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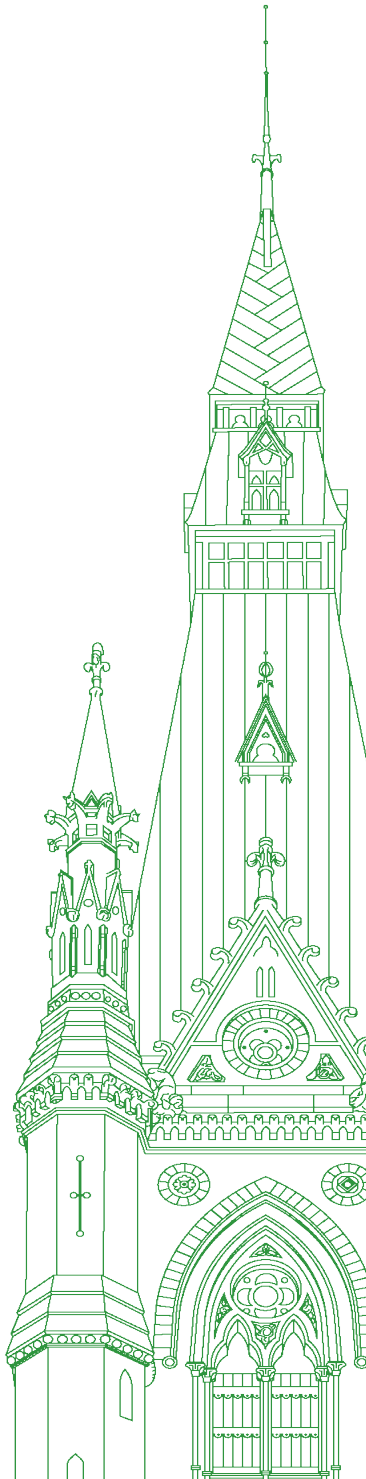

Chair: Mr. Ron McKinnon

Standing Committee on Health

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● (1705)

[*English*]

The Chair (Mr. Ron McKinnon (Coquitlam—Port Coquitlam, Lib.)): I call this meeting to order. Welcome, everyone, to meeting number 21 of the House of Commons Standing Committee on Health. Pursuant to the orders of reference of April 11 and April 20, 2020, the committee is meeting for the purpose of receiving evidence concerning matters related to the government response to the COVID-19 pandemic.

In order to facilitate the work of our interpreters and ensure an orderly meeting, I would like to outline a few words to follow.

First, interpretation in this video conference will work very much as it does in a regular committee meeting. You have the choice at the bottom of your screen of floor, English or French. Please speak slowly and clearly and hold your microphone in front of your mouth as directed during the sound check. If you will be speaking in both official languages, please ensure that the interpretation is listed as the language you will speak before you start. For example, if you're going to speak English, please switch to the English feed and speak. This allows for better sound quality for the interpretation.

Before speaking, please wait until I recognize you by name. When you are ready to speak, click on the microphone icon to activate your mike. Should members need to request the floor outside of their designated time for questions, they should activate their mike and state that they have a point of order. I will remind everyone that all comments by members and witnesses should be addressed through the chair. Should any technical challenges arise, please advise the chair or clerk immediately, and the technical team will work to resolve them. If necessary we will suspend the meeting at those times to rectify the problem.

Before we get started, I'd like to remind you all that if you click—for those operating on a computer—on the upper right-hand corner of your screen you'll see a speaker view versus a gallery view. If you click to gallery view then you should be able to see everyone in the meeting. For those using iPads, it's a little icon in the upper left hand corner.

I'd like now to welcome our witnesses. From the Public Health Agency of Canada, we have Dr. Theresa Tam, chief public health officer, and Ms. Kim Elmslie, vice-president, infection disease prevention and control branch. From the Office of the Chief Science Advisor, we have Dr. Mona Nemer, the chief science advisor. From the Canadian Institutes of Health Research, we have Dr. Michael Strong, president, and from the Canadian Society for Virology, we have Dr. Nathalie Grandvaux, president.

Welcome to all of our witnesses and thank you for being here. The committee and I appreciate your time.

We will start with the Public Health Agency of Canada with, I believe, Dr. Tam.

Please go ahead for 10 minutes.

Dr. Theresa Tam (Chief Public Health Officer, Public Health Agency of Canada): Good afternoon.

Thank you, Mr. Chair and committee members, for the opportunity to come back to speak with you again today.

The emergence and rapid spread of SARS-CoV-2, the virus that causes COVID-19, has challenged global capacities in unprecedented ways.

In Canada, there are now around 78,500 cases of COVID-19, including 5,857 deaths. Around 50% of cases have now recovered. Labs across Canada have tested over 1,337,000 people for the novel coronavirus to date, with about 5% of them testing positive overall. Collectively, provinces and territories are testing an average of over 27,000 people daily. As these numbers change quickly, we update them on the Canada.ca/coronavirus web page.

While COVID-19 remains a serious global health threat, our collective efforts to slow down the spread of COVID-19 and bring the epidemic under control have flattened the curve in Canada. The slowed rate of transmission has reduced daily case counts, but there are still localized outbreaks and active transmission in different areas of the country, so we must remain vigilant.

As the initial epidemic wave in Canada comes under control, rapidly detecting and suppressing any new surge in cases is the priority. Simply put, we must keep infection rates low while we accelerate the development of treatments and a safe and effective vaccine for COVID-19.

Given the uncertainties of the path forward, we will need to exercise caution and learn as we go. Canada's response has and continues to rely on science, our evolving knowledge on how the virus spreads, and the deployment of effective public health measures. We will adjust rapidly, as needed, to effectively reduce the spread of this virus as we reopen Canada's economic and social life.

Canada's response to COVID-19 must continue as a collaborative response that supports and includes individuals, communities, different sectors and governments.

Our federal public health role can best be described as leadership through research and science, international collaboration, data and monitoring, and continuous risk assessment; leadership in keeping Canadians informed about what we know, what we don't know and how we are finding answers to the complex questions that a new infectious disease brings; and leadership by mobilizing capacities to rapidly address gaps wherever they exist and by providing resources that strengthen the public health response wherever it is needed.

A cornerstone of Canada's overall response to date has been excellent collaboration among federal, provincial and territorial governments.

As we move forward, we will continue to work closely through the federal-provincial-territorial special advisory committee on COVID-19, which includes all the chief medical officers of health, as well as Correctional Service Canada and Indigenous Services Canada officials. At the moment, we are meeting several times per week.

The public health working group on isolated and remote communities, reporting to the special advisory committee, has also been formed to collaborate on addressing the unique needs of remote and isolated communities and those of first nations, Inuit and Métis.

I will take a few minutes to provide an update on some of the key areas where the Public Health Agency of Canada is supporting the Government of Canada and our provincial and territorial partners in the response.

Testing is a critical aspect of our COVID-19 response. Canada's testing strategy will continue to be adapted as science on the virus evolves, as more test options become available and as the pandemic progresses. It is based on the three central public health priorities of testing all suspected cases, aggressively tracing their contacts, and isolating infected people and quarantining contacts.

Testing and contact tracing are critical to setting up a ring fence around every case and breaking the chains of transmission. Canada's National Microbiology Laboratory, NML, has played a critical role in this area.

Within five days of the novel virus' genetic sequence becoming available, scientists at the NML developed a molecular diagnostic test, and now more than 30 labs across Canada can perform confirmatory tests. As commercial tests became available, the NML's validation and quality assessment programs rapidly ramped up to ensure that these tests deliver accurate results.

The special advisory committee on COVID-19 recently updated the national laboratory testing guidance with a focus on broadening testing to anyone with symptoms, even those with mild symptoms. Considerations for testing asymptomatic individuals were also provided.

The Government of Canada also recently announced the COVID-19 immunity task force to coordinate population-based serology or antibody studies to determine the extent of COVID-19 infection in Canada. This will help determine the fraction of the population who have some immunity to the virus to inform effective public health responses going forward, including any vaccination programs.

● (1710)

A robust testing approach is a key component of the reopening phases, and Canada is looking to implement a multi-pronged testing approach that encompasses a combination of lab-based PCR testing, point of care and serology testing.

A priority for all countries is the development of a vaccine for COVID-19. The National Microbiology Lab is part of a national network using genome sequencing to understand how the virus works, how it is evolving and why people experience such differences in the severity of illness. The NML's work on vaccine development builds on a track record that includes the successful development of an Ebola vaccine. We are pursuing seven vaccine development technologies and collaborating with industry and academia to contribute to vaccine discovery.

Another important area of focus for the Government of Canada has been securing critical personal protective equipment and medical equipment for front-line health care workers. We are doing this through collaborative bulk procurement with provinces and territories, building domestic production capacity and identifying potential alternatives and ways to extend product life.

The Public Health Agency also continues to work closely with provinces and territories to update infection prevention and control guidance based on the best available evidence for a variety of health care settings, including long-term care.

Another important area of focus is keeping Canadians informed. The Public Health Agency of Canada has been providing Canadians with timely information about how they can protect their health and our broader health care systems. This includes the Canada.ca \coronavirus web page, a toll-free COVID-19 information line and the Canada COVID-19 app that has been downloaded more than 540,000 times to date.

Nationally we have witnessed the impact of Canadians working together to slow COVID-19 epidemic growth through collective adherence to recommended public health measures, including physical distancing and hygiene measures. In moving forward, all levels of government are committed to working together towards a shared evidence-based approach to the cautious lifting of public health measures with the primary objective of protecting the health of Canadians while taking into consideration regional differences.

There is a need to strike a critical balance between public health control measures that minimize health impacts and the social and economic consequences. For instance, border measures under the Quarantine Act to strengthen and restrict entry into Canada from abroad, including from the U.S., remain in place. These measures will be continually reassessed as new information becomes available.

The special advisory committee on COVID-19 recently provided recommendations and national public health guidance with shared objectives, principles, criteria and indicators that serve as the foundation for lifting restrictive measures.

We must also continue to strengthen public health capacity across the country in anticipation of potential future waves of COVID-19, which includes capacity for enhanced testing to rapidly detect cases, investigate outbreaks and find and manage contacts. The Government of Canada is also working closely with provinces and territories to expand testing capacity beyond the existing laboratories and strategies to mobilize human resources to support contact tracing.

The impact of COVID-19 on the overall physical and mental health of Canadians has been significant. The direct health impacts have been devastating, with the most severe outcomes being suffered by seniors residing in long-term care and assisted living facilities. Our approach going forward must ensure that vulnerable or high-risk groups are better protected. These include those who are vulnerable because of age, underlying health conditions, remote location, close living spaces and temporary or unstable living spaces.

We must also consider the unintended consequences of restrictions in place, including increased domestic violence and social isolation, delayed care for acute and chronic health conditions and problematic substance use.

As public health restrictions are lifted, the aim is to be able to rapidly respond to any new cases or clusters to keep the epidemic suppressed. However, we must prepare for the possibility that public health restrictions may need to be reinstated if cases spike again.

● (1715)

While we do not know what will happen with COVID-19 in a few months, public health has to prepare for the possibility of another wave coinciding with the annual influenza season. This and more challenges lie ahead of this unprecedented global health crisis. Public health authorities are aware, engaged and fully committed to tackling these challenges head on with the full weight of Canadian ingenuity, collaboration and innovation.

Thank you for your attention.

I will be pleased to answer any questions.

The Chair: Thank you, Dr. Tam.

We now go to the Office of the Chief Science Advisor.

Dr. Nemer, you have 10 minutes. Go ahead, please.

[*Translation*]

Dr. Mona Nemer (Chief Science Advisor, Office of the Chief Science Advisor): Good afternoon, Mr. Chair and members of the committee.

