.2% ($1.2 billion) of the provincial health budget was allocated to PPH, cancer research and prevention, and emergency response (Table 1 and Figure 2). This is higher than historical expenditures due in part to COVID-19 pandemic response funding (budget estimate: $500 million; Table 1). While the absolute amount of funding for public health has increased over the past decade (2010/11: $427 million; 2019/20: $676 million; figures not adjusted for inflation), the proportion of the health budget allocated to public health has remained relatively stable at around 2.8% (Table 1) (Alberta Health Services, 2013, 2014; Ministry of Treasury Board and Finance, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020). The AHS PPH budget has similarly increased in absolute terms but remains stable at approximately 2.5% of total operational expenses (Table 2) (Alberta Health Services, 2012, 2013, 2014, 2015a, 2016b, 2017b, 2018c, 2020c).

It should be noted, however, that these proportions may not precisely reflect provincial allocations to public health because some services and programs are included in these envelopes that may not directly address core public health functions. For example, within the 2019/20 and 2020/21 budgets, the PPH envelope supported palliative care education, training, and health professional standards development (Ministry of Treasury Board and Finance, 2019, 2020). Also, from fiscal years 2013/14 to 2015/16, the Community Programs and Healthy Living budget supported the Insulin Pump Therapy Program (Ministry of Treasury Board and Finance, 2013, 2014, 2015).

4.2.1 Public Health Spending in Health care and Across Sectors

Within the financial statements of both the Department of Health and AHS, PPH accounts for a small proportion of overall health spending (Ministry of Treasury Board and Finance, 2020). Physician compensation, acute care, and diagnostics and therapeutics account for the largest share of provincial health expenditures at 23.4%, 17.7%, and 10.7% respectively (Table 3) (Ministry of Treasury Board and Finance, 2020). Despite evidence of intersectoral collaboration on public health-related activities, our search did not identify dedicated budget lines for these initiatives within other ministries' financial statements (Ministry of Treasury Board and Finance, 2020). However, funding to support policy, programs and services addressing social determinants of health can be found across ministries. For example, the Ministry of Transportation funds infrastructure grants to develop and maintain safe drinking water systems with First Nations communities (Ministry of Treasury Board and Finance, 2020). The Ministry of Community and Social Services also funds policy development and services aimed at preventing sexual violence, promoting healthy relationships and housing security, and providing homelessness outreach services (Ministry of Treasury Board and Finance, 2020).

Table 1 Population and Public Health operating expenses, fiscal year 2010/11 to 2020/21 (expressed in thousands, CAD$)

	Department of Health					Alberta Health Services		
	Total Health Expenditure	Population & Public Health	Cancer Research & Prevention	Emergency Response	Community Programs & Healthy Living	Promotion, Prevention & Protection Services	Total Public Health Expenditure	% of Total Health Expenditure
2020/21*	22,706,368	660,510	15,410	500,000	-	-	1,175,920	5.2
2019/20**	22,359,743	668,827	7,216	-	-	-	676,043	3.0
2018/19	21,920,021	621,577	6,568	-	-	-	628,145	2.9
2017/18**	21,667,796	650,022	1,100	-	-	-	651,122	3.0
2016/17	20,927,804	560,010	8,270	-	-	-	568,280	2.7
2015/16	20,416,901	553,561	5,000	-	-	-	558,561	2.7
2014/15	19,585,807	-	12,500	32,796	457,625	-	502,921	2.6
2013/14**	17,666,143	-	25,000	-	148,530	333,189	506,719	2.9
2012/13	16,863,277	-	12,500	-	129,563	330,775	472,838	2.8
2011/12	15,446,181	-	22,481	-	119,536	310,914	452,931	2.9
2010/11	14,736,573	-	18,750	-	119,306	289,313	427,369	2.9

Notes:

* Estimated expense

** Forecasted expense

A) Amounts abstracted from the Ministry of Health annual budget financial statements, statements of operations tables (Alberta Health Services, 2013, 2014; Ministry of Treasury Board and Finance, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020);

B) Consolidated operating expense estimates presented. Amounts for public health include transfers to AHS for Population and Public Health expenditures (except as noted in note G), and do not include capital investments or inventory acquisition expenses. These estimates include infrastructure support expenses and non-cash amounts (e.g., consumption of inventory) previously voted or not requiring cash disbursements;

C) Consolidated estimate presented for Total Ministry of Health expense (i.e., Total after adjusting for funding sourced from other ministries);

