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Strengthening the foundation of healthcare in Canada

Actions to shore up healthcare and health research in Canada

May 2022




Time to build a healthcare system that works

HealthCare*CAN* and our institutional members from coast to coast to coast believe that as a nation we must come together to shore up our health system so that it is able to meet the needs of our growing and aging population.

Our policy book is extensive, but by no means addresses the entirety of the enhancements to healthcare needed to build a health system that meets the modern needs of people in Canada. This policy book focuses on the issues our members view as most critical to them and the work they do to provide timely, high-quality care to people in Canada. It outlines concrete actions governments can take to address these pressing concerns, informed by our members and our Vice Presidents of Research and Health Human Resources Committees. As our priorities and recommendations evolve, so too will this policy book.

We are pleased to present our policy book, *Strengthening the foundation of healthcare in Canada*, which focuses on four key priority areas:

- Strengthen Health Research and Innovation
- Bolster Canada's Health Workforce
- Support Better Aging and Older Adult Care
- Modernize Health Infrastructure

About HealthCare*CAN*

HealthCare*CAN* is the national voice of Canada's hospitals, health research institutes and healthcare organizations. As a pan-Canadian, non-partisan association representing organizations in the health sector, we advocate for enhancements in health research and innovation, and for high-quality health services for everyone in Canada.

HealthCare*CAN* members are part of the more than 1200 healthcare facilities that support over two million direct and indirect jobs, account for nearly 12% of Canada's GDP, and stimulate local economies through research and development, commercialization of discoveries, and infrastructure projects. HealthCare*CAN* membership is diverse and made up of a variety of institutions, including hospitals, long-term care and home care providers, research institutes, health authorities and health sector associations. These organizations are crucial in furthering our understanding of diseases, developing treatment solutions for patients, delivering high-quality care, and contributing to addressing the most pressing issues facing Canada.

HealthCare*CAN* looks forward to working with our members, partners, stakeholders, members of Parliament and government to advance policy recommendations that support the health workforce, increase health system capacity, enhance patient care, strengthen the role of health research and the life sciences, and improve Canada's healthcare system.

Strengthen Health Research and Innovation

Overview

The COVID-19 pandemic showcased the benefits of investing in health research and innovation. Canadian researchers helped lead the global fight against COVID-19, by first profiling the body's immune response to the virus and developing the lipid nanoparticles to deliver mRNA to the body's cells – a breakthrough based on 40 years of research.

Canadians are proud of these achievements and consider health research and innovation to be a priority. Recent public opinion polling found that the vast majority (91%) of those polled believe health research makes an important contribution to healthcare and (81%) said it makes an important contribution to the economy.[i]

However, the pandemic also exposed many gaps in Canada's health research and innovation ecosystem. If Canada is to emerge stronger following the pandemic, a fundamental shift in how governments view and support health research and innovation is needed.

Recommendations

HEALTH RESEARCH FUNDING

In 2017, the Fundamental Science Review, in its report *Investing in Canada's Future: Strengthening the Foundations of Canadian Research*, laid out a pathway for reinvigorating Canada's research ecosystem and identified, as a first priority, the need for increased funding. While HealthCare*CAN* and our members commend the significant investments in health research announced in the 2018 budget and those made since 2020 to battle COVID-19, Canada continues to languish near the bottom of G7 and OECD countries for overall research and development spending. Currently, Canada invests 1.5% as a percentage of GDP, compared to 3% for the United States and 1.8% for the United Kingdom.[ii] Canada also lags in the percentage of total public spending on health devoted to health research at 0.43% compared to the US at 3.8% and the UK at 0.89%.[iii]

In 2020 the Industry Strategy Council, in its report *Restart, Recover and Reimagine Prosperity for All Canadians: An ambitious growth plan for building a digital, sustainable and innovative economy*, identified the health and related biosciences sector as one of the key areas of investment to help reignite the economy and protect Canadians' health and safety. As one of the fastest-growing sectors in Canada's economy, Canada needs to build on this momentum. Given the right enablers, including increased investments, the sector has tremendous potential to drive innovation, knowledge translation, and the scaling up of promising discoveries that will strengthen Canada's economy and healthcare system for the long term.

1. **Make transformational investments in health research to protect Canadians from future health crises and capitalize on economic opportunities, starting with a minimum annual floor of two per cent of public spending on health ($3.7 billion), allocated equally between health research and strategic initiatives to tackle pressing social issues to be put toward fundamental health research, strategic initiatives to tackle pressing social issues, and knowledge translation.**

COVID-19 has spurred new interest and increased investment in health research in the US and UK, both of which outpace Canada. The UK announced that it will invest £39.8 billion (approximately C$65 B) in research and development between 2022 and 2025 and committed to boosting science funding to 2.4 per cent of GDP by 2027.[iv]

The 2018 federal budget here in Canada increased The Canadian Institutes of Health Research's (CIHR) annual budget by just over 1% in 2020-21 to $1.2 billion, which is where it is expected to remain going forward. This small budget and investment in health research leaves little to be divided amongst Canada's researchers. For the Fall 2021 Project Grant competition, the success rate of receiving a CIHR grant was only 20.7%. Only 417 CIHR grant applications were successful, out of a total of 2014 applications submitted.[v]

2. **Centralize investments in strategic science through the proposed Canada Advanced Research Projects Agency (CARPA).**

An increasing proportion of CIHR funding grants and federal health research programs are directed at addressing gaps in knowledge related to specific federal objectives or priority areas, also known as strategic science.

While this is important research, it limits the funding available for fundamental or basic science – curiosity-based research that addresses the questions "how," "what" and "why" to increase knowledge. Fundamental science provided the building blocks for the scientific community's response to the COVID-19 pandemic and was the foundation for the rapid development of diagnostics, therapeutics and vaccines to combat the virus.

Many countries have established a strategic science model where governments identify health, social and economic problems that it is seeking to tackle and fund research to address these specific issues. For example, the US created the Defense Advanced Research Projects Agency (DARPA) and the UK created the Advanced Research and Invention Agency (ARIA).

The mandate letters issued by Prime Minister Justin Trudeau in December 2021 for the Minister of Innovation, Science and Industry and the Minister of Health commit to establishing a Canada Advanced Research Projects Agency (CARPA), to support research in high-impact, high-reward areas through public and private funding. It would be logical to move existing federal strategic and targeted health research programs such as the New Frontiers in Health Research, Network of Centres of Excellence, Canada First Research Excellence Fund, and Stem Cell Network under this new Agency in addition to tackling new government priorities. CIHR, the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Social Sciences and Humanities Research Council of Canada (SSHRC) would return to being the primary funders of fundamental science. Further to this change in focus, CIHR must also receive a significant funding increase to make up for decades of minimal investment and to keep pace internationally.