Thank you for the opportunity to appear before you today. I'd also like to thank my fellow witnesses for their statements and for all their efforts during this pandemic.

As you know, I was appointed as Canada's chief science adviser on September 26, 2017, to provide science advice to the Prime Minister and cabinet. My office is responsible for ensuring scientific analyses are considered in government decisions and coordinating expert advice to cabinet. I also provide recommendations on how government can better support quality scientific research. Furthermore, my office helps to ensure that government science is fully available to the public. Lastly, I have a mandate to promote collaboration between federal scientists and academia, both in Canada and abroad, and to raise public awareness of scientific issues.

Since the beginning of the COVID-19 pandemic, I have had the opportunity to make contributions in all these areas. If I may, I will summarize them for you.

Starting in February 2020, I set up a number of expert groups and task forces. These experts are keeping us abreast of ongoing clinical and scientific challenges, and best practices for pandemic response in Canada. I have also been involved in science coordination efforts within the federal government with respect to medical countermeasures. I have worked with the broader science and research community in Canada to enhance coordination efforts.

For example, working with a few other people, I helped set up CanCOVID-19, a pan-Canadian research platform to optimize collaboration during the COVID-19 crisis. More than 2,000 researchers are registered on the platform—barely a month old—which attests to the determination and extraordinary engagement of the Canadian scientific community in the response to the pandemic.

● (1720)

[*English*]

Additionally, I'm engaged in the international science advice response to COVID-19. Chief science advisers, or the equivalent, from a dozen countries have been meeting weekly for the past two months. We discuss the dynamic developments and challenges of the pandemic and its evolving characteristics in different countries at different times. We share data and information on social and medical measures. These interactions provide important opportunities for coordinating research and science advice.

An example of this international effort was the group's call to global publishers to make COVID-19 scientific publications openly accessible to all, which the publishers quickly agreed to. This has meant that research results are now quickly disseminated and used to help manage the pandemic everywhere. This is an unprecedented development that is supporting scientific data-sharing at a rate never witnessed before.

Over the past few months, our knowledge of the new SARS-CoV-2 virus that causes COVID-19 has rapidly progressed, including efforts by our own Canadian researchers. However, there are still many unknowns that affect disease prevention and management. I'll highlight a few of those, with your permission.

The first area is in terms of disease susceptibility. Not everyone in the population appears to have a similar risk of infection, but how exposure to different levels of the virus leads to different individual responses is unclear. As you can imagine, this has an impact on prevention measures in different settings.

The issue of infectivity still needs to be clarified. Infected individuals seem to be contagious for two or three days prior to symptom onset until around seven days thereafter, and possibly longer. This implies that significant transmission comes from asymptomatic individuals, which creates an added challenge for early detection and the control of disease spread.

With respect to disease outcome, we've all seen that older age and chronic preconditions, such as cardiovascular disease, diabetes or obesity, have been associated with a higher risk of a poor COVID-19 outcome. However, the reasons remain unexplained. Our experts have pointed out the need for harmonized, quality data collection and sharing, which is important for sorting out the confounding variables and, more precisely, guiding disease management in the Canadian context.

With respect to prevention and treatment, Dr. Tam has already alluded to the importance of a vaccine. In the absence of acquired immunity or an effective vaccine, avoiding or minimizing exposure to the virus is the best prevention. We know what this means.

Vaccine development is under way, including in Canada, using a wide range of classical and novel approaches.

With respect to treatments, several clinical trials are ongoing, including in Canada, to test the efficacy of existing drugs. However, the results so far are disappointing. It should be noted that currently there are very few broad-acting antiviral medicines, which is why the development of new antiviral drugs is being pursued in parallel to vaccine production efforts.

Let's remember the successful management of hepatitis C and HIV with antiviral therapies, not vaccines. I think that we have hope on both fronts.

With respect to diagnostics, Dr. Tam has already mentioned the use of qPCR, which is the gold standard for testing for the presence of the virus. However, this multi-step test is not very well suited for remote areas and for other situations that require faster or repeated screening, such as borders and primary care, which is why the development of complementary detection methods is ongoing.

I have the privilege of sitting on the immunity task force with Dr. Tam. This ongoing work is going to be important to determine the actual prevalence of exposure in Canada and to inform vaccine development.

As countries reopen their economies in the weeks and months ahead, the scientific community will continue to gather more data to better understand both the virus and the disease it causes. These efforts are instrumental for our ongoing preparedness to live with and overcome the virus.

Around the globe, countries are also stepping up their efforts in key areas, including deploying robust and agile systems for virus testing and contact tracing, as well as understanding the level of the population that has been exposed to the virus.

Another area is the standardization of data collection, constantly improving the quality and developing protocols for sharing and mining the data, including using AI-supported tools. This is again an effort that Canada is part of.

Of course, everyone around the world is stocking up on medical equipment and therapeutics, or at least trying to, and putting in place national strategies for local manufacturing of personal protective equipment as well as COVID-19 diagnostics and medical countermeasures. More broadly, countries are expanding research and development efforts and considering approaches to national health security across the entire medical supply chain.

Last but not least, strengthening health emergency preparedness is on everyone's mind, including at the level of the multidisciplinary science advisory function.

In conclusion, this pandemic is highlighting the critical value of research and the importance of science coordination across disciplines and sectors. It's also underscoring the need for national production capacity for health security. Right now, we're playing catch up, but we hope that current investments and efforts will result in a sustainable ecosystem for infectious disease research and development. The war against COVID-19 will be won through science. Let's ensure that Canada's excellence in science continues to be mobilized for the benefit of all Canadians.

Thank you.

I look forward to our exchange.

● (1725)

The Chair: Thank you, Dr. Nemer.

We go now to the Canadian Institutes of Health Research, Dr. Michael Strong, president.

Please go ahead for 10 minutes.

Dr. Michael Strong (President, Canadian Institutes of Health Research): Mr. Chair, thank you for having me before the committee once again to speak about the continued importance of research and the ongoing role of the Canadian Institutes of Health Research in Canada's response to COVID-19.

Before we begin, I want to reiterate my sincere appreciation and gratitude to all of the health care professionals—the front-line and essential workers who are working tirelessly to support the health, safety and well-being of Canadians.

I would also like to extend my sincere condolences to the members of the Canadian Snowbirds for the tragedy of this past weekend. My wife, Wendy, and I had the opportunity to see the Snowbirds in London on Mother's Day. It was a real treat. They are, and always will be, a symbol of the pride that we as Canadians have in this great country. Our thoughts are with them at this time.

As I am sure many of my colleagues here today will echo, I also wish to commend the incredible and continued efforts of the Canadian research community. Our researchers are among the very best in the world, and they continue to play a critical role in the global and domestic research response on COVID-19.

I am pleased to be with you today to provide an update on the research initiatives that CIHR has recently implemented as part of Canada's efforts to address the pandemic. Before doing so, I wish to emphasize that CIHR's efforts to address the COVID-19 outbreak continue to be undertaken in very close collaboration with federal partners—including my colleagues who are appearing with me today—at Health Canada; Innovation, Science and Economic Development Canada; the National Research Council, and many others.

I also wish to highlight the recently established COVID-19 immunity task force that Dr. Nemer referred to. I am pleased to say that two of CIHR's scientific directors, Dr. Charu Kaushic and Dr. Carrie Bourassa, are lending their expertise on immunity and infection and indigenous health respectively to this important initiative. CIHR also continues to work hard hand in hand with such international partners as the WHO and the Global Research Collaboration for Infectious Disease Preparedness, otherwise known as GloPID-R, to enable Canadian researchers to help in the global research efforts.

Additionally, CIHR supports the calls made by the chief scientific advisers around the world, as noted by Dr. Nemer, to ensure that such research outputs as data and publications are publicly available to support the ongoing global emergency response efforts.

As I shared with you at my previous committee appearance, CIHR moved quickly in February to efficiently mobilize the research community through the launch of a rapid research response to COVID-19. In just a few weeks, CIHR was able to select, through a rigorous peer review process, 99 COVID-19 research projects focused on developing and testing medical, social and policy countermeasures to address this public health crisis.

Given the uncertain nature of vaccine development and therapeutics and the need for additional preventive measures, Canada's response to the COVID-19 pandemic also requires sustained research investment to ensure a rich pipeline of innovations. That is why on April 23 the Prime Minister announced an additional $1.1 billion in support of a national medical research strategy for COVID-19, including close to $115 million in funding for CIHR.

This new investment builds on CIHR's initial rapid research response and will enable us to support researchers working on projects related to the development of vaccines, therapeutics, new diagnostics and public health interventions to move to the next critical stage in their research. It will also help to secure Canadian participation in domestic and international clinical trials responsive to WHO priorities that will increase the understanding of the efficacy and effectiveness of vaccines, therapeutics, mental health supports and clinical management approaches to COVID-19.

For instance, through this investment, we were able to provide Dr. Srinivas Murthy and his team from UBC with an additional $3.5 million to support the Canadian treatments for COVID-19 trial, otherwise known as CATCO, the Canadian arm of the WHO “solidarity” trial. This will enable Dr. Murthy and his team to expand the trial to include additional hospital sites and more study of participants across Canada to study the effectiveness of different drug treatments for COVID-19. We are confident that this type of research will greatly contribute to our efforts to rapidly find effective treatments for the benefit of all Canadians.

A portion of the investment will also be dedicated to working with Health Canada to improve ethics research review processes and structures. This will help accelerate the launch of promising multi-site, multi-jurisdictional research, including clinical trials across Canada. Further, these funds will also allow the Government of Canada, under the leadership of CIHR, to set up a centre for pandemic preparedness and health emergencies research that will lay the groundwork towards more nimble domestic and global pandemic research coordination.

● (1730)

Finally, we have heard loud and clear from Canadians and health care providers that more support is needed to help understand and mitigate the mental health and substance use impacts of the COVID-19 crisis. As such, CIHR, in partnership with the Public Health Agency of Canada and Health Canada, has established an expert advisory panel on mental health and substance use and will support research to facilitate the rapid synthesis and translation of evidence on effective virtual service delivery models for the benefit of all Canadians.

We are pleased to share that the second phase of CIHR's rapid research response is currently under way, and we have received a staggering number of applications. This underscores the incredible and widespread mobilization of the Canadian research community in response to COVID-19. Applications for the second phase are currently under review, and funds will be provided to successful applicants in a few weeks.

In the meantime, CIHR continues to coordinate and support the sharing and translation of ideas, data and innovative solutions across all levels of government to enhance timely and effective responses to the COVID-19 crisis. Since we last met, CIHR has rolled out a number of virtual knowledge mobilization meetings to strengthen connections between researchers funded through the COVID-19 rapid response competition and Government of Canada departments and agencies in order to accelerate research and knowledge translation.

I want to reiterate that these investments in research provide the crucial high-level evidence needed to inform policies and clinical and public health responses to mitigate the rapid spread of COVID-19 and save the lives of Canadians.

The critical importance of the work generated by CIHR's research community brings me to my last point. As you may well be aware, CIHR has postponed this year's spring project grant competition. Given the growing interest in this decision, expressed both publicly and within the scope of this very committee, I would like to take a moment to explain the reasons for this decision, which was made in close consultation with our trusted partners.

As a result of the COVID-19 outbreak and the redirection of government priorities to address the pandemic, CIHR placed a moratorium on all existing and any new strategic funding opportunities, with the exception of those related to COVID-19. At the time, CIHR could not be certain about the reliability of critical infrastructure required to deliver the project grant competition, which requires the review of thousands of applications in a short period of time, just after all CIHR employees had been directed to work from home.

