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Public Health In The Public Eye: **Motivating Sustained Investment**

November 2020

Public Health In The Public Eye: Motivating Sustained Investment

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This white paper was not commissioned by a client and is an independent publication of the StrategyCorp Institute of Public Policy and Economy.

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Published in Toronto, ON | November 2020

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Executive Summary

The COVID-19 pandemic has granted unprecedented attention on public health and some of its various important and interdependent parts that, arguably, under normal circumstances, work quietly behind the scenes without much visibility to most Canadians.

This visibility provides an important opportunity for public health – an opportunity to build and communicate a deeper, broader and more sophisticated awareness and understanding of what public health is to non-experts. This is a time to convey, celebrate, and be grateful for the critically important role that public health plays in society not only during times of crisis, but also as a part of its ongoing responsibilities and functions to promote and protect the health of all Canadians. In the face of what some public health experts and advocates argue has been Canada's increasingly weakened and under-funded public health system, particularly over the last decade, this understanding, or value proposition, is fundamental to supporting sustained, appropriate, and impactful investment in public health that transcends the crisis and politics of the day.

The knowledge translation and communication challenge is an important piece of the puzzle when grappling with the public health sustainability issue. Public health is in the spotlight with both its strengths and weaknesses laid bare. How do Canadians, their decision makers and government leaders, both inside and outside of public health, learn from these experiences and work together to continue to strengthen public health for everyone's benefit? It starts with common knowledge and understanding.

In this paper, contributing to a common understanding begins by looking at fundamental public health definitions and concepts, including how public health is organised across Canada and the essential services it delivers that are distinct from the health care system. A brief history of public health in Canada sets the context for deriving a few observations from the COVID-19 pandemic. These observations lead to important learnings for public health and its many and varied stakeholders, most importantly, the public. Three recommendations are offered to move these opportunities forward:

The learning opportunity - Public health focuses on population level health inequities by working with many stakeholders in society to strengthen the social determinants of health and reduce and buffer toxic stress in the lives of all citizens regardless of where they live, work, and raise their families. Variable, unpredictable investment and attention on public health issues and vulnerable populations can exacerbate risk and vulnerability during times of crisis and on an ongoing basis.

Recommendation – Public health reforms and budgets need to consider the principles of health equity and social justice to identify the most appropriate, consistent, and sustainable investments across the country and population groups, both during a pandemic and otherwise.

The learning opportunity - A timely, robust, reliable, valid and relevant evidence base is critical to assessing public health risks and for public health leaders to make the best decisions possible to protect and promote the health of Canadian populations and prevent poor physical and mental health outcomes. This also includes decisions related to future public health system and service reforms, and restructuring.

Recommendation – Public health reforms and budget decisions should be based on high quality knowledge and evidence, and include sustainable, future-oriented investments in public health surveillance and data governance systems, and research, evaluation and knowledge translation infrastructure and expertise.

The learning opportunity - Leadership in public health matters. While Canadians rely on public health leaders and experts for their expertise, guidance and directives, equipping non-experts with basic knowledge about public health could also be beneficial and advance common objectives when it comes prevention, improving health outcomes and making the case for public health.

Recommendation – To build knowledge capacity and leadership to motivate sustained investments in public health, public health leaders and key partners should invest in new and innovative ways to translate and mobilize foundational knowledge about public health and its impact to non-experts, which could include politicians, the media and the public.

Public health is fundamental to healthy populations and a healthy society. It should not take periodic pandemics to make this case. However, in the face of competing priorities and fiscal restraint, the public health value proposition is not necessarily well communicated nor well understood, leaving it vulnerable to political inattention, cyclical funding, and reductions in infrastructure support. Making the case for public health requires experts and evidence, but it also requires investments in raising awareness and equipping non-experts to be effective public health advisors, communicators, champions, and advocates. While public health is in the public eye, this issue is being illuminated and worthy of a closer look now and into the future.

Introduction

"One thing that is difficult for public health [to do] is to advocate for sustained investments and avoid this boom and bust panic" (1).
- Dr. Theresa Tam

The COVID-19 pandemic has granted unprecedented attention on public health and some of its various important and interdependent parts that, arguably, under normal circumstances, work quietly behind the scenes without much visibility to most Canadians. During this pandemic, professionals such as public health policy and decision makers, the Chief Public Health Officer of Canada (CPHO), provincial and territorial Chief Medical Officers of Health (CMOH)[1], epidemiologists, and infectious disease experts have become part of the daily news with Canadians hanging on their every word. As well, public health organizations with significant responsibility to protect and promote the health of populations, like the Public Health Agency of Canada (PHAC) and local public health authorities, have been thrust into the spotlight with increasing prominence, profile and controversy (2).

This visibility provides an important opportunity for public health – an opportunity to build and communicate a deeper, broader and more sophisticated awareness and understanding of what public health is to non-experts. This is a time to convey, celebrate, and be grateful for the critically important role that public health plays in society not only during times of crisis, but also as a part of its ongoing responsibilities and functions to promote and protect the health of all Canadians. In the face of what some public health experts and advocates argue has been Canada's increasingly weakened and under-funded public health system, particularly over the last decade, this understanding, or value proposition, is fundamental to supporting sustained, appropriate, and impactful investment in public health that transcends the crisis and politics of the day (3-8).

