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Chair

Ms. Bonnie Brown

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• (0910)

[English]

The Chair (Ms. Bonnie Brown (Oakville, Lib.)): Good morning, ladies and gentlemen. It's my pleasure to welcome you to the 53rd meeting of the Standing Committee on Health. This morning's topic is the avian flu.

It's my pleasure on your behalf to welcome our witnesses, the first of whom is the Honourable Carolyn Bennett, the Minister of State for Public Health. With her, she has Dr. David Butler-Jones, the Chief Public Health Officer of Canada.

We'll begin with this set of witnesses and invite Minister Bennett to begin her presentation.

Good morning.

Hon. Carolyn Bennett (Minister of State (Public Health)): Good morning, and thank you, Madam Chairperson, for this opportunity to update the committee on Canada's efforts against the avian influenza.

We feel this is very timely. This is obviously an issue that is worrying our citizens. We hope this is the beginning of an ongoing dialogue in which the members of this committee particularly will see themselves as being able to let us know what Canadians are saying and what they're worried about, so we can address their concerns and keep evergreening our approach.

[Translation]

We have work to do in explaining, from the start, that these efforts against avian influenza are only a part of our overall pandemic preparedness. In recent weeks, we have heard and read a lot about avian influenza - or bird flu - and pandemic influenza. To put recent developments in perspective, it is important to understand the differences between these viruses. This motion is a case in point.

[English]

Human influenza is a respiratory infection caused by the influenza virus, with strains circulating every year. Birds and other animals also contract and transmit influenza. The H5N1 is a strain of avian influenza that is highly deadly to birds and that has also affected a limited number of people.

If the H5N1 virus changed or mutated into a new strain to which people had little or no immunity and was easily transmitted to people, this would create the conditions for an influenza pandemic.

[Translation]

In that sense, it is important that governments prepare to respond to a possible influenza pandemic, whichever form it may take, and it is in this context I will frame my remarks today.

[English]

As you know, Canada was one of the first countries in the world to develop a national pandemic influenza plan. Our country continues to play a leadership role in readiness planning at an international level, as we have just shown with the international meeting of the health ministers.

[Translation]

This meeting set a precedent by bringing together, for the first time, Ministers of Health from developed and developing countries and heads of key international organizations to accelerate planning on a global health security concern.

[English]

The work at the Ottawa meeting will lend impetus to the WHO partners meeting and the APEC economic leaders' meeting taking place this month. I will note, to begin with, that we felt the presentation at the meeting last week by Margaret Chan, the representative of the director general of the WHO for pandemic influenza, was an excellent overview and rationale for the priorities that all countries should look at.

We've left you a copy of her deck. I've certainly used it on my website as a very good overview of what the international priorities have been.

[Translation]

And I am pleased to note that the Ottawa meeting was a success on many fronts.

[English]

Firstly, the delegates agreed that there needed to be a common vocabulary and common understanding, and a clear and candid approach to communications concerning new developments in each of the countries. Ministers agreed that a multi-sectoral approach, beginning with the animal health and human health sectors, must underlie global efforts towards coordinated pandemic planning.

The immediate global public health issue is to work collaboratively with the animal health sector to prevent and contain the spread of H5N1 virus among animals and from animals to humans. Therefore, we are thrilled today to have Dr. Brian Evans and Krista Mountjoy with us.

[Translation]

Delegates also agreed upon the need to examine alternative ways of devising additional capacity for vaccine production, and looked at the issue of capacity building in terms of surveillance and testing.

[English]

Our success will depend heavily on strong political will and commitment, and the Government of Canada has shown that will and commitment by taking the threat of avian influenza, and more specifically, of the H5N1 strain, very seriously

[Translation]

While H5N1 only rarely affects humans, we are working closely - across the Government - on issues surrounding the animal-human health interface. The Canadian Food Inspection Agency, in particular, has played a major role here - Dr. Brian Evans and Krista Mountjoy, who are with us this morning, will be able to elaborate on their role. I will be meeting with Minister Andy Mitchell on November 17th to discuss our next steps with CFIA.

[English]

Funding has also been provided to Environment Canada, as you heard earlier this week, to monitor wild birds and their migratory patterns. Public Safety and Emergency Preparedness Canada has an interdepartmental committee that meets regularly to coordinate work across departments on emergency preparedness.

[Translation]

We are also working closely with our international partners to monitor the situation, to prevent a pandemic, and to prepare.

[English]

Health Canada and the Public Health Agency of Canada have taken a number of important steps to increase Canada's pandemic influenza preparedness.

Our contingency planning began in the late 1980s, when people started to talk that we were overdue for a pandemic, and included close collaboration with the provinces and territories, which in 2002 led to the creation of the pandemic influenza committee, with representatives from the federal, provincial, and territorial governments.

• (0915)

[Translation]

PIC developed a comprehensive national Pandemic Influenza Plan that outlines what, in the event of a pandemic, is to be done by the various levels of government. The Plan was released in February 2004, prompting the WHO's recognition of Canada as a world leader in pandemic preparedness.

[English]

We have a copy of the plan here, and it has been posted online since 2004. We know this binder is not enough. The plan is an evolving framework that is continually being adapted as the situation changes and new information becomes available.

In April of this year the Public Health Network was founded, with Dr. Butler-Jones and Dr. Perry Kendall, B.C.'s Chief Medical Officer

of Health, as co-chairs. In this country we now have a vehicle in which all 13 jurisdictions can plan together, share resources and information, and provide a forum for advisory groups like the pandemic influenza committee.

[Translation]

The development of a contract for a domestic supply of pandemic vaccine in 2001, and the creation of a national antiviral stockpile demonstrates the commitment of the federal government and our provincial and territorial partners to preparing for an influenza pandemic.

[English]

Combined, federal, provincial, and territorial governments currently have approximately 40 million capsules of oseltamivir, enough to treat 4 million people. Specifically, governments currently own 35 million capsules, with another 5 million on order. We continue to re-evaluate the needs.

[Translation]

Canada is working on a balanced, multi-faceted approach that includes not just antivirals - but also ensuring a domestic vaccine supply, controlling infections in hospitals and taking other public health measures.

[English]

In terms of vaccine, a 10-year pandemic influenza contract with ID Biomedical established in 2001 will support sufficient infrastructure and capacity to produce enough pandemic vaccine for all Canadians. In addition, Budget 2005 provided an additional \$34 million over five years to assist in the development and testing of a mock pandemic flu vaccine.

As our Chief Public Health Officer, Dr. Butler-Jones, reinforced during our international health ministers' meeting last week, diseases do not respect borders. Governments must work to prevent the spread of disease, not only in their own countries, but internationally as well.

[Translation]

To this end, the Government of Canada re-introduced in Parliament a new Quarantine Act, to prevent the spread of diseases across international borders.

[English]

As you well know—and we thank you for your help in this committee—the act creates this new legislative authority to control the movement of people in conveyances, goods, and cargoes, and protects Canadians from serious communicable disease. It meets our obligations towards the international community and it provides mechanisms to ensure that human rights are adequately protected.

[Translation]

But our commitment to preventing the spread of a potential pandemic means we must maintain our strong international presence.

[English]

Canada has provided continuous support to the WHO and countries affected by avian influenza, including sending a mobile lab to Vietnam, and epidemiological and public health expertise to Thailand, Vietnam, and China.

• (0920)

[Translation]

The Canada-Asia Regional Emerging Infectious Disease (CAR-EID) Project aims to increase capacity in Southeast Asia and China, by strengthening surveillance, lab capacity, emergency preparedness and risk communications.

[English]

The security and prosperity partnership that was announced in March 2005 by Prime Minister Martin, U.S. President Bush, and Mexico President Fox has been hugely important in terms of the work plans for the health component of the initiative, including the development of a North American pandemic influenza plan.

Canada has also improved its capacity to monitor, detect, and promptly report unusual respiratory viruses, including avian influenza, through surveillance systems such as the Global Public Health Intelligence Network, which we invented and we now do for the WHO.

[Translation]

A working group has been established to further refine public health measures at ports of entry.

[English]

Communication networks have been developed with international, provincial, and territorial counterparts, and the Public Health Agency of Canada continues to contribute to international discussions on pandemic preparedness.

[Translation]

Finally, research to assess the various impacts of universal influenza immunization programs is now underway, and will assist the Canadian Immunization Committee in making recommendations on programs across the country.

[English]

To be sure, there is still much more work to do. Our preparedness will only be as strong as our weakest link. We invested \$100 million in 2004 to enhance local public health capacity, but there are still parts of Canada with inadequate public health resources. Our Office of Public Health Practice is working hard to close these gaps. The linkages between family doctors, public health, and hospitals can still be improved. We are working on a pan-Canadian plan to communicate with our front-line providers.

[Translation]

Madam Chair, to conclude my remarks: in his report Learning from SARS, Dr. David Naylor's assessment emphasized the need to work on 'the four C's': coordination, collaboration, communication and the clarity of who does what, when.

[English]

While we should never be complacent, I think all Canadians can be very confident our country has, through the developments I've identified, made significant progress on all four of these Cs.

[Translation]

And I thank you for the opportunity to update you on those developments today.

[English]

I look forward to an ongoing communication with this committee, because your understanding of this issue and your relationship with your citizens are the most important things in our being able to deal with what is a threat, but for which the fear needs to be constructive.

The Chair: Thank you very much, Minister Bennett.

Ladies and gentlemen, at the request of the witnesses, we'll have the head of the CFIA, the Chief Veterinary Officer of Canada, Dr. Brian Evans, present next.

Dr. Evans, you have the floor.

Dr. Brian Evans (Chief Veterinary Officer of Canada, Canadian Food Inspection Agency): Thank you, Madam Chair.

As Dr. Bennett has indicated, a number of diseases, even beyond avian influenza, not only do not respect political differences, but also do not respect species borders. In that context, we'd like to provide a very brief overview relative to the current avian flu influenza situation.

Avian influenza is a contagious viral infection that primarily affects birds but has been demonstrated on a limited ability to infect other species. As many on this committee have come to understand, and Canadians as well, there are multiple strains of avian influenza. A classification system, which uses H and N types of protein receptors on the coding of the virus, provides for 16 H types and 9 N types and the multiple combinations associated with that of the virus. It's also very important to point out to the committee as well that H5N1 in and of itself has multiple strain variations, and the genetic makeup of any H5N1 can be totally distinct from that of another. Therefore it's important that when we qualify the discussion around H5N1, we should be focusing primarily on the issue of the Asian strain of H5N1.

It has demonstrated itself to be highly contagious and fatal in poultry and other types of birds, and, as was indicated by Dr. Bennett, has demonstrated some ability to transmit to people through direct contact. That virus is now endemic in birds in multiple Asian countries and has started to demonstrate spread through previously unaffected regions of the Eurasian continent. The possibility that the virus will continue to spread by known migratory pathways through Europe, into the Middle East, and to East Africa cannot be denied. If avian flu becomes established in those regions or any other known flyway for migratory birds, the risk of reaching North America increases accordingly.

From an animal perspective, I guess it's important again and I value the opportunity to participate in the discussion this morning, because beyond avian influenza and other zoonoses, I believe this really does demonstrate the true concept of one medicine and the opportunity to mitigate risk along an extended chain.

Avian influenza could enter Canada through a variety of means: the migration of wild birds, as has been reported recently in terms of surveys to determine the true status of the migratory population in this country; illegal poultry imports and poultry products; or carrying by other vectors—mechanical equipment or on the clothing of people who have visited farms and affected regions. Of course, we cannot always discount the concept of deliberate introduction as well in the current world in which we live. Therefore, it requires vigilance in a number of areas in order to address all known pathways.

Certainly we recognize that a domestic outbreak of the Asian strain of H5N1 could have significant public health, economic, societal, and international repercussions and consequences for our country. As with BSE or SARS, some of that impact may be out of proportion with the actual number of cases of animal or human illness.

We recognize as well that the international capacity to deal with avian influenza is currently non-uniform and in some areas very problematic. Therefore, it's imperative that we continue to look at the opportunities for Canada to increase its investment in managing the risk not only within our borders but also by providing assistance to mitigate the risk at source in other countries.

In terms of our state of readiness, from within the veterinary and animal health communities, it's important to emphasize that an avian influenza response plan is in place. It focuses on preventing the introduction of AI through a number of various pathways, as I've introduced to you. It requires surveillance and early warning detection systems associated with both those birds that are raised within controlled circumstances and those that fall outside of normal domestic production systems. It requires us to work very closely with the Canada Border Services Agency in terms of ongoing daily alerts, as we map the progress of the disease around the world, so that we can re-target inspections to the most appropriate areas, again, dealing with both passengers and commercial traffic.

