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# Standing Committee on Foreign Affairs and International Development

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Chair: Mr. Sven Spengemann





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• (1105)

[*Translation*]

**The Chair (Mr. Sven Spengemann (Mississauga—Lakeshore, Lib.)):** Good morning, honourable colleagues. Welcome to meeting No. 15 of the Standing Committee on Foreign Affairs and International Development.

Pursuant to the motion adopted on January 31, the committee is meeting on its study of vaccine equity and intellectual property rights.

[*English*]

As always, interpretation is available through the globe icon at the bottom of your screen, and for members participating in person, please do keep in mind the Board of Internal Economy's guidelines for mask use and health protocols.

[*Translation*]

I would like to take this opportunity to remind all participants to this meeting that screenshots or taking photos of your screen is not permitted.

Before speaking, please wait until I recognize you by name. When speaking, please speak slowly and clearly. When you are not speaking, your mic should be on mute.

A reminder that all comments by members and witnesses should be addressed through the chair.

[*English*]

Colleagues, it gives me great pleasure to welcome now our first panel of witnesses before the committee and to thank them for agreeing to take the time to be with us this morning. We have with us from Gavi, The Vaccine Alliance, Dr. Seth Berkley, chief executive officer. From the United Nations Children's Fund, UNICEF, we have Lily Caprani, head of advocacy and global lead for global health vaccines and pandemic response.

Welcome to both of you.

Colleagues, we are also waiting to hear from Dr. Ayoade Alakija, special envoy and co-chair of the ACT-Accelerator. She is on our witness list this morning on behalf of WHO. She has some technical problems with respect to a connection, and we're hoping she'll be able to join us in the course of our discussion this morning.

With that, I would like to give each of our witnesses five minutes for their opening remarks, after which we will begin the discussion with members.

Dr. Berkley, if you would like to lead us off on behalf of Gavi with five minutes for opening remarks, the floor is yours.

**Dr. Seth Berkley (Chief Executive Officer, Gavi, The Vaccine Alliance):** Thank you, Mr. Chair.

Honourable parliamentarians and distinguished guests, thank you for inviting me here today. I thank the Canadian government for being such an incredible long-term and ongoing supporter of both COVAX and Gavi. Just earlier this month, you renewed the support of the Gavi COVAX AMC summit with additional pledges, bringing your total advanced market commitment to around \$800 million Canadian. This has helped provide vital support with vaccine procurement, deliveries and ancillary costs. As well, you have committed to donate the equivalent of at least 200 million doses through COVAX by the end of 2022.

In addition to this, Canada has provided critical help with the design and operationalization of the dose-sharing mechanism. All of this has played an essential role in helping COVAX deliver more than 1.4 billion doses of COVID-19 vaccine to people in 145 economies, with the vast majority, nearly 90%, going to the 92 lower-income advanced market commitment countries that otherwise would have struggled to get access. Through the Gavi COVAX advanced market commitment, or AMC, this equitable access to COVID-19 vaccines has been absolutely critical to protecting people and increasing coverage in lower-income countries.

Today, on average, 44% of people in these countries are now protected with two doses. While this still falls well short of the 59% global average and 70% global target set out by the WHO, it is incredible progress compared to just six months ago, but clearly we still have a long way to go. While many wealthy nations like Canada have coverage above 80% and some are now offering fourth booster shots, in lower-income countries it's a very different story. Currently, 18 countries still have coverage lower than 10%. This is a huge improvement on just three months ago, when 34 countries were in this position, but even so, many are still struggling with their rollouts.

Therefore, even though many countries with high coverage have now relaxed restrictions and reopened their societies, we are still in a state of global crisis. So far, a new variant has emerged roughly every four to five months, and globally nothing has changed to give us reason to believe this pattern won't continue. With 2.7 billion people still unvaccinated, the virus continues to have ample room to circulate and mutate. This means that the threat of resurgence or new and potentially more dangerous variants still hangs over us and will continue to do so until global coverage increases and more people are vaccinated.

Until recently, the main challenge has been supply. Vaccine hoarding, export restrictions and manufacturing delays have seriously hindered global access, but now global supply has ramped up and access to doses is no longer the issue. One reason for that is the successful use of technology transfers during the pandemic. By sharing not just intellectual property but also vital know-how that is essential to the production of vaccines, technology transfers have played a critical role in enabling us to get such large volumes of doses so quickly.

While COVAX supports any efforts aimed at increasing equitable global supply, waiving intellectual property is only part of the solution, and it's questionable whether by itself it would have the same impact. It's also important to remember that IP is an important part of vaccine development and is absolutely critical for innovation, which is the main reason so many COVID-19 vaccines have been developed, with more than two dozen vaccines already in use and hundreds more in clinical and pre-clinical trials.

• (1110)

Diversifying global supply remains important, and Gavi and COVAX are committed to it. When Gavi first began its work in 2000, there were only five suppliers, mostly in industrialized countries. Today there are 18 suppliers, with the majority in developing countries. Moving forward, the best and most sustainable way to achieve this is through the development of regional manufacturing sites producing a variety of global, regional and locally relevant vaccines, especially in Africa.

For now, though, COVAX's greatest challenge is no longer supply; it is coverage. The reality is that many countries are struggling with their rollouts to turn vaccines into vaccinations. That is where our priority must now lie—ensuring that these countries get the right vaccines and the right volumes at the right time. That means providing support so that countries can scale up their delivery systems and increase absorptive capacity and demand. This is what they will need to get doses out to people faster and ultimately achieve their targets.

Although we must help countries achieve their national targets, it's critical that we get high coverage of high-risk groups—health care workers, the elderly and those immunosuppressed or with comorbidities. Right now we estimate coverage of about 75% for health care workers and 57% for those over 60. This is not good enough. The pandemic is not yet over—far from it—so it's imperative that countries use the doses available for them to protect as much of their population as possible, starting with those most at risk. The good news is that we now have enough supply to help

them not only meet these national targets but possibly even exceed them.

I'd like to end by thanking Canada for its incredible leadership, support and ongoing partnership to help make that possible.

Thank you, Mr. Chair.

**The Chair:** Thank you very much for your opening remarks.

We will now go to Ms. Caprani. The floor is yours for five minutes, please.

• (1115)

**Ms. Lily Caprani (Head of Advocacy and Global Lead for Global Health, Vaccines and Pandemic Response, United Nations Children's Fund (UNICEF)):** Good morning. Thank you so much for having me, distinguished guests and parliamentarians.

UNICEF, as you know, is the United Nations children's agency, and we're very proud to be the lead delivery partner for COVAX. That's everything from procuring vaccines to delivering the last mile and making sure that vaccines get into arms.

Lots of what I'll say may underscore what you've heard from Dr. Berkley: that the journey of the last two years has taken us from a position of insufficient supplies of vaccines to achieve coverage at the rates needed to protect populations around the world to today's problem of having sufficient supplies but being unable to always turn those vaccines into vaccinations and protect the most vulnerable populations around the world.

The pandemic is far from over, as we know. A new variant continues to emerge every four months or so, and the threat is not over, either to those vulnerable populations or to any country. Even with high vaccine coverage, it remains in our enlightened self-interest to continue to press for global co-operation and ensure that all vulnerable populations around the world receive the protection they need from severe illness and death and to reduce the ongoing disruptions to other essential services.

One of UNICEF's chief concerns is to make sure that the ongoing response to the pandemic doesn't come at the cost of other essential services, including routine childhood immunization, access to education, access to primary health care and all of those essential functions that protect children's lives now and their opportunities in the future.

As part of the vaccine global rollout, we've seen ongoing challenges to achieving a supply chain, and throughout 2021, as we know, the biggest challenge was making sure that low- and middle-income countries could access vaccines. That inequality, the stark inequality in access to supplies, has to some extent been addressed, with thanks to the global leadership of high-income countries, including Canada, generously funding COVAX and the ACT-Accelerator and donating doses when vaccine supplies were not available.

As you've heard from Dr. Berkley and others, today's challenge is primarily one of deploying those vaccines and making sure they reach the people who need them most. In order to do that, we need far more attention and investment on the delivery challenges. It's not good just delivering vaccines, the products themselves; they need to get from the tarmac and into arms. In order to do that, we need sustained efforts to invest in health system capacities in the lowest-income countries in the world.

We know that most of the countries with the lowest levels of coverage face many competing demands. I hope we will take a moment to put ourselves in the shoes of health ministers in low- and middle-income countries, who face conflict and security challenges, competing health emergencies, constrained budgets, insufficient health care workforce capacity and many other competing challenges to find practical ways to help provide the technical assistance, the operational assistance and the funding needed to overcome those hurdles. If we don't do that, we will not achieve the coverage needed to protect those countries and all of us around the world.

In order to do that, we need to address some critical bottlenecks that are becoming more and more clear. We ask Canada and all supporters of COVAX to join in demonstrating support for those countries to continue to be able to politically prioritize the COVID response in the face of these other competing challenges. In order to do that using predictable supplies and predictable arrivals of vaccines and other countermeasure products, they'll need sufficient funding to be able to support a highly trained, well-protected and properly paid health care workforce ready to deploy these vaccines in communities that need full risk communication and engagement so that populations are fully aware of where to access vaccines and can do so from a trusted, well-equipped and well-trained health care worker.