To raise awareness about what public health is, how it is distinct from health care and provide food for thought about how to build a better understanding about public health, this paper summarizes foundational public health definitions and concepts, provides a brief historical context of public health in Canada prior to the COVID-19 pandemic as well as how it is governed and structured. It then provides a few key observations from the ongoing COVID-19 crisis to further demonstrate how public health is potentially not well understood (or recognized for its essential contributions to health outcomes and the health system) to its detriment. Motivating sustained investments based on public health lessons over the decades and the COVID-19 pandemic need to rest on a solid foundation of understanding. Three learning opportunities and recommendations are offered with this in mind.

The knowledge translation[2] and communication challenge is an important piece of the puzzle when grappling with the public health sustainability issue. Public health is in the spotlight with both its strengths and weaknesses laid bare. How do Canadians, their decision makers and government leaders, both inside and outside of public health, learn from these experiences and work together to continue to strengthen public health for everyone's benefit? It starts with common knowledge and understanding.

[1] In this paper, CMOH is used interchangeably for individuals in this role who might have different titles, which vary across Canadian provinces and territories.

[2] The Canadian Institutes of Health Research define knowledge translation as: A dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system. https://cihr-irsc.gc.ca/e/29529.html

Based on the work of the FrameWorks Institute, this process involves experts and non-experts working together with knowledge brokers and communications specialists who help translate scientific concepts into plain language narratives for non-expert audiences and mobilize this translated information to inform public debate, and better align policy and practice with knowledge. https://www.frameworksinstitute.org

Understanding The Fundamentals

Health, Public Health, and the Public Health System

The World Health Organization defines health as "a state of physical, mental and social well-being and not merely the absence of disease or infirmity."[3] Health, or being healthy and well, is not a static phenomenon, but rather a dynamic capacity that is built over the life-course beginning in early childhood and influenced by interdependent phenomena including genes, positive and negative experiences, relationships and intergenerational factors. Based on this understanding, grounded in the science of the human development process as well as the social determinants of health, health is a holistic, dynamic and complex concept that stems from multiple, interdependent "upstream" (e.g. healthy public policy) and "downstream" (e.g. supportive relationships) factors that contribute to health, and the capacity to be healthy and resilient throughout life for individuals, families, communities, populations and society as a whole (9-14).

Given this definition of health, how does public health factor into health and well-being outcomes, and how is it distinct from the healthcare system? First, public health is a responsibility and function of government that is focused on the health of populations and not on the health of individuals, which is the focus of the health care system. The population health approach aims to improve the health of the entire population and to reduce health inequities[4] among population groups instead of focusing on individual cases. PHAC defines public health as "the organized efforts of society to keep people healthy and prevent injury, illness and premature death" (16). It is a combination of programs, services and policies that protect and promote the health of all Canadians (16). At its core, public health shapes our communities so that everyone has what they need for optimal health.

Second, public health systems are the complex adaptive networks at the federal, provincial, territorial and municipal/regional levels of government and include the departments, agencies, units, organizations, teams and programs that deliver public health services to Canadians (15). These systems are distinct from the Canadian publicly funded health care system that provides primary and acute care services to individuals in settings like hospitals or clinics. Health care makes up one piece of a strong foundation of health by treating patient-centred illness and disease. Other pieces function by securing the conditions in our communities that promote health and wellness. Ensuring that these conditions are solid, safe, and as stable as possible is the priority of public health professionals.[5]

Third, public health services encompass programs and initiatives focused on health promotion, health protection, population health surveillance, and the prevention of death, disease, injury and disability (15, 17).

Finally, public health practice is an approach to maintaining and improving the health of populations that is based on the principles of social justice, attention to equity, evidence-informed policy and practice, and addressing the underlying determinants of health. Many of these determinants are outside the direct responsibility of the public health system (e.g. education, employment) and therefore involve public health working collaboratively with communities, local businesses, schools and many others to create the conditions for good health. These principles are considered to be the foundations of public health, while the building blocks of public health practice include: evidence, research, surveillance and epidemiology, community consultation, risk assessment,[6] policy, intervention and health promotion (See Figure One) (15, 17). Together these foundations and building blocks are considered to be the "basics" of public health.