Certainly it has a very huge component in terms of on-farm biosecurity and awareness and education of the industry sectors that have an opportunity to be front-line stewards in identifying the disease early and taking the necessary precautions to preclude its further extension.

•(0925)

An avian influenza rapid response plan is also in place, and it describes the immediate disease control actions that would be undertaken upon suspicion of the disease—note, suspicion. We can act in the absence of confirmation in order to deal with it in the most effective and appropriate way.

National foreign animal disease eradication support plans, known as FADES, are currently being updated and have to a large degree been updated in a number of provinces and territories to address lessons learned from our own experiences in British Columbia a year

or so ago and to continue to build on the best improvement on a continuous basis from lessons learned external to Canada.

We have in place a federal and provincial linked laboratory network. I believe it's important, as well, to point out that with respect to our complex in Winnipeg—again I cannot emphasize enough the vision of previous governments of this country in the investments that were made to build that particular facility—at this particular point in time the international recognition of our Winnipeg lab complex as an international reference laboratory for avian influenza is well advanced. That's a very important contribution for Canada, because by gaining that recognition, it will provide our animal and public health operators of that facility access to all strains of avian influenza to allow us in Canada to develop and work with those strains, even before they're diagnosed within our borders; to look at new and opportunistic mitigations; and to build the capacity to respond, even in advance of its entry.

We have also in place an international veterinary reserve with five other countries—Australia, New Zealand, the United States, the United Kingdom, and Ireland—that provides for immediate surge capacity that can be called upon, should emergency circumstances dictate to do so, with highly trained technical experts.

We continue to work, as the Canadian Food Inspection Agency, with our provincial and industry counterparts on the implementation and reinforcement of on-farm biosecurity measures. It's equally important to note at the international level that Canada has continued to show leadership in working with international organizations such as the World Organization for Animal Health, or the OIE, formerly the Office International des Epizooties, to ensure that science-based standards are in place, that there are opportunities to protect human and animal health, while continuing to allow for safe trade.

It's very important that we do not allow countries that make the appropriate investments in surveillance to fear the economic consequence of detections, which would be unwarranted or unjustified.

Madam Chair, I would now conclude my remarks and turn to Dr. Butler-Jones for the public health perspective.

•(0930)

[*Translation*]

Dr. David Butler-Jones (Chief Public Health Officer, Public Health Agency of Canada): Good morning, Madam Chair and committee members.

[*English*]

It really is a pleasure to have this opportunity. I'm sure when this was anticipated, when we started into this, we weren't expecting the level of media attention and reaction internationally or the work of our American counterparts, but I think it is timely, certainly, as a result.

[Translation]

The Minister of State, Ms. Bennett, has illustrated the differences between avian influenza and other strains. I also believe it's very important to know the difference between vaccines and antivirals.

[English]

It really is a situation in which there's much confusion in the public eye. Again in the public sense, vaccines like smallpox, measles, polio, etc., essentially have the ability to eliminate the disease. Anti-virals are certainly an important part of our strategy—and you'll be speaking to one of the manufacturers following this—but ultimately if we hope to deal with influenza, we have to have an effective vaccine and we have to have other comprehensive approaches. I guess one way of illustrating anti-virals is they're the fire and rescue brigade that can come in and help to minimize the impact but not ultimately prevent or control the disease itself.

From a human health standpoint, we do see individuals who have become infected through either the eating of or very close contact with contaminated poultry or the drinking of raw blood. But there are just over 100 cases in Southeast Asia in spite of what is probably millions of exposures. It is a major leap for most animal viruses that tend to be specific to an animal, and including to a human for human viruses, but when it does it certainly can have devastating impact—smallpox, measles. The range of the serious epidemics of the past actually originated in animals. And while that possibility is rare, we have to be constantly looking for it and thinking about that possibility. At the same time, virtually every animal disease that is specific to a particular species does have the potential to infect a small number of people. Again the numbers are small, probably related to something in our immune system or genetics that makes this small group of people susceptible.

One of the things that is of human concern beyond the economic and other impacts of the disease in birds—wild birds and particularly in poultry—is that because the influenza viruses generally are very adaptable, they're constantly changing in small ways. That's why we need to be immunized each year in terms of the human virus, as they have the potential to exchange genetic material. So effectively you could have a pig or a human infected with both a bird virus and a human virus. They re-assort and you come up with a human virus that is already adapted in humans but has enough change that our immune system doesn't recognize it. Most commonly, that was the cause of pandemics in the fifties and sixties. It was that re-assortment that created a new virus that then spread around the world and affected some 25% or 30% of the population.

In terms of where we are, I guess the only other thing to say is it's important to make the distinction between 1918 and 1919 and the H1N1 of that period and the typical influenza both before and since in terms of human outbreaks. The 1918 and 1919 outbreak was particularly nasty, somewhere between 1% and 2% mortality, but it was a much different situation, at least for Canada, then from what it is now: relatively poor underlying health; multiple other infections that prime the immune system, so then you get an overreaction and clogging of the lungs, for example; as well as not having antibiotics to treat secondary infections; not having anti-virals; not having an effective health care system to manage severe disease; and then the

virus itself magnifying in the trenches of Europe during the war with other infections. There are so many things.

I just want to speak to some of the projections out there. There have been claims that we could see cases in the millions, not in the thousands or tens of thousands. This is just to say that if we took the experience of 1918-19, assuming that the mortality rate was 2% and, as it was then, about 25% of the population got ill, then we would see today, if nothing had changed—no health care, no antibiotics—with our population today, that it would translate to 140,000 to 150,000 people, not 1.4 million.

I think that's serious enough, and that is not to underestimate the impact of it, but to talk of numbers in the millions.... It has not happened; it's most unlikely to ever happen. We have to plan and think about those possibilities, but to be realistic about it, it's unlikely.

• (0935)

At the same time, in addition to the importance of our planning, to minimize the risk of disease, to minimize mortality, to minimize those who need hospitalization, we also need to be planning and understanding the impact on society, on the economy, on people's understandings, and how we then relate, and what that does in terms of the functioning of society.

So all of this really is important, and that's why very quickly, in the face of new emerging diseases or if WHO declares that now we have a pandemic virus, it really will be beyond a health issue. It will be a cross-government, cross-sectoral issue, and that's why it's so essential that we are engaging other jurisdictions, working internationally, and working with the private sector and other organizations as well.

Slide eight basically gives an overview of some of the elements that are currently in place. The national plan has been a model for other countries. We did get a bit of a head start in preparing and having that. We're now working clearly with the provinces and developing capacity around how do local and regional governments and health services and others respond. Margaret Bloodworth, who is the deputy minister in PSEPC, and myself will be co-chairing a deputy-minister-level committee across government. We already have an officials-level committee, an intergovernmental committee, which has been working for some time now.

We will be revising the national plan, based on the changing perspective and the new standards for WHO, as well as a strategic plan of action. Most provinces and territories have developed their plans or are very close to having them published. There still is a lot of work to do, though, in terms of local-level planning, which is variable across the country, and communications with the public around understanding the diseases. The advantage of the planning and the work across sectors is that it benefits us, not only in the event of a potential pandemic of influenza, which could be soon or could be decades away—no one can really predict that effectively—but also in dealing with other emerging infections, dealing with bioterrorism, and dealing with natural disasters as well. The plans are continually evolving.

The U.S. has just come out with their plan. They are increasing, for example, their purchase of antivirals. They're proposing to purchase what would be the equivalent of enough treatments for, if it were in Canada, by population, 2.4 million people. We already have on hand in the warehouses of provincial, territorial, and federal governments enough to treat 3.5 million people, with plans to purchase additional quantities beyond that.

We also have a domestic manufacturer with the capacity to produce enough vaccine for all Canadians. Again, we're fairly unique in that in the world. Their current production capacity is about six million doses per month. That's today, so it would take a few months to produce enough vaccine for the total population. Also it would take some time to actually distribute and provide that vaccine to people. In addition, they are ramping up production and there are discussions to ramp it up further, so that we could be in a position to very easily provide and supply—at least the manufacturers to supply—vaccine to other parts of the world as well.

We have the pandemic influenza committee, which is an FPT and an experts committee that provides advice to us. We do, as I mentioned, have a vaccine strategy and an antiviral strategy.

Surveillance is a key piece, both domestically and internationally. We have FluWatch. We have a laboratory network in Canada. We have the outbreak notification system. We have surveillance going on in key hospitals to identify early, new, and emerging infections. We will be testing our system to alert physicians in the near future and modifying that and then developing that further in the country to ensure that physicians, hospitals, nursing homes, pharmacists—whoever it is who needs to know—as issues emerge, have the right advice and the right situation.

● (0940)

CFIA is involved in surveillance, as has been identified, and—no surprise—we have picked up avian viruses in wild birds. We've known that. It's always been there. The good thing now is that the surveillance will allow us to track that, to identify the base of what is out there, and to pursue that further.

In addition, we work internationally. We have been working both in training, for example, lab workers from Vietnam, as well as distributing or sending out our portable lab to assist and be involved in research. We're working with them on developing better surveillance. As I think has been mentioned to the committee before, we have a large project with CIDA in Southeast Asia for the early identification and control of outbreaks, on which we're working

not only with CIDA but with other international partners and the WHO, which I think will assist in recognizing these early.

I think I've mentioned GPHIN before, which is the Global Public Health Information Network, which allows us, by constantly surveying the Internet in multiple languages, to recognize outbreaks in their early stages. In retrospect, in an earlier model that was being just tested at the time, and it wasn't really in use, it looks like we did recognize SARS many months before it broke out of southern China. So the opportunity then to link with the WHO and the representative country allows us the opportunity to control outbreaks in the hundreds rather than the tens of thousands.

In terms of the national emergency planning, while the agency has a key role on the health pieces, Public Security and Emergency Preparedness Canada has overall responsibility. We work very closely with them. As it will be a cross-government emergency should a pandemic arise, that is going to be absolutely essential.

We have the networks across the country, and for example, I've met with the FPT deputies of the provinces and territories around pandemics specifically and how that fits into their overall planning. This month—next week, I think it is—there will be, as part of the national forum that brings together emergency responders, health emergencies, etc., one day dedicated to a tabletop exercise actually looking at pandemic response and preparedness. That meeting will be held in Quebec City.

Communication, as I mentioned before, is going to be key. It's really essential that the public knows what's going on, that we are transparent in terms of what we're able to do, what we're not able to do, what individuals can do to protect themselves, what communities are doing, and how we're preparing in advance, so that at the time of the pandemic, at the time of another outbreak, people are in fact in a position to do so.

There is the generic nature of it. Many of the elements are the same. If we have another blackout, how are families prepared? Do they have phones that would work if there's no power? Do they have flashlights? Do they have a radio that works so they can get notification, etc.? It crosses over infectious and natural disasters as well.

The Chair: Dr. Butler-Jones, the time is escaping us and the members are most anxious to ask questions. I'm wondering if you could just wrap up.

Dr. David Butler-Jones: Certainly. I would be pleased to do so.

I'll just wrap up by repeating the notion that this really is a government-wide coordinated approach, which is essential, a cross-sectoral approach, and all of the elements of the planning are essential. There's no one piece that can substitute for any other. I will leave that to questions.

Merci.

The Chair: Thank you very much, Dr. Butler-Jones, Dr. Evans, and Minister Bennett.

We'll now move to the question-and-answer period. I'll remind my colleagues that when a minister visits we have a different protocol. The first 15 minutes go to the official opposition. I'm hoping they will divide the time. Then 10 minutes go to each of the other parties, and I'm also hoping you will all divide the time so that we get as many possible people questioning as we can fit in.

We'll begin now with the official opposition, the Conservatives, with Mrs. Skelton.

● (0945)

Mrs. Carol Skelton (Saskatoon—Rosetown—Biggar): Thank you very much, Minister Bennett, for being here today. I appreciate that.

We worked in 2004 to get the new Quarantine Act into committee and to get it passed and everything. It's Bill C-12. It received royal assent on May 13, 2005, but it won't be in force until the regulations are in place, which is late fall 2006. Can you tell me why this is taking so long? I'd like to know.

Hon. Carolyn Bennett: Maybe David can talk to the actual process for getting regulations, which affect so many jurisdictions, that you actually have to make sure it has been an inclusive process to get something that can actually be effective. As you know, we were without a Quarantine Act update since the late 1800s. We do believe, I think David believes, that we do have the tools to do this.

Maybe you can just explain why the regulations are taking so long.

Mrs. Carol Skelton: We had a quarantine act in place, and when SARS hit, we decided all of a sudden that we had to have a new one. Now, if there's a pandemic, we don't have a quarantine act, so shouldn't this be a priority?

Hon. Carolyn Bennett: Let me have a go at the use of quarantine.