In order to achieve this, we would ask Canada to continue its global leadership by investing not just in procurement of vaccines but in the delivery of vaccines in the last-mile challenges, and to do so in a way that does not come at the cost of other essential services. Just to underscore how essential this is, we're seeing for the first time in more than 10 years a reduction in the number of children who are receiving routine immunization and the largest number of children who receive no vaccines at all.

• (1120)

As a consequence, we're beginning to see outbreaks of other vaccine-preventable diseases. Those will cause further disruptions and further strains on those health care services. Therefore, an investment in the delivery of the COVID-19 vaccine is an investment not just in tackling the pandemic but also in protecting the health of all

from other diseases at the same time. Further, we know that evidence from the Vaccine Delivery Partnership, which WHO, UNICEF and Gavi are part of, shows that this is one of the main reasons countries are struggling to prioritize the COVID-19 vaccine rollout.

I don't want to repeat too much of what's already been said, but I'd like to underscore that investing in capacity to ensure there's further geographical diversity of manufacturing and lifting of intellectual property rights are some ways. As you've already heard from Dr. Berkley, all of the agencies involved in the COVAX rollout will support anything that encourages the lifting of barriers to expand the capacity and diversity of the availability of vaccines; however, the TRIPS waiver, which I know is the mechanism under discussion, is probably neither necessary nor sufficient to achieve this.

I'll end by saying thank you again for the leadership of the Canadian government and for your generous contributions. The pandemic is far from over. It's a risk to health services everywhere and to global health security. It's also a great opportunity, if we use this pandemic response, to invest in sustainable expansion of health care capacity everywhere. That will not only help end this pandemic but also protect future generations from future pandemics.

**The Chair:** Thank you so much, Ms. Caprani, for your opening remarks.

We will now go to our rounds of questions. For the benefit of our witnesses, these rounds are very carefully timed and, in some cases, very short rounds. I use a signal to indicate when 30 seconds of questioning or speaking time remain. If we can stick to that, it will help us to navigate the rounds of questions that are ahead of us.

The first round consists of six-minute segments. Leading us off this morning will be Mr. Genuis for six minutes.

Please go ahead.

**Mr. Garnett Genuis (Sherwood Park—Fort Saskatchewan, CPC):** Thank you, Mr. Chair.

Thank you to the witnesses.

Dr. Berkley, are you seeing developing countries' leaders expressing preferences with respect to the kinds of vaccine they receive? Do you have instances of people declining certain brands of vaccine or seeking some over others? What reasons are being given for those preferences?

**Dr. Seth Berkley:** I'm sorry, Mr. Chair, but do you want us to respond immediately or are we waiting?

**The Chair:** Yes, please, Dr. Berkley, go directly to the member's question. It's basically up to the member to navigate his or her speaking time.

**Dr. Seth Berkley:** Okay.

The answer is yes, we are seeing preferences.

When we started, basically people wanted any vaccine at all. People were accepting a full range of vaccines. They were getting them from different sources, and they would also accept vaccines that had relatively short shelf lives when they came by donations. That has since changed. Countries that have experience with vaccines have chosen to use a particular vaccine. An example would be the AstraZeneca vaccine, which was very important at the beginning. Recently, there has been less demand for that vaccine—not from all countries, but from some. In particular, countries do not want short shelf life vaccines because they don't give them ample time for planning and making sure they can get the doses out to the periphery. Now COVAX is offering a six-month timeline of doses coming forward. With that, they get to choose their priority vaccines.

Also, in the case of donations, we've asked that donations come with at least two months' shelf time in country so they can be provided as doses.

**Mr. Garnett Genuis:** Thank you so much.

You sort of answered my next question as well, which was about expiry of doses. I recall the case in Nigeria, where I think something like a million doses had to be destroyed.

Would you be able to provide us in writing with a sense of which particular kinds of vaccines are being sought and which ones are not, just a sense of what countries are asking for? Would you have those documents available to share with the committee at a later point?

• (1125)

**Dr. Seth Berkley:** We do have that information. Obviously, we have plans for every single country. The good news is that right now, there's been a pretty broad distribution of vaccines, both mRNA vaccines and vector-based vaccines. In the past, we've used some inactivated vaccines, but those have been less in demand. We now have adjuvanted proteins, which have not yet taken off, but we expect over time, as people understand their characteristics, they will be taken up. We can submit that.

**Mr. Garnett Genuis:** Thank you very much.

I want to ask you about the impact of indemnification clauses in vaccine contracts in the developing world.

I know that our country, our government, has signed indemnification clauses around claims that might be made against vaccine manufacturers. What is the application of those clauses if Canada donates vaccines to countries in the developing world? Do developing countries sign their own indemnification clauses? Do those clauses not apply? Could you shed some light on that issue, please?

**Dr. Seth Berkley:** One thing that we did early on was to set up new mechanisms to work in a pandemic, many of which, surprisingly, weren't set up before. One of them was a standardized indemnification liability agreement. We got all of the manufacturers to agree to that. That has now been approved by all of the countries that are receiving COVAX doses. When the doses that Canada donates are transferred to the COVAX facility, they get covered by those indemnification and liability agreements.

One other thing we've done, which has really been an innovation, is to also have a no-fault compensation scheme set up for all these countries. In the case of severe disease or death from vaccine-related effects, that allows countries to go ahead and receive a certain amount of financing that is available. That is funded by a certain price on each dose of vaccine that is part of the COVAX facility. That covers both the doses that COVAX purchases as well as the doses that are donated through the COVAX facility.

**Mr. Garnett Genuis:** Thank you.

Just to clarify, that no-fault compensation package, then, is paid for by the purchaser of the vaccines. A portion of what every government or actor is paying when they purchase doses is going into that fund for no-fault compensation.

**Dr. Seth Berkley:** No, that's not correct.

What we're doing is paying for it as part of the COVAX assets that exist. A country can, if it wants, as part of its donation, pay for the delivery costs, ancillary costs, etc., but we are using the financing we receive to pay those costs.

**Mr. Garnett Genuis:** Thank you.

I'm going to ask one more question before my time's up. How much has been paid out of that no-fault compensation fund so far? If you don't have the answer, could you provide it in writing? Thank you.

**Dr. Seth Berkley:** I can't give you the exact number, but there have not been a lot of claims on that account.

**The Chair:** Thank you very much, Mr. Genuis, and Dr. Berkley.

We will go to our next intervention. Go ahead, Mr. Ehsassi, please, for six minutes.

**Mr. Ali Ehsassi (Willowdale, Lib.):** Thank you, Mr. Chair. Allow me to start with Dr. Berkley.

Dr. Berkley, as you know, the WHO did previously set a goal of vaccinating 70% of the population of every country by this summer. Where are we as far as that specific target is concerned? Do you believe we can meet it?

**Dr. Seth Berkley:** First of all, I did go over the numbers. In terms of the global average, 59% have received two doses of vaccines. In terms of the AMC 92, the 92 lowest-income countries, that number is now at 44%.

I also went over the fact that there are some low-coverage countries that are still at less than 10%. There are 18 of those now. It is very unlikely that those countries will be able to get to 70% by the middle of this year. It may be possible that countries will get to 70% by the end of the year. Some countries have set goals that are far beyond that, talking about mid-2023 or later. We have to rely on what the countries choose as their goals rather than a global aspirational target for coverage. That's what we do. We work with each country to determine their goals.

Of course, the one thing I emphasized in my remarks is that we want to make sure the high-risk populations—health care workers, the elderly and those with comorbidities—are vaccinated. Today, that means not just the primary doses, the two doses, but also boosting. Boosting has come up late in the WHO recommendations. That's something, again, that countries are working on now.

● (1130)

**Mr. Ali Ehsassi:** Thank you for that.

As I understood it, in your testimony you were saying that supply is not a challenge at this particular point, but we heard from Ms. Caprani that there are a number of different bottlenecks. It appears that the greatest bottleneck is actually building capacity insofar as health care workers are concerned.

I know that Canada has set aside quite a bit of money for capacity building, but what is it going to take for the international community to achieve that objective of building a more professional workforce in various countries to make sure we can meet these targets?

**Dr. Seth Berkley:** First of all, I think Lily was particularly talking about these low-coverage countries. There are many developing countries that actually have done pretty well in increasing their coverage and getting to high coverage levels, but there certainly are countries with weak health systems.

Fifteen of the 18 countries that haven't gotten to 10% yet are fragile countries. In those circumstances, there haven't been adequate investments, and there are usually not adequate finances to do that. Of course, immunization is the most widely distributed of all health interventions, and as Lily suggested in her testimony, we've been working on building a sustained and resilient health system in all countries, but of course in countries that have fragility or that have problems or warfare, it is very difficult to do that.

Financing is part of the solution, but good governance and the ability to access all populations will also be critical. These are things that we're working with, not just with the partners that we've talked about here, but with humanitarian partners, civil society and others to try to make sure we can enhance those systems.