D) Amounts not adjusted for inflation;

E) Expenses included not typically designated as population and public health: 2019/20 and 2020/21 budgets include funding for palliative care education, training, and standards for health professionals and to raise public awareness of palliative care; 2013/14–2015/16 budgets included Insulin Pump Therapy Program within the Community Programs and Healthy Living budget;

F) Emergency Response events: 2020/21 – COVID-19 Pandemic Response; 2014/15 – Alberta Flooding;

G) Amounts presented under AHS Promotion, Prevention and Protection Services sourced from AHS consolidated statement of operations because Ministry of Health consolidated statements of operations aggregated transfer funding to AHS for community health services and population health expenses thus obscuring the amount budgeted for public health-specific expenses.

Table 2 AHS Population and Public Health consolidated operations expenditure, 2010/11 to 2019/20 (expressed in thousands, CAD$)

	Total AHS Expenditure	Population & Public Health	Promotion, Prevention & Protection Services	% of Total Expenditure
2019/20	15,468,535	357,117	-	2.3
2018/19	15,274,704	349,669	-	2.3
2017/18	14,764,447	338,451	-	2.3
2016/17	14,403,432	-	354,700	2.5
2015/16	14,099,863	-	353,028	2.5
2014/15	13,826,757	-	360,911	2.6
2013/14	13,033,351	-	333,189	2.6
2012/13	12,568,212	-	330,775	2.6
2011/12	11,747,160	-	310,963	2.6
2010/11	10,764,956	-	289,313	2.7

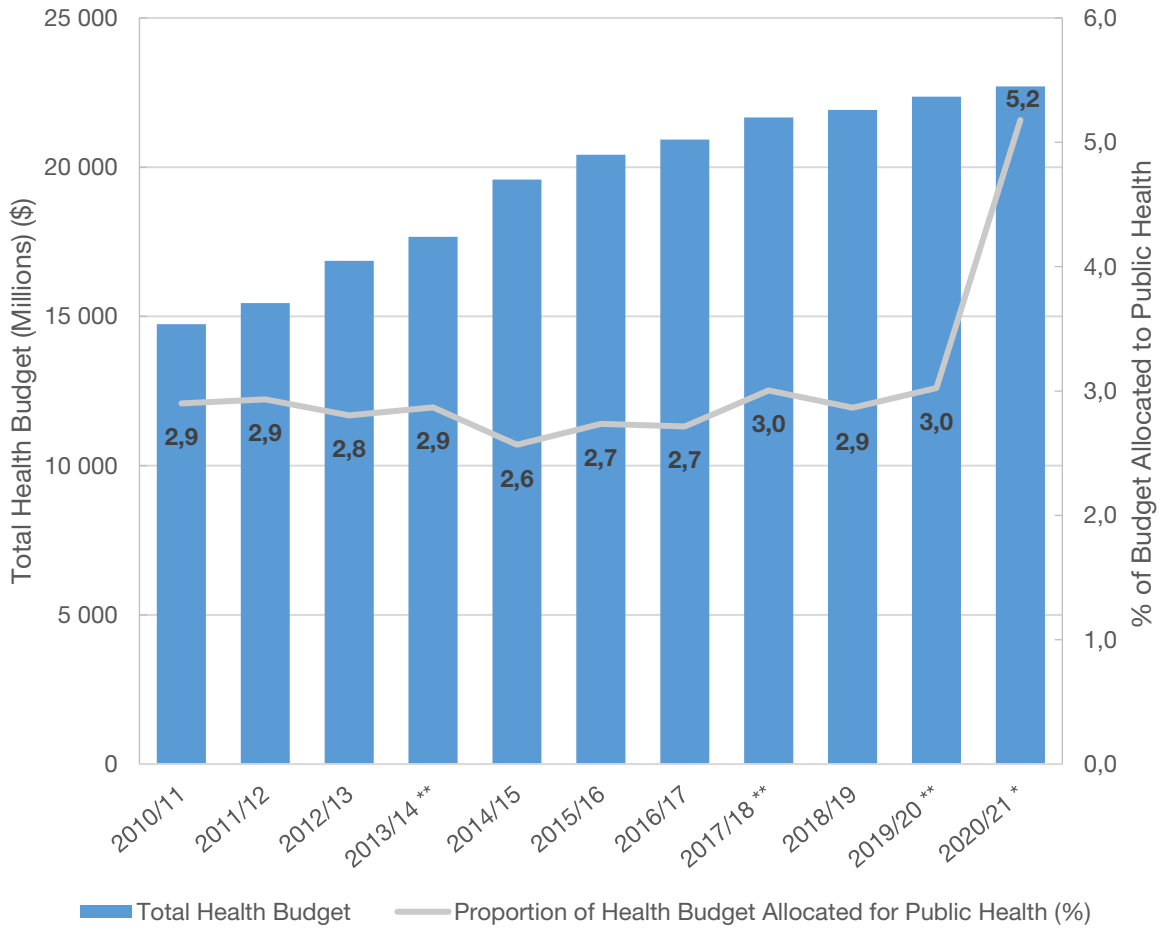
Notes: Amounts abstracted from consolidated statement of operations tables for fiscal years ending March 31st (Alberta Health Services, 2012, 2013, 2014, 2015a, 2016b, 2017b, 2018c, 2020c). Amounts not adjusted for inflation.