3. **Establish a government branch and/or funding program(s) focused on knowledge translation to move health research data and evidence into practice in the health system.**

CIHR's current $1.2 billion annual budget is not sufficient to both support the generation of research and its dissemination and translation into practice. The health research community has observed that funding from Health Canada (CIHR) does not support translation as much as funding received through Innovation, Science and Economic Development (ISED). For example, the Alliance Grants administered by NSERC, which reports to ISED, is a funding program that supports translation. As well, federal innovation programs such as the Strategic Innovation Fund (SIF) and the Strategic Science Fund do not have a dedicated line item for knowledge translation.

Creating a branch or program under Health Canada to facilitate knowledge translation by setting the standards by which health research would move into practice would help increase uptake of best practices and improve health outcomes. This could be achieved by creating a methodology centre and/or assuming the Strategy for Patient-Oriented Research (SPOR) program from CIHR. This is not a novel idea or model as the UK created the National Institute for Health and Care Research, which funds distribution of data and evidence into their health system.

4. Fund health research priorities identified by the pandemic, including research into primary care prevention, health care equity/inequities, and social determinants of health.

The pandemic has exacerbated many issues in the healthcare system, including wait times, the disproportionate impact on health outcomes due to inequities, and further highlighted the importance of social determinants of health. Supporting Canada's research enterprise should be a key strategy to address these matters.

Research will lead to the development of innovative treatments to address many of Canada's most pressing issues. It will help improve the delivery of care to vulnerable populations, such as older Canadians and those with mental health and addictions challenges. It will support the creation of a more culturally safe health system that better meets the needs of Indigenous people. It will also help address the increasing threat posed by climate change, as research into its effects on health and the health system will be critical in effectively facing future challenges. Health research, knowledge translation and the innovations that they bring will, most importantly, lead to better health outcomes and bend the health system cost curve.

NATIONAL CLINICAL TRIALS NETWORK

Clinical trials are an important step in the development of innovative medicines to ensure the safety and efficacy of drugs being brought to market. Canada has historically been a global leader in the area of clinical trials, through major leading advancements in science and research, a diverse population of potential participants, and strong clinical trial capabilities.

Overall, the global market for clinical research is estimated to reach a value of US$ 57.46 billion by 2026.[vi] Given the benefits of conducting clinical trials for hosting jurisdictions, the global market is becoming increasingly competitive as jurisdictions invest to incentivize and enhance their clinical trial attractiveness.

While all the world's top pharmaceutical companies regularly conduct trials in Canada, the number of clinical trials taking place across the country has declined over the last decade due to several challenges and barriers, specifically related to the efficient and timely set-up of clinical trials.

Individual provinces have undertaken localized or subject-specific efforts to address these issues, which has resulted in duplication, inconsistency, and different directions across the country. Canada's lack of a focused, targeted approach for clinical trials at a national level has increasingly left Canada lagging behind peer jurisdictions.

5. Develop a pan-Canadian framework for clinical trials that will make Canada a more attractive place to conduct clinical trials and a leader internationally.

Canada's current clinical trials landscape is fractured and fragmented between the CIHR, provincial clinical trial organizations and research hospitals. The environment in which clinical trials are conducted is complex, often occurring across multiple jurisdictions, involving multiple sites, and with every study needing ethics and governance approvals before commencement. While these approvals safeguard the welfare of study participants, the requirement that each site in the clinical trial receive approvals adds unnecessary duplication, considerable time, resources and costs that delay the trial's start.

Reducing barriers and streamlining operations has been a key focus of peer jurisdictions that have increased their desirability as a place to conduct trials. If Canada were to do the same, through the development of a national clinical trials framework, we would realize considerable benefits for Canadians' health and the economy, including improving the efficiency in the way Canada conducts clinical research; improving the speed of organizing and conducting clinical trials and the scaling of results; improving health outcomes for patients; increasing Canada's clinical trials market share; and increasing foreign investment.

HealthCare*CAN* suggests that Health Canada consult with clinical trials stakeholders to identify what a national framework would look like, what barriers a national framework needs to solve, what operations can be streamlined and how, and what shape a pan-Canadian, overarching administrative body should take. HealthCare*CAN* and our members are eager to support government in this endeavour and to lend our knowledge and expertise in the creation of a framework.

6. Establish a body to direct the development and implementation of a pan-Canadian clinical trials framework.

Canada currently lacks a single body to act as a steward of its clinical trials environment. Such a body would facilitate, coordinate and guide regional efforts to support clinical trials; provide greater advocacy at the federal level to increase the visibility and priority of the clinical trials environment; support operational efficiencies where beneficial; and promote Canada internationally as a place to conduct and collaborate on clinical trials.

No clinical trials framework will succeed if it is run in a silo at the federal level. Research hospitals, where most clinical trials are conducted, and provincial and territorial bodies which fund them, need to be part of a larger clinical trials framework. It is vital that the body responsible for developing and implementing a pan-Canadian clinical trials framework be comprised of representatives from organizations across the entire clinical trials environment, both from a health system and government perspective.

Establishing a pan-Canadian body with the necessary leadership, capacity, and levers to initiate change will lead to real improvement in the Canadian clinical trials environment. This is necessary for Canada to once again be a global leader in clinical trials and to provide patients, health systems, and the economy with the many benefits that clinical trials generate.

PARTNERSHIPS AND INNOVATION

Government, industry, academia, research hospitals and health organizations all recognize and realize the value of partnerships. However, in recent years, new federal innovation and infrastructure programs have established criteria that restricts the formation of partnerships by identifying who are eligible partners. Often, research hospitals and healthcare organizations are not included as potential partners, despite the significant role research hospitals play in innovation. Their acknowledgement and inclusion in federal innovation programs occurs sporadically depending on the government departments establishing these programs. As an example, while research hospitals can apply directly to CIHR, they must go through universities when applying to most other federal research and innovation agencies and programs such as to the Canada Foundation for Innovation (CFI), the Research Support Fund, the Canada Research Chairs, Mitacs, and others.

More recently, the federal government's Innovation Superclusters Initiative and the SIF – except for Stream 4 – are all industry-led initiatives. These programs encourage industry leaders, small and medium-sized companies, and post-secondary institutions to collaborate on large-scale projects.

Universities and industry cannot succeed in the health and life sciences without research hospitals, just as research hospitals are equally dependent on universities and industry for success. With the health and life sciences sector being recognized by experts as a sector with high-growth potential and one that already contributes $7.6 billion annually to Canada's GDP, it is vital that research hospitals be embedded alongside of and viewed as equal partners with universities and industry in the federal research and innovation ecosystem.

7. Build or renovate buildings to create much needed lab and incubator space that attracts and brings together researchers, universities and colleges, industry, and non-profit organizations.

There is a critical shortage of physical lab space in Canada. Entrepreneurs, incubators and start-ups continually reach out to Canada's research hospitals in the hopes that they can access their labs, but unfortunately research hospitals cannot accommodate these requests.

Fully leveraging the innovative and economic power of the health and life sciences sector requires investment to build or renovate existing space to create purpose-built incubator space that contains dry and wet lab space.[1] New lab space must be located at research hospitals as this is where health science is taking place, where new ideas are being conceived, and where researchers, patients, caregivers and end users are located.