**Mr. Ali Ehsassi:** Just in terms of enhancing those systems, as you put it, would it not be fair to say that financial assistance alone is not going to be sufficient and that there have to be more experts that can assist these countries to bring their systems up to the standards that are required? As you know, many countries have provided assistance of a financial nature, but maybe more is required to make sure that we can move forward.

**Dr. Seth Berkley:** When we talk about assistance, we talk about financing and we talk about technical assistance and we also talk

about technology assistance. One of the things that's important is to build better technology to have better data systems and a better ability to have supply chains that are resilient. This is all part of what we talk about in building capacity, and it's why in fragile countries it becomes even more difficult than it is in countries that are relatively stable, where that investment over time can be sustained.

An example would be in a country like Syria. We saw a very strongly functioning health system and immunization system get completely destroyed, including the cold chain, the supply chain and everything, so that at the end it really was about rebuilding it and tolerating the fact that the war situation meant that we were going to have to continue to invest.

**The Chair:** Mr. Ehsassi, you have about 30 seconds, so you can get in a quick one.

**Mr. Ali Ehsassi:** I'm sorry. I thought I didn't.

Again, I just want to return to this point. Perhaps if we can hear from Ms. Caprani. How do we ensure that the workforce is there and that as members of the international community, we are doing our part to build that capacity? This seems to be the critical question.

**The Chair:** Could we have just a brief answer, please?

● (1135)

**Ms. Lily Caprani:** I would agree. It's one of the most critical components to expanding capacity. We do need a significantly larger primary health care workforce, not just in order to tackle the pandemic but in order to catch up on the lost gains in routine immunization and to rebuild those highly disrupted health care systems. It will take both domestic investment of resources and better coordination and alignment by international donors as well.

In terms of the role of a government like Canada's, I think it's both: by investing in those delivery challenges and by leading by example and using your influence in fora like the G7, the G20 and the UN General Assembly to convey the message to other donor partners that coordination and a very clear focus on investing sustainably in the primary health care workforce is going to be one of the most important tools, not just in ending this pandemic but in preparing for the next one as well.

[Translation]

**The Chair:** Thank you, Mr. Ehsassi, and to the witnesses.

We now go to Mr. Bergeron for six minutes.

**Mr. Stéphane Bergeron (Montarville, BQ):** Thank you, Mr. Chair.

I'd like to thank the witnesses for being with us today and for enlightening us with their comments.

On March 21, Joshua Tabah, director general of the health and nutrition section of the Department of Foreign Affairs, Trade and Development, suggested that there was a supply issue with vaccines in 2021, whereas now it's more of a demand issue. That's what you're confirming or seem to be confirming today. We're having trouble getting available vaccines into arms, from what I understand.

Furthermore, Mr. Ehsassi talked about the lack of qualified personnel. We could also talk about other factors, such as the cold chain and large distances to travel to cover small isolated villages here and there, but also the vaccine hesitancy found in some countries.

The World Health Organization announced last Thursday that 1 million African children have been vaccinated against malaria. We've been told that an average of 6 million people are currently being vaccinated in Africa each week against COVID-19 and that this number would need to increase to 36 million to reach the target of 70% vaccination coverage.

My question to both witnesses is this: In Africa, is there the same kind of hesitancy toward the malaria vaccine as there is toward COVID-19 vaccines?

[English]

**Dr. Seth Berkley:** The malaria situation is quite different. Malaria was only recently recommended as a vaccine by the WHO steering committee. Prior to this, we were doing a pilot study to see how the vaccine could be implemented in the community. Would people continue to use bed nets, given that the vaccine is not 100% efficacious? With an understanding that people would continue to use bed nets and could get good coverage, it's recently been recommended, but it has not been rolled out more generally.

The challenge for the malaria vaccine—there's been enormous demand—has been that, at the moment, there is not a large amount of supply. There have been difficulties in manufacturing it. We are working to try to see if the vaccine can be scaled up in larger quantities, as well as having other manufacturers come in with other vaccines.

On your broader question of hesitancy, the hesitancy for COVID has been worse than with other vaccines, partially because it's been politicized in the west. They share the same mass communication platforms and social media that we have in the west. What we are seeing are rumours and misinformation spreading and causing hesitancy.

Of course, the partners on the ground are always working to try to make sure that people have the right information. Local political leaders and health care workers are working to try to provide that information to overcome that hesitancy, but it is a bigger challenge with COVID-19 than we've seen with any other vaccine to date.

[Translation]

**Mr. Stéphane Bergeron:** Does that include the malaria vaccine?

• (1140)

[English]

**Dr. Seth Berkley:** There has not yet been a campaign to roll out the vaccine for malaria. There is a current effort looking at how the vaccine will be rolled out, given the fact that there isn't an adequate supply for everybody who will want it. There will be an allocation mechanism that looks at places that have the highest incidence of malaria combined with inaccessibility and therefore the most usefulness until there's more availability. We also had to do that with the COVID-19 vaccines at the beginning, when there were not enough doses available.

I suspect Lily might have some things she would want to say on this as well. I don't know if you'd like to give her a voice.

[Translation]

**Mr. Stéphane Bergeron:** Yes, of course.

[English]

**Ms. Lily Caprani:** Thank you.

On the issue of vaccine demand—and I'm deliberately using the word “demand” and not “hesitancy”—I think it's very important that we don't fall into the trap of assuming that lower-than-ideal demand and uptake are entirely about hesitancy around the product or the science of the vaccines. The evidence doesn't support that. In fact, multiple institutional surveys across countries in Africa have found that the vast majority of people, when asked whether they intend to get vaccinated, say that yes, they do. When we ask them why they are not yet vaccinated, the reasons are more complex than simple hesitancy. Often it's a matter of convenience or of understanding or of having the right information, as opposed to some sort of principled objection to vaccination. While hesitancy is real, it's often overstated as one of the problems with demand.

A couple of things can be done to improve that situation. One is, as we've mentioned, the kind of risk communication and engagement with communities that allows them to access reliable information, often via a community-embedded health care worker. This will go a great deal of the way towards addressing it. Second, making access to these vaccines convenient by bundling and integrating them with other health systems will also make a huge difference to uptake and demand.

That's not to say misinformation isn't a challenge; it is, but it's important that we not put all of the blame on that. It's a misunderstanding of the situation on the ground.



[Translation]

**The Chair:** Thank you very much to Mr. Bergeron and to the witnesses.

Go ahead, Ms. McPherson. You have six minutes.

[English]

Go ahead.

**Ms. Heather McPherson (Edmonton Strathcona, NDP):** Thank you, Mr. Chair.

I'd like to thank the witnesses for being with us today and for sharing their expertise with us. This has been very interesting.

I will start with Ms. Caprani.

You spoke a little bit about the trickle-down of the impacts on countries, outside of the vaccines. One big concern that I am feeling with this is, first of all, that the world has changed focus. Now that the developed world or the countries in the north have reached fourth doses and have increased their vaccination, there is this feeling that COVID-19 is over and that we can change the channel or turn the page. I think both of our witnesses today have made it very clear that we are not out of this pandemic and that variants will continue to develop.

One worry of mine is that ODA will be impacted. Countries will see their vaccines as a portion of their ODA, which means fewer ODA dollars will be available for things like other health care initiatives, education and support for women and girls.

Can you speak about whether or not that worry is founded, and what we can do to prevent it?

**Ms. Lily Caprani:** There are two separate points. The wider impact of the pandemic on developing countries—especially their health systems, but also other essential social sector provision—is an enormous concern, especially for UNICEF, because of the way children are kind of hidden victims of the pandemic. Although they haven't been at greatest risk of severe illness and death from the pandemic, they have suffered from extensive closures of essential services, backsliding of routine immunizations, a lack of access to newborn and maternal health care, and school closures. They really will bear a generational cost of the pandemic response, especially if investments in other forms of ODA are reduced in order to pay for the pandemic response.

The pandemic response needs to be additional to, not instead of, continued and sustained investments in health, education and social protection services. That continues to be in the interest of all high-income countries as well. This should never have been, and is not, a matter of charity or generosity. It's in the enlightened self-interest of all to continue to make these investments.

We're also beginning to see, as I mentioned, alarming backsliding in progress that was hard won over more than a decade. We're seeing the return of outbreaks of other vaccine-preventable diseases, including measles and now polio as well, which have significant knock-on effects on the health system and on communities surrounding those low-coverage areas. This kind of reversal of progress is entirely avoidable. It is a very concerning side effect of not having sustained investment throughout the pandemic.

I don't want to get too far off topic, but we are starting to see the same kinds of worrying trends in the provision of nutrition services, for example, as well.

Yes, it is a huge concern. While we know that the OECD DAC rules allow donor countries to offset some of these pandemic donations and payments against their ODA, we would strongly encourage donor governments not to do so and to recognize the long-term impact that will have on hard-won gains in health and development.

• (1145)

**Ms. Heather McPherson:** Thank you.

I think it's such an important point that we are talking about “in addition to”, not “instead of”. That's a vital thing that I'll certainly be pushing for.