We made the very difficult decision to ensure that these funds would be saved for the fall of 2020 project grant competition, but at the same time, we also began exploring options to support both the researchers and the trainees impacted by this decision, as well as those impacted by the shutdown stemming from COVID-19 of the broader research programs.

For instance, to support lead applicants whose work was impacted by the postponement of the spring competition, CIHR will provide prolonged financial support for existing grant holders for some and extend bridge grants for others. To support trainees, including students and post-doctoral fellows, the government recently announced new funding of $291 million to maintain income support for these individuals while the majority of academic research programs are closed.

On May 15, the Prime Minister announced an additional $450 million in funding to help Canada's academic research community during the COVID-19 pandemic. This funding will support universities and health research institutions to maintain essential research-related activities during the crisis and then ramp back up to full research operations once physical distancing measures are lifted. Further details on these supports can be found in the written brief we provided the committee in advance of this meeting.

To conclude, I would like to re-emphasize that CIHR recognizes the dual importance of supporting both Canada's response to COVID-19 and the broader research community that has been adversely impacted by this pandemic. Investments such as those recently announced are critical to sustaining Canada's research excellence, talent and knowledge.

To ensure that we are doing our utmost to support our researchers through the COVID-19 response and the post-pandemic economic recovery, CIHR continues to work closely with our federal partners, the research community and health charities to explore additional ways to support our researchers in these difficult times.

Again, thank you for inviting me to provide an update on CIHR's continuing efforts to support COVID-19 research. I am happy to answer any questions you may have.

● (1735)

The Chair: Thank you, Dr. Strong.

We go now to the Canadian Society for Virology and Dr. Nathalie Grandvaux, president.

Dr. Grandvaux, please go ahead. You have 10 minutes.

Dr. Nathalie Grandvaux (President, Canadian Society for Virology): Good afternoon, members of the committee and fellow witnesses.

First of all, let me thank you for the opportunity to appear before you today to speak as the president of the Canadian Society for Virology. I am very proud to lead this young not-for-profit society that I co-founded in 2016 with Dr. Craig McCormick, a professor at Dalhousie University.

CSV was originally founded to help Canadian virologists who were spread across the country, including world-renowned experts in basic, clinical and epidemiological research, to come together to exchange ideas and discover new opportunities for collaboration to meet the challenge of existing and emerging viral infections and realize their potential to lead in this research area. CSV now counts 220 members, who study viruses that infect human, animals, plants and bacteria. CSV members represent universities, hospitals and research institutes across the country. The society provides unique opportunities to bring the community together and foster exchanges, thus promoting collaborations to accelerate discoveries and the translation of research findings into positive health outcomes for Canadians. Canadian virologists have made important contributions to the fundamental understanding of many viruses, which has led to the development of new strategies for monitoring, preventing and solving global health challenges related to viral infections, such as, for example, the Ebola virus vaccine and anti-HIV drugs.

As you can imagine, our community quickly plunged into the heart of the current global pandemic and is at the forefront of research to contribute to the understanding of SARS-CoV-2, the virus responsible for COVID-19, from a biological and epidemiological point of view and its diagnosis and treatment through antivirals or vaccines.

The outbreak of SARS-CoV-2 was under the radar of members of CSV, including members of the executive, as soon as it appeared in China in December 2019. The immediate action of CSV was to contribute to the organization of support for health care workers, medical microbiologists and virologists in China to help contain the outbreak, treat patients and protect front-line workers who were facing shortages of protection equipment and supplies.

With the leadership of CSV executive members, together with Dalhousie University and members of the Canadian medical community, about $48,000 was raised through donations and used to purchase and ship Tyvek suits to hospitals in Wuhan.

Members of our community, including clinicians and microbiologists, were part of the team managing the first COVID-19 case in Toronto. Through collaboration with other CSV members, they quickly achieved laboratory culture of the virus. Other collaborative teams took alternative routes to culture the virus and very quickly test animal models, which are key to antivirals and vaccine development. These tools are now spread through our community, which is responding in an exceptional way by quickly redirecting the research to respond to the urgent need to better understand SARS-CoV-2, improve diagnosis, identify therapeutic strategies and develop vaccines.

The community effort is immense, and we want to acknowledge that this was only made possible thanks to the very quick response of the federal government and agencies. The major investment in COVID-19 research, made through the CIHR, NSERC, SSHRC, CRCC, new frontiers in research fund, the International Development Research Centre and Genome Canada, has strongly supported the effort made by our community. It would not have been possible without this investment.

This must, of course, be underlined, but it should not make us forget the reasons that have contributed to the lack of preparedness in facing the current pandemic. Indeed, the lack of funding for investigator-initiated fundamental research over the years has strongly limited the diversity of research that could have given us an advantage over the virus. In fact, over the past decade, scientists have raised awareness against the class of viruses to which SARS-CoV-2 belongs. It was clearly established that the most probable naturally occurring threat that humans face is from a respiratory-borne RNA virus.

This class of microbes should have been a preparedness priority. I personally raised awareness about it to the CIHR's infection and immunity institute advisory board last year. The SARS epidemic in 2003, which had already affected Canada, should also have sent the signal for the necessity of preparedness. Scientists are in the best position to keep watch on the emerging fields. In order for them to translate their observations into knowledge and tools to face emerging infectious diseases, they need continuous and sustained funding for investigator-initiated research.

● (1740)

Major investments were made at the time of the SARS epidemic, but once it ended research funding in this area was limited, and advances that had been made were stopped. If global research had continued, we could have had antivirals and/or hints for quick development of vaccine candidates against SARS-CoV-2, a closely related virus.

Accumulation of knowledge, including biology, interaction with the host, epidemiology and ecology, of diverse viruses would give us an advantage in the anticipated fight against emerging pathogens. As such, let’s not repeat history and cut funding when this pandemic comes to an end. Let’s also not make the mistake of focusing only on coronaviruses, but rather on a wide variety of viruses, as we do not know what the next threat will be.

Importantly, SARS-CoV-2, like SARS, is a zoonotic virus, meaning it spread to humans from an animal. This pandemic is showcasing how viruses jumping from other species can be a threat to humans, and further underscores the necessity of funding research on viruses of diverse origins, not only human.

Expertise in the manipulation and study of human-threatening viruses, and the development of antivirals and vaccines, requires years of training. CSV members are currently training the next generation of virologists, and CSV is dedicated to providing support through career workshops and opportunities to network during sponsored symposia, awards and lab exchange programs.

While CSV members are now focusing on COVID-19-related research, their research program on other viruses is on pause. It is essential to expand research capacity in order to ensure a broader scope of research on a variety of human and animal viruses.

Importantly, to fight viruses, virologists cannot work in silos. They need training in, or collaboration with, researchers with expertise in immunology, vaccine and drug development, epidemiology and ecology. Canada should support careers and build capacity in various areas of virus-related research such as fundamental research, epidemiology and drug and vaccine development by raising the profile of those career opportunities and creating supportive environments for training.

The study and development of therapeutics and vaccines against emerging pathogens causing threats to humans, such as SARS-CoV-2, requires experiments that must be done in high-level containment level 3 facilities. It is key that this infrastructure across Canada meets all the government laboratory biosafety guidelines at all times. This is essential for researchers to perform the required experimental work to build knowledge on viruses and respond quickly to a situation of threat.

This was not the case in this current time, as several facilities were not certified and could not have been updated over time because of lack of funding. It is important that the federal government commit to secure funding for building capacity and maintenance of containment level 3 laboratories and animal facilities, which are essential for a response to any emerging pathogen. The development of these laboratories should not only be in the form of infrastructure funding, but also in the form of operating funds.

In closing, I want to leave you with the following take-home message. The spillovers of emerging infectious diseases are continuing to increase and the current pandemic will, unfortunately, certainly not be the last. Increased preparedness through funding investigator-initiated research and infrastructure will cost far less than the public health and economic toll of another virus that we may have been able to identify and contain earlier.

It is essential for the CSV community that the required increase in basic virus research is not done at the expense of funding for other fields, threats or diseases. Virus-related research is part of an ecosystem that overall urgently needs more investment for fundamental, investigator-initiated research.

● (1745)

[*Translation*]

Lastly, I'd like to stress the fact that CSV members mobilized in an exceptional way in response to the current COVID-19 pandemic. They were able to quickly redirect their research, something that would not have been possible without the federal government's major investment in COVID-19 research, made through the CIHR, the Natural Sciences and Engineering Research Council of Canada, or NSERC, the Social Sciences and Humanities Research Council, or SSHRC, the Canada Research Coordinating Committee, or CRCC, through the new frontiers in research fund, the International Development Research Centre, or IDRC, and Genome Canada.

Unfortunately, we are experiencing the insidious effects of years of underfunding for non-targeted basic research. Adequate investment would have meant that we were better prepared to deal with emerging infectious diseases. Scientists are in the best position to keep watch on these emerging fields, but they need the resources to translate their observations into cutting-edge research.

Their message is this: the repercussions of emerging infectious diseases continue to increase and the current pandemic will unfortunately not be the last. Increased preparedness through funding of research and infrastructure will decrease the public health and economic toll of another virus that we may have been able to identify and contain earlier.

Lastly, it is essential that the required increase in basic virus research is not done at the expense of funding for other fields, threats or diseases. Virus-related research is part of an ecosystem that overall urgently needs more investment for fundamental, investigator-initiated research.

Thank you, and I would be happy to answer your questions.

[*English*]

The Chair: Thank you, Dr. Grandvaux.

We will now start our questioning. We will do three rounds of questioning.

We'll start our first round with Mr. Jeneroux.

Mr. Jeneroux, please go ahead for six minutes.

Mr. Matt Jeneroux (Edmonton Riverbend, CPC): Thank you, Mr. Chair.

Dr. Tam, on January 29 you said that, due to our legal duty to the WHO, you wouldn't recommend travel bans. There was a fear of being called out if we did anything different. Has the WHO's position on travel bans changed?

● (1750)

Dr. Theresa Tam: I think the international health regulations and the framework underneath which the WHO functions—the WHO secretariat—prior to this absolutely unprecedented event of our modern era, has really been predicated on stopping the spread of public health risks.

Mr. Matt Jeneroux: I'm sorry, Dr. Tam. I only have six minutes.

I'm just curious, has the WHO's position on travel bans changed?

Dr. Theresa Tam: I think that the WHO is still recommending that countries that are taking additional measures like travel bans explain themselves, which is why over 100 countries have had to explain why they have enacted such travel bans based on their goals.

Mr. Matt Jeneroux: Based on that, then, Dr. Tam, on March 16, Canada implemented travel bans. Are you still concerned about being called out by the WHO? Are you confident in the decision that you made?

Dr. Theresa Tam: I think we're confident in having made the decision based on the evolving nature of the outbreak and the risk it poses to Canadians. We explained ourselves to the WHO in the time that is prescribed by the international health regulations, and we need to continue to evaluate it.

Mr. Matt Jeneroux: On that same date, you stated wearing a mask to protect others was ineffective, stating that this view was based on science. On April 6, you said that "A non-medical mask can reduce the chance of your respiratory droplets coming into contact with others or landing on surfaces". Was this decision based on the WHO's recommendations or your own?

Dr. Theresa Tam: This was based on a review of the evidence through the special advisory committee, which I've just talked about, with the other chief medical officers of health. That was based on the evolving science, looking at the role of asymptomatic and presymptomatic transmission and the evolving research that is being published. There was very, very little research being published prior to that, so we kept updating our advice based on the latest information. I think our—

Mr. Matt Jeneroux: Based on that, then, Dr. Tam, a 2019 study of the WHO's recommendations on pandemics, including wearing masks, factored in science but also other measures such as costs and benefits, feasibility, and resource implications.