[3] Preamble to the Constitution of WHO as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of WHO, no. 2, p. 100) and entered into force on 7 April 1948. The definition has not been amended since 1948. https://www.who.int

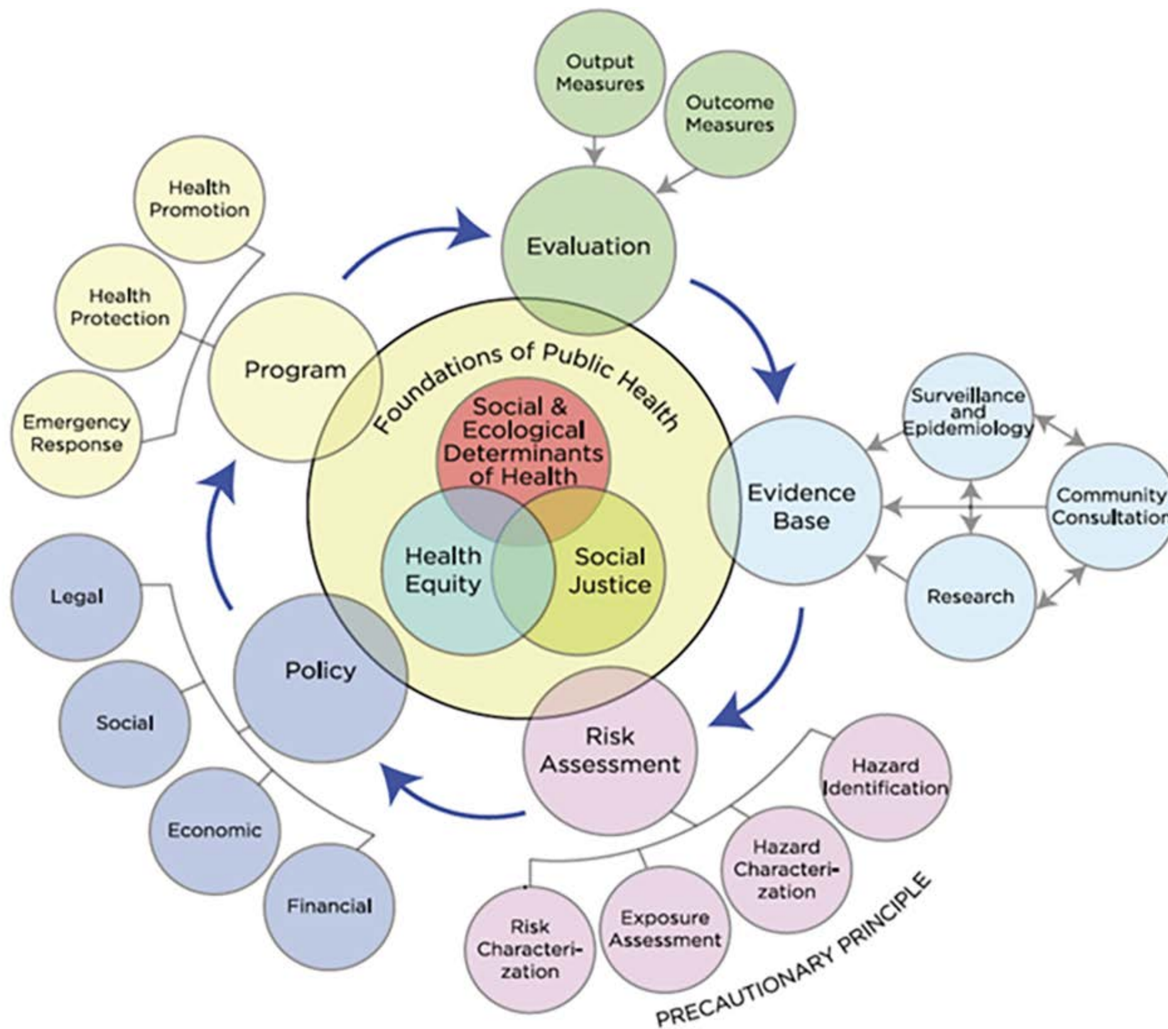
[4] Health equity means that all people have the capacity to reach their full health potential and should not be disadvantaged from attaining it because of their race, ethnicity, religion, gender, age, social class, socioeconomic status or other socially determined circumstances. Health equality in contrast aims to ensure that everyone gets the same things in order to enjoy full, healthy lives. It aims to promote fairness but can only works "if everyone starts from the same place." (15.Canadian Public Health Association: Public Health in the Context of Health System Renewal in Canada: Background Document https://www.cpha.ca/sites/default/files/uploads/policy/positionstatement/phhsr-backgrounddocument-e.pdf Ottawa; 2019. pages 4-6)

[5] For examples of health promotion initiatives with a focus on the social determinants of health and collaboration with community partners see: PHAC - Health Promotion https://www.canada.ca/en/public-health/services/health-promotion.html

[6] The "precautionary principle" informs public health decision making. It is "an approach to managing risk that has been developed to address circumstances of scientific uncertainly. It reflects the need to make prudent action without having to wait for completion of scientific research." (17. Canadian Public Health Association Working Paper, Public Health: A conceptual framework https://www.cpha.ca/public-health-conceptual-framework. Ottawa March 2017.(page 10)

In 2008, PHAC and partners also identified seven core competencies for public health practice in Canada (18):

Figure One: A conceptual framework for public health (17) (page 7)



Governance

The governance of the Canadian public health system is highly decentralized and stems from the constitutional division of power that involves a complex variety of legislation, regulations, and policies at all levels of government. The federal government has constitutional authority over some areas of health (e.g. quarantine, providing health services to Indigenous communities[7]) and the power to maintain Peace, Order and Good Government by declaring national emergencies, a power that could potentially become relevant during a public health crisis. Provinces and territories have authority over health insurance, regulating health professionals, health services delivery, and the regulation of public health and public health services (15, 19, 21).