My next set of questions is for Dr. Berkley.

Dr. Berkley, it's a little bit opaque for us to understand exactly the situation with regard to Canadian doses that have been donated. We have heard that there's a commitment for 200 million doses. We have seen some dollars. The additional dollars in the budget were of course very welcome. The government has talked about giving approximately \$87 million to date. Can you give us some actual numbers of where those doses are and what that looks like?

From what I understand, the only ones that I can actually find and put my finger on are those 21,600 doses that went to Madagascar. I would like more clarity on that, if I could.

**Dr. Seth Berkley:** I don't have all the information in front of me. In terms of doses that I am aware of, there were 10 million doses of Moderna that were provided. There were 12 million of J&J, about 22 million doses of AstraZeneca and seven million of NovaVax.

Some of those donations were ultimately returned because of short shelf life, but the vast majority of them have been delivered. I don't have a breakdown in front of me about which countries they went to, but my understanding is that Canada did not earmark those doses, and therefore they went into the general supply for the 92 countries that need it.

**Ms. Heather McPherson:** If you could provide those numbers in writing at a later date, that would be fantastic. It does seem like it is a fraction of the doses we would like to see.

The very last question—I know that I'm running out of time—is a very quick question. What would have been the result on the vaccine rollout if the TRIPS waiver had been accepted when South Africa and India asked for it at the very beginning of the pandemic? We're two and half years in and we still have not agreed to that.

What would have been the impacts if we had agreed to that waiver much sooner?

**The Chair:** Give just a brief answer, please.

**Dr. Seth Berkley:** None.

The critical issue is know-how. Patents have not been the blocking factor here. Of course, you need to have access to any patents, but they can even be worked around. The critical issue for biologics is know-how. If you don't have the know-how....

Moderna has said that they were not going to block their patents from the beginning, but nobody has been able to make the Moderna vaccine because they don't have the know-how. It's the know-how that's critical.

**The Chair:** Thank you so much. Thank you, Ms. McPherson.

We'll now go to our second round. Just in the interest of time, in our second panel, I would suggest that we compress our allocations to four minutes and two minutes, respectively.

If that's okay with colleagues, I would like to ask Mr. Aboultaif to lead us off, please, for four minutes.

**Mr. Ziad Aboultaif (Edmonton Manning, CPC):** Thank you, Chair. Thanks to our witnesses. Thank you again for appearing before the committee this morning.

Dr. Berkley, you mentioned some vaccine brands for which there's less demand, such as AstraZeneca, and that there are some vaccines that were rejected because of short shelf life. Both are actually bad news, because there's a waste there that could be prevented.

First, would you be able to tell us how many vaccinations were rejected due to short shelf life? Where is the deficiency in the system? Is it the infrastructure? Is it the supply chain? What is it that causes that waste of vaccinations?

• (1150)

**Dr. Seth Berkley:** Initially, people were very happy to take any vaccine dose, including those with a short shelf life. There was enormous demand, and people would take them and use them very quickly. What's happened since is that countries have now gotten access to vaccines. With those vaccines being in country, they have planned programs and are working on it. If doses show up that have a short shelf life, they have to either displace the doses that they have planned to use or they have to return those short-shelf-life vaccines.

Some have displaced the vaccines they were planning. Some have rejected them. Of course, if it's coming through COVAX, we don't provide those doses without first asking whether they'll take them, including what the timeline is, but some donors have provided vaccines outside of COVAX with short shelf life and put political pressure on countries to take them. This has meant, if they have

short shelf life, that they have to go ahead and push out their other vaccines, which may create problems with those.

**Mr. Ziad Aboultaif:** Would you have the information, again, on how many of those vaccines were discarded because of that?

**Dr. Seth Berkley:** Yes, we have that information. Do you want it just for Canada, or for COVAX in general?

**Mr. Ziad Aboultaif:** In general, if that's okay. Hopefully it's detailed by country.

Ms. Caprani, you're with UNICEF. I was amazed to hear that some vaccination deliveries did not go well. They were supposed to go to certain countries, especially lower-income ones and middle-income ones. Can you advise us on the supply chain at UNICEF? I believe that an organization so well established must have that readiness.

What was the holdup in not being able to deliver all the vaccinations, especially when they became available?

**Ms. Lily Caprani:** UNICEF's supply division is the lead delivery agency for COVAX. That means we are part of the procurement process and of delivery in literal terms, transporting or shipping and flying vaccines to countries. In fact, there is no problem with doing that.

I think there has been a misunderstanding. When we say “delivery challenges”, we don't mean transport problems. Often, the turnaround time between receiving doses, getting them on a plane and delivering them to a country can be as little as 48 hours. There's no constraint in terms of the transportation.

The process involves a country being ready to receive and accept doses. UNICEF will never deliver doses that are ready to be deployed if they can't be accepted by a country and turned into vaccinations received in people's arms. Each country must, of course, tell us it is ready to go before we will deliver vaccines. This is in order to prevent wastage, precisely as we've been discussing.

One way of thinking about it is that we're acting as a matchmaker between available supplies from donors or manufacturers and the receiving countries. As a matchmaker, we have an extremely high success rate. When countries are not able to take those vaccines and deploy them—rejecting them due to short shelf life, or because they simply haven't been able to mobilize a workforce that is ready to go—they will decline. Wherever possible, we'll redirect those vaccines to another country that is ready to deploy them.

Unfortunately, sometimes that does result in waste. Obviously, we aim to minimize that. Thus far it's been very low.

**Mr. Ziad Aboultaif:** Thank you.

**The Chair:** Thank you so much.

Thank you, Mr. Aboultaif. We'll have to leave it there in the interest of time.

Ms. Vandenbeld, please go ahead. You have four minutes.

**Ms. Anita Vandenbeld (Ottawa West—Nepean, Lib.):** Thank you very much.

Thank you to the witnesses for their expert testimony today.

I'd like to follow up on a previous question asked by Ms. McPherson and touched on by Mr. Aboultaif. It's about how donations are provided, as cash versus actual vaccines.

When there are supplementary doses a country doesn't need, or options to purchase, there's a mechanism to provide that bilaterally from country to country. My understanding is that cash donations directly to COVAX and the ACT-Accelerator are far preferable. Rather than having to find existing doses and sending those vaccines somewhere, providing cash can be done much more flexibly. It can also add to things like health systems. When Canada provides cash donations equivalent to vaccines, we're also including things like syringes and everything else, and we're one of the few countries doing that.

I'm looking at numbers. My understanding is that if you include the cash transfers in lieu of vaccines, we're well over 100 million already and well on our way to the 200 million vaccine doses that we pledged. That's not even including the extra billion dollars in budget 2022.

Can you talk about whether or not the cash donations equivalent is most needed right now?

• (1155)

**Dr. Seth Berkley:** Thank you for that question. You are absolutely right: Cash is better now.

There was a moment in the middle of last year when we were unable to access doses because of export bans from multiple countries, because of vaccine hoarding, etc. At that point, donations were a godsend. They were really helpful because they allowed doses to flow, but we now have the unlocking of doses from manufacturers. By the way, that's another delay that Lily did not mention. It is not a UNICEF delay, but we also have to wait for the companies to be ready to ship doses, having cleared them, even though they have been produced. Sometimes the delay we talk about in delivery is that. Cash is better.

That said, we don't want to see wastage anywhere. Lily talked about COVAX internally, but we would prefer to see all doses go to a good home. We have tried to continue to respond to countries that have come to us and said, "We have doses that are available" as long as we can match them up to what countries want and they have adequate shelf life. Of course, we will not try to push those doses out anymore if the countries don't need them or already have an excess of those doses. That's really the challenge. Cash gives us flexibility, and thank you, Canada, for providing the ancillary syringes, etc., for doses. You're right that some other countries haven't done that, and that has meant that we've had to use financing to purchase them.

**Ms. Anita Vandenberg:** I'd also like to follow up on what you both have said about capacity and building up health systems. I've noted that in addition to the \$732 million extra for the ACT-Accelerator in the 2022 budget, we are also providing \$296 million to build up health systems around the world.

I'll start with Ms. Caprani.

Can you tell us why this is so important, particularly when you're talking about children and talking about future pandemics? Why is it so important that we're funding not just vaccines but health systems?

**The Chair:** Make it a brief answer, please, in the interest of time.

**Ms. Lily Caprani:** Thank you.

It is absolutely essential. Thank you to Canada for leading the way and demonstrating a willingness to invest in health systems. Often the Cinderella service doesn't get the investment. It's often not as attractive to donors and it's harder to measure, but it is absolutely critical.

To give an example to illustrate it right off the bat, we receive reports all the time from countries that they are having to divert resources from their current health systems in order to respond to the pandemic in a way that comes at the cost of other essential services. That's why we need to invest in these systems.