Would you agree that we had early knowledge of human-to-human transmission, meaning transmission via droplets, yes or no?

Dr. Theresa Tam: I think we know that this coronavirus is transmitted by respiratory droplets, and primarily through coughing or sneezing, but also through other means, through your mouth and nose primarily. Those are the primary routes of transmissions. We know the tried and true measures to reduce that risk, but we've also recommended non-medical masks—we're preserving the medical ones for health care workers—as an added layer of protection on top of the other public health measures.

Mr. Matt Jeneroux: Why did you, as Canada's chief public health officer [*Technical difficulty—Editor*] masks [*Technical difficulty—Editor*]?

Dr. Theresa Tam: As I said, as we reviewed the science and as data available, there was very little scientific information. Some of it was through influenza studies, some through laboratory studies and some through modelling studies. We took the body of it that very week. We took a number of publications into account and, as I said, a lot of it was also predicated on the publications on asymptomatic and presymptomatic transmission.

Mr. Matt Jeneroux: Dr. Tam, you just admitted that you would agree there was knowledge of human-to-human transmission—meaning transmission via droplets—and masks protecting against that.

Moving on, only because we're short on time, on January 29 you also said that no countries had put in travel bans, but Taiwan had banned travellers from Wuhan, China, on January 23. Why did you omit this fact?

Dr. Theresa Tam: I'm not certain that I know exactly what travel bans Taiwan had enacted at the time, but of course things were undergoing rapid evolution, with different countries taking different measures.

Mr. Matt Jeneroux: Based on Taiwan's experience, what lessons have you and the Public Health Agency specifically learned from Taiwan about how to effectively contain the spread of COVID-19?

Dr. Theresa Tam: I think we've learned a lot over the last several months. I still think that, obviously, the paradigm in the past was that we needed to contain the virus at the source, and that we need to be extremely—

● (1755)

Mr. Matt Jeneroux: What have you learned specifically from Taiwan?

Dr. Theresa Tam: I think, like all other countries, we learned the specific infection prevention control measures that are fundamental to public health and that we all know work: staying home when you're sick, washing your hands, covering your cough, all of those things.

I think we're learning a lot more about how we apply border measures and travel health advice. We'll continue to look at what other countries are doing and what happens, particularly during this time, as economies or societies open up in other countries. We need to look at what happens to them and learn from them as well.

The Chair: Thank you, Mr. Jeneroux.

We go now to Dr. Powlowski for six minutes.

Mr. Marcus Powlowski (Thunder Bay—Rainy River, Lib.): Dr. Tam, I know hindsight is 20/20, but let's look to the future and base decisions on science and evidence.

What about the possibility of some sort of mandated use of masks in Canada? There is plenty of evidence out there that masks are a benefit, mostly in preventing transmission from somebody who has the disease—perhaps people who are still asymptomatic and don't know they have the disease—to other people.

There's a whole bunch of studies. Let me quickly run over some of them.

Howard et al, in a study that hasn't yet been published, but that looks as if it'll be published in Proceedings of the National Academy of Science, looked at the evidence and concluded, "The preponderance of evidence indicates that mask wearing reduces the transmissibility per contact by reducing transmission of infected droplets in both laboratory and clinical contexts".

In the Annals of Internal Medicine a recent meta-analysis of 64 studies showed that transmission was decreased by 50% to 80% in health care settings. A Leung study on other forms of coronavirus showed decreased transmission when people who are infected have masks. There was a well-publicized, light-scattering study in the New England Journal of Medicine showing what happens when you have a mask and when you don't have a mask. A number of papers have been written on modelling, looking at what happens when you add masks—even if they're not a solution, but do have incremental benefit—combined with other public health measures, indicating that these can significantly reduce the transmission of disease and the progression of the pandemic.

Many countries in Southeast Asia that have done very well in their response to the pandemic by requiring masks in public settings. Places like Taiwan, Singapore, Thailand and 90 countries globally have some kind of mandated use of masks.

To top it off, there's a recent open letter in the United States, signed by 100 prominent medical people, to governors across the United States. A lot of people who wrote this letter were from Harvard; there were two Nobel laureates, and people from Cambridge, Oxford, Berkeley—all the big schools—and their conclusion was that requiring the use of fabric masks in public places could be among the most powerful tools to stop the community spread of COVID-19. They too are calling for mandated use of masks.

We're spending billions and billions of dollars in dealing with this. It's really important that we don't screw up as we come out of our initial social isolation. How about some form of mandated use of masks?

Dr. Theresa Tam: As I've just said, the federal-provincial-territorial special advisory committee, which includes the chief medical officers of health, has been reviewing the evidence, much of which you have just cited.

The committee really wanted to ensure that there is flexibility according to local context and epidemiology. In provinces and territories where there hasn't been any community transmission, that's a bit different than in certain provinces where that has already occurred.

As we're exiting and beginning to cautiously and slowly relax some of the public measures, we have updated our recommendation on the use of non-medical masks. The way it is positioned right now—based on the evidence, but also on Canadian epidemiology—is that when the local epidemiology and rate of community transmission warrant it, the wearing of non-medical masks or cloth facial coverings is recommended for when you can't physically distance from others, particularly, as you can imagine, on public transport, in grocery stores and in retail places. It is a matter of your protecting others, so "I protect you and you protect me" is part of that.

As to what exactly happens in the individual jurisdictions like Toronto or Montreal, they need to have the flexibility to do that. It is, as you said, an added layer of protection, as long as everybody remembers that it doesn't necessarily negate the need for physical distancing and hygienic measures. It is certainly an added layer when you can't be assured that you can get that two-metre physical distance from others.

● (1800)

Mr. Marcus Powlowski: Dr. Tam, I'm sure you would agree that it would be wonderful if everybody in society did the right things, but that isn't the case.

Would you be willing to consider the possibility of mandating the use of masks in places where there are still significant numbers of COVID-19 cases, such as Montreal and Toronto?

Dr. Theresa Tam: Again, that's a jurisdictional flexibility. As you will see, Montreal is increasing that kind of recommendation. Also, you have to support people to be able to meet those recommendations, so ensuring that those, for example, who can't.... We need to make sure that it is available to all segments of society as well.

Canadians played a very, very big role in controlling this epidemic, and we must bring them together and their collective actions. The wearing of a mask is a massive social behavioural change, and I do believe that momentum is now there, so engaging Canadians and maintaining their trust is very important. Whether you're mandating it, I think, then depends on what happens in your local jurisdiction as to whether it is warranted.

The Chair: Thank you, Dr. Tam.

We'll go now to Mr. Thériault.

Mr. Thériault, please go ahead. You have six minutes.

[*Translation*]

Mr. Luc Thériault (Montcalm, BQ): Thank you, Mr. Chair.

My first question is for Dr. Tam.

Dr. Tam, as you will recall, the first few times you appeared before the committee, mainland China was the world epicentre of the outbreak. We talked about the very definite threat for our neighbours to the south given their health system, which leaves the equivalent of Canada's population out in the cold. They don't have access to health care, so screening them is a challenge.

At today's press conference, you pointed out that the massive reduction in international travellers has allowed Canada to manage the first wave of this pandemic. In hindsight, would you have recommended closing the border with the U.S. sooner?

[*English*]

Dr. Theresa Tam: I think the virus itself travelled across the world very fast and so, while the initial epicentre was China, we also picked up cases very soon. The Canadian surveillance system was able to pick up cases from Iran, but it was really the cases from Europe and the United States that had the greatest impact on the introduction to Canada.

As I said, at that time, because of a very few cases we were taking incremental measures. Shutting down the longest land border in the world is a massive decision and is one for decision-makers. In retrospect—and maybe looking forward—the world might be a very different place in terms of whether this kind of measure is enacted. We will learn from these lessons but as you can imagine, you have to look back and also think about whether this is how we manage every epidemic.

For sure, this is something that is unprecedented. Practically every single country enacting travel bans is a huge—

● (1805)

[*Translation*]

Mr. Luc Thériault: Pardon me, Dr. Tam. With all due respect, my question was very straightforward.

Our neighbours to the south have 1,500,000 cases and 91,500 deaths. In hindsight, would you have recommended closing the border with the U.S. sooner? When did you recommend to the government that the border be closed?

[*English*]

Dr. Theresa Tam: I think, again, with hindsight, at that time there weren't a lot of cases. If you had asked policy-makers at the time whether they would have closed the border— I'm not going to second-guess what they may think now—with all the lessons learned and knowing that some instantaneous travel restrictions are an option with, of course, the society willing to take all the different consequences of that—

[*Translation*]

Mr. Luc Thériault: When—

[*English*]

Dr. Theresa Tam: —going into the future, you may want to consider it faster.

[*Translation*]

Mr. Luc Thériault: Dr. Tam, you're giving me the same answer. I'm not sure whether you don't want to answer the question, even though it's quite straightforward.

In light of the case you're making now, would you recommend closing the border with the U.S. sooner? When did you make that recommendation? On June 21, are you going to recommend reopening the border?

The Prime Minister said that his actions were science-based, and you are the voice of science. I'm asking you a straightforward question, and I'd like a straightforward answer.

[*English*]

Dr. Theresa Tam: What happens in June depends on the epidemiologic situation in the United States at the time. We'll continue to evaluate it but, right now, I think the recommendation, together with the chief medical officers, is we need to keep that border restricted as it is now.

Looking back, could you have done it faster? Possibly. I think that is definitely something that could have happened faster, but this virus was travelling in invisible ways. A lot of things happened very quickly around March 13th, the 18th and, I think, it was the 21st when, successively, travel restrictions were placed very rapidly as soon as we got the sense that this virus was actually in every country. We didn't just start with Europe and the United States. We went with travel advice as well as the travel restrictions essentially for the world, because you couldn't really tell where the virus was going to come from.

In hindsight I think that, yes, people could have acted faster and maybe in the future we would take different positions. That remains to be looked at in lessons learned.

The Chair: You have 15 seconds.

[*Translation*]

Mr. Luc Thériault: That matters because the Prime Minister consistently reminds us that all of his decisions are science-based.

The committee is gathered here today, and with all due respect, I would say that the voice of science is struggling right now. I think it's important to be clear in response to clear questions. I don't want to hear why it was slow in coming. I think it was done too late, but beyond that, we need solutions for the future. What I take away from your answer is that we should have closed the border sooner.

[*English*]

The Chair: Please wrap it up.

Dr. Theresa Tam: Well, again, we're learning about this situation as we go. It's an absolutely unprecedented move. I think going into the future, having learned what we've just learned, actions may have been faster. Right now, though, I think some of the really key measures we've put in weren't necessarily just closing the border and reducing the numbers. It's also been asking people to take the 14-day quarantine measures. I think that is essentially the cornerstone of what we need to do going forward as well.

● (1810)

The Chair: Thank you, Mr. Thériault.

We go now to Mr. Davies.

Mr. Davies, please go ahead. You have six minutes.

Mr. Davies, you're muted.

Let's suspend the meeting for a couple of minutes and get Mr. Davies sorted out.

● (1810)

_____(Pause)_____

● (1810)

The Chair: We'll now resume the meeting.

Go ahead, Mr. Davies. You have six minutes.

Mr. Don Davies (Vancouver Kingsway, NDP): Thank you.

Dr. Tam, you spoke of the importance of data and keeping Canadians informed. I share that commitment with you 100%. You said that you altered your advice on masks because of your review of the emerging evidence.

Will you share the emerging evidence you reviewed that caused you to change your recommendation on masks to this committee—not right now, I mean, but afterwards? Will you send us that evidence you relied on?

Dr. Theresa Tam: Yes, absolutely.

Mr. Don Davies: Thank you.

Dr. Theresa Tam: Again, the evidence is evolving as well, as we know.