PHAC is the lead agency for public health at the federal level and is part of the federal Health Portfolio along with Health Canada, the Canadian Institutes of Health Research, the Patented Medicine Prices Review Board, and the Canadian Food Inspection Agency which all report to the federal Minister of Health.

Public Health Agency of Canada's Mandate

Through its legislative framework, PHAC has developed a mandate to: (16)

- Promote health
- Prevent and control chronic diseases and injuries
- Prevent and control infectious disease
- Prepare for and respond to public health emergencies
- Serve as a central point for sharing Canada's expertise with the rest of the world
- Apply international research and development to Canada's public health program
- Strengthen intergovernmental collaboration on public health and facilitate national approaches to public health policy and planning

Collaboration and coordination across the country is facilitated through the Public Health Network Council, the Council of Chief Medical Officers of Health, and the Conference of Federal, Provincial, and Territorial Deputy Ministers of Health. The newly formed Chief Public Health Officer's Health Professionals Forum includes non-governmental organizations. PHAC has also established regional offices to further facilitate integration and coordination of activities across the country (15, 16).

Within its mandate, PHAC has a responsibility to collect epidemiological data for several reportable diseases, as well as other pertinent public health data, in collaboration with the provinces and territories (15). The obligation to collect and share data across Canada is not mandated. Rather, it relies on cooperation and collaboration instead of formal agreements or legislation. Critics argue this situation weakens the country's public health system and pandemic response, including PHAC's role to speak authoritatively based on comprehensive and timely epidemiological evidence (22).

The Chief Public Health Officer of Canada (CPHO) is the federal government's lead public health professional responsible for: (16)

- Providing advice to the Minister of Health and President of the Public Health Agency of Canada
- Working with other governments, jurisdictions, agencies, organizations, and countries on health matters
- Providing an annual report to the Minister on the state of public health in Canada for tabling in Parliament
- Speaking to Canadians, health professionals, stakeholders, and the public about issues affecting the population's health, including during emergencies

The CPHO is also accountable for, or has delegated responsibilities for, public health-related provisions of the Public Health Agency of Canada Act, the Quarantine Act, the Human Pathogens and Toxins Act, and the Department of Health Act (15). Initially appointed as both the CPHO and President of PHAC, the position was split in 2015 when a separate President from the federal public service was appointed. Critics have argued this restructuring has

[7] Fierlbeck and Hardcastle point out that "indigenous communities also have their own jurisdiction to pass regulations in response to a pandemic, either through bylaw-making powers assigned under the Indian Act, a self-government agreement, or an asserted inherent constitutional right to self-government." 19. Fierlbeck K, Hardcastle, L. Chapter A-1 Have the Post-SARS Reforms Prepared Us for COVID-19? Mapping the Institutional Landscape In: Flood CM, MacDonnell, V., Philpott, J., Theriault, S., Venkatapuram, S., editor. Vulnerable: The Law, Policy and Ethics of COVID-19 Ottawa: University of Ottawa Press 2020. p. 31-48.(page 35) The First Nations Health Authority in British Columbia (BC) is an example of highly effective Indigenous self-determination in health care. 20. Richmond CAM, Cook C. Creating conditions for Canadian aboriginal health equity: the promise of healthy public policy. Public Health Rev. 2016;37:2. Public Health in the Context of Health System Renewal in Canada: Background Document https://www.cpha.ca/sites/default/files/uploads/policy/positionstatement/phhsr-backgrounddocument-e.pdf Ottawa; 2019. pages 4-6)

weakened and compromised both the role of CPHO and the public health expertise of the PHAC overall (2, 5).

Provincial and territorial public health legislation defines the core functions of public health for each jurisdiction with public health services being organized differently at provincial, regional and local (municipal) levels. These services vary across the country according to the overall health system in each province and territory but, in general, the local / regional public health organizations provide services that meet the needs of the local population with direction provided by a public health official (23, 24).

Most provincial and territorial public health laws establish an executive level function, called a Chief Medical Officer of Health (CMOH), who is responsible for overseeing the public health sector. However, the power and authority of this individual may vary from province to province and is described by Fafard et al. as "contested" (25). In their survey of public health legislation across Canada, they found significant variation in the advisory, communication, and management roles of CMOHs. As they note, while most provinces and territories provide their CMOH with advisory and reporting powers, other powers including managing programs and advocating on behalf of the public remain unclear. There is an inherent tension among these CMOH functions, particularly if the communication role is also extended to advocacy. The independence and authority to communicate with the public and advocate for policy or program change is not typically codified. It is difficult to be a spokesperson for a government while also advocating that it changes its public health policies (25). The lack of clarity about the mandate of CMOHs across the country is a potential weakness in the public health system that needs to be addressed.