An international quarantine will not work in a pandemic, period. You cannot close the borders to flu. It is infectious for days before you come down with symptoms, so that is not a tool we are looking at for a pandemic. It is in the same way as a change of workers across provincial borders doesn't work, because in a pandemic every province will have its hands full, and there won't be an ability to move. So some of the things that we saw through SARS are not at the top of our shopping list in actually preparing for a pandemic.

Mrs. Carol Skelton: I personally feel that it is a priority and it should be looked at.

When can we expect legislation officially establishing the role and the mandate of the Public Health Agency of Canada, the Chief Public Health Officer, and the Minister of State for Public Health? In the absence of legislation, do these institutions and yourselves have any legal authority in this country?

Hon. Carolyn Bennett: The Public Health Agency was established by an order in council and therefore that means it exists and the sign's on the wall and David Butler-Jones is in place. We will be tabling the legislation—it's on the counter for this month, and we will do that.

That being said, what's exciting about that new legislation, which I think you will be very happy to see in the legislation, is the role of David Butler-Jones has been articulated as having a very different

role in terms of his being able to speak to Canadians independently of his role as deputy head. I think this is a very exciting innovation and reality for this country.

Mrs. Carol Skelton: Minister, we're going to have that legislation, you say.

Dr. Butler-Jones said in his presentation that Public Safety and Emergency Preparedness Canada will be in charge if there is a pandemic. Is that correct? Did I hear it correctly?

Dr. David Butler-Jones: They will be responsible for the overall coordination, but we will still have responsibility on the health aspects, and I will still have the responsibility to speak to the public on issues that concern the public's health.

Mrs. Carol Skelton: Does this legislation have to be in place before you can do that?

Dr. David Butler-Jones: No.

Mrs. Carol Skelton: It doesn't have to be in place.

Dr. David Butler-Jones: The Prime Minister has been very clear in terms of what my role is and the expectation from my role, and that's the way I've functioned since I started a little over a year ago.

Mrs. Carol Skelton: How much money is Canada contributing to other countries and to the WHO for pandemic planning?

Hon. Carolyn Bennett: In terms of pure pandemic planning, we could gather all of that for you and find out all the bits. The most recent examples have been the \$15 million for the CAREID project in Southeast Asia and our contribution to the risk outbreak communication manual for the WHO. We can get that for you, Carol.

● (0950)

Mrs. Carol Skelton: I'd appreciate that. Thank you.

The Chair: Thank you, Ms. Skelton.

Mr. Ritz, please.

Mr. Gerry Ritz (Battlefords—Lloydminster, CPC): Good morning, ladies and gentlemen. It's good to see you again. Dr. Evans and I, of course, go back a ways with the agriculture committee and all the problems we've had there.

I'm a little bit skeptical when I look at how prepared we are for any kind of pandemic, when I look back on the avian flu in Abbotsford and some of the results from that. We can't seem to come up with a safe water system in this country over the last decade, and yet I'm to convince my people that we're prepared for this. I find that a little bit hard to do, in that we see the latest reserve that's got caught with bad water. I had one in my own riding of North Battleford, and we're not prepared for that, yet we're going to be prepared for a global situation.

Dr. Evans, in your response you said that most provinces and territories have developed their own plans. I've been involved in discussions with some of the provinces with regard to doing that, and it's been brought about more because they've developed this patchwork to cover a federal void. It's taking too long to get a lot of this in place. How do you respond to that?

Dr. Brian Evans: I think the reality is, as Dr. Butler-Jones has pointed out, and as we've gone through previously, that in the circumstance of an emergency, the first responders are tiered. It does require an integrated approach. What we're really building here is not a patchwork, but in fact it's complementing the competencies that exist at all levels of government to respond to the circumstance. There is municipal authority to deal with disposal and provincial authority to deal with contracting in emergency circumstances, and there are authorities under the Health of Animals Act. What the FADES plans do are bring together all of the competencies and authorities so that there is an ordered rollout of that activity.

Mr. Gerry Ritz: The legislation is in place at this point, and you can build on what's there.

Dr. Brian Evans: Yes, that's correct.

Mr. Gerry Ritz: That leads to my next question. Out of the Abbotsford hearings, which I was part of—and I know you were there at one point as well—one of the recommendations was that the CFIA establish a special animal disease response team, basically a DART team. Has that been done?

Dr. Brian Evans: Yes, it's well advanced. We've been engaged with the four veterinary colleges across the country, with their expertise. We're working with the provincial labs and the veterinary structures within the provinces as well. We have identified experts within Canada, and as I've alluded to, we now have a broader international response as well, depending on the magnitude of the response required.

Mr. Gerry Ritz: So that's under way but not completed. It's still a work in progress.

Dr. Brian Evans: At any given time, we have the list of experts who would be called. We are working through exercises with them at this point in time so that they are prepared to go. But again, it's important that we recognize that the incident itself will require specific expertise. The fundamental piece to this is making sure of who the people are, that they know their role, and that they are in place.

Mr. Gerry Ritz: And you establish a pecking order and so on.

I would ask, then, if we know who is in charge at the federal level. We have a lot of different ministries involved here. Who is going to take the lead role, and how do you decide that? It goes beyond health. It goes into emergency preparedness, which is under the Deputy Prime Minister. We have two different health departments involved. We have Industry Canada, we have Foreign Affairs, we have all sorts of different areas, and that generally turns into a gong show. Everybody wants to take charge, but nobody moves, nobody gets hurt. Have you established that pecking order?

Hon. Carolyn Bennett: One of the important changes in the way in which the government has worked has been that there is now a cabinet committee that deals with public safety. As a cabinet committee, even this week we learned how we did fare on the triple-

play exercise—an outbreak of plague—that we did with the U.S. and the U.K. The complexity of any of these things, you're quite right, really requires, like David Naylor said, communication, collaboration, cooperation, and clarity on who does what, when.

What we are continuing to exercise in table top exercises is whether we are getting it right in terms of who speaks, in terms of the risk communication. Even in this last exercise that we did with the other two countries, we did pretty well.

Mr. Gerry Ritz: Thank you.

One of the things Dr. Butler-Jones brought up was that speed is of the essence. The first 48 hours are critical in getting that immunization. I saw that in Dr. Bennett's package, too. In the first 48 hours, you stand a lot better chance of building the immunities if you get your vaccines in place and so on.

• (0955)

Hon. Carolyn Bennett: That's for antivirals.

There's going to be a test at the end of this committee meeting. A vaccine is the shot that you get beforehand to raise your immunity, so that hopefully you won't get it or it will be really mild if you do get it. An antiviral is what must be taken in the first 48 hours of coming down sick, in order to minimize the severity of the flu that you get. They're two different things.

I would say to the Deputy Prime Minister that it's a bit like the old days, when people were confusing debt and deficit. We have to make sure everybody understands the difference between a vaccine and an antiviral.

Mr. Gerry Ritz: Thank you.

The Chair: Mr. Merrifield.

Mr. Rob Merrifield (Yellowhead, CPC): I want to follow up on what Mr. Ritz was going on about, and it's near and dear to me because of the Lake Wabaman spill in my riding, where the oil spilled into the lake. We had four different federal departments, and it absolutely paralyzed all of what was done there. Nobody was playing quarterback, so it's absolutely important that we have laid out whose jurisdiction is what in case of an emergency.

I would like for you to have that sort of thing worked out, and then table it with the chair so that we can see it. We will then all know publicly exactly what those lines of command are and who does what. Is that fair enough?

Hon. Carolyn Bennett: Maybe David would also help, because a couple of scenarios might be helpful for you. We could maybe table a couple of scenarios like the one you were proposing.

Mr. Rob Merrifield: Fair enough. Do a scenario and lay it out. I just think it's very important that it's a good exercise not only for us, but one that's absolutely critical for you because of who does what. Is it Anne McLellan in Emergency Preparedness? Is it Mr. Dosanjh? Is it you, Carol? Or is it CFIA? They all have a role, so I'm sure we have to have that laid out and we have to understand exactly who's in charge of what.

The other thing is whether or not we're sure we don't have avian flu in Canada today.

Hon. Carolyn Bennett: We have avian flu everywhere in Canada. Avian flu is endemic in birds, right, in terms of the wild birds.

Mr. Rob Merrifield: We just don't know what strain it is, is that what you're saying?

Hon. Carolyn Bennett: Let's let Brian do that.

Dr. Brian Evans: It's important for the honourable member to know that we do recognize that avian influenza is circulating constantly in all species of birds. The primary preoccupation at this point in time is with the Asian strain of an H5N1 virus. We have no evidence to suggest, or all the indicators continue to support—

Mr. Rob Merrifield: The birds in B.C. were tested, the other ones, when? The day before yesterday?

Dr. Brian Evans: Yes. They demonstrated an H5, but there were none of the indicators: no die-off in wildlife; no extension into the United States along that same pathway.

Again, it's important to recognize that we have found H5N1 in North America historically. It has been diagnosed as recently as 2002 in turkey populations in Michigan. There have been H5 subtypes in waterfowl in Minnesota and Tennessee. So it's important that we put it in context. There is a constant background there. What we're reporting now is a better definition for us, as Dr. Butler-Jones says, to quantify that, and if there's any change in that, it gives us the best early warning system so that we can then adjust our biosecurity or our efforts to manage.

Mr. Rob Merrifield: I think that describes what's going on.

My colleague asked about the DART team with CFIA, and you say you have that in place. I'm wondering if that same DART team is in place for the Public Health Agency. I guess that goes back to the chain of command and your plan, so it's another reason why I want that plan.

Is that the approach? Are you going to be training human resources and first responders across the country? Are you going to actually have a DART team that will go in and coordinate in case of an emergency anywhere in the country?

Hon. Carolyn Bennett: It will depend. What we are training, exercising, and practising now are some NOHERT teams that we put in the 2004 budget. The NOHERT teams are health emergency response teams, multi-disciplinary teams that can be deployed to a place. David can explain them, but they won't help in a pandemic.

Mr. Rob Merrifield: If you can describe exactly how they would work, and table that information with the chair as well, I'd appreciate that.

Dr. David Butler-Jones: Certainly.

I would just say very briefly that the NOHERT teams are health care teams. They're there for the sort of situation in which, if hospitals in Toronto are getting overwhelmed, we can bring in the multidisciplinary team to facilitate that.

What we have in place now is a system.... Local public health has the responsibility and has authorities to manage local outbreaks, and provides this for the province. We then facilitate that. We have teams that come in to facilitate the investigation, as we've done in North Battleford, as we've done in Toronto, as we've done in other jurisdictions.

Mr. Rob Merrifield: If you will table that so that we have an understanding of it, I'd appreciate that.

I have one other question. The WTO says that as far as Tamiflu and the antivirals are concerned, their recommendation is 25%, yet I think the United States and Canada are prepared for about, what, 15%?

• (1000)

Dr. David Butler-Jones: Close to 15%.

Mr. Rob Merrifield: So are their recommendations on the upper side? Do you challenge their recommendations? Why did you come up with your number, compared to what I've heard as their recommendation?

Dr. David Butler-Jones: There are different recommendations for different jurisdictions. The WHO talks of 25%. In effect, that would treat every single person who gets sick during a pandemic, because typically it's about 25% of the population. Nobody has ever done that for any disease ever before.

Mr. Rob Merrifield: But that's their recommendation, is it?

Dr. David Butler-Jones: That was a number that circulated, but I don't know that there's any official number. It really depends on the jurisdiction to really review their situation. And because it's just part of a plan, if you had nothing else, if you had no capacity to develop vaccines, if you had no capacity to do anything, you might consider having that on hand, but you would not likely have the capacity to actually deliver the antivirals to all those who get sick, in a timely way.

It's not a practical recommendation, in that sense. I think it's something we continue to review. And as I've said before, we now have either on order or in hand close to 15%. We have about 13% on hand, and we're continuing to review that. The plan is that we will be buying more, and we will probably be diversifying our antivirals to others, as well.

The Chair: Thank you, Mr. Merrifield.

Mr. Ménard.

[Translation]

Mr. Réal Ménard (Hochelaga, BQ): Madam Chair, I'm going to take seven minutes, my colleague three. So please stop me after seven minutes so I can turn the floor over to Ms. Demers.

We have avian influenza in our environment. For the moment, however, there is no indication that it is being transmitted to humans. That's a fact that we can find reassuring. This morning, I'd like to ask you a question, Ms. Bennett.

Let's suppose that, tomorrow morning, we discover a case in Canada in which avian influenza has been transmitted from poultry to a human being. What do we do? Describe to me the actual action plan that would be implemented. I won't interrupt you; take the time you need to tell us how that plan would be executed.

Hon. Carolyn Bennett: The situation would be that a person suffering from a typical human flu would have contracted avian flu. The virus would have mutated...