Mr. Don Davies: Yes.

Dr. Tam, according to an April 27 article in the Toronto Star, the "national modelling" that you presented on April 9 was not an actual mathematical model, but rather a synopsis of scenarios produced by internal and external experts. By my assessment, PHAC has never published a single epidemiological model complete with transparent data, methodology and assumptions to date. Norway, Germany and Switzerland publish these, often daily.

Does PHAC not have such a model, or is it withholding it?

Dr. Theresa Tam: The approach we took was to have panels of experts. That leaves over 30 modelling experts from across the country to look at more than one methodology. It's not a single model, but they work pretty much constantly to update what the model's parameters would be, based on published information but also based on the Canadian models around the country. It is not a singular methodology, but one that takes into account many different ones.

● (1815)

Mr. Don Davies: I want to make sure I have your evidence clear, Dr. Tam. Are you saying that the Public Health Agency of Canada does not create or have its own model that it, itself, is assessing? Is it simply evaluating and gathering other models created by external sources?

Dr. Theresa Tam: It would be both. For example, when I presented the short-term forecasting model, it was one of the methods that was presented. But that kind of model tells you what might happen in the very near future and depends on case input. There are other models, including disease transmission models and dynamic models, that we have in-house, but which also take into account many different inputs from scientists across Canada.

Mr. Don Davies: Will you deliver to the committee all models with data methodology and assumptions that are created by the Public Health Agency of Canada? Will you commit to doing that?

Dr. Theresa Tam: Yes, absolutely.

Kim Elmslie, the VP in charge of the modelling team may want to supplement, but for sure, we can provide you with what we have. I know that our modellers were—

Mr. Don Davies: Thank you.

Dr. Theresa Tam: —wanting to provide their input as well into a peer-reviewed journal of what they're trying to do.

Mr. Don Davies: Okay.

Dr. Nemer, your website very recently indicated that it established eight COVID-19 expert panels and task forces, and you mentioned those in your testimony. When were those task forces established? How often have they met?

Dr. Mona Nemer: The first task force, the science expert task force, was established, I believe, towards the end of February and had its first meeting on March 6. That expert committee meets biweekly. It met today for the 16th time. After that we established two subgroups, one focused on modelling and one on health systems.

Mr. Don Davies: I know that there are eight task forces. When I go to the website, Dr. Nemer, there are no agendas, no minutes and no research studies published. Where can I find information about what these task forces are doing?

Dr. Mona Nemer: We've provided the title of the focus of the task forces; however, we're not publishing the agendas, but we certainly have summaries of the meetings and what was discussed.

Mr. Don Davies: Dr. Nemer, I can't find any summaries of any meetings on your website. The first thing said on your website is that your office "is committed to ensuring that government science is fully available to the public." Will you reveal to the public and this committee for full disclosure all the minutes of meetings of all eight task forces in line with your mandate?

Dr. Mona Nemer: I don't think there is any problem in providing the committee with the minutes of our expert panels. I just want you to realize that—

Mr. Don Davies: Thank you.

The Chair: Thank you, Mr. Davies.

That brings round one to a close. We go now to the second round, starting with Dr. Kitchen.

Dr. Kitchen, please go ahead for five minutes.

Mr. Robert Kitchen (Souris—Moose Mountain, CPC): Thank you very much.

Thank you, everybody, for presenting today and for your great presentations. It's great for us to hear all of this information.

Dr. Tam, we last saw you in January. Thank you for coming back.

At that time in January, after a lot of prying and poking by me, I managed to get you to tell us that we could do 16,000 tests a day. Assuming that's roughly 108 days ago, that would amount to saying that we could have done 1,728,000 tests in that time frame. Since then, a lot of things have changed and a lot of testing has improved, yet today in your presentation, you talked about only 1,200,000 tests being done. Why is that? Why are we not getting all these tests done?

● (1820)

Dr. Theresa Tam: What I said was that on average, provinces and territories are conducting about 26,000 to 28,000 tests per day. We do know that there's capacity now to do, just in the public health lab system, about 16,000 tests a day.

Mr. Robert Kitchen: Yes, but Dr. Tam, you said 16,000 back in January, and we have come up with more tests, yet we do not seem to be able to equate it to significant tests, and I'm wanting to know why that is being done. Is that because of a breakdown between federal and provincial...?

Dr. Theresa Tam: We've been working very closely with the provinces and territories and doing a huge amount of work, of course, in getting supplies, whether they're swabs or reagents, and getting domestic manufacturing in gear right now. I think the capacity will continue to increase.

As to the number of tests being done by each jurisdiction, part of this is related to where the epidemiology is at. British Columbia is doing a bit less now because its epidemic wave is coming more under control, but that needs to be—

Mr. Robert Kitchen: I apologize for interrupting, but I do have some more questions.

Dr. Tam, in 2016 the Government of Canada entered into a multilateral information-sharing agreement with the provinces and territories that outlined the public health information that must be shared with the federal government during a global health crisis. However, this agreement is not legally binding.

What steps is PHAC taking, in conjunction with Health Canada, to develop a mandatory information-sharing system for all jurisdictions in Canada?

Dr. Theresa Tam: Right now all information sharing is collaborative with the provinces and territories. This is how the public health system is set up, so yes, we have to depend on the ability of the health system to provide that.

We are working right now with StatsCan to see what we can do to improve on that in order to get the data at the national level and fill in some of the blanks in the information we have.

Mr. Robert Kitchen: Thank you.

Other jurisdictions have done a much better job of reporting demographic details. For example, numbers out of New York City health show that of all the cases that have led to death, nearly 98% had an underlying health condition or underlying illness, including diabetes, lung disease, cancer, immunodeficiencies, heart disease, hypertension, asthma, kidney disease, GI disease and liver disease. In fact, as you're aware, China's tests only come out with positive numbers if a person tests positive and has pneumonia.

Why doesn't PHAC publish more detailed demographic data, as this is done in other jurisdictions?

Dr. Theresa Tam: We do have a detailed epidemiologic report on our website. For example, in terms of hospitalization cases, close to 75% of them have underlying health conditions. Also on the website will be the analysis by age group and by sex, for example. That type of breakdown is available in the epidemiologic report, and it is posted.

Mr. Robert Kitchen: Dr. Tam, you mentioned vulnerable age groups in your report today. As you're aware, PHAC was developed in 2003, after the SARS epidemic. After that, a lot of the studies talked about preparing people for future pandemics. However, as Dr. Nemer said today, we've been playing catch-up. We've heard similar things from many other different presenters at the committee. For example, research was stopped after the SARS pandemic, and there were other issues, such as protocols were being forgotten.

It's been 17 years. PHAC was supposed to come up with the protocols to make certain that we were prepared and our seniors were prepared for this situation. What protocols and steps have been put in place by PHAC in the past 17 years to ensure that our seniors are prepared? You're saying today that we now have to prepare again. Why was that not done after SARS?

● (1825)

Dr. Theresa Tam: The Public Health Agency has worked with the provinces quite extensively on pandemic preparedness over many years, and I think that in terms of the international assessments, like the Global Health Security Index, we are one of the top countries in preparedness.

However, this is an absolutely unprecedented global crisis, which I think all of us will have to learn from. One of the key learnings is actually about long-term care facilities and how seniors are or are not being supported in our country. That is a big societal issue, and I think it is something that not just public health care but society writ large must come out of this in having a much better system and approaches to look after our seniors. That would be coming out of the first wave and preventing more tragic consequences for seniors going forward.

I just have to emphasize, as our researchers have said, that this pandemic demonstrates the importance of public health and investment in public health, not just in the Public Health Agency, but in the public health system writ large in Canada, all the way from local to provincial to federal.

We are a relatively small segment of the health system. We are working very hard to prevent the negative impact on the health care system itself and on working with everybody in Canada to flatten that curve so that you didn't get the horrific impacts on the hospitals and health care systems that you did in New York or Italy.

The public health system must not be forgotten. I know that this crisis is massive, but I would like to think that in four or five years' time the investment we're seeing now in public health continues.

The Chair: Thank you, Dr. Kitchen.

Dr. Jaczek, please go ahead. You have six minutes.

Ms. Helena Jaczek (Markham—Stouffville, Lib.): Thank you very much, Chair.

First of all, I do want to thank all the witnesses for coming today and sharing their thoughts with us.

In particular, I would like to thank Dr. Tam for all that she has done over the last several months. Really, it's been day in and day out. I can't tell you how impressed I've been with your demeanor, Dr. Tam, throughout this entire situation, so my first question is for you.

Dr. Tam, you and I both know that contact tracing is an essential part of infection control, and this function is formed by local public health units across the country. It's very labour intensive, and it also requires quite a bit of skill in terms of investigative skills and diplomacy, because quite often people don't actually want to disclose where they might have been and who they've been with.

It has been a real struggle here in York Region. I know that our public health staff are working so hard. There has been a real effort to provide the search capacity given the number of positive cases here. Now we're hearing about contact tracing apps and, potentially, their use in a situation such as we're facing at the moment. Could you give us some of your thoughts about whether contact tracing apps could provide some relief to what is currently being done through our public health units?

● (1830)

Dr. Theresa Tam: Thank you for the question.

Of course, there are many, many people working really hard on this crisis. I just happen to represent the tip of the iceberg of the public health system.

You're right in that contact tracing is a fundamental public health competency, if you like. Local public health has augmented the capacity, and what we've offered to provinces is that if they don't have enough people to do contact tracing, please let us know. We have developed a roster of people. I know that they've massively increased training, for example, for students, medical students or retired health professionals to supplement their contact tracing capabilities, but we're also here to help, including federal public servants, who may be able to assist. There are different rosters being offered to provinces and territories.

On the application, I actually think, if you look at some of the other countries, that what you have to do as well is have a population that is ready to use contact tracing. You actually have some applications where Canadians have to sign up for them, and you need significant numbers for participation in order for that to work. I do think it is a concept that provinces and territories are interested in, and we've been facilitating some of the discussion on some of the options, so there's definitely more to come on that.

For example, Alberta started using an application. They are trying to get more people to sign up for it, but thus far.... I think in the Canadian context they are still trying to get more people to be recruited. In terms of this conversation, it is something that Canadians need to be engaged in so that they understand what this means. Privacy, of course, is also something of paramount importance as these applications are being used.

Ms. Helena Jaczek: Thank you.

What percentage of coverage do you think you would need to make it effective to use an app like that? How many people would have to sign up to use it?

Dr. Theresa Tam: That may depend on the exact set-up of the application or the technology because I think there are different solutions. I would have to get someone who is an expert in this to let you know.

I do know that, depending on the level of infection in the community, the number of contacts that you have to trace in order to suppress the chains of transmission can vary. It can be between 50% to 60% of contacts that you have to trace in order for that transmission chain to be stopped, so you can imagine that it takes a significant number of people to have signed up for this for contacts to even be notified.

Ms. Helena Jaczek: Thank you.

We all know that we make decisions based on what we know when we make them. Based on that knowledge, we make our decisions. That leads us to data availability.

We've heard a number of witnesses who have come before the committee suggest that even though you've talked about the great collaboration with provinces and territories, there is a real lack of consistency in public health data that is publicly available and in real time. There have been questions about why the case definition wasn't the same for every province and why every self-assessment tool wasn't the same.

In light of this and some of the comments you've heard this afternoon, would you say there really is a need for the creation of a pan-Canadian public health surveillance system?

Dr. Theresa Tam: First of all, the data gap is challenging, I would say. Part of it is a capacity issue, potentially, at different levels of the public health system. We do have a pan-Canadian public health network. We actually have many national or federal-provincial-territorial surveillance systems as it is, but we do need to improve on the....