Key Developments and Issues Pre COVID-19

Boards of Health were first established in Canada in 1832 and 1833, with responsibility for public health issues such as improvements to water quality and sanitation. Since that time, public health roles and responsibilities have expanded to include immunization against childhood disease in the mid-1900s, health promotion in the 1980s and 1990s, and more recent efforts to focus on primordial and primary prevention by addressing the social determinants of health. Canada has a strong international reputation for its contributions to public health over the decades, with achievements that focus both on universal and more targeted public health initiatives including, acting on the social determinants of health, motor vehicle safety, tobacco control, (26, 27) as well as significant leadership and expertise in population and public health research and knowledge translation (28-30).

Throughout the decades, infectious disease prevention and emergency preparedness have been top public health priorities. The Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 reinforced the need for stronger Canadian public health capacity across the health system, including in both policy and practice. Lessons learned from SARS outlined in the Naylor Report (Learning from SARS: Renewal of Public Health in Canada) (31) and its corresponding recommendations for the public health system with a focus on bolstering Canada's emergency response capacity, led to the establishment of the Public Health Agency of Canada (PHAC) under the ***Public Health Agency of Canada Act*** in 2006.[8] This occurred through the amalgamation and centralization of federal government departments and branches with responsibilities related to public health, and the establishment of the Chief Public Health Officer of Canada (CPHO) position. The Naylor Report also recommended building and strengthening the public health workforce, which was addressed in part through the creation of Master of Public Health programs in Canadian universities in the mid 2000s and the delineation of core competencies for public health practice (15).

Naylor also highlighted the significant political and economic implications of an infectious disease

[8] See: https://lois-laws.justice.gc.ca/eng/acts/p-29.5/page-1.html

"The hardest lesson may be the requirement that we invest in public health even (or especially) in periods where threats to public health are not on the horizon (and thus not on the political agenda). Faced with short electoral cycles and the competing financial demands of primary and acute care, public health across jurisdictions has a history of marginal funding. 'The pattern,' noted the Naylor Report, 'is now familiar. Public health is taken for granted until disease out- breaks occur, whereupon a brief flurry of lip service leads to minimal investments and little real change in public health infrastructure or priorities'" (19).

outbreak. Paradoxically, public health experts and advocates argue that while emergency pandemic preparedness and response is extremely important, political leaders tend to only pay attention to public health during times of crisis and frame it too narrowly around infectious disease. This framing, uneven attention and narrow focus could jeopardize sustained investment in other important public health priorities, particularly when threats to public health are not on the horizon (19). These observations are consistent with those from other public health leaders and scholars who have been sounding alarm bells since the Naylor Report about the challenges faced by public health in Canada, arguing that the promise of a strengthened public health system post SARS has not been realized (5). While the pandemic response system had been continuously improving, (32) and was tested and improved further after SARS during the H1N1 outbreak in 2009, potential weaknesses persist (e.g. data sharing, complexity of coordination required, role of CMOH) with other aspects of the system deteriorating. Despite strong evidence in favour of the significant contributions public health policies have on the health of populations, and the contribution that investments can make to reducing the burden on health and social systems, (33, 34) investments in public health have been in decline. Deepening and growing weaknesses include: flat lining and/or reductions in budgets that are already considered to be insufficient and vary significantly across the country, from between 1.3% and 5% of overall health budgets; (5, 15) downgrading the status of public health within governments and health authorities; eroding the independence of CMOHs and the CPHO; limiting the scope of public health by combining it with primary and community care; and assigning public health responsibilities to managers and leaders who are not public health experts (5). Erosion of this capacity can disproportionately impact populations already experiencing significant health disparities, such as Indigenous populations, given public health's work on the basic determinants of health (7).

Changes affecting public health, such as budget cuts and reorganizations, often stem from political decisions and/or follow election cycles. Cited reasons for these changes include the need to realign responsibilities to create efficiencies, improving services at the local and regional levels, and a need to find cost savings (15). Examples include: what some describe as a "draconian" 33% budget cut the Quebec government imposed on public health units in 2015; (4) firing the former Chief Public Health Officer in New Brunswick in 2015 with no apparent rationale and dispersing about 100 public health staff across three ministries thereby disrupting the cohesiveness of the public health department;[9] (7) and Ontario's announcement in 2019 that it planned to reduce the number of public health units from 35 to 10 and cut the amount spent on public health in the province by $200M annually (about a 26% reduction in the budget) (35). It is not clear if any of these decisions incorporated empirical evidence about public health system performance, which public health researchers and evaluators argue could significantly enhance their quality, relevance, and appropriateness (4).

[9] Also see: https://atlantic.ctvnews.ca/former-n-b-chief-medical-health-officer-breaks-silence-after-job-termination-1.2991811

The Public Health System and COVID-19

"In this pandemic, Canadian institutions have displayed some of their weaknesses and inadequacies, but on the whole have performed relatively resiliently. Processes of decision-making have been adapted to improve performance, and the people in leadership jobs have largely risen to the challenges they faced. As to institutions, processes, and people, we have been relatively well served" (36).