[English]

Mr. Réal Ménard: I will ask you to speak fast, because I don't have a lot of time.

Some hon. members: Oh, oh!

Mr. Réal Ménard: Next time we'll practise French, you and I. But I appreciate your French. Good.

Hon. Carolyn Bennett: Maybe it would be even faster if David did a bit.

It will require a mutation, because right at the moment the avian flu is so deadly to humans. You need it to be mixed with a human flu so it has the potential to go from human to human.

[Translation]

Mr. Réal Ménard: I want to know the stages of an emergency scenario. How would we proceed, in concrete terms?

[English]

Dr. David Butler-Jones: Essentially, if we recognized an unusual influenza, potentially an avian influenza, that person would be isolated in the hospital in respiratory isolation. We would do the diagnostics. We would follow up on their contacts to make sure they were not contacting others. That would be an appropriate role for some containment, until we understood what was going on with it.

We have not seen, even in Southeast Asia, that it has spread from person to person in any efficient way. Obviously, if we started to see that we would have to escalate in terms of the notifications, thinking about what was happening, why it was happening, what we could do, and the use of antivirals like Tamiflu for its treatment. In close contacts we might consider prophylaxis to try to avoid that, but again it would depend on how it was evolving. We would bring in expertise internationally, as well as our own expertise, to understand and make sure we were sharing that information internationally, because other countries might be experiencing it at the same time.

So a whole number of steps would fall into place locally in the hospitals, provincially with public health, through ourselves, and with the engagement of our laboratories and others as necessary.

[Translation]

Mr. Réal Ménard: Across Canada, whether it be in Manitoba, Saskatchewan, Quebec or Ontario, a monitoring system would send out an alert if a case of avian influenza were discovered. The necessary steps would then be taken to isolate the person. If it was realized that there was a risk of transmission, drugs would then be administered. Let's go back to the differences between drugs...

• (1005)

[English]

Hon. Carolyn Bennett: The point at the moment, and the reason we're working so hard in Southeast Asia, is because the most likely place that human-to-human would evolve is there, where there is this close contact between birds and humans in the backyards, and all of that. So we're watching it so carefully and increasing the capacity for surveillance in Southeast Asia because we think that's where the most likely human-to-human would come. That's why we are doing this surveillance with them.

Dr. David Butler-Jones: Certainly in Canada we're looking all the time.... If somebody has a severe respiratory disease, like in the nursing home outbreak in Toronto that turned out to be Legionnaires' Disease, it takes some time to identify what it is. So they isolated that, and there wasn't an interchange of people. They brought in the testers and sent in the epidemiologists to try to figure out what it was. It took a few days. We see unusual respiratory infections all the time, so a key piece is to contain it in the meantime and figure it out.

[Translation]

Mr. Réal Ménard: I have a final question. I want to understand the difference between vaccinations and antiretrovirals. A vaccine can't be developed because the strain of the disease is unknown to us. As for antiretrovirals, you've awarded a contract to the Roche company.

Will the eventual national stockpile include what the provinces already have in inventory? Mr. Couillard, for example, says he has eight million doses of antiretrovirals. Does the federal inventory, which contains 40 million, include the inventories of the provinces?

[English]

Dr. David Butler-Jones: No, that is the best estimate we have, and it's constantly changing as the provinces or ourselves order additional.... There are 35 million doses in the hands of provinces, territories, and ourselves in warehouses currently, with 5 million more on order. It does include Quebec. Because it will take time to develop a vaccine, an important part of the strategy is to have that treatment earlier on until we get the vaccine into people.

[Translation]

Mr. Réal Ménard: All right. I turn the floor over to my colleague Ms. Demers.

Ms. Nicole Demers (Laval, BQ): Thank you, Madam Chair.

Thank you for being with us today. I would have liked us to be able to attend the meeting held two weeks ago as members of the Standing Committee on Health.

You mentioned research projects to assess the impact of the universal flu vaccination programs. When do you think you'll be able to tell us about the results of those projects?

[English]

Dr. David Butler-Jones: There's ongoing research on the difference between having a program like in Ontario, where it's offered annually to everyone, versus other jurisdictions that focus on high-risk groups like seniors, those with underlying chronic diseases, small children, etc. We're still waiting on the results of that.

Interestingly enough, it's a lot more complex than simply offering it. For example, one of the objectives is to ensure that those at highest risk of severe disease and dying get the vaccine. A province like Nova Scotia is able to accomplish that without a universal program. So there are a number of things we need to understand in terms of why.

The other thing is that approximately half of doctors and nurses get immunized, and they're the ones who potentially bring it into the nursing home. So workers in nursing homes need to be immunized, not just the people who are resident there, because it creates a ring of protection around them.

[Translation]

Ms. Nicole Demers: We currently have a number of doses of antiviral drugs. I'd like to know how long they'll remain effective. In Quebec, many people are being prescribed Tamiflu. Isn't there a risk that these people will take Tamiflu thoughtlessly at the slightest sign of flu and that that will harm them rather than help them?

[English]

Dr. David Butler-Jones: It's certainly a potential issue if people stockpile. There are many questions about having individual stockpiles, as opposed to us collectively having one for those who are ill. You have to know when to take it. If you just have a cold it's a waste of time. The more we use it, do we risk increasing potential resistance and losing it as an effective treatment? We don't have the answers to all of these things. We're continuing to look at that in terms of providing best advice. It's one of the things that will be key.

Having it is really a doctor-patient issue, and for some people it may be appropriate. But as governments we need to have amounts on hand to provide appropriate treatment early. There are many questions still to be answered. We continue to review that.

• (1010)

[Translation]

Ms. Nicole Demers: How long does Tamiflu remain effective?

[English]

Dr. David Butler-Jones: The shelf life is about five years. It depends on the age of the stock. With the company there is work to look at ways of assessing if that shelf life could be extended by testing the drug, its efficacy, etc. That will be important, especially if we're able to keep it longer, because it's expensive to have to replace.

In terms of its efficacy, in clinical trials the period of illness is about a day and a half to two days shorter, and there's some improvement in the seriousness of the illness. But it isn't a magic bullet and you don't suddenly get better if you take it.

[Translation]

Ms. Nicole Demers: On October 27, Dr. Henry Ninman said on the CBC News that the number of doses stockpiled might prove to be insufficient. The calculation was apparently done with a view to treating the normal spread of a regular human influenza virus. Here we're talking about two tablets per day for five days.

However, according to the experts, the treatment should last eight days, which would guarantee that the virus is entirely eliminated. Can you confirm or deny that information?

[English]

Dr. David Butler-Jones: That's part of the evolving scene that we continue to evaluate in terms of the treatment of H5N1. It's probably the least likely scenario that it's in H5N1 and mutates in a way to be adapted in humans. But that's one of the things we also have to think about. It's likely to be a more typical human strain, in which case it will be.... But again, the manufacturers are keenly interested in this,

as are we. We would have to adjust accordingly based on evidence as it develops.

The Chair: Thank you, Madam Demers. Your timing is excellent.

Ms. Crowder, please.

Ms. Jean Crowder (Nanaimo—Cowichan, NDP): Thank you, Madam Chair.

Thank you for coming.

I think this is a really important matter to have before Canadians, to make sure Canadians get accurate information, because there is a great deal of misinformation out there.

I want to speak specifically about communication, because Minister Bennett did mention that. Although I know it's a slightly different situation, I just want to come back to some issues that were identified with SARS. The report that came out from the CMA said that without a coordinated system to notify acute care facilities and health care providers of global health alerts, front-line clinicians often had no prior warning. The second piece was that because of the inability of governments to communicate in real time with physicians, organized medicine must develop the capacity to ensure real-time communication.

The reason I bring up those two pieces is twofold. I talked to the CMA recently. In their view, there is still a huge gap between the plan and the execution; it's always the execution. The plan of the federal government appears to be very comprehensive—I mean, I took a look at it, but there's a real gap between that plan and what happens in local communities.

There were a couple of factors they identified that were highlighted with SARS. One was that as far as they know, the federal government and local provincial authorities still do not have a current, up-to-date list of all family physicians in Canada and a capacity to communicate with them outside of normal working hours. That's one.

The second piece that was identified with SARS was that there was a huge problem in bringing people across provincial borders. For example, there were physicians who were prepared to come from Alberta to Ontario, but issues of provincial jurisdictions over credentialing, issues over their liability insurance, and issues over their compensation, should they become ill in Ontario, weren't dealt with in a timely way. If we end up with a pandemic, we're going to need rapid response.

The third issue I'm going to ask you to respond to is the fact that in checking with my own local emergency authorities and our health authorities, there seems to be a gap in information and being linked in a meaningful way through various levels into the provincial.... I found some authorities who I would have anticipated were speaking to each other, and they weren't even in the loop. Many of these folks don't understand that they need to include all of their local politicians: federal, provincial, and municipal. We get calls to our constituency office, saying, "What do I do? I'm sick. Who do I talk to? The chickens are sick." They don't include us in that kind of communication.

I wonder if you could address those three points.

Hon. Carolyn Bennett: I'd love to.

Even before David was around, the communication with front-line providers was paramount to me. If there's one thing that bothers me, it's that. I think, as a member of Parliament from Toronto, one of the reasons we knew British Columbia did better during SARS was in the way they could get information down to the front-line providers.

Obviously, we have been working with David, who, as we said, now chairs the Canadian Health Network with Perry Kendall, the Chief Medical Officer of Health for British Columbia. That means all 13 chief medical officers talk to one another. In an equivalent of picking up the red phone, David can then get to his 13 counterparts.

Jean, I think people have felt that a central list would only be as good as yesterday. Keeping lists current—as those of us in politics know—is not as easy as it sounds. I have asked the Colleges of Physicians and Surgeons, as a criterion of registration, every year, to look at how they would want to be contacted in an emergency. Alberta has already done that; other provinces are beginning to do that.

I think that organized medicine needs to do that too. We need a number of ways of doing this in terms of finding out how we get in touch with those people. That's what David was referring to. Next month we will test that in British Columbia. In the same way as 30 years ago, when I carried a cardiac arrest bellboy—I had to answer every 12 hours as to whether I got the message—we're going to do a test message and see what kind of penetration we get on that test. Then we're going to the other chief medical officers of health.

David will maybe want to talk about crossing borders; again, we're dealing with the colleges. Because they don't have an umbrella organization to deal with, it seems to be a little bit harder for us to get a consistent approach to honouring one another's certification and things with the nurses and paramedics.

On local public health, I think you're right. That includes on reserve. Again, on the bottom-up piece, we're really trying to do a much better job with the great epidemic people from the Public Health Agency.

David, do you want to...?

•(1015)

Dr. David Butler-Jones: Briefly, we are working with the licensing authorities and the provinces and territories in terms of mutual aid and the sharing of information and, if necessary, being able to facilitate the rapid movement of people from one jurisdiction

to another. Again, we are working—depending on where you are in the country—with local public health. Where I was, for example, I could contact all the physicians, nursing homes, hospitals, and pharmacists within an hour by fax because we set that up in that area. That's varied. Some places can do that, and some can't. As I said before, we're well on the road, but we're not there yet. One thing is making and ensuring local connections where they don't already exist among emergency, health, and other appropriate services—and thinking in terms of comprehensive emergency planning, which must adapt as it relates to something like a pandemic or infectious—

Hon. Carolyn Bennett: So this month we'll do a partners' meeting with the CMA, the College of Family Physicians, the emergency physicians, the hospital accreditation.... We're going to try to bring all our national partners together to see what they can do to help us leverage this communication and all other aspects of pandemic preparedness.

Ms. Jean Crowder: Do I have time left?

The Chair: Yes, you do.

Ms. Jean Crowder: I'm going to ask two unrelated questions, so I can give you the space to answer them. First, I would like you to talk specifically about first nations reserves. Clearly, they often don't have access or capacity around medical delivery. In that light, when we talk about communication, we make assumptions that everybody has Internet, fax, e-mails, cell phones, and so on. Many remote communities don't have that. Could you please address this issue?

The second piece I'd like you to address is that in the federal plan, I notice the timeframe around vaccinating all Canadians is four months, and I understand it's in two waves. Realistically, do we have a capacity, both in terms of the ability to have a domestic supply of a vaccine—if it's developed, because it depends on the strain—and the physical capacity in communities to vaccinate all Canadians in four months?

Could you please address the first nations and the capacity?

Hon. Carolyn Bennett: We've been working with the AFN on this, and certainly there needs to be a real preparedness they feel confident with and part of in terms of the planning. We are working on that. I don't think it's perfect yet, in that the province has the supply of antivirals, and the bands aren't confident yet they will get their share. We've got some work to do, and we're continuing to work on that every day.