1 Dry labs refers to labs that undertake applied or computational mathematical analyses via the creation of computer-generated models or simulations. Wet labs are where drugs, chemicals, and other types of biological matter are analyzed and tested using various liquids.

The co-location of researchers, engineers, entrepreneurs, and businesses will strengthen relationships between the health system, academia, and the private sector while immersing the people developing innovations into the health system where their innovations will eventually be deployed to improve patient outcomes. This will provide Canada with even greater returns on investment in health research.

The CFI was created to fund research infrastructure, including state-of-the-art facilities, laboratories, equipment, computer hardware, software and databases. However, much of the funding that has been awarded recently has been allocated for equipment and computers, not to facilities or space within a building. The newly created Biosciences Research Infrastructure Fund and its call for proposals indicates that funding will support project that renovate or repair existing CL3 or CL4 facilities[2] or the equipment housed in these facilities.

Funding new facilities is considered exceptional, but CFI must allocate funding to all categories of research infrastructure or consider reinstating the Research Hospital Fund so that much-needed laboratory space can be built. Doing so will help the government achieve two of its goals – growing partnerships within the health and life sciences sector and assisting CFI realize its objective of promoting networks and collaboration among Canadian universities, colleges, research hospitals, non-profit research institutions and the private sector.

8. Facilitate the creation of health networks or hubs around research hospitals that bring together academia, industry, start-ups and incubators, and business.

Pressing healthcare needs and the innovations required to address them converge in research hospitals. Government must realize that research hospitals are powerful innovation hubs that operate at the centre of the health and life sciences ecosystem. They already bring together researchers, universities, patients, companies, governments, and industry in a non-competitive context to drive new technologies and to commercialize promising products. The Innovation Factory in Hamilton and AGE-WELL are just two examples of highly successful health networks.

According to a 2014 report on the state of Canada's science, technology and innovation system by the Science, Technology and Innovation Council, the hospital sector was noted as Canada's most collaborative research performer "by far".[vii] Facilitating and supporting research hospital networks or hubs must be a higher priority in the federal government's innovation agenda. A first step would be to ensure that at least one of the research hubs receiving funding in the inaugural competition of the Canada Biomedical Research Fund be led by a research hospital.

9. Evaluate federal and tri-council funding programs to make the criteria less restrictive and more flexible to foster partnerships.

Many federal and tri-council (CIHR, NSERC and SSHRC) funding programs have restrictive stipulations. For example, there is the "Canada first" funding principle that only funds research that is conducted in Canada and stays in Canada. Tri-council funding program criteria stipulate that grants are awarded to the researcher's institution and not directly to the researcher, so unless community hospital researchers are affiliated with a university or have a university appointment, they cannot access funding despite the important community-based research they conduct. Similarly, the shifting of programs that support international partnerships and collaboration, like Genome Canada, The Centre for Aging + Brain Health Innovation (CABHI), Brain Canada Foundation, and the Stem Cell Network under the Strategic Science Fund at the time of renewal will further constrain these programs as additional governance and management requirements from the federal government are being imposed.

HealthCare*CAN* highly recommends that the federal government and tri-council make their funding programs more flexible in supporting collaboration with other domestic and international partners. This will foster important research partnerships that will significantly benefit Canada's research ecosystem, health system, economy and the health of Canadians.

2 Diseases, viruses, and bacteria are researched, studied, and handled within labs that contain the appropriate level of safety and security measures to prevent illnesses and outbreaks. Containment levels are determined by the combination of safety measures present in a lab, including equipment and physical lab features. The higher the containment level, the more safety measures that are in place.

CL3 labs contain more infectious pathogens like anthrax, tuberculosis and West Nile virus. They require stringent facility design and engineering controls (e.g., inward directional airflow [IDA], high efficiency particulate air [HEPA] filtration of exhaust air).

CL4 is the highest level of containment available and it is where pathogens like Ebola, Lassa fever, and Nipah virus are researched. CL4 labs require a highly complex facility design that is a self-contained area within a building or, when necessary, a separate building and includes enhanced engineering controls (e.g., HEPA filtration of exhaust and supply air), specialized biosafety equipment (e.g., effluent decontamination systems), and redundant biosafety features (e.g., two stages of HEPA filtration of exhaust air).

HEALTH RESEARCH DATA AND INTEROPERABILITY

There are many Canadian entities that capture and store an extraordinary amount of health data across the country. These include primary care providers, clinics, hospitals, public health units, and governments. This siloed, disconnected series of separate systems has left valuable health data inaccessible and unusable.

While the pandemic has motivated the federal government to invest heavily in health data systems, no coordinated approach or strategy has been developed. This has a negative impact on health outcomes, hinders research, impairs public health decision-making, and increases health system costs.

The Health and Biosciences Economic Strategy Table (HBEST) is one of several bodies that have called on government to create an interoperable health data system. HBEST proposed a number of sector-wide actions to unleash innovation, one of which is to create a national digital health strategy that features an interoperable digital health platform. A high-performing interoperable, digital system is a critical enabler of advances in health and health research, and the economic success of the sector.

In the Public Health Agency of Canada's pan-Canadian Health Data Strategy Expert Advisory Group's second report, they identify interoperability across jurisdictions as the backbone of data in the health system. The current strategy of implementing digital health technology on a service basis compromises individual care and public health measures. This is evident with current initiatives underway, such as SPOR's Canadian Data Platform Initiative, Canada Health Infoway's PrescribeIT and ACCESS Atlantic.

10. Improve health system interoperability to support partnership creation, including through the creation of a pan-Canadian health data research repository.

As outlined earlier in this document, connections and networks among Canada's health researchers are well-established, but they lack the tools to effectively communicate and share data and information across institutions and provincial and territorial divides.

HealthCare*CAN* supports the recommendations of both the HBEST and PHAC reports outlined above. Moving towards a national health data strategy that allows for interoperability between institutions, jurisdictions and governments will enrich the quality and availability of health data and research, and foster the partnerships and collaboration needed to drive innovation that will address Canada's most pressing health challenges.

There is a role for the federal government – that of leadership – in establishing a pan-Canadian data repository and working with provincial and territorial counterparts in creating such a repository. The development of a pan-Canadian health research data repository could be led by any of several federal departments or agencies, such as Health Canada, the Public Health Agency of Canada, or the tri-council.

Endnotes

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Bolster Canada's Health Workforce

Overview

Canada's health sector has struggled to manage through workforce shortages for years, a problem exacerbated by the COVID-19 pandemic. These shortages undermine the ability of the healthcare system to provide timely access to high-quality care for everyone in Canada.

Health workforce shortages also negatively affect those working in the system. Fewer workers in the system leads to increased workloads, more overtime, and a reduced ability to provide quality patient care. It also means that healthcare workers have less time and energy to focus on their own health and wellbeing.