It's no surprise that the biggest indicator of a country's likelihood of having tackled the pandemic and achieved good vaccine coverage is the prior existence of a strong, well-funded, well-coordinated health care system. It's the number one way that we will end this pandemic and prevent the next one. I am concerned that in our pandemic preparedness and response debates and discussions around the world this year, investment in primary health care and in system strengthening still falls to the bottom of the political priority list. I hope that Canada will help make sure it doesn't.

**The Chair:** Thank you so much.

Thank you, Ms. Vandenberg.

[*Translation*]

Mr. Bergeron, you have six minutes. Go ahead.

**Mr. Stéphane Bergeron:** Thank you, Mr. Chair.

A panel of experts at the World Health Organization earlier this month found that a single dose of a human papillomavirus vaccine would be sufficient to provide effective immunity against COVID-19. Obviously, if this news proves to be true, it is extremely promising for the future, particularly with regard to vaccinations around the world and the fight against this pandemic, and even against a possible endemic.

What do you think about that?

• (1200)

[English]

**Dr. Seth Berkley:** The announcement from the WHO was looking, through their SAGE, which is their advisory mechanism, at HPV as a single-dose versus a two-dose and, in the past, even a three-dose vaccine for human papilloma virus and cervical cancer. It has nothing to do with COVID-19 in terms of where they are. They have suggested that data suggests, although it is not complete, that one dose of vaccine will give you protection for a period of time. They are unable to say at this time whether it will be a lifetime or not, but they feel that will be a more cost-effective way of working and, of course, people would be able to go back and revaccinate at a later time if necessary.

We will be following that WHO recommendation and therefore hopefully be able to accelerate the access to HPV vaccines.

[Translation]

**Mr. Stéphane Bergeron:** Would you like to add anything, Ms. Caprani?

[English]

**Ms. Lily Caprani:** To be clear on COVID-19 vaccines, as Dr. Berkley has said, the SAGE group of experts constantly monitors the scientific evidence available and updates its guidance. On COVID-19, we now know that protection with boosters is essential for the most vulnerable populations. We would encourage all policy-makers to follow the guidelines of the SAGE experts, which are regularly updated to reflect the latest understanding of the evolution of the virus.

[Translation]

**The Chair:** Thank you very much.

Thank you, Mr. Bergeron.

[English]

We have Ms. McPherson, please, for two minutes.

**Ms. Heather McPherson:** Thank you very much.

My first question will be for Ms. Caprani. I'm concerned about the vaccination rates internally for countries in areas where there is conflict, humanitarian crises ongoing, internally displaced people, refugee camps and whatnot. How can Canada assist in making sure the vaccines can get to those communities and vulnerable populations?

**Ms. Lily Caprani:** I think you heard earlier that the fairly newly convened vaccine delivery partnership is doing country-by-country assessment of the national priorities and the need for very flexible and tailored plans of support for every single country. Of those 18 that remain under 10% coverage, 15 are emergency countries experiencing either conflict or other humanitarian emergencies.

We know, from our experience as humanitarian agencies responding around the world for the last 75 years, that what we require are very flexible forms of funding so that we can respond in emergencies. We need flexible and tailored planning and we need to work closely with those governments to adapt to their own local needs.

Some of the best examples we've seen of successful and quite rapid increase in coverage rates have been countries where they've been able to bundle and integrate the COVID response into other humanitarian response actions and health system actions, rather than having to treat it as yet another vertical response that stands alone.

This is not necessarily in the context of humanitarian emergency, but I know that Ethiopia has managed to increase by five times its coverage rate since mid-February by being able to be much more flexible in its planning. Other countries in emergency situations need to be able to do the same.

I would encourage Canada and all donor governments to make sure that funding is delivered in a flexible way to allow the humanitarian agencies to work closely on tailoring the kind of deployment needed so that it works for the local context.

**Ms. Heather McPherson:** It's interesting what you were—

**The Chair:** Thank you very much, Ms. McPherson.

I apologize, but it's in the interests of time. We have two more intervenors.

Mr. Genuis, you have four minutes.

**Mr. Garnett Genuis:** Thank you, Mr. Chair.

On a point of clarification, do we have an hour with the next witnesses as well?

**The Chair:** We have slightly less. We need to compress that a bit, but I'll propose an equitable distribution.

**Mr. Garnett Genuis:** All right. I thought we were going to proceed to them so we don't run out of time for them, because I think having time with them is important.

I do have additional questions, if possible.

Following up on my previous questions, Dr. Berkley, could you clarify that the funding for the no-fault compensation mechanism comes from donors to COVAX and not from industry? Is that correct?

**Dr. Seth Berkley:** That is correct.

**Mr. Garnett Genuis:** Okay. There's no mechanism by which industry would be contributing to that.

• (1205)

**Dr. Seth Berkley:** There currently is no mechanism. Of course, normally industry does pay its own insurance costs or self-insures against AEFIs, but in the case of novel vaccines and during a pandemic, they weren't willing to do that. That's why we created this external no-fault compensation scheme.

**Mr. Garnett Genuis:** Is that something they had asked for?

**Dr. Seth Berkley:** It is correct that they had requested, as part of their indemnification and liability, some type of no-fault compensation scheme. Not every manufacturer had asked for that, but that was a desired outcome by a number of manufacturers who also said they wouldn't supply vaccines to developing countries unless there was some type of no-fault compensation scheme.

**Mr. Garnett Genuis:** Does that no-fault mechanism cover theoretically possible cases of bad faith or if misleading information is presented or information is withheld? Does it cover all possible cases of liability, or does it only cover unforeseeable negative events?

**Dr. Seth Berkley:** It is events that are severe in nature that are proposed to be related to the vaccine, although obviously one cannot always make a direct connection. It is run by a commercial insurance operation and managed by them in a way that allows a specific set of responses and therefore specific payments for severe side effects and death.

**Mr. Garnett Genuis:** Just to clarify my question, though, does it indemnify companies if a company might have had certain information about side effects and that information was withheld? Would those indemnification agreements cover a hypothetical case like that?

**Dr. Seth Berkley:** I would need to check with the lawyers on what the specific agreement is, but that was not the purpose of setting this up. It was not to provide blanket protection to industry; it was to make sure that if there were, as I said, severe reactions to the vaccine, unknown reactions, there would be a compensation mechanism set up.

If that's an important issue, I could have the lawyers look at what the language was.

**Mr. Garnett Genuis:** Yes, if you could, please.

Are those agreements public? Have they been released publicly? Can the particulars of those agreements be provided to the committee?

**Dr. Seth Berkley:** I'm not sure they have been provided publicly. They might be privileged documents. I can look at that as well.

**Mr. Garnett Genuis:** If you could either provide them to the committee or just provide us with a written update with respect to their status, that would be great.

**The Chair:** Thank you very much, Mr. Genuis. We'll have to leave it there.

Go ahead, Ms. Bradford, please. You have four minutes.

**Ms. Valerie Bradford (Kitchener South—Hespeler, Lib.):** I have a question for Ms. Caprani.

You mentioned that you felt that TRIPS was perhaps insufficient, that it has worked well but we need to do more. Could you please elaborate on what more we should be doing in that area?

**Ms. Lily Caprani:** UNICEF's position is that we of course want to see every action possible taken to lift any barriers to expanding manufacturing capacity. For future pandemics, if we had a more geographically diverse manufacturing base, that would be a good thing. However, as Dr. Berkley has said, lifting the TRIPS waiver wouldn't have made a difference in this pandemic, because on its own it's not enough.

With regard to expanding capacity for manufacturing vaccines, which are not the same as drugs and involve a much more complex process involving multiple components, we've been very pleased to see voluntary licensing and proactive partnership between IP holders and manufacturers. Where that has happened, it has been because of technology transfer, the sharing of know-how and voluntary licensing and proactive partnership. All those things are essential. Lifting IP rights on its own isn't enough. It wouldn't allow a manufacturer to become sufficiently expert to be able to make vaccines. As we've just heard, the Moderna example illustrates that.

It's very much worth pursuing all avenues to expanding geographic manufacturing capacity in the coming years in preparation for a future pandemic, but the priority during this pandemic has been to encourage proactive partnership, sharing of know-how, technology transfer and making sure that manufacturers that are able to produce safe and effective vaccines with appropriate regulatory oversight can do so. There are plenty of good examples of that happening without a TRIPS waiver.

● (1210)

**Ms. Valerie Bradford:** Thank you for that.

Dr. Berkley, Canada has committed \$580 million in support and has been a key champion of the COVAX facility. What more could we do to support the COVAX facility going forward?

**Dr. Seth Berkley:** Thank you for Canada's support. Obviously, as Lily and I have both said, finance is important. What's also important, and Lily mentioned this, is trying to make sure that in major fora such as the G7, the G20, the UN General Assembly, the World Health Assembly and so on, this still is prioritized. The challenge, as we heard from some of the parliamentarians, is there is a risk that people will say, "This is over. We're done with the virus." I don't think the virus is done with us, and therefore we need to make sure we can look at multiple problems and emergencies at the same time and continue to have the financial support, political support and health system support that is necessary both to build a strong response now and to be better prepared for the inevitability of a future outbreak, which is an evolutionary certainty, particularly with global warming, increased population, urbanization, and so on.