•(1020)

Ms. Jean Crowder: Mrs. Bennett, is there training going on in first nations communities around dealing with this on reserve communities? Because there is an issue around building capacity for it.

Hon. Carolyn Bennett: We are beginning. Between both the First Nations and Inuit Health Branch and the Public Health Agency of Canada, we're trying to come together to make sure there really is a plan and that it's effective.

Maybe David will talk a bit about how you could roll that out, including first nations. Canada is the most connected country in the world, so we do have e-mail access to all band offices in the country. It's just that it isn't enough in terms of making sure they feel confident. So we're continuing to work on all of that.

Dr. David Butler-Jones: Quickly, it is very variable still, but it is being worked on. Certainly the connectedness with local health regions, the provincial plans, etc., is essential. Again, the access and prioritization for antivirals, local capacity, development, etc., is variable. Where I was previously, first nations were involved as part of our pandemic committee and part of the planning, etc. It was integrated, and we had cross-coverages of medical officers working with first nations and those working for the provincial authorities. This is very variable, but it is an area we're continuing to work on.

In terms of capacity, it is very variable in this country. But it's something the public health network and working with my colleagues—the deputies in the provinces and the ministers to ministers—in terms of how we can continue to build that capacity... In the budget before this past one, there was \$300 million over three years for immunization programs, which helps build capacity. There was another \$100 million intended for support at the front lines. We'll continue to work with the provinces and territories in terms of rebuilding the capacity that was lost at the local level over the last decade, as we've been so focused on hospitals and less on the public goods of public health.

The Chair: Thank you, Mrs. Crowder.

Now Mr. Savage.

Mr. Michael Savage (Dartmouth—Cole Harbour, Lib.): Thank you, Madam Chair, and welcome all.

I think we can take some pride in this country that Canada has taken a leading role in the world in preparing for a pandemic, and I congratulate you on that. That doesn't give us a lot of reason for comfort. I appreciate that we're not overconfident on that, because this is a serious issue.

I noticed in today's *Globe*—I think it was today's *Globe*, an article titled "Doctor suggests 'helper' drug could double Tamiflu supply", and it says:

In effect, half a dose of Tamiflu...administered with probenecid would equal a full dose of the antiviral alone. Doctors suggest a combination of the two drugs would stretch the amount of Tamiflu available in the event of a flu pandemic—more than doubling the limited supply.

I wonder if you have any comment on that.

Dr. David Butler-Jones: That would be nice. I'm not sure. I think there are a number of areas of research, and that's again why we engage internationally and why our scientists with others around... I mean, for example, there's potential for other antivirals that might be useful, the combinations of things. There are just so many potential questions.

I think perhaps the group from Roche might actually have an answer for you, so I will leave it. Perhaps you might want to ask that question again of them, but anything that we can find that will assist us, obviously we're interested.

Mr. Michael Savage: I would just say I doubt I'll have time to have a question on the next panel, so maybe if they're here they might want to answer that question in their presentation if they get a chance, if it be possible.

Now, my other question revolves around Canada's role in the world. We're parliamentarians for Canada, and our first responsibility has to be the people of Canada, but when you look at the health systems and the support networks and the ability to deal with a pandemic that exists in some of the nations of the world that are probably more likely to have to face this, perhaps, than Canada, or at least equally likely, I'm interested in the discussions we've had and the commitments we've had, particularly to developing nations. I'm wondering if you could just expand on that a little bit.

At the four-minute mark or so, perhaps the chair could let us know, because I know my other colleagues want to ask questions. It's specifically addressing the issue: Do we support the idea of contributing vaccines or antivirals to developing countries for their use?

Hon. Carolyn Bennett: In the international meeting last week, they decided to focus on four things, Michael. Number one was the animal-human health. The number one thing we can do is to keep this a chicken disease. Therefore, in terms of building capacity, building surveillance, we have the \$50 million project that the Public Health Agency is administering in Southeast Asia that has been about surveillance and laboratory capacity and being able to find it early so that, as Secretary Leavitt says, you can stamp it out with your foot like a spark, as opposed to waiting for the water bombers to come.

We still believe that's the most important investment we can make in the animal-human health piece. It was very exciting this summer in Hong Kong and Hanoi and Bangkok to hear the collaboration that's been going on with Canada.

The lab people from Vietnam were in Winnipeg this summer learning that there have been a lot of us trying to train the labs, train whatever to do it. That being said, we are also learning a lot from the people in Southeast Asia. So I think we are focusing on the animal-human health, on the research on vaccines and antivirals, on the risk communication, because again part of our job is not to scare people by not having common messages. So Canada's contribution to the WHO outbreak communication manual has been hugely important.

● (1025)

Mr. Michael Savage: I never get the chance to interrupt you, Minister. I just want to say I agree 100%. I want to say that we also dealt with the AIDS strategy in Canada a couple of weeks ago. We're a rich nation. We have to make sure our people are protected, but I really think that Canada's role in the world, as one of the rich nations where we are very fortunate...I'm glad we're taking the leadership position and I hope we continue to do that.

Thank you for that.

The Chair: Thank you, Mr. Savage.

Mrs. Chamberlain and then Ms. Dhalla.

Hon. Brenda Chamberlain (Guelph, Lib.): Thank you, Madam Chair.

Dr. Evans, you mentioned in your comments that we could act on suspicion. That interested me. What do you mean by “on suspicion”? What would be your indicator to act without knowing?

Dr. Brian Evans: Again, we're very fortunate in the country that we have very strong enabling authorities under the Health of Animals Act. As I've indicated, in the event of suspicion of disease—it could be, again, a spike or an increase in morbidity or mortality in a flock circumstance, or a die-off in the wild as well—it would allow us then to go in with our authorities and, jointly with the provincial authorities, to do additional work immediately. We don't have to wait for the laboratory confirmation to initiate that process.

Equally so, in terms of verifying what we're dealing with—again, part of this, as Dr. Butler-Jones alluded to—in terms of the first signs that we get, there's the ability to do immediate containment. In other words, we can place movement restrictions and do certain things to contain it within that area while we do the additional work necessary to verify whether we're dealing with something important. We have the ability to determine where the point of exposure was. In other words, have there been visitors from other countries who have been on those premises in the last period? Are there indicators suggesting that there was a pathway that allowed the virus to get there? We can do immediate tracing, have stuff moved from that location to other locations, forward and backward, over the incubation period of the disease.

We can do what's currently being done; we can raise the awareness of industry about their own biosecurity, how they can control movements on and off their farms, how they can put in place the disinfection necessary and those types of interfaces while we're doing, as I say, the diagnostic work, typing the strain and doing all the rest of that work.

The primary thing that's really important in all of these circumstances is at the first indication we have the ability to go back, with the provincial labs, and look at all the provincial submissions over the past period of weeks to determine if there was something there below the radar screen that would have suggested something that didn't trigger at the time but now we have an actual clinical outbreak of something, which would allow us to do that. Again, we need to work with a degree of discretion. We certainly don't want to be accused of being militaristic and of going at it with a sledgehammer at the first sign of anything, but we have the basic control mechanisms that can be initiated without having to confirm in fact that this is what we have.

We work closely with the industry and the public health sector as well to make sure they're on board with what we're doing and can be supportive, because there are things they can also do as tertiary and secondary efforts there.

Hon. Brenda Chamberlain: The other question I have follows up on Ms. Crowder's. I too get constituents talking to me about the flu and what it means if this outbreak comes. They hear the reports too on the news that there'll be millions of people killed. One of the things people ask me occasionally is what they can do. Is there anything they can do?

All I really know to say is, get your flu shot and wash your hands. Is there anything else that we can be advising people to do?

Prevention, of course, is important, so to just say, well, no, you just have to wait, and if you get it, you get it, and if you don't, you don't....

• (1030)

Hon. Carolyn Bennett: I just can't thank you enough for that question. As you know, I'm the minister of handwashing, and I am thrilled at any point—and particularly at this time of year—that all members of Parliament are part of our campaign to actually get people to get their flu shots, get people to wash their hands for at least 20 seconds, that is, for at least one verse of “Happy Birthday To You”.

Don't go out when you're sick. What we learned from SARS is that we don't want somebody with a fever at a funeral. We don't want people coughing all over other people on a plane. We actually have to change the nature of work so that people don't feel they have to come in if they're sick. We actually have to change our minds on how we deal with one another. This means that in mitigating a pandemic or mitigating even the seasonal flu, which still, depending on the year, can kill between 2,000 and 8,000 Canadians every winter, it doesn't have to go through a whole family, through a whole office, through a whole classroom, if we would wash our hands, stay home when we're sick, take the alcohol swab to the phone or the doorknob and get things wiped down if somebody sick has been around.

I think what we're saying is that preparing for a pandemic will make for a healthier planet, period, in terms of what David Butler-Jones has been saying.

Hon. Brenda Chamberlain: I would just say to you as well that I was one of the ones who, over the years, didn't want to take a flu shot and didn't take a flu shot for a long time but started to get very sick from flu. For the last two years—this is my third year of having it—it's made an amazing difference. I think that's very important, because I think there are a lot of people like me who maybe didn't want to do it, but they should.

Hon. Carolyn Bennett: Even in emergency backups, when Alberta did its big flu campaign with shots in 2000, it didn't have the same problems in terms of turning people around in emergency departments. All other provinces looked to that and said that it was effective, even on a population base, in terms of how long people wait in an emergency department, which depends, really, on the percentage of the population that gets the flu.

The Chair: Thank you, Mrs. Chamberlain.

Ms. Dhalla, please.

Ms. Ruby Dhalla (Brampton—Springdale, Lib.): Thank you once again for being here. Much of what you've said has been informative to many Canadians across the country.

I just wanted to expand upon what my colleague was saying in regard to some of the precautions you mentioned the average Canadian should take in terms of prevention.

We know now that travel season is coming up. Could you please elaborate on what precautions the average Canadian should take when travelling abroad, if any?

Dr. David Butler-Jones: Depending on where you're travelling, it varies. Get good travel advice wherever you're going in terms of immunizations, etc., but as it relates to influenza, clearly, having a flu shot is important. Basic things like washing foods, washing hands, all of those kinds of things are absolutely essential. The benefit of all of these things is that they reduce the burden of infectious diseases all the time, not just in a pandemic, and if we get in the habit of doing them, then when we do face something like that, we're already in a good position.

The other thing is to make sure that people are in good health. That's the reason for all of the prevention activities and the other activities, because those of us who are ill or have underlying chronic disease are much more likely to die with these emerging infections. So the healthier the general population—the healthier we are and the better we look after ourselves—the better position we are in to resist infections or to not succumb to them.

It's all together. There are specific recommendations that fit in relation to where you're travelling, but those basic things—making sure you have chronic medications with you if you need them, making sure you look after yourself, eating well, getting rest—all of those things are pretty basic. There's also stuff on the websites that can help people—and with their physicians or travel clinics where it's specific.

Dr. Brian Evans: Madam Chair, I would be remiss if I didn't take the opportunity to speak from the veterinary perspective on this. Again, when people are travelling, they need to make sure that they don't bring back to Canada those things that they should not be bringing back to Canada. When they arrive back in Canada, if they have been on a farm in another country, they must complete the declaration card honestly. That's a very important component of our broader biosecurity, because it allows us to look more closely if you were on a farm—we can examine your shoes, the clothing you had on, and those types of issues.

Again, I'd be remiss if I didn't take the opportunity to say that Canadians, when they travel, are also part of our biosecurity defence when they come back.

• (1035)

Ms. Ruby Dhalla: Thank you.

In terms of the last question, both yourself, Minister, and Dr. Butler-Jones, along with the Minister of Health and many people who were involved, have to be commended and congratulated for the conference that was planned on a possible pandemic.

We've seen throughout the past year a number of different issues affecting the international arena, everything from the tsunami to hurricanes to a possible pandemic. Number one, where is Canada at in terms of its international role in regard to this pandemic?

Secondly, in regard to the conference that was held, we heard great things about it on television and read about it in the newspapers. Unfortunately, many members of the health committee weren't there. Can you please tell us what some of the tangible outcomes accomplished at this conference were?

Hon. Carolyn Bennett: I think the communiqué was one of the best that I've ever seen at an international meeting. I think Minister Dosanjh did an amazing job in terms of personally calling a number

of these ministers to make it possible for them to come, knowing it would be about candour and about the fact that we need to create on this planet a safe space in which people can tell the truth to one another and won't be punished in terms of closed borders and all of the things that have been of real concern. I think probably people did learn the lessons from SARS.

In the commitments that came out of the conference around animal-human health, around surveillance and capacity, around risk communication, around commitment, around both research on vaccines and antivirals as well as some equitable approach to distribution, I think it was a good beginning. Everybody knows that it then has provided an ability to go forward on those areas. It's been important for Canada that the Prime Minister has taken quite an interest in this. It's been a hugely important first step in terms of where we go.