That healthcare workers have an increased risk of experiencing mental health issues, like stress, anxiety and burnout is well established in research literature.[viii] These higher levels of psychological distress are not only a result of their chosen professions, but also the systems and environments within which they work. Demand on the health system continues to rise as Canada's population ages and people live longer, albeit often with more complex and chronic conditions. Yet health system investments and resources have not adjusted to respond to these changes. The health system is overloaded, understaffed, under-resourced, and underfunded, resulting in a system that is unable to meet the growing and diversifying needs of people in Canada.

The additional demands of responding to COVID-19 for the past two years has added further stress to the health system and exacerbated shortages of healthcare workers. Statistics Canada reported 126,000 vacancies in the healthcare and social assistance sector in the fourth quarter of 2021, almost double the vacancies seen two years prior (64,000) and representing nearly one in seven job vacancies across the country.[ix]

Healthcare workers have clearly and repeatedly warned of the increased levels of stress, anxiety, depression and burnout they face.[x] Research from around the world, including here in Canada, shows that these issues, which were concerns prior to the pandemic, have only worsened due to the added risk and workload brought on by the pandemic. A crowdsourcing initiative conducted by Statistics Canada in late 2020 showed that 70 percent of the 18,000 healthcare workers surveyed reported that their mental health worsened during the pandemic.[xi] Healthcare workers reported worse mental health regardless of whether they were in direct or indirect contact with confirmed or suspected COVID-19 cases, with 77 percent of those with direct contact and 62 per cent of those with indirect contact indicating that their mental health was worse than before the pandemic.[xii] Additionally, 40 per cent of individuals with direct contact and 29 per cent of individuals with indirect contact rated their mental health as fair or poor.[xiii] These findings offer a glimpse into the significant, detrimental impact the pandemic is having on the mental health and wellbeing of healthcare workers.

It is important to recognize that even among healthcare workers, mental health impacts are felt differently. Certain healthcare workers – like nurses, orderlies, aides and personal support workers – provide the type of patient care that exposes them to circumstances that could lead to heightened psychological distress, such as violence or abuse. Workers in these roles are also disproportionately women, immigrants, newcomers, racialized individuals, and, in certain cases, working low-paying or part-time jobs with little or no benefits.

The fallout from riskier working conditions and poorer mental health brought about by the pandemic is being felt across the country as healthcare workers retire early, move to less demanding healthcare roles, or leave the system altogether. Many more are planning to leave once the pandemic is over.

The toll COVID-19 is taking on healthcare workers is substantial and will endure long after the pandemic over. It is crucial that governments address the health workforce shortage with both short-term and long-term action. Such concerted action is vital to ensure the country has the health workforce it needs to deal with COVID-19, perform non-COVID medical procedures and treatments, tackle medical procedure backlogs, and provide high-quality care to those who need it.

Throughout the pandemic, we have been reminded that when the population is not healthy, our economy will not be healthy. The same is true for our health system. Healthcare workers are the system's greatest resource, and when they are well taken care of so are Canadians.

Recommendations

1. **Implement a pan-Canadian health workforce planning strategy with the goal of gathering workforce data and developing solutions to tackle the shortage of healthcare workers and address the factors hindering recruitment and retention.**

Canada does a poor job of health workforce planning, and a lack of a pan-Canadian strategy makes it difficult to ensure that the right number and type of workers are in the right place at the right time. This impacts patient care, leads to poor working conditions for healthcare workers, has economic ramifications for Canada, and perpetuates current inequities in the health system, especially given the sector has a high percentage of workers who are women, immigrants, newcomers, and racialized individuals.

Implementing a pan-Canadian health workforce planning strategy will ensure Canada has a better understanding of the workforce shortage it is facing and the factors contributing to the shortage, helping inform the development of solutions to tackle these issues. It will also allow for better insight into future needs and strategies to ensure Canada has the health workforce it needs to meet future demand. A well-staffed health system, with healthcare workers who feel mentally and physically well, is vital for a functioning health system and to deliver high-quality patient care.

a. **Work with provincial and territorial governments to establish a health workforce agency to enable strategic pan-Canadian health workforce data gathering, research, planning and forecasting.**

As a crucial piece of a pan-Canadian health workforce planning strategy, the federal government must work with provincial and territorial counterparts, as well as stakeholders within the health system, to create a body to gather health workforce data and conduct research into health human resources to better assess and plan for Canada's health workforce needs. This pan-Canadian health workforce agency must examine opportunities to address health workforce shortages, including through improved working conditions, education, credentialing, and scopes of practice. It must also focus on how to create a more equitable and representative workforce that reflects Canada's population.

Not fully understanding the makeup of the health workforce across Canada has led to competition for talent between provinces and territories. The competition is so high that employers are required to increase remuneration to attract and retain healthcare workers, which increases health system costs. Similarly, newer healthcare workers are seeking a better work-life balance and are consequently choosing to work part-time hours. This shift increases the number of healthcare workers that are needed, and because this change was not planned for, training additional workers to respond to this

demand did not occur. It is reasonable to assume that healthcare workers of all ages may look to strike a better balance once the pandemic is over, further contributing to ongoing shortages. These are only some examples of the implications of a lack of health workforce planning on workers, patients, health systems and the economy.

Canada lags its OECD peers in health workforce data collection, infrastructure, and analytics.[xiv] Many countries undertake health workforce planning at the national level and have established dedicated bodies to collect and analyze data on the health workforce, conduct research, forecast health system needs, and contribute to policy development to strengthen the health workforce and health system.

For example, Australia has been conducting national-level health workforce planning since at least 2008, creating a centralized agency to carry out health workforce planning and reform to address the challenges of providing a skilled, innovative, and flexible health workforce in the country.[xv] The agency's initial study looked at health workforce needs between 2012 and 2025, first developing projections for the size and type of health workforce required to meet future needs, and then modeling the training pipeline necessary to meet the health workforce size and type needs.[xvi] The country's health workforce planning strategy is continuously updated, with the current national health workforce strategy extending to 2031.

In the United States, the National Centre for Health Workforce Analysis (NCHWA) develops reports on the US health workforce, including projecting supply and demand for healthcare professionals by discipline.[xvii] The NCHWA is part of the Health Resources and Services Administration, an agency of the US Department of Health, responsible for improving health outcomes and health equity.[xviii]

There are also examples of workforce planning in other sectors right here in Canada that could be used as a basis for developing a health workforce planning approach. For more than 20 years, BuildForce Canada, a national industry-led organization, has helped the construction industry manage workforce requirements by providing labour market information, tools and resources, including data-intensive scenario-based forecasting to assess future labour market needs across 34 trades.[xix]

A pan-Canadian health workforce planning strategy will increase understanding of workforce shortages, the factors contributing to them, and help inform the development of solutions to tackle issues. It will also provide insight into future needs and help support development of strategies to ensure Canada has the health workforce it needs to meet future demand. Such a strategy must be aligned with a robust pan-Canadian vision for healthcare.

2. Leverage immigration and international recruitment of healthcare workers to address existing health workforce shortages over the short- and medium-term.