Table 3 Breakdown of Alberta Health budget by expense area (expressed in thousands, CAD$)

	2018/19 Actual	% of Ministry Total	2019/20 Forecast	% of Ministry Total	2020/21 Estimate	% of Ministry Total
Physician Compensation and Development	5,406,670	24.4	5,499,258	24.3	5,417,275	23.6
Acute Care	4,124,190	18.6	4,180,121	18.5	4,055,418	17.7
Diagnostic, Therapeutic and Other Patient Services	2,475,531	11.2	2,504,233	11.1	2,452,482	10.7
Support Services	2,241,340	10.1	2,273,000	10.0	2,250,000	9.8
Drugs and Supplemental Health Benefits	2,202,676	9.9	2,309,339	10.2	2,227,467	9.7
Community Care	1,411,258	6.4	1,462,000	6.5	1,494,000	6.5
Continuing Care	1,125,903	5.1	1,160,000	5.1	1,164,000	5.1
Home Care	688,040	3.1	715,000	3.2	717,000	3.1
Information Technology	584,459	2.6	639,670	2.8	719,787	3.1
Population and Public Health	**621,577**	**2.8**	**668,827**	**3.0**	**660,510**	**2.9**
Ambulance Services	525,531	2.4	525,000	2.3	532,000	2.3
Administration	556,281	2.5	487,691	2.2	489,760	2.1
Research and Education	106,926	0.5	94,579	0.4	94,579	0.4
Ministry Support Services	62,084	0.3	63,400	0.3	62,579	0.3
Infrastructure Support	44,360	0.2	14,817	0.1	96,631	0.4
Debt Servicing	15,353	0.1	16,000	0.1	16,000	0.1
Cancer Research and Prevention Investment	6,568	0.03	7,216	0.03	15,410	0.07
COVID-19 Pandemic Response	-	-	-	-	500,000	2.2
Ministry Total	**22,198,747**	**100**	**22,620,151**	**100**	**22,964,898**	**100**

Note: Table adapted from the Ministry of Health statement of operations table p. 125 (Ministry of Treasury Board and Finance, 2020).

Figure 2 Provincial public health spending in Alberta, 2010/11 to 2020/21 (CAD$, not adjusted for inflation)



Notes:

* Estimated expense

** Forecasted expense

A) Amounts abstracted from the Ministry of Health annual budget financial statement, statement of operations tables;

B) Consolidated operating expense estimates presented. Amounts for public health include transfers to AHS for Population and Public Health expenditures (except as noted in note G), and do not include capital investments or inventory acquisition expenses. These do include infrastructure support expenses and non-cash amounts (e.g., consumption of inventory) previously voted or not requiring cash disbursement;

C) Consolidated estimate presented for Total MOH expense (i.e., Total after adjusting for funding sourced from other ministries);

D) Amounts not adjusted for inflation;

E) Expenses included not typically designated as population and public health: 2019/20 and 2020/21 budgets include funding for palliative care education, training, and standards for health professionals and to raise public awareness of palliative care; 2013/14-2015/16 budgets included Insulin Pump Therapy Program within the Community Programs and Healthy Living budget;

F) Emergency Response events: 2020/21 - COVID-19 Pandemic Response; 2014/15 - Alberta Flooding;

G) Amounts presented under AHS Promotion, Prevention and Protection Services sourced from AHS consolidated statement of operations because Ministry of Health consolidated statements of operations aggregated transfer funding to AHS for community health services and population health expenses thus obscuring the amount budgeted for public health-specific expenses.