This afternoon we are doing a briefing for all MPs at 3:30. The communiqué will be part of that. We'll walk you through the communiqué and ask what you think Canada should be doing next in terms of pushing for various commitments or those kinds of things. I think we've been viewed to be a leader in this, and we want to keep that leadership role.

The Chair: Thank you, Ms. Dhalla.

Mr. Fletcher wants a turn.

Mr. Steven Fletcher (Charleswood—St. James—Assiniboia, CPC): Thank you, Madam Chair.

Since my time is short, I'll just get to the point.

Madam Minister, I'm very disappointed with your answer to the question of my colleague, Ms. Skelton, dealing with when the regulations of the Quarantine Act will be enforced. You immediately turned to Dr. Butler-Jones, but the fact is that Canadians expect their ministers to know when regulations are going to be put into force, or at least a timeline. You don't necessarily need to know every little detail, but to pass it off right off the bat is not appropriate.

This leads into the whole issue of the quarantine legislation. Canadians expect that the quarantine legislation will help prevent a pandemic in this country. You suggested that the Quarantine Act would have no effect during a pandemic, but that it's actually more of a preventative measure. The answer you provided on that issue was not satisfactory, which leads into accountability.

When the issue of accountability came up, Madam Minister, you referred to a committee and to multi-stakeholders, and to all of those sorts of things. We all know what happened in New Orleans, where there was no one who took ultimate accountability. The public voice in this government has been the health minister. On the issue of avian flu, you alluded to the conference. In numerous media interviews, he has been the member of the government who's been the spokesperson on this issue.

So I wonder if this committee expects answers on accountability and where the buck stops, and if we should not have the health minister here to answer these questions, rather than yourself.

• (1040)

Hon. Carolyn Bennett: Sure, I'd love to answer, but let's go back to the Quarantine Act for a second.

The Quarantine Act is in place, right? The pre-existing.... We need one regulation to put the Quarantine Act into force. We hope to get it this fall, but it may not be until next spring, as there are still ongoing negotiations with Transport Canada and the aviation industry.... You will see the regulation when the House resumes in February.

In terms of the ongoing deputy ministers negotiation, that is what David Butler-Jones does, finding out how far we are in the negotiations and making sure those things are happening.

In terms of who speaks, I think there's a real difference between preparedness and what actually happens in a pandemic. All of us are doing what we can in terms of preparedness, but in an actual pandemic, Anne McLellan will speak, in terms of dealing with all government departments and their preparedness. David Butler-Jones will have a very specific or special role, in the way that we have organized it for him to be able to speak directly to Canadians on health aspects—but he will also have a separate role as the deputy head of...and head of the agency.

The Minister of Health is responsible for the whole health portfolio and therefore requires a seriously integrated approach, from regulations around vaccines and antivirals, to the research and CIHI and how we measure things. The Minister of Health has a distinct representative, the Chief Public Health Officer, who in fact reports directly to the Minister of Health. My role is to support the Minister of Health and to do all the work I do every day preparing and making sure that we actually have this job done.

Mr. Steven Fletcher: We should then have the Minister of Health here, if Mr. Butler-Jones reports directly to the minister.

The Chair: Thank you, Mr. Fletcher.

We'll now go to Mr. Thibault.

Hon. Carolyn Bennett: That wasn't who you called. You called

The Chair: Excuse me, Mr. Thibault has the floor.

Hon. Robert Thibault (West Nova, Lib.): Thank you, Madam Chair.

I'm pleased that the Minister of Public Health is here. She's done a wonderful job in communicating this to Canadians helping to make sure, working with Minister Dosanjh, that all agencies as well as all provinces were working with us and that we were working as a whole. I think this is a great Canadian success story of how we can work together, how the team can pull together across borders when it's good for Canadians like this.

The question I would have for Dr. Butler-Jones is twofold, and we have very little time, so I'll let him comment. He made a comment earlier that H5N1 wasn't a virus that would mutate, but if I understood correctly, there was a risk that it would affect a known human virus that already is affecting humans and that would be the virus that might mutate and become pandemic. I'd ask him to clarify that in a moment.

There's another thing he could comment on. I joined with my friend Mike Savage here in saying that I think we have a role to play internationally as a rich nation, as an advanced nation, but I'm a little bit more selfish than Mike, because I see that work we're doing with other nations—and I hope we'll do more—as being beneficial to us.

This is a potential pandemic, and if it's not H5N1 influenza, it will be another one at some time. It's important to us as Canadians that we'll be acting as a globe, because this isn't going to be a neighbourhood problem. This is going to be a global problem, and we have to work together and get it at its source—as in the bird flu situation—if possible.

Mr. Jones.

Dr. David Butler-Jones: In terms of the virus and the different mechanisms by which the virus could become a pandemic virus, the most likely is a combination of a human virus and an animal virus, probably a bird virus. It could be H5N1; it could be another bird virus that reassorts and creates in essence a new human virus.

The human virus itself is constantly changing, so it's also possible it could mutate sufficiently that even fewer of us recognize it, and that's part of the reason why from year to year we see different severity and different numbers of people affected with the human virus. The least likely of the three is the current avian H5N1 going through all the steps it would need to take to become a human virus. That's the least likely. It's always possible. We have to be looking for it. The other possibilities are more likely. And clearly, the more that we collectively do as a world...because when this becomes a pandemic, when this becomes an infection in any country, all countries will be affected.

So you're absolutely right, it's also in our personal interest to engage in this work internationally. The good thing about it is that we all benefit as a result.

• (1045)

The Chair: Thank you, Mr. Thibault.

Thank you to all my colleagues for your self-discipline in keeping to a fair division of time.

I'd like to thank Minister Bennett, Dr. Butler-Jones, Mr. Evans, and Ms. Mountjoy for coming to share their information with us. I think it's been a very productive meeting. If we want to see you again, we'll call. But I'm certain you've given us all kinds of good information.

Thank you very much.

Hon. Carolyn Bennett: Madam Chair, I just want to thank everybody at the Public Health Agency and CFIA. We are blessed in this country to have such fabulous public servants who help to protect us every day.

The Chair: I think we'll take a few minutes while we do this switch of witnesses.

• (1046)

_____ (Pause) _____

• (1053)

The Chair: Ladies and gentlemen, I think we're ready to proceed to part two of our meeting.

We are lucky to have representatives of Hoffmann-La Roche Ltd. with us. Mr. Paul Brown is vice-president of sales and marketing, and Ms. Ilona Torontali is vice-president of public affairs.

Mr. Brown, are you going to begin? You have the floor, sir.

Dr. Paul Brown (Vice-President, Sales and Marketing, Hoffmann-La Roche Limited): Madam Chair, honourable members of the committee, thank you very much for the opportunity to appear before you today. My name is Dr. Paul Brown. I am the vice-president of sales and marketing for Roche Canada. I am also the former global lead for Tamiflu, the antiviral drug that is so frequently mentioned in the context of pandemic planning and of avian influenza. I am joined today by my colleague, Ilona Torontali, vice-president of public affairs.

We are very appreciative of this opportunity to discuss with you the important role that Tamiflu plays in pandemic planning. Roche has been doing business in Canada for over 70 years, and employs over 700 people in this country. Our speciality-based portfolio of pharmaceuticals is focused on life-saving medicines in a number of areas, including oncology, virology, transplantation, cardiology, and, of course, influenza.

Let me turn to Tamiflu. Tamiflu can be used to both treat and prevent influenza. It works by stopping the spread of the virus. It helps patients recover faster when they have contracted the virus. Tamiflu is active against all strains of influenza A and B tested to date, including H5N1 influenza, the strain that is currently infecting bird populations throughout Asia and Europe.

Roche's position on pandemic stockpiling is that pandemic plans should have provisions for both vaccines and antivirals. To be clear, we consider that Tamiflu is one important component of pandemic planning, not the only solution.

Vaccines remain the cornerstone for prevention for both seasonal and for pandemic influenza. However, vaccines cannot be used as a treatment for influenza. It should be understood that it will take approximately three to six months to prepare and manufacture a significant quantity of a vaccine in the event of a pandemic. However, unlike vaccines, antivirals like Tamiflu can be stockpiled in advance of the flu, and will therefore be the only option available until vaccines are ready in significant quantity.

The World Health Organization has recommended that all countries make provisions for antivirals as part of their pandemic plan. Consequently, Roche has been in dialogue with approximately forty governments around the world regarding pandemic stockpiling of Tamiflu, and we have been in discussions with the Canadian government since 2002. I am pleased to say that all Canadian government orders to date have been fulfilled, ahead of the schedule.

The global trend that we see for developed countries around the world is that they stockpile enough Tamiflu to treat approximately 20% to 30% of their populations.

I just want to come back to a very important issue, raised earlier, that I think causes some confusion in the media, and that is the terminology around doses versus treatments. I would just like to be clear that one treatment course is ten doses, ten capsules. If we talk about ten million doses, that is equivalent to one million treatments.

I now want to turn to a comment on manufacturing and supply of Tamiflu. Roche has significantly increased the manufacturing capacity of Tamiflu. We doubled our manufacturing capacity last year, and we are doing so again this year. By the time we get to mid-2006, production capacity will have increased eight- to ten-fold since

2003. The manufacturing process for Tamiflu is complex. It involves ten steps, approximately fifty external suppliers of raw materials, and multiple external manufacturers and facilities. Roche has been working with these partners to optimize the process and the supply chain. I should point out that should the government be interested in purchasing additional supplies of Tamiflu for pandemic stockpiling, they should be aware that the current lead time for additional supplies is up to eighteen months.

• (1055)

In addition to the work that we do with our own supply chain, Roche has recently announced that it is actively evaluating opportunities to sub-license the production of Tamiflu to qualified manufacturers or governments that can demonstrate the ability to produce substantial amounts to the required quality standards. Roche is currently evaluating over 100 sub-licensing requests.

Finally, Madam Chair, I would like to comment on the events of last week. Last week, due to an unprecedented demand for Tamiflu, in the absence of seasonal influenza, Roche Canada took the responsible position of temporarily suspending shipments of Tamiflu into the supply chain until the start of the flu season. Once the flu season starts, we will manage the inventory of Tamiflu by prioritizing the delivery of Tamiflu to high-risk patients in hospitals and in long-term care facilities.

To be clear, this refers only to the supply that has targeted for the regular flu season. It does not affect our commitment to work with governments to help them build pandemic stockpiles of Tamiflu.

Madam Chair, I hope this information on Tamiflu has been helpful. I would now be pleased to answer any questions the honourable members may have.

• (1100)

The Chair: Thank you very much.

Mr. Merrifield.

Mr. Rob Merrifield: Thank you very much for coming. It's indeed timely, particularly after what we've gone through in the first hour and a half of this committee meeting.

I think it's important that you and the panel before you have cleared up the difference between a vaccine and an antiviral. What is interesting to me about what you just said is that it is not only a prevention, but it's also a treatment. It's a prevention and a treatment, which I would think is kind of unique for a product.

I want to go back to what I earlier asked the minister on why the Canadian government chose the 5% to 10% rather than the 25% to 30% that you said most of the countries are targeting. From your position, I know that it may sound like it's tainted to some degree because you're in the business of selling this product, but is that an appropriate number?

I think you have some credibility in this because you've actually shut down sales, which I have never seen a corporation do in all my life, for the betterment of making sure there's enough stock in the country. I think you've gained a tremendous amount of credibility in your answer because of that.

Can you tell me what your view is on Canada's position on this?

Dr. Paul Brown: Thank you for the honourable member's question.

Let me try to answer that in three parts.

First of all, to come back to the treatment and the prevention piece, Tamiflu was designed to be effective against all forms of influenza A and B viruses. Indeed, in the clinical studies that were used as the basis to approve Tamiflu for seasonal use, it was shown that Tamiflu was effective in a treatment setting. If you became infected with the flu, you would take two 75 milligram capsules of Tamiflu per day for five days. It can be used in that setting for treatment. It was also demonstrated to be effective in a preventative setting. You could take one capsule of Tamiflu for 10 days, up to six weeks. It prevents infection. You're absolutely right that Tamiflu can be used both in a treatment setting and in a preventative setting.

Again, in the context of a pandemic planning situation, it's up to individual governments to decide how best to use the drug, what the most appropriate mix is, and how to use that in context with the rest of the pandemic plan.

In terms of the number issue, I'm pleased to share with the committee that we have delivered on all of the orders and requests that we have had from the Canadian government. On the precise number that the Canadian government has, it's really for them to comment on. It's a very complex decision in terms of how big the stockpile should be. It varies from country to country. It's a complex mix of what the individual government's objectives are, what the infrastructure is, and what they want to achieve.