Many healthcare organizations are eager to recruit internationally trained healthcare workers to address immediate health human resources needs. However, barriers exist that make the recruitment of foreign-trained healthcare workers a significant challenge. This includes aspects of the Labour Market Impact Assessment (LMIA), such as the time and cost to complete the assessment, certain thresholds that must be met to obtain a positive assessment not aligning with the current realities of the health workforce in Canada, and the credentialling process to recognize foreign training. While relying on immigration and foreign-trained healthcare professionals is not a long-term solution, it will be critical in filling health sector shortages in the short- to medium-term.

In response to ongoing workforce shortages, the federal government has made several announcements outlining changes to improve the immigration process and investments to facilitate the recruitment and licensing of newcomers in the health sector. These are welcome developments and will help address some of the concerns of the health sector. However, to truly make an impact in tackling health workforce shortages, especially in the short- and medium-term, the immigration process would benefit from further streamlining and scaling of solutions to leverage the skills of qualified immigrants and newcomers. For example, it would be helpful to have a mechanism or program to connect healthcare employers and immigrants and newcomers to help healthcare organization fill vacancies. Many healthcare organizations have the resources to support these individuals in navigating the settling and credentialing process, but they need to be aware that these individuals are in the country and qualified for available roles first.

3. Support interprovincial/territorial coordination of education and licensing.

As Canada faces a health workforce shortage and as virtual care gains popularity, the implications of jurisdictional barriers that exist in healthcare education and licensing – both within Canada and internationally – are heightened. During the pandemic measures were implemented to facilitate the movement of healthcare workers across provinces and territories to help the hardest hit areas. Similarly, necessary processes were implemented to support providers who had to switch to providing virtual care at the onset of the pandemic.

These approaches worked well, and Canada cannot afford to return to the pre-pandemic status quo once the pandemic is behind us. We must make permanent what, at the time, were viewed as temporary solutions to shore up a struggling system, including measures to support health workforce mobility and the virtual delivery of health services across provincial and territorial borders.

Governments, regulators, educational institutions, professional associations, employers, and unions must work together to reduce jurisdictional barriers to adapt to changing health system and patients needs, including better coordination of healthcare education and licensing. The federal government must play a leadership role to convene stakeholders and facilitate the implementation of solutions in this area.

4. Collaborate with provincial and territorial governments, regulators, and educational institutions to train more Canadian healthcare workers – particularly from Indigenous communities – in the professions and fields necessary to meet the long-term needs of the healthcare system.

Over the long-term, Canada must train more healthcare professionals. This involves increasing the number of seats available in university and college programs for all healthcare professions, expanding access to marginalized, Indigenous, and other racialized groups, and enhancing support to maximize postgraduate training and internship opportunities.

Developing programs such as campaigns to familiarize young people from across Canada – with a particular focus on Indigenous youth – with health sector jobs and providing financial and other incentives to those considering a career in healthcare can help attract people to healthcare professions. Providing additional support to students throughout the education and training process, which can be achieved through financial incentives, grants, and tuition relief programs, are further measures that can encourage individuals to pursue healthcare as a career. Such awareness and support programs could help fulfill recommendation 23 (i) from the Truth and Reconciliation Commission of Canada Calls to Action to: "Increase the number of Aboriginal professionals working in the health-care field."

5. Support the health, wellness, safety, and resilience of the healthcare workforce by expanding mental health and wellness research, programs, and resources specific to healthcare workers.

The mental health and wellness challenges experienced by healthcare workers were well-known prior to the pandemic and have only worsened over the past two years. The need for more action to support mental health and wellness due to pandemic challenges extends to healthcare workers, who have been at the front lines of the fight. Governments at all levels must invest more heavily in the mental health and wellness of healthcare workers.

The federal government must play a role in improving mental health and wellness for healthcare workers by providing dedicated funding for research into the mental health and wellness of healthcare workers. The effects of the pandemic on the healthcare workforce are only starting to be understood, and it is likely that there will be long-term implications after the pandemic is behind us. It is crucial that we better understand how the healthcare workforce has been impacted and what we can do to support their mental health and wellbeing. This is vital as Canada continues to deal with health workforce shortages and increasing demand on the system over the coming years.

The federal government must also invest in programs and resources to help improve the mental health and wellness of healthcare workers. Increasing programs geared specifically to help healthcare workers through psychotherapy, needs assessments, peer support, and workplace mental health training and intervention services are only some of the resources that would help healthcare workers maintain their mental health and wellbeing.

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Support Better Aging and Older Adult Care

Overview

The COVID-19 pandemic revealed longstanding shortcomings in the way Canada supports and provides care for older adults.

In the first year of the pandemic, which included the first two waves of the pandemic, close to 70% of Canada's COVID-19 facilities occurred in long-term care.[xx] Canada's COVID-19 death toll among residents in long-term care ranks highest among OECD nations.[xxi] After decades of chronic underfunding and understaffing, long-term care organizations across the country were too often unprepared for a crisis of this magnitude, which left residents and staff vulnerable to COVID-19 and its impacts.

Home care services were also severely compromised by the COVID-19 pandemic. Too many home care clients had their services reduced or suspended altogether. This left some older adults in the position to look for care in hospitals and long-term care homes already stretched thin with the increased demand the pandemic had place on them – and where the risk of exposure to COVID-19 was heightened.

The pandemic also underscored the critical role caregivers play in providing care to older adults. Spouses, children, friends, and neighbours often act as essential partners in care where services are inadequate, inaccessible, or out of reach – geographically and financially. Caregivers are an integral part of the older adult care system, and they deserve support from government, especially as they are saving the health system an estimated $9 billion a year and personally incurring an estimated $33 billion in direct and indirect costs – such as out-of-pocket expenses, lost productivity, and forgone vacation time – annually.[xxii]

Life expectancy in Canada is rising, and people across Canada can expect to live longer, better lives, but with that longevity comes increased chance of developing chronic health issues, many of which require more complex health and social services. Many older adults want to age at home, in their communities, but Canada's infrastructure is not set up to meet their needs and accommodate them as they age. There must be fundamental transformation to reimagine older adult care in this country.

Canadian seniors are increasingly fearful that they will not have the supports they need to live a dignified life independently, or in a care setting. By 2030, an anticipated 1 in 5 Canadians will be 65 years and older.[xxiii] All levels of government owe it to our older adult population to shore up resources to meet the challenges of Canada's growing and aging population.

There is increasing demand for both long-term and home care, with demand expected to grow 60% and 53%, respectively, between 2019 and 2031. Nevertheless, long-term and home care services in Canada are inadequately designed and equipped to meet the complex care needs of today's aging population.

At the height of the second COVID-19 wave in 2020, an alarming 85% of Canadians surveyed indicated that they would do everything they can to avoid moving into long-term care.[xxiv] In the same survey, those aged 65 and older were nearly united in their desire to avoid long-term care, at a worrying 94%.[xxv]

Much more needs to be done. HealthCare*CAN* calls on the federal government to provide leadership to ensure older adults in Canada have the right care at the right time and in the right place. Older adults deserve to live their more mature years with respect, dignity, with access to high-quality care when they need it.