As outlined, when the ongoing COVID-19 pandemic began in early 2020, Canada's public health system was not without issues. Most Canadians were likely not aware of this situation as public health usually works quietly and competently in the background without much visibility to the public. Moreover, despite the weaknesses in the public health system some argue that Canadians are generally being well served during these extraordinarily stressful and unprecedented times and, as such, Canadians ought to be extremely grateful to public health leaders and front-line staff.

Having said this, as the COVID-19 pandemic plays out in real time with nearly 270,000 cases and more than 10,000 deaths in Canada as November 9, 2020, it is not clear when, or how, it will end. Some observations can be made at this point, however, that further contribute to an understanding of the state of public health in Canada – and possible actions that can be integrated into iterative policy improvement processes. These generally align with the weaknesses the public health community has identified for many years and are offered to inform recommendations for moving forward to address public health sustainability. They focus on system issues that are apparent during the pandemic, but with relevance that transcends the crisis and pandemic preparedness to inform policy changes more generally. What these recommendations highlight is that a lack of solid understanding, or a failure to acknowledge, what public health does for Canadians is a root cause of historical and ongoing weakness in the system. Public health does not offer obvious political "wins" between crises, particularly in the face of mounting health care costs and competing priorities (37). Understanding how public health can become such a win raises important questions about knowledge translation and communications.

Observation One

Variation and vulnerabilities

Canadians' experiences during the pandemic have been impacted by a number of factors, including where they live and pre-existing vulnerabilities and increased health risks in certain populations, such as Indigenous populations, visible minorities and new immigrants, and seniors (particularly those living in long term care facilities) (38). There has also been a rise in mental health and addiction related issues as well as instances of family disputes and domestic violence, as Canadians cope with the significant toll the pandemic has taken on their everyday lives, families, and livelihoods. All of these significant challenges are, to a certain extent, preventable public health issues.

The learning opportunity

Public health focuses on understanding and addressing health inequities by working with many stakeholders in society to strengthen the social determinants of health and reduce and buffer toxic stress in the lives of all citizens regardless of where they live, work, and raise their families. As has been witnessed for many years, variable and unpredictable investment and attention on public health issues and vulnerable populations can exacerbate risk during times of crisis and beyond.

Recommendation - Public health reforms and budgets need to consider the principles of health equity and social justice to identify the most appropriate, consistent, and sustainable investments across the country and across population groups.

Observation Two

Evidence to inform decision-making

As this paper has already pointed out, there is much debate among experts and policy makers related to sharing epidemiological data across the country, particularly between provinces and territories with PHAC. Some are calling for legislation to require such data sharing rather than depending on collaboration and good will, despite the collaborative approach being historically preferrable due to shared powers under Canada's constitution (21). Canadians need to be confident that public health decision-makers have the information they need to make the best decisions possible both during pandemics and otherwise.

While data sharing issues are not very visible to most Canadians, another issue related to evidence-based decision-making has been playing out in the public eye during the pandemic: the situation with Canada's Global Public Health Intelligence Network (GPHIN) (39, 40). The Network, first established in the mid-1990s, was made up of highly specialized experts and provided continuing surveillance data so that Canada and other countries had the epidemiological intelligence they needed about potential health threats for planning and response efforts. In 2018-2019, officials inside PHAC decided to curtail GPHIN activities since no major health threats seemed to be materializing and, it appeared, they sought to use the resources for other purposes. Analysts were reassigned and by the time COVID-19 hit, GPHIN "was a shadow of its former self" (39).

PHAC based scientists also assert that another motivation behind GPHIN's demise was that the role of scientific advice and evidence-based decision-making had been on the decline at PHAC since the CPHO role had been split, making way for the PHAC presidency to be appointed to a federal public servant without public health expertise. Without GPHIN and expertise at the top, they argued that Canadian public health officials were not adequately informed to assess the COVID-19 risk and might have assessed it as too low for too long until finally in March 2020 they began urging

Canadians to physically distance. Subsequently, two investigations into the oversight of GPHIN and the complaints from scientists within PHAC about the risks of dismantling it have been launched by both the Auditor General and Health Minister Patty Hajdu. The GPHIN alert system was restarted in August 2020 "after 440 days of silence" (39).

The learning opportunity

Reliable, relevant, and appropriate public health decision-making and risk assessment is based on timely, robust, reliable, and valid evidence and information. It also depends on knowledge translation and communication processes and expertise focused on effectively summarizing and sharing research and data to inform decisions. Surveillance, research, evaluation, knowledge translation and related infrastructure, as well as approaches to governing data gathering, storing and sharing need to be appropriately resourced to be sustainable. While the pandemic highlights the importance of epidemiological information in decision-making, the domains of research, evidence and expertise that are potentially relevant to public health decision-making are also informed by a broad range of knowledge areas encompassing interdisciplinary expertise and scientists from across many disciplines. Depending on the issue at hand, this might include social scientists, behavioural scientists, indigenous scholars, legal scholars, political scientists, and evaluation research experts, to name a few. When considering public health science and scientific expertise, it is important to think broadly given the wide scope of public health expertise decision-making might require. Public health system performance measurement is also a specific area of expertise that can inform public health reforms and reorganization of services (4).