5 Public Health Workforce

The core public health workforce includes "all staff engaged in public health activities that identify public health as being the primary part of their role" (Rechel, Maresso, et al., 2018). This excludes professionals such as midwives, community pharmacists or family physicians who may promote public health, but only as part of their job. Our search sought information detailing the size and professional discipline composition of, and recruitment and retention trends and strategies for, the public health workforce in Alberta.

5.1 Size, Composition, Recruitment and Retention

5.1.1 Current State

Alberta's public health workforce is largely comprised of service providers, such as public health nurses, environmental health officers and public health dieticians (Public Health Physicians of Canada, 2019). While AHS reported a workforce of over 100,000 employees across the province in 2018, 91.3% of whom are unionized (Ernst & Young LLP, 2019), details on the scope and number of public health professionals are not publicly reported. Furthermore, the Alberta Health employee directory presents information on the types of roles employed within public health and related divisions, although details on the public health workforce are not available (Government of Alberta, n.d.-b).

The most detailed information available on the public health workforce is specific to the supply of public health and preventive medicine physicians. The Scott's Medical Database indicates that, in 2018, there were 39 public health and preventive medicine specialists working in Alberta, equivalent to one specialist per 100,000 people; 33 of whom were based in Calgary (20) and Edmonton (13) (Canadian Institute for Health Information, 2020). Approximately 30 public health physicians fulfill roles as MOHs (Alberta Health Services, n.d.-n; Public Health Physicians of Canada, 2019). Not all MOHs are Public Health and Preventive Medicine specialists as there is a mix of specialists and physicians with extra public health training in the system. Outside of MOHs, public health physicians in Alberta can also work in clinical settings as Medical or Scientific Directors (Public Health Physicians of Canada, 2019).

Recent workforce planning for public health focused on physician supply. The AHS Physician Workforce Plan and Forecast Report 2018–2028 reported a public health physician workforce of 19.61 full-time equivalents in the 2017–2018 fiscal year (Alberta Health Services, 2018a, 2018b). When adjusting for the forecasted needs of the population, the recruitment needs for public health physicians in Alberta for the period 2018–2021 was 13 FTEs and 20 FTEs over the period 2018 to 2028 (Alberta Health Services, 2018b). This forecast aimed to address resource gaps and the AHS strategic priority to shift focus towards population-based approaches to preventing illness and promoting wellness (Alberta Health Services, 2018a).

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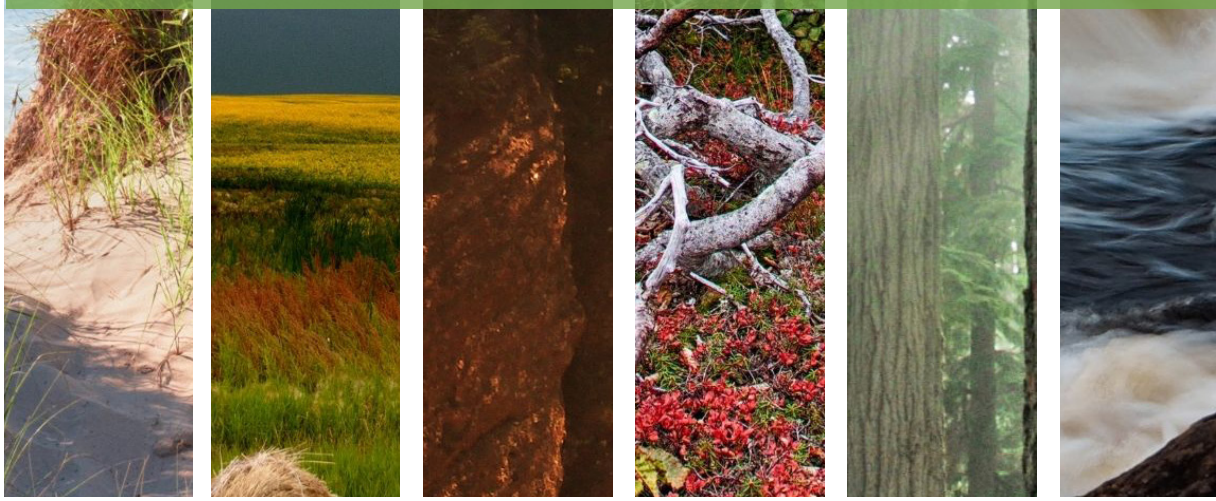

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