Recommendations

1. **Create communities that allow adults to age in place and address the social determinants of health, such as housing, transportation, and nutrition, that affect healthy aging.**

Aging in place means having the right services and supports to care for seniors at their place of residence or for seniors to live safely and independently in their home and community for as long as they wish or are able. Aging in place is associated with improved quality of life, lower risk of contracting communicable diseases and needing hospitalization, decreased mortality, and reduced health care costs. Care at home and preventative care also decreases demand on our acute care resources.

As a nation, Canada must address the social determinants of health that affect healthy aging; including, providing more supportive housing to fill gaps that exist between home and long-term care; funding meal service delivery programs, such as "Meals-on-Wheels"; investing in community-based programs to combat loneliness among older adults; and reforming Old Age Security to ensure it is commensurate with individual and household expenditures.

The federal government must support efforts by provinces and territories to develop community adult care hubs that unite respite supports for caregivers, adult day programs, and childcare to create intergenerational and inclusive communities. The federal government must also work with Indigenous partners to develop culturally sensitive and safe programming, particularly in the territories and rural and remote locations.

2. **Develop a national approach to support better aging and improve health and social services for older Canadians, backed by substantial investments to meet the current and future needs of Canada's aging population.**

Older adults across Canada are increasingly seeking services that let them live a more independent, active, and dignified life, which includes living at home and in their community with supports for as long as they wish and are able. There is a growing need for a pan-Canadian approach to support best practices to improve health and social services for older adults.

Canada is failing to keep up with the demand for long-term care, home care, and the social services needed to support aging in place. Significant gaps exist between what is needed and what is available. Decades of under-resourcing, limited government oversight and accountability to patients, residents, families, caregivers, and the care workforce must be rectified. Canada urgently needs to expand home care services and community support. It also needs to build more long-term care homes and add more beds, but new builds must include improvements that respond to the needs of an older and frailer elderly population, reflect current data and research on the best practices for providing care, and incorporate the needs of residents and caregivers.

a. A dedicated federal transfer to improve long-term care and home care supports for aging in place.

The federal government is urged to establish a new separate federal health transfer to provinces and territories to improve long-term care and home care supports and supplement the increasing health-related costs faced by provinces and territories due to population aging. Relatedly, national standards, specific reportable metrics, and spending priorities must also be agreed to between the federal, provincial and territorial governments.

b. Implement federal legislation and standards specific to the long-term care sector.

The patchwork of for-profit, non-profit and public long-term care facilities across the country has resulted in inconsistent care for older adults. Proper national standards would improve access and delivery of high-quality long-term care regardless of where in the country a person lives, while improving working conditions for the long-term care workforce.

Collaboration between the Standards Council of Canada, Health Standards Organization, and the Canadian Standards Association to develop two new national standards for long-term care in Canada is a positive development. Federal government support and funding will be crucial for the standards to be implemented by long-term care homes and the provinces and territories.

The next step would be for the federal government to lay out how it will implement the standards currently under development.

c. Shift to providing more home and community care.

Most older adults prefer to spend their older years in their own homes in their community, but home care in Canada is severely underfunded and understaffed. Throughout the pandemic, as some home care services were suspended, many in the home care workforce left the sector altogether and have not returned. Consequently, home care services struggle to keep up with demand.

It is also crucial that the federal government partner with provinces and territories to improve virtual connectivity for older Canadians. This includes ensuring reliable internet services and devices to access it, to better leverage virtual care and digital health technologies to deliver health services in the home or community. It is also critical that community organizations and programs be built to help familiarize more seniors with how to best use the services available through the internet.

The federal government must support its Minister for Seniors by creating an expert panel to provide recommendations for establishing an Aging at Home benefit.

d. Increase staffing and improve working conditions in long-term care and home care organizations.

Long-term care and home care staff such as personal support workers, resident care workers, care aides, and nurses, provide valuable care to some of the most vulnerable people in our society. Yet, most long-term and home care staff are unregulated, receive some of the lowest wages in the health sector, do not receive health benefits and sick days, and are given variable and minimal formal training in long-term and home care. These roles are also predominantly occupied by women, many of whom are immigrants, newcomers, and racialized individuals, groups that are increasingly likely to face inequities in the workforce and society.

Throughout the pandemic, shortages of personal protective equipment, stressful working conditions, and the death of residents and colleagues have negatively impacted long-term and home care staff physically, mentally and emotionally. While a problem before COVID-19, staff shortages at these facilities are growing worse every day and are compounding the detrimental impact to staff left working in the sector.

The federal government must work with provincial and territorial governments, regulators, and institutes of learning to train more long-term and home care workers to mitigate staff shortages and develop a strong older adult care workforce. For example, creating financial incentives through educational grants would support an increase in students training in geriatric health services.

The federal government, in collaboration will provinces and territories, should immediately act on its commitments to train up to 50,000 new personal support workers, raise wages to at least $25 per hour, and ensure health benefits and sick days are available to individuals working in the long-term care and home care sectors.

e. Increase funding in research and innovation related to aging to deliver concrete improvements in older adult care.

Reimaging older adult care will require significant investments into health research related to aging to enhance the lives of Canada's older adults and to support seniors to live their best lives. Canada has a strong foundation in health research and translating research into action. The federal government should work with its federal partners to deliver more sustainable and consistent funding for older adult care health research. There are already established research networks to support work in the field of aging, including AGE-WELL, the Canadian Frailty Network, and the National Network Initiative for the Care of the Elderly (NICE). Another important area to increase funding related to aging includes investing in innovative best practices and age-friendly technology and commercialization of said technology to markets.

3. Provide better financial and social supports for unpaid caregivers.

Unpaid caregivers – spouses, children, friends and neighbours, most of whom are women – are an integral part of the older adult care system and they deserve support. Redefining 'caregivers' and 'dependent' to broaden eligibility for financial benefits and other assistance and creating better awareness about the resources and supports available to caregivers would help recognize caregivers' role as essential partners in care.

Amending the federal Canadian Caregiver Tax Credit to become a refundable tax credit would be a specific and concrete way that the federal government could better support caregivers financially. Caregivers take on many out-of-pocket costs in caring for their loved ones and many caregivers are not in the paid workforce because they are at home providing needed care.

For those caregivers that are in the workforce, there are additional direct and indirect costs, such as the use of vacation time to carry out caregiving duties, that could be offset by a refundable tax credit. According to the Carers Canada, a national coalition dedicated to increasing recognition and support for caregivers, the financial and career impacts to unpaid caregivers are staggering:

- 15% of unpaid caregivers reduce their work hours.
- 40% of unpaid caregivers miss days of work.
- 26% of unpaid caregivers take a leave of absence.
- 10% of unpaid caregivers turn down job opportunities.
- 6% of unpaid caregivers eventually quit their jobs.[xxvi]

In addition to the lost wages and decreased retirement income resulting from the above, 19% of caregivers further report that their physical and emotional health suffers as well.[xxvii]

There are also major consequences for employers and the Canadian economy. Employers lose skilled workers, experience increased turnover, and lose 18 million work days per year. The estimated cost to the Canadian economy from lost productivity is $1.3 billion per year.[xxviii]

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Modernize Health Infrastructure

Overview

Investing in healthcare infrastructure, both physical and digital, will strengthen the resilience, sustainability and equity of the health system and position Canada's economy for growth and prosperity. Investing in healthcare infrastructure does not just improve patient care and safety but also contributes to Canada's economy by creating jobs, helps address climate change concerns, and can play a part in ensuring Canada reaches its net-zero emissions target.