**Ms. Valerie Bradford:** Just quickly, are there any lessons that can be learned from the successes and shortcomings of COVAX to date, going forward for the next round?

**Dr. Seth Berkley:** For me, there are two lessons. One is to have contingent financing available immediately so that we can go ahead and make sure we get in the queue to purchase doses quickly.

The second is to have surge capacity. UNICEF's supply division, Gavi and all of the people initially had to work with existing staff. That was overwhelming. People did it because they knew it was the right thing to do, but we need to be better prepared to surge and respond, and to keep alive all of the lessons learned from this effort.

**Ms. Valerie Bradford:** Thank you.

**The Chair:** Thank you, Ms. Bradford.

Colleagues, on our collective behalf, I'd like to thank our witnesses, Dr. Berkley and Ms. Caprani, for being with us today.

[*Translation*]

Thank you very much to our witnesses, for your expertise and, above all, your service.

[*English*]

Thank you so much for the important work. We'll let you disconnect now. Travel safely, both of you, and thank you again.

Colleagues, we'll go right into our next panel. I'd like to welcome, from AstraZeneca Canada, Kiersten Combs, president; and from Pfizer Canada, Fabien Paquette, vaccines lead. Each witness will have five minutes for an opening statement.

We will start with you, Ms. Combs. I will give you the floor for five minutes. Please go ahead.

**Ms. Kiersten Combs (President , AstraZeneca Canada):** Thank you very much for having me today to provide a few brief remarks about AstraZeneca's role in fighting COVID-19.

In the face of the greatest health emergency in our generation, I'm incredibly proud of the role that AstraZeneca and our employees are playing to defeat the pandemic and to positively contribute to global public health.

The pandemic has never really respected boundaries or borders. It has represented an unprecedented global health and economic challenge. Because of this, at a very early stage in the crisis, AstraZeneca joined forces with the University of Oxford to bring together their world-class expertise in vaccinology with our global development manufacturing capabilities.

From the outset of this partnership, AstraZeneca committed to providing broad and equitable access to our vaccine and to making it available at no profit through the height of the crisis. I think this reflects our commitment to meet the urgent global public health need that we felt and to support health systems and economies recovering from the global outbreak.

In recognizing the complexity of vaccine manufacturing and the critical importance of the global supply chain, AstraZeneca helped establish manufacturing capacity in 15 countries at 25 different manufacturing sites to supply the vaccine in every region of the world as quickly as possible. This required us to rely on our own manufacturing capacity and to share our know-how with more than 20 partners, each of which is now fully equipped to supply the vaccine and contribute to our total output.

In support of global efforts to guarantee rapid, fair and equitable access to vaccines for people in all countries, AstraZeneca was the first biopharmaceutical company to join the COVAX partnership.

In 2021, AstraZeneca together with our global partners supplied more than 2.6 billion vaccine doses to over 180 countries across every continent, including here in Canada. Approximately two-thirds of the supply went to low- and middle-income countries. More than 300 million doses have been delivered to 130 countries through COVAX.

Since early 2020, when the true scale of the pandemic became clear, AstraZeneca has committed to helping defeat COVID-19 by harnessing and sharing our scientific knowledge and expertise to advance the development of potential medicines to prevent or treat the virus. As you know, our Vaxzevria vaccine has been a critical part of global efforts to defeat the pandemic. It received its first approval for emergency use in December 2020 and has been granted a marketing or emergency use authorization in 93 countries worldwide. That includes an emergency use listing by the WHO.

The vaccine has demonstrated efficacy against all known variants of COVID-19, including omicron. It is also effective against all severities of the disease, from asymptomatic to severe disease and hospitalization. It's generally well tolerated, according to clinical studies and real-world evidence from over 10 million patients globally. Over the course of 2021, it's estimated to have helped prevent 50 million COVID cases and five million hospitalizations and has saved more than one million lives.

Complementing our vaccine's approach, we also quickly mobilized our efforts to advance the development of Evusheld. It's a novel coronavirus-neutralizing long-acting antibody combination for the prevention and treatment of COVID-19. Evusheld is actually the first long-acting antibody combination to demonstrate benefit in both prevention and treatment of COVID-19, as well as the first antibody therapy to have shown a high level of protection against symptomatic COVID in the pre-exposure prevention setting.

While the vaccine is helping us turn the tide of this devastating pandemic, millions of people around the world—about 2% of the population—remain at risk of COVID-19 because they're unable to mount a sufficient immune response following vaccination. These are patients and other people who are immunocompromised. They include people with blood cancers or other cancers being treated with chemotherapy, people on dialysis, those taking medications after organ transplant, or those who are on immunosuppressive therapies, including medicines for multiple sclerosis or rheumatoid arthritis.

In closing, I hope I have clearly demonstrated AstraZeneca's commitment to helping defeat COVID-19 from the very beginning of the global health crisis. Our commitment has not stopped. We remain focused on providing broad and equitable access to our vaccines and our other medicines.

• (1215)

AstraZeneca remains steadfast in our commitment to changing the course of this pandemic and helping ensure that those countries with the least means are able to protect their populations. This is a humanitarian challenge that we have, and it demands a global united response, not just from the scientific community but also from industries, organizations, governments and, really, every person around the globe. We are committed to continuing to play our part in this public health crisis.

Thank you.

**The Chair:** Thank you very much, Ms. Combs, for your opening remarks.

[Translation]

Mr. Paquette, you have five minutes for your opening remarks.

[English]

**Mr. Fabien Paquette (Vaccines Lead, Pfizer Canada):** Thank you, Mr. Chair and members of the committee.

[Translation]

Good afternoon, everyone.

I'm very grateful for your invitation today to contribute to your study.

Pfizer and BioNTech have been firmly committed to equitable and affordable access to COVID-19 vaccines for people around the world since the beginning of the pandemic.

• (1220)

[English]

First, we started by introducing tiered pricing. We established one tier for wealthier nations, such as Canada, where the price was benchmarked to the historical costs of the flu vaccine. Middle-income countries were asked to pay half of that price. Lower-income countries, which represent approximately 50% of the world's population, were offered a not-for-profit price.

Second, we established multiple supply pathways, such as direct supply agreements, with governments like Canada's. To date, we've delivered more than 71 million doses here in Canada. We have direct supply agreements with COVAX. In 2021, Pfizer-BioNTech shipped more than 250 million doses, which is more than 25% of the total COVAX supply, to more than 100 countries and territories. We've supported government donation programs, including one billion doses supplied to the U.S. for donations to low- and middle-income countries, as well as the African Union. We've also initiated humanitarian donations.

Third, we've deployed a reliable global manufacturing network.

[Translation]

As of April 17, 3.3 billion doses of the Pfizer-BioNTech vaccine have been delivered to more than 179 countries and territories in every region of the world.

[English]

We pledged to provide two billion doses to low- and middle-income countries in 2021 and 2022. As of April 17, we've delivered more than 1.3 billion doses to 110 countries toward this pledge.

[Translation]

Our supply chain and manufacturing network spans four continents and includes more than 20 facilities. We are sharing our technology with numerous manufacturing partners, including Biovac in South Africa, Eurofarma in Brazil and many others. Our voluntary licensing agreements are with partners with a strong track record in quality vaccine production and with the ability to manufacture at large scale.

[English]

Increasingly, credible voices around the world are recognizing that patents or supply is not the issue. The Africa Centres for Disease Control and Prevention has paused all COVID-19 vaccine donations until the third or fourth quarter of this year, stating that the primary challenge for vaccinating the continent is no longer supply shortages but logistical challenges and vaccine hesitancy.

The WHO has reported that many countries are struggling to achieve a high uptake of COVID-19 vaccines, despite adequate supply. The African Union and COVAX have declined options to obtain vaccines as developing nations struggle to turn supplies into inoculation. India's two major COVID-19 vaccine makers have halted production of vaccines, citing a high inventory and a lack of new orders.

To achieve the goal of vaccinating the world's population, we need to focus our efforts where they matter the most. First is investing in country readiness and addressing vaccine hesitancy. The real solutions to improve vaccine access include reinforcing and maintaining health infrastructure to deliver the vaccine, supporting frontline health workers to administer the vaccine, vaccine hesitancy campaigns to increase acceptance of the vaccine, dose sharing and removing trade barriers.

[Translation]

These are the major pandemic issues facing the developing world.

[English]

Second, we need to continue to address trade bottlenecks. Export restrictions were a significant trade barrier at the beginning of the pandemic. While they are currently manageable, there is always the risk that they will revert.

Finally, continued innovation is of paramount importance. Many companies are collaborating together to support R and D and manufacturing, thanks to intellectual property and pro-innovation policies. Together, we continue to address COVID-19 by designing additional vaccines that target new variants.

We are conducting research for specific dosages for special populations, such as children, and creating additional formulations that will improve the storage and handling of the vaccine to make it easier to administer in less-developed countries.

● (1225)

[*Translation*]

The foundation of intellectual property has enabled a strong global supply network with multiple partnerships that maintain high quality standards, resulting in an industry that is now producing about 1 billion doses of COVID-19 vaccine a month.