Recommendation - Public health reforms, restructuring and budget decisions should be based on high quality knowledge and evidence, and include sustainable, future-oriented investments in public health surveillance and data governance systems, and research, evaluation and knowledge translation infrastructure and expertise

Reforms and resource allocation should also consider that solid evidence already exists to support the case for investing in chronic disease prevention and health promotion, starting in the early years and intergenerationally. Such investment can result in reduced risk and vulnerability for poor physical and mental health issues throughout one's life and reduced cost and burden on health and social systems (10, 33, 41-43). Efforts[10] to synthesize and disseminate this existing knowledge for decision-making are important and necessary investments. If this knowledge is used to make decisions, it could result in better health outcomes for Canadians and less costs on health care and other social systems.

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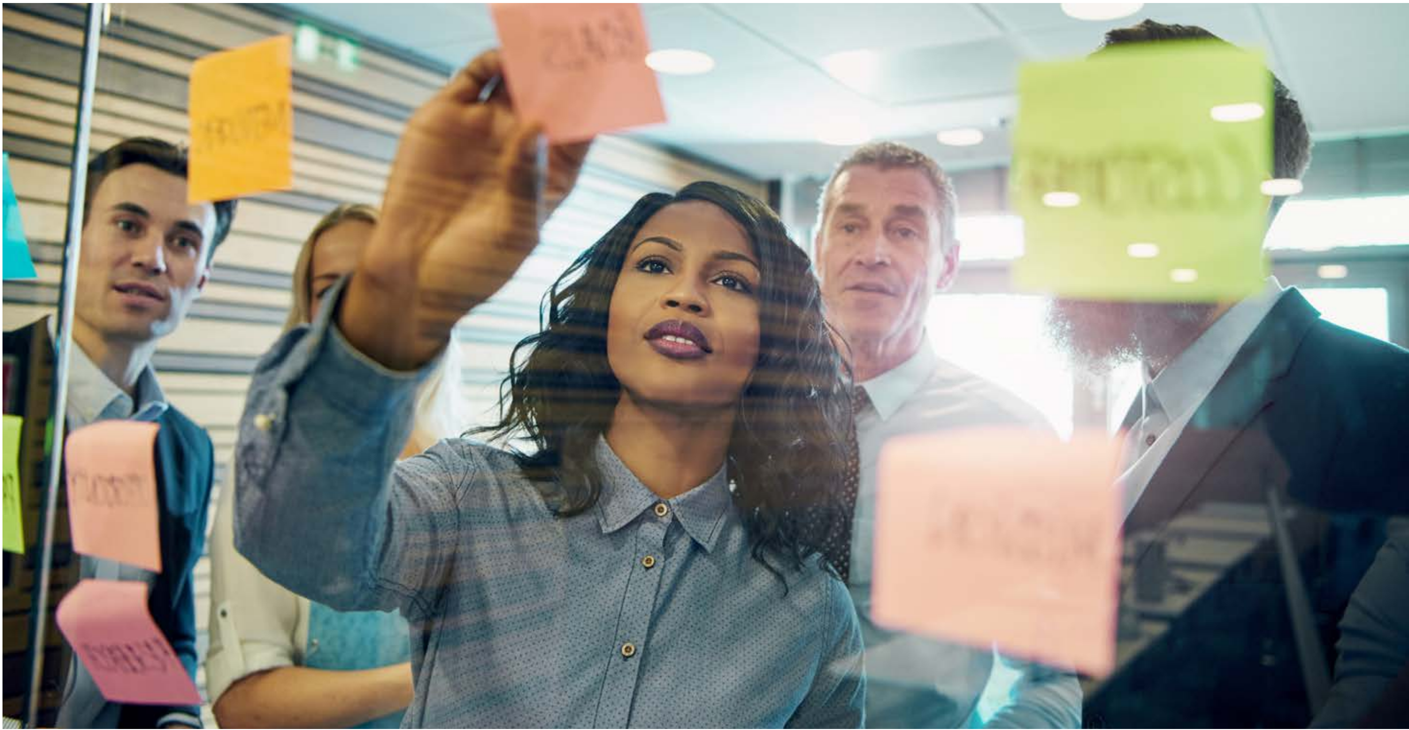
[10] An example of such an investment is the Alberta Family Wellness Initiative's work to mobilize the Brain Story in a number of ways including through a free on-line course called the Brain Story Certification Course. The Harvard Center on the Developing Child with the FrameWorks Institute summarized and translated this knowledge for non-expert audiences into what is called the Brain Story. This foundational knowledge about brain and child development and how experiences play a role in this process is making a difference to thousands of Canadians and attracted international attention too. 10. Alberta Family Wellness Initiative [cited 2020 November 1]. Available from: www.albertafamilywellness.org

Observation Three



Leadership, communication, and public health capacity

Public health leaders have been front and centre during the pandemic like never before. Canadians are grateful for these leaders and their expertise, stamina, and dedication to the health of the country. However, given the variation across Canada in terms of who is deemed to be an authoritative spokesperson, or chooses to be one (a CMOH or a political leader or sometimes both), how well equipped they are to take on this role, and what their messaging is in terms of public health directives, understandably Canadians have reported being confused by inconsistent advice and expectations (44, 45). Moreover, with inconsistent or unclear messaging, they could be at risk of turning to illegitimate sources for insights (46). Public health leaders with the expertise, skills, and competencies needed to lead and communicate about public health efforts are an absolute necessity to public health. Actions over the last decade or so to dampen or confuse these roles, including at PHAC, are worrisome. They could potentially denote a lack of understanding of what public health is, how it is distinct from the health care system, and subsequently, what public health expertise is in practice.