We actually have national case definitions, but it's up to the provinces and territories to look at that, to report to us according to the case definitions. However, sometimes that does vary, and we do have certain data gaps that we must address. This is a critical aspect going forward, including, I think.... A lot of people have called for disaggregation of data, for example, according to race and indigenous status. I know that some jurisdictions are working on that, but that is still a gap, for sure.

The Chair: Thank you, Dr. Jaczek.

We'll go now to Mr. Webber.

I have to correct myself. The last two question slots I said were six minutes. That is incorrect. We'll revert now to our proper time slots of five minutes for Mr. Webber and then for Mr. Kelloway.

Mr. Webber, please go ahead for five minutes.

● (1835)

Mr. Len Webber (Calgary Confederation, CPC): Thank you, Mr. Chair.

Thank you to all the presenters today for their opening remarks.

Dr. Tam, I, too, want to begin by saying that I have great respect for the work that you have done, and that we are appreciative of the time and energy that you and your team have put forth in these past few months. I also know that your public availability on a regular basis only adds to your workload, but it certainly is appreciated.

In your opening remarks, Dr. Tam, you mentioned moving forward and that all levels of government are committed to working together toward a shared, evidence-based approach to the cautious lifting of public health measures with the primary objective of protecting the health of Canadians, taking into consideration regional differences.

I want to bring up elective surgeries throughout this country. We know that elective surgeries across Canada were put on hold as we braced for a wave of these COVID-19 cases in hospitals across the country. However, we are sacrificing the health and well-being of many thousands of Canadians with other equally significant health concerns.

Canadians expect the federal government to take a leadership position on this issue as it is its advice that provinces are relying on for guidance during this pandemic. Last week here in committee, Dr. Paul Dorian testified that these cancellations are costing lives. He said that he personally knew of four deaths in just one week in a hospital in the Toronto area, if I understood that correctly.

Dr. Tam, when do you see the cautious lifting of the hold on elective surgeries throughout this country?

Dr. Theresa Tam: Given the regional differences, what we did, together with the special advisory committee, was establish the criteria upon which jurisdictions can look at easing the public health measures.

All chief medical officers were very cognizant of the unintended consequences of public health measures. Some of them are definitely negative, although there are some that are positive.

We also provided guidance on some of the initial areas that need to be eased. One of them is non-urgent medical services. This is in the very initial tranche of areas that jurisdictions will be looking at. I think some of them have already begun resuming some of this, but that is within the provincial and territorial mandates.

Mr. Len Webber: Regarding these unintentional consequences, Dr. Tam, can you tell us how many elective surgeries were postponed? Do you hear those numbers at all, by chance, or how many deaths in Canada there have been due to the postponement of these elective surgeries due to COVID? There are two questions in there.

Dr. Theresa Tam: This is an area that I've really stressed to Statistics Canada and the Canadian Institute for Health Information. You may have seen that Statistics Canada has released the initial quarter numbers for excess mortality in their reports. Of course, in the first quarter, the epidemic was only just starting in Canada. The data in April from Stats Canada would give us some inkling of the excess mortality statistics.

In addition, we did discuss at the special advisory committee some of the key data that we would like to seek from some of these organizations in order for us to look at some of the key unintended consequences. That work is under way.

Mr. Len Webber: Thank you.

Just on another line here, as you may be aware, this health committee has been meeting twice a week during this pandemic, and the Minister of Health has said that our work in committee here is important now.

Because this is the first time, Dr. Tam, that you have appeared before the health committee since the pandemic was declared, I'd like to know if you are paying attention to the testimony here, as it is often at odds with the government actions and priorities.

Can you, Dr. Tam, just let us know specifically what testimony you've heard at our committee here, and what impact that has had on your decisions?

● (1840)

Dr. Theresa Tam: A lot of things have happened, and I just want to maybe look back at the records of when I last appeared. I think some of them were estimates, but I think March 11 was the last time and much has happened.

We do have a team at the agency that keeps us apprised of the outcomes and activities of this committee, and it is a really important committee, because the crisis is extremely complex and you actually have to look at many different dimensions of this, fundamentally the perspectives of many different sectors and Canadians as well.

I think it's absolutely critical that these kinds of discussions occur and that we learn from some of the deliberations. Of course, many of them are from health care workers from the front line, in terms of the kinds of support they need.

From the Public Health Agency perspective, a lot of what we do is more guidance, but also the huge amount of work done by many departments in getting personal protective equipment, for example, is coming out of some of your deliberations on how we better protect the front line, and that is from only some of the deliberations.

As we've already said, regarding the significant impact on the long-term care homes and seniors, it's extremely important for Canadian society to have a good discussion on how we can do that better moving forward.

The Chair: Thank you, Mr. Webber.

Mr. Kelloway, we now go over to you for five minutes, please.

Mr. Mike Kelloway (Cape Breton—Canso, Lib.): Thank you, Mr. Chair.

Before beginning my line of questioning, I just want to thank each of the witnesses for their tireless research efforts and dedication to the fight against COVID-19. Hearing you speak today only confirms to me that team Canada has the right folks on the job and that we'll get through this together.

I have three questions, and we'll see if we can get through the three.

My first question is for Dr. Nemer.

Dr. Nemer, I understand that the COVID-19 immunity task force intends to oversee and support serological testing in Canada over the next two years to track the extent of the virus in the general population and in specific groups at greater risk of being infected.

Can you describe the task force's role in overseeing and supporting this testing in Canada, and what role the provinces, the research institutions and others would play in the work of this task force?

Dr. Mona Nemer: This is a very important task force. The work will be done in collaboration with the provinces, the academic hospitals and a number of existing networks in Canada, such as the network for the study of aging and so on. The idea of having the task force is really to coordinate the collection of data—I'm very impressed that we're talking a lot about the data—and to make sure that all the right data is collected. Basically, it's harmonizing the approaches and making sure that everyone is using the right tools and the right tests. A lot of tests will give more positives than negatives or have less sensitivity and so on.

It's a coordinating function, but the work will be carried out evidently locally in the research hospitals as well as in collaboration with the Public Health Agency's local representation on the task force.

Mr. Mike Kelloway: Dr. Nemer, will vulnerable population groups and those in rural Canada be tested as well?

Dr. Mona Nemer: Yes, absolutely. I'm happy to share, perhaps, the development that there will be an indigenous circle to work with indigenous communities. There are efforts already to look at what's happening in children, and longitudinal studies of health care workers to see when they developed immunity, until when, and so on.

A number of these are ongoing. I can't remember them all, but we've already started.

Mr. Mike Kelloway: Thank you very much.

Dr. Strong, while a number of groups in Canada are conducting research around a vaccine for COVID-19, Dalhousie University in my province of Nova Scotia has been the first to be approved for clinical trials. Can you tell me how CIHR will support Dalhousie University researchers through their development?

Dr. Michael Strong: There are two aspects to that. First, through the original initiative of the rapid response, we do provide funding through to researchers at Dalhousie who are participating in this. Second, we've been very involved, working with our colleagues at ISED, NRC, Health Canada and PHAC, in helping with the design of the studies that will be needed to know about the effectiveness of this.

We know that those studies will first be driven through Dalhousie for that, but at the current moment, we're in the process of really adjudicating a massive number of grants in which we expect we will see that roll-up coming into play.

● (1845)

Mr. Mike Kelloway: Great.

How much time left do I have, Mr. Chair?

The Chair: You have two minutes.

Mr. Mike Kelloway: Wonderful.

My next question is for you, Dr. Grandvaux, from the Society for Virology. I read on CBC online last week that the novel coronavirus is mutating. Can you tell us what that means for fighting the virus and for tracking it? Will the virus mutation help or hinder international efforts in dealing with COVID-19?

Dr. Nathalie Grandvaux: The virus is indeed mutating, but the good news about COVID too is that it's mutating far less than influenza, for example. The rate of mutation is pretty low. That does not mean there will not be consequences, because you need only one mutation to have a consequence.

For now, in terms of the mutations that have been identified, we don't know what the consequences are. We know there are two major strains. One is a mutation that started in Europe. The other is the original strain coming from China. It could impact the transmissibility. It could impact the effectiveness of a vaccine, if we develop it, but there is no way to predict that in advance. It's a possibility. It's low, but it's there.

The Chair: Thank you, Mr. Kelloway.

Mr. Mike Kelloway: Thank you.

The Chair: As it turns out, that was more like a minute and a half than two minutes.

Mr. Mike Kelloway: It's all good.

The Chair: We go now to Mr. Thériault for two and a half minutes, please.

[*Translation*]

Mr. Luc Thériault: Thank you, Mr. Chair.

My question is for Dr. Grandvaux. I'll try to be brief so she has time to answer.

We're being told that what we are doing now is time management, because there isn't a vaccine or an antiviral drug yet. We're starting to see serological testing, and we're realizing that tracing is important and screening alone isn't enough. Dr. Nemer said earlier that we've been playing catch-up.

Dr. Grandvaux, during one of your talks, you said that we were fighting an unknown enemy, and you said earlier that we had abandoned fundamental research.

At this point, what are the main lessons we should be drawing from this situation so we don't make the same mistakes?

Dr. Nathalie Grandvaux: That's a very good question.

It's important to continue funding research. The only way to fight an unknown enemy—in other words, the next virus—is to know as much as possible about many types of viruses. We have to let researchers work within the broadest scope possible without directing their work. When research is tethered, it necessarily goes in a specific direction. That means knowing what direction you're heading in, and that's not the case with an emerging future pandemic.

We must support a diversity of fundamental research and listen to the science. Numerous reports by the WHO and research institutes revealed that this risk was out there. The world didn't listen to researchers, in Canada or anywhere else. We have to learn from that. We have to let scientists keep a much more vigilant eye on emerging fields and give them the resources to respond.

Mr. Luc Thériault: Are you optimistic about the likelihood of finding a vaccine, or do you think we're going to have to live with this virus and do more research on antiviral drugs?

Dr. Nathalie Grandvaux: I believe in a vaccine. A tremendous amount of effort is being poured into it, and we will find one, but it's hard to say when.

I think antivirals are essential. I'll tell you outright that the basis of my own personal research is the development of broad-spectrum antiviral drugs, and there's a reason for that. Before you can deal with the next virus and find a vaccine, you have to know what it is. There will always be a time lag, but with antivirals and molecules, we can help people who have the virus while we wait for the vaccine. If we can use antivirals to relieve people's symptoms and reduce the virus's impact on patients, the wait for a vaccine will be much less frantic.

● (1850)

Mr. Luc Thériault: In closing, I imagine—

[*English*]

The Chair: Thank you, Mr. Thériault.

[*Translation*]

Mr. Luc Thériault: Thank you.

[*English*]

The Chair: Mr. Davies, go ahead for two and a half minutes, please.

Mr. Don Davies: Thank you.

Dr. Tam, as you know, long-term care homes account for over 80% of the deaths from COVID-19 in Canada. Why did the Public Health Agency of Canada wait until April 13 to release interim guidance for infection protection and control of COVID-19 in long-term care homes?

Dr. Theresa Tam: The fundamentals of infection prevention control have always been there; that's existing. Precautions, that's already well published. Managing viruses, such as coronavirus that spreads through the respiratory droplet route.... All that was available.

However, with the experience that was fundamental at the long-term care homes, a specific guidance hadn't existed at that time. It was a broader foundational guidance. We took the opportunity to get experts who have managed these situations to develop a guidance because it was going to be very helpful.

We also incorporated new evidence on the presymptomatic and asymptomatic transmission, which resulted in the recommendation of masking and personal protection equipment for the whole shift, which was also new at the time. The timing was to coincide with the evolving evidence as well.