Healthcare institutions across the country must regularly redirect funds allocated to updating infrastructure to provide patient care. This necessity effectively mortgages the future of Canadian healthcare infrastructure, leaving it woefully outdated, environmentally unsound, and at risk for climate change related damage. Most importantly, a lack of investment in healthcare infrastructure undermines patient care and poses potential risks to patient safety.

The COVID-19 pandemic highlighted the serious challenges facing Canada's health infrastructure. In long-term care, multiple-bed rooms did not allow for proper implementation of infection prevention and control protocols, and older facilities faired far worse in terms of cases and deaths.

In acute care, hospitals often could not keep up with the volume of COVID-19 patients because they lacked the space and equipment needed to treat them.

In primary and specialty care, providers quickly shifted to providing virtual services, but often had to implement digital platforms and tools as they went. Canada's digital health systems, fragmented across jurisdictions, made it difficult to collect comprehensive data on the association between infection rates and socio-economic factors, geographic location, and age and hindered the sharing of critical patient information across organizations.[xxix]

Further, a lack of health-related manufacturing infrastructure and capabilities meant Canada could not produce much-needed personal protective equipment, drugs, and vaccines domestically.

A prime reason why Canada finds itself contending with outdated – and sometimes missing – healthcare infrastructure, including buildings, medical equipment, digital systems, laboratories and manufacturing facilities, is that while total health care spending has increased over the last 20 years, Canadian capital investment in health infrastructure has fluctuated, with a noted decline in recent years.[xxx] Consequently, healthcare organizations across the country face a substantial backlog of deferred maintenance projects, among other much-needed infrastructure projects. Best estimates of deferred maintenance in the healthcare sector come from a study conducted in 2015 and was already at a staggering $15.4 to $28 billion at that time, underscoring the urgent need to address this shortfall immediately.[xxxi]

While federal-provincial-territorial jurisdictional issues are often cited as a major impediment to direct federal investment in healthcare infrastructure and healthcare more broadly, the public dismisses these concerns. Polling conducted by Abacus Data for HealthCare*CAN* in late 2020 shows that the majority of those polled do not care about political jurisdictions and want all levels of government to work together to improve healthcare.[xxxii] There is historical precedent for federal capital investment in health infrastructure: The 1948-1970 Hospital Construction Grant Program and the 1966 Health Resources Fund Act provided funding for much of the hospital infrastructure still in use today.[xxxiii]

Experts suggest that the life of a building before needing renovation is no more than 40 years, meaning that major investments in healthcare infrastructure were due around 2004. In fact, around that same time, the Standing Senate Committee on Social Affairs, Science and Technology released the Kirby Report, which acknowledged the degenerating state of Canada's public health infrastructure and suggested a substantial investment.[xxxiv] However, the recommendations were not followed, leaving Canada in a worse state nearly 20 years later.

Recommendations

1. **Ensure infrastructure funding reaches the health sector by providing healthcare organizations, such as hospitals, research institutes, health authorities, and long-term care facilities with direct and equal access to federal infrastructure funding.**

Healthcare organizations, such as hospitals, research institutes, health authorities, and long-term care homes, are not able to directly access federal infrastructure funding. This makes them reliant on funding that flows to the provinces and territories, and possibly further to municipalities, being allocated to improvements to health infrastructure. This has proven to be a faulty approach as these governments, who have many infrastructure projects to contend with, such as roads, bridges, community centres, libraries and other public buildings, often overlook the need to invest in health facilities, thinking that these vital public buildings fall within the purview of health ministries and will be addressed through healthcare funding.

We do not have to look that far back for an example of how a well-intentioned investment in infrastructure often omits the health sector. In 2020, $3 billion was shifted from Infrastructure Canada's Investing in Canada Infrastructure Program to a COVID-19 Resilience Stream to be administered through provinces and territories to address infrastructure needs such as improved heating, ventilation, and air conditioning systems and greater physical distancing. While this funding would not have been sufficient to fully achieve these objectives, the money was mostly funneled to municipal projects and other sectors, once again passing over healthcare facilities. Direct and equal access to federal infrastructure funding for healthcare institutions is critical to ensuring infrastructure projects in all sectors can compete on an even playing field for federal investments.

One example of a promising direct investment from the federal government is the recent Canada Infrastructure Bank investment in Toronto Western Hospital's raw wastewater energy transfer project, which emerged through collaboration between the Canada Infrastructure Bank, HealthCare*CAN* and our member organizations.

The consequences of outdated health infrastructure are plenty and often detrimental. For example, the issues with old and outdated infrastructure in long-term care were directly linked to the devastating outcomes for seniors in the first two waves of the pandemic. In Ontario, the Office of the Auditor General's blistering report identified that overcrowding and a lack of room for isolation made it nearly impossible to observe proper infection control protocols and concluded infrastructure was a major contributing factor to the high death toll.[xxxv]

Infrastructure funding covers more than just the physical building; investments must also include laboratories and facilities within hospitals and long-term care homes to improve quality of care and infection control. Such improvements to infrastructure will undoubtedly increase efficiency, reduce wait-times, improve patient outcomes, and provide critically needed surge capacity in the system.

2. Increase capital investments in healthcare to a minimum of 0.6 percent of gross domestic product (GDP) (approximately $12.5B) to better align with Canada's Organisation for Economic Co-operation and Development (OECD) counterparts.

As previously noted, Canada's investment in capital infrastructure in healthcare has declined in recent years while overall healthcare spending rose steadily over this same time. This indicates that necessary infrastructure upgrades and repairs are being deferred to fund operational expenses, a problem that will only persist as Canada's growing and aging population puts further pressure on health systems.[xxxvi]

The two main revenue streams for capital investments in healthcare in Canada have remained unchanged for the last 100 years. Charitable giving and taxation continue to be the primary sources. Both fluctuate over time and do not provide a steady source of funding, which needs to be bridged by the federal government.