As the pandemic highlights, public health leadership is critical, but it also illustrates that to strive for healthier populations non-experts could also benefit from a basic understanding and knowledge about public health. These non-experts potentially include politicians and the staff who support them, policy analysts and policy makers across government, the media, the public, as well as many stakeholders who need to be involved in "whole of society" approaches (38) to delivering public health. Some level of public health knowledge, understanding, and communication capacity outside the boundaries of the formal public health system could help Canadians be better informed and equipped with the capacity to be healthy, ensure that policy makers outside public health consider it in their policy making, and that other influencers in our society convey accurate and appropriate messages about public health.

The learning opportunity

Leadership in public health matters. The current pandemic has made this abundantly clear. In keeping with previous calls for role clarity, when the pandemic subsides there could be an opportunity for public health leaders from across the country to take stock of their mandates and roles and identify areas for improvement. Given the prominence, impact, and spread of messaging from public health spokespeople, analyzing what messaging worked, or did not work, why, and with which audiences or

mediums it worked, would be highly beneficial to prepare for future communications. Arriving at both consistent messaging for some purposes (universal messaging across Canada) and customized for others (context specific messaging) is critical for the public to be well informed and able to follow public health directives without confusion.

The leadership and communication challenges also lay outside of public health per se. While some have justifiably argued that public health experts need to develop expertise in policy and political decision-making processes to be better equipped to make the case for public health, (37) those outside public health also need to learn about public health. A basic knowledge and understanding of the foundations of public health, the culture and values that underpin public health, as well as its significant impact on the health of populations could help non-experts and experts alike work together within a common mindset to better communicate and advance common public health objectives.

An example of a process to advance such an objective is the Public Health Reaching Across Sectors (PHRASES) project in the U.S led by the de Beaumont Foundation and the Aspen Institute in collaboration with the FrameWorks Institute and Hattaway Communications (47). This project focuses on translating expert knowledge and concepts about public health into understandable messaging for non-experts with the intent to develop more effective ways to communicate the value of public health and build stronger relationships with partners and communities. On its website, PHRASES provides accessible research-based tools and messaging for more effective communication. While U.S. based, the basics of public health are universal, so these tools are applicable to audiences worldwide who are aiming to achieve the same objectives when it comes to communicating about public health to non-experts.

The PHRASES project provides at least two main insights for public health. First, it is a formal recognition based on empirical research that public health is not well understood by non-experts, which may be creating barriers to making the case for well supported public health systems. It also shows, however, that this lack of understanding is not insurmountable - there are effective solutions to addressing this knowledge gap that involve knowledge translation and communications investments and expertise. Second, there are partners outside the formal public health system that are equally interested and invested in advancing the health of populations in society. This is not necessarily a new or unknown phenomenon, but it is important to emphasize that these allies can work with public health experts in advocacy and other roles consistent with whole-of-society approaches that public health may not easily be able to take on due to conflicts of interest. PHRASES shows that there are proven, research-based ways to build public health communication and knowledge translation capacity for public health leadership among non-experts that in turn can help experts and decision-makers. This capacity is foundational to keeping public health on the agenda, and appropriately resourced, structured, assessed, and improved for quality, sustainability, and impact.

Recommendation - To build knowledge capacity and leadership to motivate sustained investments in public health, public health leaders and key partners should invest in new and innovative ways to translate and mobilize foundational knowledge about public health and its impact with non-experts, which could include politicians, the media, and the public .

This type of investment could raise awareness and build understanding to help make the case for public health and prevent “boom and bust” attention on it. It could also help ensure public health is appropriately and effectively communicated as separate from health care and requiring its own sustainable expertise, funding, and resourcing. The PHRASES project provides one example of how this can be done. Other mechanisms to consider could be establishing public health educational initiatives across government departments and levels of government that could include setting up communities of public health knowledge entrepreneurs made up of policy makers, analysts, advisors, and communications staff. Such professional development initiatives and communities of practice have proven effective in other knowledge domains, such as mental health and addiction and early childhood development (10, 48, 49).

Conclusion

Public health is fundamental to healthy populations and a healthy society. It should not take periodic pandemics to make this case. However, in the face of competing priorities and fiscal restraint, the public health value proposition is not necessarily well communicated nor well understood, leaving it vulnerable to political inattention, cyclical funding, and reductions in infrastructure support. Making the case for public health requires experts and evidence, but it also requires investments in raising awareness and equipping non-experts to be effective public health advisors, communicators, champions, and advocates. While public health is in the public eye, this issue is being illuminated and worthy of a closer look now and into the future.

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