Mr. Don Davies: Dr. Tam, in 2006 you co-authored a report on pandemic preparedness in Canada, titled, timely enough, “The Canadian Pandemic Influenza Plan for the Health Sector”. That document called for the Canadian government to make plans to ensure a consistent 16-week supply—that's two pandemic waves—of personal protective equipment, such as the N95 respirator masks, gowns, etc., specifically because your report acknowledged there would be shortages of the materials and supplies during the pandemic period. Yet, according to PHAC whistle-blowers on February 12, 2020, the national emergency stockpile included only 94,000 surgical masks, 100,000 N95 respirator masks, 400,000 face shields, etc. This is the equivalent of one week's worth of use in Ontario alone.

As chief public health officer of Canada, what accounts for this failure to ensure that Canada had a consistent 16-week supply of personal protective equipment prior to the outbreak of COVID-19, as you yourself identified and recommended in 2006?

The Chair: Dr. Tam, remember your microphone, please.

Dr. Theresa Tam: Yes.

Absolutely, that is a Canadian pandemic influenza plan. The Canadian health system, as you know, is not just the federal, but provincial and territorial systems as well, and each of the provinces have their own stockpile. This is a recommendation for the country.

The national emergency stockpile system—

Mr. Don Davies: With respect, it was for the Canadian government, Dr. Tam. You were recommending the Canadian government have a 16-week supply.

The Chair: Don, no more questions, please.

Dr. Tam, please answer, if you will.

Dr. Theresa Tam: Again, the national emergency stockpile system went into full gear and to getting all the supplies we needed, and there was a global shortage. I think going forward, I would like to see support for the national emergency stockpile system and the public health system writ large. Given what we know about global supply, the Canadian public and the government can decide how much of this they would like us to actually stockpile going forward. We're going to learn a lot, as we've just said.

The Chair: Thank you, Mr. Davies.

That brings round two to a close. We'll start round three at this point.

Ms. Jansen, please start. You have five minutes.

Mrs. Tamara Jansen (Cloverdale—Langley City, CPC): Thank you, Mr. Chair.

I'd like to direct my questions to Dr. Tam.

On January 31, Marnie Johnstone, executive director at PHAC, sent an email stating, “We have some stock in national emergency stockpile (incl stuff that is expiring in feb and March) that we are able to donate without compromising Cdn supply.”

We now know that Marnie Johnstone's assessment of our PPE needs in Canada was dead wrong. What modelling data was she using to suggest the donation would not compromise Canadian supply?

● (1855)

Dr. Theresa Tam: At the time, the concept—and the global concept—was containment at source, which meant to control as much as possible the outbreak at the source in China. That was critical, so the federal government did make a donation at the time.

Mrs. Tamara Jansen: I'm just wondering what sort of data she was using to decide there would be no compromise to the Canadian supply.

Dr. Theresa Tam: I'm not sure I can speak to that. All I can say is that particular set of PPE was probably not going to be usable, as it were, based on the standards at the time, in a very short time frame.

Mrs. Tamara Jansen: But the email makes it sound like we had stuff that was expiring, and we had plenty enough besides that. Anyway, let's move on.

We can see in her email that she was in a rush to get those supplies to the Red Cross in time for a repatriation plane that was departing for China. She mentions formal signatures, stating that we could get them later and not to worry about it. Is it possible that her rush to make the flight played a role in such a serious error?

Dr. Theresa Tam: I don't think that was necessarily the case, but, as we said, expired stock and near-expired stock normally would not have been used in the Canadian context. Going forward—

Mrs. Tamara Jansen: But we did actually need that expired stock here in Canada already, unfortunately.

Anyway, okay. Let's—

Dr. Theresa Tam: Going forward, though, we are doing everything we can, including Health Canada providing instructions on expired stock, and even resterilizing certain equipment as well. So we're pulling out all the stops on that.

Mrs. Tamara Jansen: I'm going to go on.

On January 25, the WHO assessed the risk of a COVID-19 event to be moderate at the global level, while PHAC assessed the risk for Canada as low. That was actually the same day the first case of COVID-19 was identified in Ontario. On February 2, the WHO changed that threat level to high.

On February 17, the cabinet passed an order in council that read, and I'm quoting here, “the introduction or spread of [COVID-19] would pose an imminent and severe risk to public health in Canada”. Yet after that date, you continued to insist the risk to Canada was low.

Why did you disregard the official conclusion that there was “an imminent and severe risk”? What do you think are the consequences of leading Canadians to believe the risk was low?

Dr. Theresa Tam: Right from the start, from when we knew about the cluster in Wuhan, we had been escalating the Canadian preparedness because we didn't.... There was an uncertainty as to what was going to happen.

Ms. Tamara Jansen: But why was there a difference between—

Dr. Theresa Tam: The risk assessment at the time—

Mrs. Tamara Jansen: What was the difference between what you said and what everybody else was saying?

Dr. Theresa Tam: The risk assessment at the time, in terms of the domestic transmission, was low because we actually didn't have many cases in Canada at the time. So that was not the global—

Ms. Tamara Jansen: And yet cabinet called it “imminent and severe”.

Mr. Darren Fisher (Dartmouth—Cole Harbour, Lib.): On a point of order, Mr. Chair, she asked the question. Let this witness answer the question, please.

Dr. Theresa Tam: I think we were all aware of the potential introduction of risk, but at that time if you were in Canada, given that we didn't have community transmission to any extent, the risk, if you were in Canada, was going to be low.

We also had a much more granular assessment of risk as well, which means that—

Mrs. Tamara Jansen: Sorry. My apologies, I'm just wondering why would cabinet have called it “imminent and severe” and you did not? That's the question I have. I don't understand the difference.

Dr. Theresa Tam: I think throughout I've actually said that this is a serious situation and we need to prepare. I got the whole system going in the public health system ever since we heard about the virus. We needed to prepare for the potential that this was going to be an extremely severe situation.

At that time, the domestic transmission was not.... That was the risk we were trying to assess. It would have been different if you had been going to Wuhan or some other place. Those are different levels of risk assessment.

Mrs. Tamara Jansen: Up until early April you stated that asymptomatic persons shouldn't wear a mask as it didn't work or was harmful, and then on April 6 you changed your mind and said a mask was good for additional protection. You insisted to Canadians, time and again, that COVID-19 didn't transfer from human to human, but Dr. Maria Van Kerkhove of the WHO admitted in April 13 that, and I'm quoting, “Right from the start, from the first notification we received on the 31st of December, given that this was a cluster of pneumonia...immediately thought, given that this is a respiratory pathogen, that of course there [may] be human-to-human transmission.”

Canadians are confused. Why had we been told that science has the answers? Canadians are looking to you as a top science official in the country. They don't understand why your message changed so much. Why did you lead Canadians so far from the known scientific fact that masks do work?

● (1900)

Dr. Theresa Tam: There were a lot of different points made. Human-to-human transmission was always a possibility. At the beginning we just didn't know whether it was a zoonotic event, but it was soon apparent that there was human-to-human transmission, and the extent of which was—

Mrs. Tamara Jansen: Right, the WHO obviously felt that.

The Chair: Thank you, Ms. Jansen. Your time is up, but I'll let the witness respond to your question.

Dr. Theresa Tam: In terms of mask use, as I just said, the recommendations are made collaboratively with other chief medical officers and the special advisory committee. We reviewed the evolving evidence.

I think it is very reasonable, and I'm sure all the research scientists will agree, that we have to incorporate information as we go along. We incorporated the studies, which were actually not that many but we incorporated them, on asymptomatic and pre-symptomatic transmission, but also the potential for the added layer of protection. I think it's reasonable to bring Canadians along to the latest recommendation.

Recommendations will evolve again, as we know more.

The Chair: Thank you.

We go now to Ms. Sidhu. Please go ahead five minutes.

Ms. Sonia Sidhu (Brampton South, Lib.): Thank you, Chair.

Thank you to all the witnesses. Dr. Tam and your team, we do appreciate the work you are doing. Thank you very much.

My first question is to Dr. Tam. The Province of British Columbia has implemented an online serology survey to seek more information on how the disease has impacted citizens. What value is there in having a survey like this? Do you think more provinces should consider implementing that?

Dr. Theresa Tam: Well, I think that citizen engagement is very important because of their key role in stopping transmission. We look towards the study in British Columbia with great interest. I think we need to understand more of what the Canadian experience has been.

I'll just also point out—and I'm not sure whether CIHR, Dr. Strong, might wish to comment—that, in line with the biomedical research, there's actually social science and other research as well that is ongoing to look at Canadian perspectives. There's research looking at what Canadians think about contact tracing, for example.

Ms. Sonia Sidhu: Thank you.

My next question is to Ms. Elmslie. We previously heard from the Canadian Federation of Nurses Unions, which had concerns about PHAC's guidance for PPE in health care settings. Can you explain to us what work you are doing with health care professionals to inform these national guidelines and standards? What kinds of evidence do you and your team use to inform these national guidelines?

Ms. Kim Elmslie (Vice-President, Infection Disease Prevention and Control Branch, Public Health Agency of Canada): Whenever we are developing guidance, we start with a review of what the scientific evidence tells us. Then we use a very wide network of stakeholders to help us interpret the evidence and identify gaps in that knowledge, and use that to develop guidance.

We also work with groups such as the Canadian Federation of Nurses Unions and other unions, because they bring important perspectives to the table from their knowledge of what's happening on the ground. Whilst there can be debates on the interpretation of science, we always bring those perspectives from workers into the conversation. We take their questions and concerns and refer them back to the experts. It's a bit of an iterative process to arrive, finally, at the set of guidelines that we believe at the Public Health Agency, based on our assessment, are the most important, most reliable and most accurate guidelines at that point in time. The reason they're interim is because we're always looking at evidence and are always analyzing evidence, and that may update or change our guidance.

One of the other things we're doing to stay in contact with the nurses' unions and other important unions across the country is having a weekly meeting where we invite those stakeholders to share their experiences. I use those opportunities to give them an update on the guidance that we're developing and on other things that are happening at the agency. They very generously use that time to indicate where they have concerns and where they would like to see the Public Health Agency of Canada doing more work.

It's a really important dialogue that we are maintaining. People don't always agree, but what's important is that we're listening carefully to each other's perspectives. In fact, the perspectives that the Canadian Federation of Nurses Unions brought to us during this process led us to clarify areas in the guidance that perhaps were confusing, and to adjust areas where we felt, based on their interventions, we could make important changes.

● (1905)

Ms. Sonia Sidhu: Can you explain the guidelines for the home care settings as well?

Ms. Kim Elmslie: In developing guidelines for home care, we used the same process, in the sense that we're bringing the experts together using the evidence, and then bringing together the communities that work in these areas to ensure that the guidance is highly relevant to them and they can use it in practice. What we've learned is that technical guidance often needs to be used in different formats so that people can apply it easily on the ground. In the context of home care, it's really important that those important workers are well supported as they do their jobs in different contexts. Our guidance is always going to be based on what we've learned, what we know and how we can best adapt it to meet the needs of those workers in as clear and relevant a fashion as possible.

The Chair: Thank you.

Mr. Jeneroux, please go ahead for five minutes.

Mr. Matt Jeneroux: Thank you, Mr. Chair.

Mr. Chair, before I get to my questions, I would like to go back to the timeline and Dr. Tam. On January 26, the National Microbiology Laboratory received its first case, and a lots of the decisions that were.... Going back to January 26 is when the first case came to Canada. There are questions about the role and the sense of urgency that the Public Health Agency plays in this country, seeing as some of the decisions that we've seen up until this point were not made until late February or March.

That being said, I want to ask some of my questions, particularly when it comes to the PPE supplies. We sent 16 tonnes of PPE to China in February. Has that allotment sent to China been fully replaced by China?