[*English*]

As you consider making recommendations to government, I encourage you to recognize that patents are not the obstacles to equity.

[*Translation*]

Thank you very much.

[*English*]

I look forward to your questions in English or in French.

[*Translation*]

**The Chair:** Thank you very much for your opening remarks, Mr. Paquette.

[*English*]

Colleagues, we'll go into our rounds.

I'm struggling to manage our minutes of time. We can go a little bit past. I know that's not the preference for every colleague. Some of us have commitments at one o'clock, but we could go until 1:15.

Why don't we start by doing the following? If we pare back the opening round to five minutes, that gives us some flexibility—

**Mr. Garnett Genuis:** No, please. I think each party should have six minutes to start off.

**The Chair:** Okay. If it's the preference of the committee, if that's the consensus, we can certainly stick with that.

We do have a bit of a constraint with respect to having started a bit late.

For six minutes, Mr. Genuis, please go ahead.

**Mr. Garnett Genuis:** Thank you, Mr. Chairman.

I think it's important to start off, Ms. Combs, by addressing the elephant in the room. There is declining relative demand globally for the AstraZeneca COVID-19 shot. For instance, Africa's most populous country, Nigeria, with a vaccination rate of only 6.5%, still has decided to stop taking AstraZeneca vaccine shots. I wonder if you could tell us if you would recommend the AstraZeneca

COVID-19 shot to people who are close to you and under the age of 55, based on the evidence that currently exists.

**Ms. Kiersten Combs:** I very much recognize the situation that we have globally with our vaccine. It is quite prevalent here in Canada.

To answer your question directly, I would first and foremost recommend that anybody who's close to me get vaccinated and get vaccinated wherever and however they can. The science suggests that the Vaxzevria, our vaccine, with the side effects profile that it has, is safe to take. If that's the vaccine available, I would offer it to my family members.

I will say, though, that any time you take a vaccine, any time you take any medicine, there's a risk-benefit profile associated with it that is a very individual choice. That individual choice has to be made on a person-by-person basis. It's no different with a vaccine.

**Mr. Garnett Genuis:** Thank you, madam.

To be very clear, though, Canada's National Advisory Committee on Immunization issued a statement over a year ago actually recommending against the use of your vaccine for adults under 55. It was related to concerns about vaccine-induced thrombocytopenia. Provinces have issued similar recommendations.

Would you recommend that people follow that public health advice and not take your vaccine in light of what public health authorities are recommending in Canada?

**Ms. Kiersten Combs:** I would recommend to anybody that yes, you follow the public health guidance that is given in your local area. We have the benefit here that we have other vaccines available to us. Absolutely, I would suggest that following public health guidance is the way to go.

I also know that not everywhere in the world is in the same situation. On the risk-benefit profile, there are global regulatory bodies that suggest that the risk-benefit profile for Vaxzevria is a beneficial one. It is beneficial to the individual, so taking the vaccine is recommended in certain parts of the world.

**Mr. Garnett Genuis:** Okay.

Just to follow up on that, the recommendation from Canada's health authorities at the provincial and national level is that those who are under 55 not take it.

Do you have any evidence to suggest, for instance, that the risk of vaccine-induced thrombocytopenia is lower in certain developing countries than it is in Canada? We're talking about the same disease here.

**Ms. Kiersten Combs:** No, I have no scientific evidence to prove that, but I also very much respect and defer to the public health authorities in the local areas, where the population should follow their guidance on which vaccines they choose to receive and administer in those areas. That's all I'm saying.

**Mr. Garnett Genuis:** Okay.

I think it is a bit of a problem when we have one set of health advice in one country and a different set of health advice in another country. You're saying to follow the health advice wherever you are, even though we're talking about the same compounds.



Can I ask one more question on your vaccine specifically? Was your company aware of the side effect risk profile prior to the statement being released a year ago from the National Advisory Committee on Immunization?

• (1230)

**Ms. Kiersten Combs:** When side effects started to be identified in the general population, our organization....

Remember that this product is a little bit different from a lot of vaccines and, I would suggest, from any type of pharmaceutical product, in that it was distributed and administered to a wide, diverse population almost across the globe in a very short amount of time. It was a much shorter amount of time than usual for a medicine to be introduced into the general population—

**Mr. Garnett Genuis:** I'm sorry, ma'am. I have very limited time. I'd like to give you all the time I can, but in 10 more seconds I have to ask Mr. Paquette.

Were you aware of these risks prior to that statement being released?

**Ms. Kiersten Combs:** AstraZeneca was aware of the risks associated with Vaxzevria at the time when we made it publicly known.

As we follow, in any type of—

**Mr. Garnett Genuis:** I'm sorry. I have to proceed to Mr. Paquette. You can certainly follow up with the committee in writing.

Mr. Paquette, you spoke about vaccine hesitancy. In 2009, your company paid \$2.3 billion U.S. in what was then the largest health care fraud settlement in U.S. history. This was related to allegations that you illegally promoted four drugs—Bextra, Geodon, Zyxos and Lyrica.

I share the concerns about vaccine hesitancy. Do you think settlements like this have contributed to a lack of trust in the pharmaceutical industry and vaccine hesitancy around the world?

**Mr. Fabien Paquette:** Thank you for your question.

Actually, vaccine hesitancy has been in place for a long time, for as long as vaccines have been out there. It's not new; it's something that has been seen.

We see different types of vaccine hesitancy. We see people who are pure anti-vaxxers and who really will never get a vaccine, while other people are just looking at getting a little bit more insight, understanding and information about vaccines.

I think what is critical here is to provide education, with health care providers giving the right information to the audience.

**Mr. Garnett Genuis:** Sir, I guess—

**The Chair:** Thank you very much, Mr. Genuis. That's actually over six minutes.

Dr. Fry, you have six minutes.

**Hon. Hedy Fry (Vancouver Centre, Lib.):** Thank you very much.

I want to thank you for coming and providing us with.... You're going to get a hard time from this committee, as you well know.

As a physician, I can say that it's well known that different individuals and groups react to different drugs in different ways. One cannot look at a broad consensus and say that because something happened to group A, it's necessarily going to happen to group B. That's the whole thing about the risk-benefit profile that tends to happen.

I want to ask you a question. You talked a lot about vaccine hesitancy. I want to know what you think causes vaccine hesitancy, other than fear that it's going to hurt you. You talked about the readiness of countries to be able to give the vaccine—not to produce it, but to be able to give it and get it into populations. You also talked about the WTO and supply chain problems.

First, I want to know what you think is a cause and what can you do about vaccine hesitancy. Education is indeed one thing. Also, what are you going to do about the fact that now that you have a lot of vaccines and production is paused, some countries aren't even ready to give it? What do you think can be done to assist in getting the infrastructure necessary and in getting the people who are able to give these vaccines? I mean, it doesn't have to be a physician or a nurse. It could be somebody who is trained to deliver a vaccine. What are you going to do to make that happen?

Second, what are you going to do about the supply chain problems at WTO? How are you working with WTO? What is the challenge? Why is there blockage at WTO, other than some countries not wanting to make some agreements that are necessary to get this to move forward?

**Mr. Fabien Paquette:** Dr. Fry, is the question for me?

**Hon. Hedy Fry:** It's for both of you, actually, but you can start, Mr. Paquette.

**Mr. Fabien Paquette:** First of all, vaccine hesitancy needs to be taken seriously. It differs from one country to another. The rationale as to why people may refuse vaccination or have concerns about getting vaccinated is based on different elements that need to be further understood, described and explained. I think education remains the fundamental way to help people slowly get more on board with immunization.

There is so much evidence. Science is so clear about the value of immunization and vaccines. It's a question of making sure we take the time to listen and understand the concerns being raised, provide as much support as possible and give people the time to actually reflect on this and see the value.

We've seen an increased number of people getting vaccinated as we see the pandemic going on. We see people getting vaccines on a regular basis, and that has helped to convince others of the safety and the efficacy of the vaccine. Those are basically the fundamentals we need to address.

• (1235)

**Hon. Hedy Fry:** Can you talk about what the challenges are with regard to supply chain problems? I know trade is one, and the WTO. Is the WTO addressing this, or is it stymied by some countries not wanting to do anything about it?

**Mr. Fabien Paquette:** It's really interesting, because right now, as we have significant capacity and access to vaccines, the real challenge is really the deployment of these vaccines in different countries.

If we take the example of our mRNA technology, there is a challenge related to the cold chain process. We need to make sure that the delivery of the vaccine respects the very strict guidance that applies to the cold chain. We've realized that some countries might not have the capabilities right now, or did not have them in the past, to actually be able to fully deliver our vaccines as quickly as they would like to. This is a limitation that we need to be aware of.

Our role is to help these countries get the equipment required—for instance, ultra-low temperature freezers to make sure they can store the vaccines safely—and also help them to optimally deploy the vaccines to their population. We always know that the last mile is very important. We need to make sure that we can provide the vaccines to where the people are. That process is quite complex. We probably need to have more investments in infrastructure in these countries.