Canada's investment in healthcare infrastructure as a percentage of gross domestic product, is lower than that of many OECD countries, including the United States, New Zealand, Australia, France, and Germany. The lack of capital investments leads to overcrowding and long wait times for care in Canadian hospitals. Looking at average bed occupancy rates over 15 years (2000 – 2015), Canada's average of 91.6% far surpasses the average of 75.7% among 27 OECD countries.[xxxvii]

When looking at spending on health infrastructure among OECD countries as a share of GDP, Canada sits below the OECD average of 0.6% at 0.5% and lags many of our most important global counterparts, such as France (0.6%), the United States (0.7%), Denmark (0.8%), Australia (0.8%) and Germany (1.1%).[xxxviii]

3. Support the expansion of virtual care and digital health.

The expansion of virtual care and digital health options, sparked by COVID-19, had the positive impact of practitioners and researchers being able to provide better care for patients, facilitate research and treatments, and increase collaboration. The Canadian Medical Association (CMA) conducted a survey in June 2020 showing 47% of Canadians used virtual care such as calls, email, texts, or video during the pandemic and 91% were very satisfied with the experience.[xxxix]

Beyond the benefits to both providers and patients, the expansion of virtual healthcare options also significantly reduced CO_2 emissions. Healthcare in Canada rates as the third-highest per capita in greenhouse gas emissions in the world and overall accounts for approximately 4% of the country's total emissions.[xl] Hospitals alone account for 21,228 carbon dioxide equivalents or 8% of greenhouse gas emissions of non-business or household emissions, and 538,031 terajoules or 11% of non-business, non-household energy use.[xli] The way healthcare is conducted in Canada – in person, using outdated infrastructure – further contributes to climate change. New approaches and technologies must be adopted not only to better facilitate patient care and outcomes, but to address the impact of the health sector on the environment.

Although more recent data is not yet available, research from before the pandemic clearly showed that carbon footprint savings ranged between 0.70 to 372 kilograms of carbon dioxide equivalent per virtual appointment.[xlii] To provide some context, on the lower end this is equivalent to the CO2 emissions from charging 85 smartphones and at the higher end the CO2 emissions from charging 45,251 smartphones. If Canada could sustain virtual visits at half of all primary care visits, it will result in projected annual savings of 103 million hours for Canadians and a decrease in 325,000 metric tonnes of CO2 emissions, which is equivalent to the annual CO2 emissions from 39,138 homes' energy use.[xliii]

4. Improve information technology and digital infrastructure across the health system.

Expanding virtual care will not be possible without digital infrastructure that supports new technology and tools and enables the sharing of information across institutions and jurisdictions. The pandemic highlighted how Canada's patchwork systems and poor data-sharing capabilities created a lag in real-time national data on the COVID-19 crisis when compared to other countries, and created barriers to patient care as patients transferred between different institutions, care settings, and in some cases provinces and territories.

Canada's siloed approach to data gathering and sharing has implications across the health system: many patients cannot access their medical information; healthcare providers cannot easily access a patient's medical history to provide the best treatment possible; and researchers cannot leverage health data across institutions and jurisdictions.

Canada Health Infoway's initiative, A Healthy Dialogue, one of the largest public consultations about digital health ever conducted in Canada, found that 92% of Canadians want technology that makes healthcare as convenient as other aspects of their lives, and 80% of Canadians believe investing in healthcare technology should be a top priority. Conducted in 2019 and 2020, the study also found that the pandemic made Canadians aware of the opportunities that exist for digital health tools and virtual care, with nearly 90% of Canadians indicating that COVID-19 has shown that virtual care tools can be important alternatives to in-person visits.[xliv]

The digitization of healthcare and the increased use of virtual care will continue post-pandemic, especially as patients demand more virtual and digital healthcare tools to support their health in an ever more digital world. Facilitating this shift will require improvements to current information technology and digital infrastructure across health systems, which will require investments from all levels of government.

Several of Canada's peer countries have outlined digital health strategies in recent years, supported by substantial funding, including Australia, New Zealand, and the United Kingdom. In 2017, Australia outlined a National Digital Health Strategy and Framework for Action with the goal of creating health infrastructure that can be safely accessed, easily used and responsibly shared to support better patient healthcare and health outcomes. Australia is in the process of developing its next national digital health strategy to replace the 2017 one that expires in 2022, with a focus on laying the foundations for next-generation healthcare in the country.

In its 2021 budget, the United Kingdom earmarked £2.1 billion (approximately $3.5B) in new funding to improve information technology and digital technology infrastructure across the National Health Service (NHS).

Maximizing the benefits and opportunities of virtual care and digital health tools as well as facilitating the interoperability of digital platforms between institutions and jurisdictions is necessary to better support patient care, enable health research, spur innovation, and attract private and global investment in the health sector. It will require investment from all levels of government, including the federal government, who will need to play a leadership role as facilitator between various stakeholders and levels of government.

To learn more about our recommendations related to technology and health research and innovation, see our Health Research and Innovation section.

5. Bolster the healthcare sector's cybersecurity capabilities through investments, programs and standards.

The healthcare sector in Canada is already an increasingly appealing target for cyber criminals thanks to the highly sensitive nature of medical information and technology. Expanding virtual care and digital health will present greater challenges to the cybersecurity landscape.

In 2020, there was a more than 45% increase in cyberattacks, the largest increase by sector. The combination of legacy technology, remote work without robust cybersecurity measures, and highly sensitive information has made healthcare a highly lucrative target for cyber criminals. Increasingly, equipment in hospitals and medical devices (e.g., pacemakers) are connected to the internet and are vulnerable as well.

Cybersecurity threats are not simply an information technology issue; they are a threat to patient safety. The 2021 cyberattack against the Newfoundland and Labrador healthcare system resulted in a complete shutdown of the patient booking and health information portals, resulting in thousands of appointments and procedures getting delayed, including chemotherapy treatments. Implementing a new set of standards to support cyber resilience is vital to addressing the rise in cyberattacks on the Canadian healthcare system. Without a set of standards, which must include tools, policies, security measures and safeguards, guidelines, risk management approaches, actions, training, and best practices, the healthcare sector cannot assess where they currently rate in terms of cyber resilience or benchmark progress. Instituting a practical standard will allow healthcare organizations to develop a mature understanding of their current position and to make the investments necessary to improve it. Human error remains the primary method for cyber criminals to gain access and greater investments in educating all healthcare personnel about cybersecurity and good cyber hygiene is crucial.

6. Continue enhancing broadband services in rural and remote areas to ensure everyone has access to and the ability to use virtual care and digital health tools.

Expanding virtual care and digital health often involves ensuring greater access to broadband in rural areas. While this is certainly a priority, meaningfully expanding virtual care requires that the federal government make it accessible across jurisdictions. Currently, the Canada Health Act allows for healthcare coverage for people away from their home province or territory through the portability criterion. While this seems like it would enable greater virtual care options, in reality the portability criterion is limited to only covering emergency care for people temporarily in another province or territory.[xlv]

7. Work with provincial and territorial counterparts to ensure administrative and regulatory policies are in place to support virtual care

Another barrier resulting from the provincial/territorial nature of medical delivery is that the current fee structures necessitate that both patient and provider are in the same jurisdiction. COVID-19 temporarily expanded billing codes for virtual care but with the pandemic subsiding, the measures are being rolled back and will result in a reduction of virtual care options. All these factors must be addressed to realize the true potential of virtual care, particularly in remote areas that would truly benefit from greater access to medical care and innovative ways of delivering care.

Endnotes

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