Dr. Theresa Tam: I don't know exactly how to answer that question. I know that there are various donations. I have not been particularly involved in the exact logistics. We can get back to you.

Mr. Matt Jeneroux: Have we been keeping track of that 16 tonnes? It would be great to know if we're even close to that number in getting that 16 tonnes back.

A 2011 report said that the Public Health Agency had 11 NESS warehouses spread out across Canada. That same 2011 report said that there were 1,300 prepositioned sites containing supplies. Sally Thornton, a vice-president under your supervision with the Public Health Agency and in charge of the NESS, said that there were only 1,000 of those sites in 2012. How many of those sites existed at the start of this pandemic?

Dr. Theresa Tam: Sally Thornton is the VP closest to the specifics of NESS so I think definitely take her numbers. I know that a lot of those prepositioned sites were cots and blankets, essentially, not actually PPE or any of the medical countermeasures.

● (1910)

Mr. Matt Jeneroux: Would it be possible to get that number from you or Sally, Dr. Tam, of how many sites that we had remaining from those 1,000 in 2012?

Dr. Theresa Tam: Yes, we can get that to you, but again, they were small stashes of sort of post-Cold War kind of equipment, I think, so—

Mr. Matt Jeneroux: I think it would just be helpful to piece together the whole story here, if that's all right.

Just because I'm short on time, I'm going to move quickly. In documents obtained by this committee and a briefing note dated February 10, it is mentioned that the Public Health Agency is conducting a PPE survey on provinces' and territories' supplies for areas of vulnerability to ensure sufficient supply. What date did that survey begin?

Dr. Theresa Tam: I'll have to get back to you. I know that the survey continues in a very diligent way, but we'll have to get back to you on the specific date.

Mr. Matt Jeneroux: Was it before or after February 4? Would you know?

Dr. Theresa Tam: I do not know. We'll have to get back to you.

Mr. Matt Jeneroux: I'd previously requested a copy of that survey from Sally Thornton. Hopefully, between the two of you, we'll be able to get a copy of that survey. She had agreed to provide this survey and we're looking to see the results of that survey.

Do you think Dr. Bruce Aylward's attending our committee would benefit the committee's ability to review the government's response to COVID-19?

Dr. Theresa Tam: I think the committee should feel free to invite your witnesses. Dr. Aylward obviously works for the WHO and he was a critical component of the WHO response. He's not part of the agency. He doesn't work in Canada so I think.... I'm sure the WHO gets invited to committees such as this, so I think please invite the witnesses you think would be helpful to you.

Mr. Matt Jeneroux: Just a point of clarification for the witness, Mr. Chair, Dr. Aylward has been invited to this committee. He has turned down the invitation a number of times. We actually had to put forward an official summons to have him appear.

That would lead me to assume that there hasn't been a sense of seriousness undertaken by the WHO to actually come to this committee. Any sort of pressure that Dr. Tam or Minister Hajdu could put on Dr. Aylward or members from the WHO to take this committee seriously would certainly be appreciated, I think, by all members of this committee, because we did vote unanimously in favour of having him come. We also voted unanimously in favour of the summons. I would hope that in the next conversations, in any conversations, Dr. Aylward would be encouraged to come forward to this committee.

The Chair: Thank you, Mr. Jeneroux.

Mr. Van Bynen, go ahead, please. You have five minutes.

Mr. Tony Van Bynen (Newmarket—Aurora, Lib.): Thank you, Mr. Chair.

Thank you, Dr. Tam, for joining us today, and thank you so much for your incredible dedication to Canadians through this pandemic, particularly when you tend to get barraged in second-guessing some decisions that were made on the basis of the knowledge that was in our hands at the time.

I appreciate your coming back to the committee to update us. You've provided a number of updates on modelling. Do you have a new update that you could share and provide to the committee today? I promise you that I will listen to your answer, because I genuinely want to hear an answer.

Dr. Theresa Tam: I think the most important updates decision-makers or Canadians want to hear is where we are at and whether things are getting better. I think all of our indications are that the epidemic is definitely slowing down.

One of the things that we looked at was the rate of drop in cases. The case counts over the last seven days compared to the previous seven days have dropped by about 13%. When we looked at what we call the doubling time, the epidemic showed exponential growth at the beginning, so the doubling time was about three days, which is very fast. Now it is almost an irrelevant indicator because it's now over 30 to 60 days, so that tells you that the rate of increase or doubling is definitely slowing down.

There is one indicator that everybody is interested in, which is what we call the effective reproduction number. This looks at whether one Canadian transmits to fewer than one Canadian, in which case the chain of transmission will break.

This number at the national level is less meaningful than perhaps looking at a regional level, because we have regional epidemics, but right now it is below one. Below one is where we want it to be. We want to see it really below one, and that is sustained in terms of that trajectory, but it is very different in different provinces.

Many jurisdictions have no community transmission or have the epidemic under control, but, we are keeping an eye on Ontario and Quebec, because the two provinces account for about 85% of cases and 94% of the deaths. Looking at their rate of the slowing down of the cases and their hospitalizations and deaths is extremely important as we look at this.

Basically, with the regional epidemic in mind, which is different, all provinces are showing a decline, basically, in their projections. Again, my message is that we are optimistic, but we must be very, very cautious, because in this next phase, if we ease the measures.... Again, modelling will show different scenarios as to how much of a release in these public health measures one can afford to do. You've seen some of that from British Columbia as well. The modellers are very much all working really hard at this. Really, it's the final epidemiology where, if we do see cases reignite, we will have to leap on them really, really fast. That is the premise of the testing and contact tracing.

● (1915)

Mr. Tony Van Bynen: In spite of what we heard was or wasn't done, can you confirm to me that Canada is flattening the curve?

Dr. Theresa Tam: Yes. The collective actions of everybody in Canada, including every citizen who heeded public health advice, have brought the initial epidemic wave to begin to be under control, but one mustn't forget that there are still outbreaks in Ontario and Quebec, in particular in certain hot spots, so we haven't quite finished that yet, and we have to be very cautious.

Really, it's the collective action of the whole population. That's how complex this disease is. No one single layer of government can do this, but the whole society has to continue to help.

Mr. Tony Van Bynen: Dr. Tam, over the weekend you shared the great news that 50% of the COVID-19 patients in Canada have recovered from the virus. While that's great news, we aren't quite through this outbreak yet, and I think you share my concern that, as the weather gets nicer and the numbers get lower, more people will be tempted to return to their regular activities.

What is your advice to Canadians on how to find a balance between maintaining an effective, safe practice and also finding ways to take advantage of the nicer weather?

Dr. Theresa Tam: Again, definitely listen to your local public health advice, because there are differences in activities across Canada, but everybody appreciates that it's important for mental and physical health for people to get outside. The risk of transmission is lower outside. The key transmission settings are indoors, in more crowded settings and where you can't maintain the two metres.

My message to all Canadians is to go out safely. If you go out safely, you can. It still means maintaining that physical distancing, keeping within your household cluster, observing your handwashing, not touching your face and wearing a mask if you can't keep that two-metre distance in crowded conditions. All of those layers of protection will allow people to get outside and enjoy some of the fresh air.

We've had a good discussion at the special advisory committee where they're looking at the reopening of different businesses, etc., because inside is where the transmission risk is. They will be very cautious about the number of people that can be maintained in an indoor setting while maintaining the public health measures. Going outside is something that should be encouraged, but doing it safely.

● (1920)

The Chair: Thank you.

We go now to M. Desilets for two minutes and a half.

[*Translation*]

Mr. Luc Desilets (Rivière-des-Mille-Îles, BQ): Thank you, Mr. Chair.

I'd like to start by thanking the witnesses for being here and sharing their insight with the committee members.

I have a short preamble. Today is World Family Doctor Day, respiratory therapist day and orderly day, so I wanted to take this opportunity to bring attention to those days. We'd like to recognize all of those workers and thank them.

My first question is unfortunately for Dr. Tam.

I say “unfortunately”, Dr. Tam, because we aren't going to go easy on you.

We're hearing about immunity certificates lately. Could you briefly comment on that? Do you agree with the concept, ethically or otherwise?

[*English*]

Dr. Theresa Tam: Right now, some of the other experts on this panel said we don't understand enough of the immunology of the virus. If it behaves like other viruses, there will be some immunity if you have antibodies. We don't know for how long and how strong. Depending on your local epidemiology, some of these results may be false positives or may not have detected the antibody even if you had it. That's why the immunity task force and researchers studying the human immune system are extremely important in getting at some of those questions. From that perspective, we can't yet interpret the results of those tests.

You also brought up an important point, which is that perhaps there is an ethical dimension to this, when you are now separating people who have an antibody identified and those who do not and what that means and whether there will be a stigma attached to that one way or the other, to people who have been infected or not. It is a very important point, and one that the immunity task force will also be looking at.

[*Translation*]

Mr. Luc Desilets: I see.

Would the certificate hold true in the event of a second wave or second strain?

[*English*]

Dr. Theresa Tam: Again, it depends on whether the antibody responds to changes or not, and whether the tests for the antibodies will need to be adapted, but I think, as some of our other experts have said, there is no current indication of a separate strain. It absolutely has to be monitored, because it's important not just for the antibody tests, but for the vaccine development as well.

If the characteristic of the virus changes, it is possible that the interpretation of the test or how well the test performs also will have to be re-evaluated.

The Chair: Thank you.

We now go again to Mr. Davies. Please go ahead for two minutes and a half.

Mr. Don Davies: Thank you, Mr. Chair.

Dr. Tam, on April 28 Canada's first ministers released a joint statement on restarting the economy. That statement identified the criteria and measures that need to be in place to take steps to do so, including “Sufficient public health capacity is in place to test, trace, and isolate” and control the spread of the virus.

Dr. Tam, given that Canada is currently only conducting about 30,000 tests per day, are you confident that all provinces and territories meet that criterion?

Dr. Theresa Tam: We have to look at the indicators more broadly, but everybody agrees that we need more testing capacity, so that is important. We are continuing to increase the public health capacity.

At the local level, people need to be able to assess whether that capacity on the ground is sufficient to detect any resurgence of cases, so they can be reassured that if there are cases, they will be detected.

We are updating some national laboratory guidance—we referenced that as well—to look at how we broaden the testing to people with milder symptoms, but also looking at some of the other considerations in lowering the threshold for testing in certain high-risk conditions. Also, I know some provinces are beginning to test more widely in the communities. They should be part of surveillance systems or pilot studies so we can get data on what happens when you test under those conditions.

● (1925)

Mr. Don Davies: I'd like to drill into that, Dr. Tam, as I have very limited time.

We have conducted a little over one million tests. We know the City of Wuhan is testing up to a million people per day and that we're well below jurisdictions like Germany and South Korea, which have experienced new infection clusters.

What is keeping us at such a low rate of testing? Is it a lack of laboratory capacity? Is it a lack of testing kits? Why is Canada stuck at 30,000, when you have said our target should be about 60,000 tests a day? How can we get there?

Dr. Theresa Tam: Based on our scan of the provinces and territories, there is actually public health laboratory capacity to do 60,000 tests a day. Some provinces are testing below their maximum capacity. They have the capacity for a surge of testing, but some of them are not testing because they have very little activity. They are opening up their society accordingly.

In some areas, particularly where there has been quite a significant amount of activity, I know that jurisdictions are trying to increase the amount of testing they are doing now, particularly in Ontario and Quebec.

Mr. Don Davies: Thank you.

The Chair: That ends our third round of questions.

I'd like to thank all the witnesses for sharing your time, your great presentations and of course your expertise.

I would like to thank the committee for sitting here for three hours and getting all this information out into the open.

I declare the meeting adjourned.