I can share with you that we have delivered on the requests that have been asked of Hoffmann-La Roche to the Canadian government. Whether the number that is available is appropriate or not is a question that should be addressed to the government.

Mr. Rob Merrifield: That's why I asked it. I got a blank stare on both sides—when I asked them and also from you. I guess that's why it's disconcerting to me, and probably to most Canadians, when you see our number one physician in the country with regard to a pandemic ordering a hundred of these doses of Tamiflu out of his own pocket for his own use. It makes me a little uneasy when there is such a short supply, and when we perhaps only have 10% rather than 20% to 25%.

Anyway, you can go on.

Dr. Paul Brown: Let me just comment on the last part of your question, which was what we did recently in terms of managing the inventory for this flu season. I would like to provide the committee with some context of why we did that.

In the weeks prior to the decision to manage the inventory supply, we saw more demand for Tamiflu in one day through the retail chain than we saw in the whole previous year. So in one day we saw more inventory for Tamiflu being pulled through the retail chain than we did in the whole of the previous year. That is in the absence of any influenza season having started.

So, Madam Chair, what we decided to do as an organization was to take what we think was a responsible step and to say that we will manage the inventory that we have, such that when the influenza season starts, we will prioritize that supply to long-term care

facilities and hospitals, in order to make sure that Tamiflu goes to those individuals who are most likely to need it—those who have the most risk of complications when the influenza season begins.

● (1105)

Mr. Rob Merrifield: I think that's a responsible place for you to go.

So what you're saying is that Canada has no Tamiflu on order with your corporation at the present time.

Dr. Paul Brown: All orders of the Canadian government to Hoffmann-La Roche have been met on or ahead of schedule. We have an additional or ongoing dialogue with the government, but I hope the committee will appreciate that the precise details of that and the nature of the contracts that we have are confidential.

I am unable to share the details of that, Madam Chair.

Mr. Rob Merrifield: I'm not looking for details, but am just wondering if the government has placed an order with you or not. I don't care how much, necessarily.

What you're saying is that all of them have been filled. So I take it that there are no other orders today with your corporation.

Dr. Paul Brown: We'll have to refer back to Dr. Butler-Jones.

Of course, if the government wants to place further orders, we will continue to work with the government diligently and responsibly, as we have done over the law couple of years, to make sure we help the government reach or achieve its stockpile requirements.

Mr. Rob Merrifield: A year and a half is what you're saying it will take, if an order were placed today, before you could fill it. Is that what you're saying?

That takes us to the other question, which my colleague, Michael Savage, asked earlier, and which I was going to ask at any rate. It came out in the papers yesterday that probenecid, I think it's called... Does that product work to double the effectiveness of Tamiflu?

Dr. Paul Brown: I'll take the question in two parts and address the first part. Please refer to the documentation we've provided and turn to a schematic entitled "Oseltamivir: The Manufacturing Process".

I just want to put into context for the committee what lies behind the lead times, because there has been a great deal of confusion in the media about this. It's a very complex process to make Tamiflu. So if you look at this chart, the building blocks or the starting materials for making Tamiflu come from two potential sources: star anise plant, or a fermentation process.

Once you have that starting material it's then converted, through a number of complex chemical transformations, into the key intermediate, which is number two on your scheme. That is then transferred to an outside manufacturer that has specialist capabilities to carry out this step. It's a very complex step and potentially explosive. La Roche has been working with these manufacturers now over many years to fine-tune and develop the capacity for this step.

The product then comes back to Hoffmann-La Roche and is finished in the final steps to give the active pharmaceutical ingredient. It looks a little bit like candy floss. That's the sort of texture of the active pharmaceutical ingredient Oseltamivir. It can't be put straight into capsules. It has to be made into a powder to go into capsules, and then packaged and distributed.

As you can see, that's a very high-level summary of the manufacturing process. It is complex. To go from the starting point to the end of the process takes approximately 12 months. So that is the reason behind the lead times of 12 to 18 months.

• (1110)

Mr. Rob Merrifield: Your corporation has been saying that patent law is something you're prepared to give out to other corporations if they can meet the standard. Am I catching that right?

Dr. Paul Brown: Just to go back to the process, over the last three to four years we've continually scaled up this production line. We doubled capacity last year, and doubled it again this year. We have plans to further increase the capacity, and we continue to work to optimize this.

As a result of doing that, we've been able to meet every order around the world, not just here in Canada. We've met every government order we have received so far for pandemic stockpiling. However, we have also said that we are very willing to talk to third-party manufacturers. If they can come to the table and show that they can make substantial amounts of Tamiflu to the same regulatory and quality standards that Hoffmann-La Roche does, we are absolutely prepared to discuss sub-licences. We have a process that's operational, and companies can approach the company. Currently about a hundred companies have approached Hoffmann-La Roche to discuss potential sub-licensing.

The Chair: Thank you, Mr. Merrifield.

We'll move to Mr. Ménard now.

[Translation]

Mr. Réal Ménard: I want to get a clear understanding of the actual situation. When the minister tells us that she has 40 million capsules, that in fact means that we have what it takes to administer four million doses of antiviral drugs. In other words, when she writes in her speech that Canada has 40 million in reserve, that means that we have 40 million antiviral doses to treat individuals.

[English]

Dr. Paul Brown: It is correct that 40 million capsules would be equivalent to four million treatments. However, let me just make one final clarification here. That's assuming all of the material is used in a treatment setting. If you chose to use some of that material in a preventative setting you would use more material, and the number of people who would be—

[Translation]

Mr. Réal Ménard: What's disturbing is that, if the government asked us to respond to an urgent demand, the manufacturing stages — what has to be done to gather product components from all your 50 suppliers — would take 18 months. Consequently, even in a national emergency, you couldn't produce more Tamiflu in less than 18 months.

Is production essentially done in Canada, or the United States? That's what concerns me first of all. Your answer is, at the request of 50 countries. Is that domestic production?

[English]

Dr. Paul Brown: Thank you for your question.

Again, let me try to comment on that in two parts. First of all, the issue of supply here really comes back to the central question around planning. Let's take just one step back—

[Translation]

Mr. Réal Ménard: I understand the process, but is production as a whole being done in Canada or the United States?

[English]

Dr. Paul Brown: I will answer your question, but I'd like to come back and address the first part of your question, if I may.

Let me first of all just comment on this, because it's a very key, central point to the whole issue of supply. That is, one of the advantages of antivirals is that they can be stockpiled in advance. In the event of a pandemic occurring, whether we talk about antivirals or whether we talk about vaccines or any other medicine for that matter, the ability to have surge capacity to meet demand at the time a pandemic occurs will not be there. The advantage of antivirals is that they can be stockpiled. That's why we've been working with governments now for four or five years to build up their stockpiles; that's what we've been doing with the Canadian government.

The second part of your question is where is the supply chain placed. The supply chain is a global supply chain. It is not based here in Canada. It's located all around the world. But again, I want to come back, because it's a central point. In the event of a pandemic, relying on a supply chain to produce material when the pandemic occurs is really not going to help meet demand. The important thing is to plan in advance, build the stockpile, and have the Tamiflu antiviral available in the country so you can use it.

• (1115)

The Chair: Try to be a little bit more concise. For example, the question that was asked was where is it manufactured? He doesn't want to know where the supply chain is. We all know in this global economy that supplies come from all over the world. I also want to know, where is the closest, to where we're sitting right now, manufacturing location at the end of which come Tamiflu pills? Where is that in the geography of North America?

Dr. Paul Brown: Madam Chair, first of all, let me apologize. I'm using my company terminology, which is maybe not clear.

When I talk about supply chain, I mean manufacturing.

The Chair: You're stretching out great long sentences when all we want is the name of a city, a town, or something.

Dr. Paul Brown: I understand the question and I understand your frustration, but I can't give you a simple answer because it's not made in one place.

If we go back to this diagram—

The Chair: I asked which one was closest to the city of Ottawa. Even if it's made in ten cities around the world, what is the closest manufacturing location that produces pills, the closest to the city of Ottawa?

Dr. Paul Brown: The final step where we have pills is in Europe, in Switzerland, and there's also some capacity in the U.S.

The Chair: Where in the U.S.?

Mr. Ménard will carry on, and I hope the answers will be as short as possible.

Please, Mr. Ménard.

[*Translation*]

Mr. Réal Ménard: You like Shakespeare, but you should answer with Molière.

You say you respond on demand, on a first-come, first-served basis. If the Canadian government declared a state of emergency, would it be possible for you to prioritize orders from Canada in view of the fact that you respond to 50 countries? How does the government pay for every tablet put at its disposal? What's the profit margin you get on that?

[*English*]

Dr. Paul Brown: The first-come, first-served system we've had operational for a long time is one that has worked and that we stick to. That is, if the Canadian government puts in a request today, it joins the queue and it gets locked into the system once we have an agreement with the Canadian government. If a government comes behind with a further order, it doesn't get bumped. It is a strictly first-come, first-served basis.

In terms of the price question, the price that has been offered to the Canadian government is a consistent global price. It's significantly reduced from the retail price. There is a discount for pandemic purchases, and that has been consistently applied around the globe, with the exception of third world governments, where there is a further discount.

[*Translation*]

Mr. Réal Ménard: What is that price?

[*English*]

What is the price for the Canadian government?

Dr. Paul Brown: I'm not allowed to divulge that. It's part of the confidential contract we have with the Canadian government. If Dr. Butler-Jones or Minister Bennett want to share that information with you, then I would respectfully ask that you ask that question of them. I'm not in a position to give that answer.

[*Translation*]

Mr. Réal Ménard: Ultimately, you're confirming that the current state of supply is roughly equal to 10 percent. If there were a pandemic, we could respond to 10 percent of cases, the United States to four percent, and, in a number of other countries, it's 20 percent. The state of supply on the basis of the contracts with Roche would meet 10 percent of the demand.

Will you confirm that figure?

[*English*]

Dr. Paul Brown: Again, I think Dr. Butler-Jones earlier commented that they have in their hands approximately 3.5 million treatments, which is approximately 10% of the Canadian population.

• (1120)

The Chair: Thank you.

Mr. Thibault.

Hon. Robert Thibault: As I understand it, from Dr. Butler-Jones also, it was closer to 14%, with the population just under 30 million. Regardless, we have it.

I think the question from Mr. Ménard might have been misunderstood when he was talking about the portion of the need, because the need isn't that easy to identify; it's a lot more complex. If you look at the total population, then it's quite an easy figure.

You and Dr. Butler-Jones have made it clear that it's a complex system for decisions and that it's done in consultation with experts from the industry as well as from all the provinces and the pandemic influenza committee, who look at your products and also at products of other manufacturers that have antiviral treatments. It's an ongoing process as to building the stockpile and determining how much we need.

What I would like to do before I ask you any questions is to compliment you and your company on the way you've handled yourselves throughout this whole process. It's having a little bit of a CNN effect, because lately there was the international conference in Ottawa and the Americans went public with their plan this week. It seems that the world has been becoming aware of this lately, but I know that your company has been working on this for a long time and has been in discussions with countries in a responsible manner. Canada, I believe, was the first country to start stockpiling, and that was in partnership with Hoffmann-La Roche.

The other thing I want to compliment you on, as has Mr. Merrifield, is withdrawing the supply at a time when the market seemed unstable or wasn't reacting the way it should have reacted. There might be the CNN factor again or the fear factor happening, and I think it's very responsible of you to overlook immediate profits and look at the health of citizens not only in Canada but around the world and use your supply responsibly.

I should also thank you for having briefed me a few weeks ago on these matters. Since then I've read in the media about the discussions you're having around the world to increase your production capacity, as you have mentioned in answer to other questions, and I think that's very positive.

These drugs are prescription drugs. They have a lot of uses, both on the prophylactic side for prevention, where they could be used for front-line workers, and for the treatment of people. There's also a risk if these drugs are improperly used. There's a risk of creating resistance and those kinds of things. So I think the fact that you've taken away the supply at the consumer level and kept it in a way that it can be managed by governments, hospitals, special care homes, and those places is particularly good.

The other point I wanted to make is that you might hear people, when they do get the CNN factor and the fear factor and think there should be a mountain of antivirals in every backyard, suggest that the intellectual property rights should be removed from companies like yours. I would contradict that because of the fact that there was a market opportunity where you invested in the science in developing this product. If we get around that, I don't think we'd have a whole lot of investments of that type in the future for the next pandemic or the next fears.

What I'd like you to maybe explain to us is how you can work within those contexts by licensing other companies and how you see that coming in the timeframe such that we could have additional production. We may quibble in Canada: should it be 14%, should it be 20%, should it be 30%? We know that worldwide it's well under what the requirement is, so there's a worldwide need. How confident is Hoffmann-La Roche that you can ramp it up in a relatively short period?

Dr. Paul Brown: Madam Chair, I'd like to thank the honourable member for his comments. They're much appreciated.

Let me handle the issue of capacity in two parts. We will continue to increase the supply chain and the manufacturing process within Roche, as we have done for the last three or four years. And as I've said, we doubled last year, and we doubled capacity again this year. We have plans to continue to expand that further.

I want to be clear that as we've done this, we've been working with manufacturers outside of Roche for many years in order to make this happen. This is not all sitting within Hoffman-La Roche. There are many external suppliers of both raw materials and some of these intermediate steps.

What we are saying is if other parties out there have expertise and capacity to help increase the capacity of the Tamiflu manufacturing process, and they can make sufficient quantities to have a meaningful impact—but of course it has to be of the same high regulatory and safety standards we use ourselves—we would be very willing and happy to talk to them about sub-licensing. Those discussions are ongoing. There's a process in place. We're processing through those now, and the dialogue is ongoing. It would be premature of me to speculate on how many of those will become fruitful discussions, but we're hopeful we'll find additional collaborators.

• (1125)

The Chair: Thank you, Mr. Thibault.

I think Mr. Ménard has a point of order.

[*Translation*]

Mr. Réal Ménard: Madam Chair, before we adjourn our proceedings, I need clarification. Two figures were circulated. On the basis of contracts carried out, if reserves were administered, could we supply three percent of the Canadian population, or 10 percent of the Canadian population? I want to make sure I have the correct information before we adjourn because the difference is enormous.

The government seemed to say it was 10 percent, whereas the witness said three percent.

L'hon. Robert Thibault: No, he didn't say three percent.

Mr. Réal Ménard: I'd like you to tell us one last time. On the basis of contracts carried out, if reserves were distributed to the Canadian population tomorrow, could we meet 10 percent of the population's needs, or three percent?

You say 10 percent?

[*English*]

The Chair: Of course it depends how many doses too, because I believe I read in the paper a couple of weeks ago that eight pills were enough for one person. That seems to have risen to ten pills today, which reduces the percentage our stockpile would cover.

[*Translation*]

Mr. Réal Ménard: Is it three percent or 10 percent of the population based on the contract performed?

[*English*]

The Chair: Mr. Thibault.

Hon. Robert Thibault: I think this should be clear. In the documentation provided by Roche, it refers to around 10% of the population. What the public health minister said was 14%, or Dr. David Butler-Jones narrowed it to 14%. We could certainly ask him for the calculation, but the figure 3% never came up. I think 3% or 4% is the American figure. In Canada, we have 35 or 40 million doses. I'm not sure exactly what the figure is. If we accept the figure of 10 doses per person, we'd come to a figure of 3.5 or 4 million people, which is somewhere between 10% and 14%. I don't know exactly which figure is correct, which one Roche is basing their calculations on, or which one the Department of Health bases their calculations on, but we can certainly get them.

[*Translation*]

Mr. Réal Ménard: It's not three percent.

[*English*]

Hon. Robert Thibault: Three percent is nowhere in the question.

[*Translation*]

Mr. Réal Ménard: So we're reassured on that point. Thank you.

[*English*]

We don't want to rush you. I know you are very sensitive.

Dr. Paul Brown: I'm happy to answer your questions.

Mr. Réal Ménard: You are a real British.... I appreciate that.

The Chair: Madam Demers, then Mr. Savage, and then Ms. Skelton.

Madam Demers.

[*Translation*]

Ms. Nicole Demers: Thank you, Madam Chair.

Mr. Brown, to your knowledge, of the 35 million doses we currently have, are there any that will shortly reach their expiry date, that is to say the year-and-a-half time frame required to obtain more?

[English]

Dr. Paul Brown: When Dr. Butler-Jones answered the question earlier, he was absolutely spot on. The shelf life for Tamiflu is five years, which is actually rather unusual for a pharmaceutical product, as I'm sure you know. Usually it's approximately two to three years. So five years is the shelf life, and the material that has been purchased by the Canadian government has the longest shelf life possible. By the time the government takes hold of it, it's about four and three-quarter years.

[Translation]

Ms. Nicole Demers: It takes four years and nine months from the moment the government has it in its possession?

[English]

Dr. Paul Brown: Again, I'm conscious of not giving an answer that is too long, but let me be clear.

The shelf life is calculated from the day the capsules are produced. That is when the clock starts. By the time the drug is then packaged, delivered, in the hands of the customer, clearly you've lost a little bit of time. Hence, by the time the government receives it, it will have a shelf life of four and three-quarter years rather than five years.

• (1130)

[Translation]

Ms. Nicole Demers: Are there any replacement measures for reserves whose actual life is longer than their shelf life?

For example, there won't be any problems this year, or next year either, or the following year. We still have our 35 million doses. Have we taken any replacement measures to ensure those doses are still at maximum effectiveness?

[English]

Dr. Paul Brown: Madam Chair, the honourable member raises a very important point, and that is, that the pandemic planning and stockpiling issue goes beyond the five-year time horizon, but thus far we have not had detailed discussions about the period beyond the current stockpile.

[Translation]

Ms. Nicole Demers: What should be done for the Tamiflu stocks? Should the government plan replacement measures, or are you talking about that with the government?

[English]

Dr. Paul Brown: We would be very happy and willing to have that dialogue and discussion with the government. It would be inappropriate of me to second guess how the government wants to use the stockpile, but we will of course be happy to have the dialogue about replenishment and replacement of the stockpile if the government feels that's an appropriate strategy.

[Translation]

Ms. Nicole Demers: The Chair said that it takes 10 pills to get rid of the virus. Is it correct that 10 pills, taken two a day for five days, would be enough?

Dr. Ninman said it had to be taken for eight days in order to be sure of eliminating the virus. So 10 pills wouldn't be enough; it would take 16.

[English]

Dr. Paul Brown: This is a very complex question, Madam Chair. I'll try to answer it briefly.

Again, Tamiflu can be used either in a treatment setting or in a preventative setting. In a treatment setting you take two 75-milligram capsules every day for five days. That is the dose regimen that has been approved by Health Canada. For prevention, then it is one capsule every day for ten days up to six weeks, depending how long you want to preventatively use the treatment, how long you want to treat for.

What I think was referred to earlier is that in the event of a pandemic... Tamiflu has never been tested in a pandemic, so all of the evidence is based on how Tamiflu is being used in seasonal epidemics.

As Dr. Butler-Jones rightly pointed out, in the event that a pandemic occurs and when Tamiflu is being used, it will be incumbent upon the government and the public health authorities to make sure that the dose that is being used is the most appropriate one.

Based on all of the evidence that we have today, the dose that's been approved for seasonal use should be considered the minimum dose that we use going forward.

The Chair: Thank you, Madame Demers.

I am wondering, if I had ordered five-million doses, say, three years ago for the Canadian public, whether it would have still taken 18 months to deliver, or whether this 18-month timeline you've given us is reflective of the new demand in the face of a pandemic. Does it always take 18 months to deliver a pill, or is it because of the backlog or set of orders that you're facing?

Dr. Paul Brown: Madam Chair, perhaps I could just refer back to the chart I took you through earlier. Going from start to finish takes about 12 months; you can't really compress and condense that. So from start to finish of that whole process it takes about 12 months.

So whether we would have had this discussion one year ago, three years ago, or today, that time to produce the drug is still the same. It takes approximately 12 months.

The Chair: If you sub-licensed, it would take the new companies about 12 months.

Dr. Paul Brown: I can share with you that we believe we have a lot of expertise here. We've now been manufacturing this drug for five to six years, and we believe that timeline is as fast as it can possibly be done. We would look to third parties to help us make more capacity available, but the timelines to go from start to finish would not change.

• (1135)

The Chair: It would be 12 months. On the extra six months that you're talking about when you say 18 months to delivery, it suggests that because of the number of orders that you have, six months is added to the process.

Dr. Paul Brown: There are a number of things that feed into it. It may be orders, but of course there is also packaging, distribution, and getting the drug out to relevant parties.

The Chair: I'm also concerned about your statement that it treats and prevents. My understanding is that when you talk about prevention, people will want to rush out and buy it, thinking it can prevent the illness, but they could in fact then develop less capacity to use it as a treatment.

Our understanding was that you pulled it from the shelves so that people wouldn't rush out to buy it and use it for prevention, in order that it would be available and would have the biggest impact on treatment if they actually got the disease.

In your presentation you're talking about prevention and treatment. I find that confusing.

Dr. Paul Brown: Let me see if I can clarify that, Madam Chair.

The issue is that, first of all, Tamiflu has been approved by Health Canada to be used both in a treatment setting and in a preventative setting. In clinical studies, the drug has proven efficacy, and it has been approved to be used in either a treatment setting or a preventative setting. That is how the drug is currently used today, and it's how the drug has been licensed.

Last week, by temporarily suspending shipment of Tamiflu into the supply chain, we were really trying to react to what was happening out there. As I said, we saw more demand for Tamiflu in one day in that period than we saw in a whole year. Our intention in doing this was to make sure that the available Tamiflu and the inventory that we have get prioritized to long-term care facilities and to hospitals.

The Chair: Tell me this. Did the clinical trials for which you got approvals for prevention last for six weeks for the various patients?

You mentioned that you could take it for six weeks. It seems to me that if you take it for six weeks, it's quite a long time. Did the clinical trials include patients who took it every day for six weeks?

Dr. Paul Brown: Clinical experience went as far as 42 days in the preventative setting. That's correct.

The Chair: What about side effects?

Dr. Paul Brown: The safety profile of Tamiflu is a good one. It's a drug that is well tolerated. The most common reported side effects and adverse events with Tamiflu were nausea and vomiting, but they were generally mild and not severe. The safety profile for Tamiflu is actually a very good safety profile.

The Chair: Those side effects sound eerily like the disease it's trying to prevent.

I think Mr. Savage has a question, and maybe Ms. Skelton.

Mr. Michael Savage: I have a quick question.

We understand that there are 35 million to 40 million doses, equalling 3.5 million to 4 million Canadians for whom we have stockpiled this drug as an antiviral. It seems like an awful lot. I have every reason to believe that it probably is a lot, especially compared to our American neighbours, who have chosen to stockpile a lot less. I'm comforted by that.

I'm going to follow up on the question I asked earlier and that Rob asked as well. I may have missed your direct answer to that.

If the worst happened and we had a pandemic that raged throughout Canada, it seems to me that the possibility of a helper drug like probenecid, which I don't know much about, would be an immediate way to have a direct increase on our capacity.

There's a whole line of Dr. Savages in my family, but I'm not one of them, so keep that in mind when you answer.

Could you answer that? It may be yes, it may be no, or it may simply be that you don't know yet, but I want to hear your quick thoughts on that.

Dr. Paul Brown: We don't know yet.

I saw the *Nature* paper yesterday. It's an interesting publication and piece of science. I think before that could be converted into clinical practice, further work would need to be done, looking at it from both a dose and a safety perspective. It's an interesting finding.

• (1140)

Mr. Michael Savage: But you don't make probenecid.

Dr. Paul Brown: No.

Mr. Michael Savage: I do want to congratulate you and your company. It's easy to pick on Big Pharma a lot, but you've taken some responsible action. Thank you.

The Chair: Would you like to add something?

Mrs. Carol Skelton: There have been rumours that the avian flu is not being controlled by Tamiflu. Have you looked into this? I'd like your comments on that.

Dr. Paul Brown: I think most of those reports have come from Southeast Asia. I think Minister Bennett and Dr. Butler-Jones would also comment that it's actually very difficult to get information precisely about how the drugs are being used and what is happening out there in remote areas. It's very difficult to get a case history, so it's extremely difficult to comment. Beyond that, it would be speculation, so I can't really add anything else.

Mrs. Carol Skelton: That's all. I wanted clarification on that.

Are there any other companies making a drug similar to Tamiflu?

Dr. Paul Brown: The drug Tamiflu is part of a new class of antivirals called neuraminidase inhibitors, so it works by stopping the spread of the virus. There are two drugs available out there. There is Tamiflu, manufactured by Hoffmann-La Roche. That is an orally taken medicine. It's a capsule. GlaxoSmithKline also have a product called Relenza, which is also a neuraminidase inhibitor. That is an inhaled drug and has to be taken through an inhaler. So there are two antivirals of the neuraminidase class: Relenza and Tamiflu.

Mrs. Carol Skelton: I too would like to compliment you on the corporate decision you made last week. Thank you very much.

The Chair: Thank you very much.

I don't see any further hands, so on behalf of the committee I would like to thank you, Mr. Brown and Ms. Torontali, for coming today and presenting your information to us.

To the committee members, thank you for putting in a lot more time than you planned.

This meeting is now adjourned.

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