**Hon. Hedy Fry:** Thank you.

Ms. Combs, do you have anything to add? I know Mr. Genuis asked you a lot about AstraZeneca and the thrombocytopenia issue. As I said before, one can argue, as you say, the risk-benefit aspect. Basically, I think you've said the benefit outweighed the risk, but are you having problems other than people being afraid to take this particular vaccine in some countries? Do you see any other ways?

For instance, I wanted to hear some of you talk about the ability to train people to deliver vaccines, to put the needle in the arm. You don't have to be a physician or nurse to do that. Many people can be trained to do that.

How do you see this moving forward? As variants change regularly, some of us are going to find that these vaccines aren't going to work. What is your answer to that?

**The Chair:** Give just a brief answer, please, in the interest of time.

**Ms. Kiersten Combs:** Quickly, as my colleague just mentioned, the different vaccines have different supply chains. We have all learned how to distribute them at the local level.

I think your idea of being able to train folks to deliver them is actually a very good one. As we all become even much more sophisticated in the business model, we will explore that as an ecosystem.

You can also see that 2.6 billion doses from AstraZeneca have been distributed in lower- to mid-tier countries. It does show the difference between the supply chain and being able to get different types of medicines into local areas to actually administer them.

**The Chair:** Thank you very much. Thank you, Dr. Fry.

[*Translation*]

Mr. Bergeron, you have six minutes. Go ahead.

**Mr. Stéphane Bergeron:** Thank you, Mr. Chair.

In mid-March, we learned through media leaks of a compromise agreement between South Africa, the U.S., India and the E.U. on a possible waiver on COVID-19 vaccine patents and a possible World Trade Organization agreement on trade-related aspects of intellectual property rights, known as TRIPS.

First, can you tell us whether you were involved in those discussions? I imagine you were. Can you tell us where those discussions are at?

• (1240)

[*English*]

**Mr. Fabien Paquette:** Ms. Combs, do you want to start?

**Ms. Kiersten Combs:** Go ahead, Fabien.

[*Translation*]

**Mr. Fabien Paquette:** I'll answer you in French, Mr. Bergeron, since you asked the question in French.

**Mr. Stéphane Bergeron:** Sure. I would have been upset had you not.

**Mr. Fabien Paquette:** Yes, of course.

Your question is a very good one.

It's important to keep in mind that the patent problem is a false problem. This has been clearly demonstrated. It's not a question of patent protection. The reality is that in order to immunize and protect the entire population, it's necessary to produce vaccines quickly and then distribute them to countries that need them, at a price that suits their needs. That's what Pfizer has done. We've maximized our production through our production chains around the world and then ensured that we have a price range that meets the needs of the various countries. As I mentioned earlier, we have three price ranges. In our opinion, these were the best solutions to respond to the pandemic and eventually put an end to it.

So it's not really a question of patents. As we've seen so far, when the experts who have the production capacity and the scientists who develop the vaccines are allowed focus their efforts on that, the industry as a whole is able to produce quantities of vaccines that meet the needs we're currently seeing in this pandemic.

[*English*]

**Ms. Kiersten Combs:** I will just reiterate, because I very much support that same position. We have seen that it's not the intellectual property that has slowed the availability of the vaccines across the globe; it has been the complexity of the supply chain and the distribution of it.

As we see across all manufacturers, the partnership in the ecosystems that we've created to be able to get the medicine to the local level has really been key to our success.

[*Translation*]

**Mr. Stéphane Bergeron:** Thank you very much.

In fact, you both seem to agree with Dr. Berkley, CEO of Gavi, who answered a previous question by saying that the problem wasn't so much with patents and intellectual property, but with know-how of the concentrates used to manufacture vaccines.

That being said, let me repeat my question, if only to keep this committee up to date, because there still seems to have been a compromise agreement between South Africa, the U.S., India and the E.U. Can you tell us where those negotiations stand today? If so, what would be the potential benefits of such an agreement?

**Mr. Fabien Paquette:** Obviously, there are discussions with the World Health Organization, but Pfizer itself, as a company, isn't involved in those discussions. These are discussions among the countries. If we're asked for our perspective, we offer it, but these aren't conversations that Pfizer is necessarily actively involved in.

**Mr. Stéphane Bergeron:** Would you like to add anything, Ms. Combs?

[English]

**Ms. Kiersten Combs:** No. In the interest of brevity, I concur. AstraZeneca is in the same position as Pfizer.

[Translation]

**Mr. Stéphane Bergeron:** Can you tell us whether you were consulted during these negotiations?

**Mr. Fabien Paquette:** Our position has already been clearly stated. We said that we didn't believe that the release of patents was the way to go, as I mentioned earlier.

Moving forward, we leave it to the countries to negotiate among themselves. Our position has always been the same from the beginning.

**Mr. Stéphane Bergeron:** What about you, Ms. Combs?

[English]

**Ms. Kiersten Combs:** Again, I concur. We are in the same position. I personally and our organization here in Canada have not engaged in these conversations and very much confirm that the issue in our perspective is not intellectual property but distribution.

• (1245)

[Translation]

**Mr. Stéphane Bergeron:** Thank you very much.

**The Chair:** Thank you very much, Mr. Bergeron.

[English]

We have Madame McPherson, please, for six minutes.

**Ms. Heather McPherson:** Thank you, Mr. Chair.

I would like to thank our guests for being here today.

I have to say that I have an AstraZeneca vaccine in my arm. I also have a Pfizer vaccine in my arm, and I also have a Moderna, which is not represented here today. I am incredibly grateful for the opportunity to be vaccinated, of course, and I echo what our colleagues have said about making sure that you take whatever vaccine is offered to you as fast as you can.

Of course, I also have concerns about how the vaccines have been rolled out. I think we can all agree that it was not a perfect

scenario, and I understand that it was done within an extremely unprecedented time and a very difficult time, but I do have some questions from the sector. I have met with many people who are concerned about how the vaccine was rolled out. I'm going to read this question, if I could.

Last year, rich countries were quickly vaccinating their population, often accumulating millions of excess doses. COVAX was struggling to access enough vaccines to fulfill its commitment to developing countries, which still now are much behind in terms of vaccination rates.

I'm wondering, Mr. Paquette, if you could tell us on what basis Pfizer's deliveries were prioritized. Were wealthy or richer countries that had bilateral deals with Pfizer able to push themselves to the front of the line because they paid more per dose?

**Mr. Fabien Paquette:** To start with, when we saw it was a pandemic, there were two components. The first was that we needed to find the best possible way to address this pandemic by producing vaccines as quickly and as safely as possible. To do so, we made sure that we put all our R and D resources into having our researchers, in collaboration with BioNTech, actually discover and then do the research and development, testing, manufacturing and distribution of the vaccines. Once you have that solution in your hands, you want to deploy it as widely as possible. As such, we were reaching out to all the countries in the world to make sure they would have an opportunity to sign an agreement with Pfizer.

To be very transparent, some raised their hands right away. Others decided to wait a bit, despite our tier pricing model. As such, we were offering our vaccines to every country in the world, including COVAX countries—with COVAX, of course—to make sure they would have access to it. However, as I said, some countries decided to sign agreements with Pfizer right away to—

**Ms. Heather McPherson:** I'm so sorry to interrupt you and I don't want to be rude, but you'll understand how pressed I am for time.

Were wealthy countries that came forward first, because they could pay that higher rate, able to access the vaccines faster? Were they able to be faster in the line?

**Mr. Fabien Paquette:** Like all the other countries, they had access to the vaccine as they were signing the agreements. There were countries that signed earlier on. I'll give you the example of Israel, which signed up front and had access to the vaccines. Canada was also among the countries that signed up front.

If lower- or middle-income countries within COVAX wanted to have our vaccine, they had access to it as well. In those cases, the challenge most likely was more around the infrastructure for deploying the vaccines in those countries.

**Ms. Heather McPherson:** We know that's the case now, but we also know that at the beginning it was actually the supply that was a problem.

Can I also ask what profit Pfizer made with regard to the COVID-19 vaccine? How much profit has Pfizer made?

**Mr. Fabien Paquette:** I haven't had any details about the overall financials of the total sales or profit on this.

**Ms. Heather McPherson:** You can't provide how much money Pfizer made by producing the vaccine. Could you provide that to the committee at a later date, in writing, please?

**Mr. Fabien Paquette:** Yes, absolutely, we can provide the total revenues.

**Ms. Heather McPherson:** Thank you.

The other thing I want to ask about is the allowing of donations to other countries. My understanding is that with the agreements that were in place, with the agreements that Pfizer had with the Government of Canada, they were unable to donate the excess vaccines because of the restrictions put in place by Pfizer.

Is that accurate?

**Mr. Fabien Paquette:** No, that is inaccurate.

I could very clearly mention that in our contractual agreement there was a clause that provided that Canada could give doses of our vaccines if they wanted to. Of course, we would need to have the conversation about how and when this could be done, but there was definitely an opportunity for Canada to actually deploy the Pfizer-BioNTech vaccines.

**Ms. Heather McPherson:** When was that clause added? When was it first possible for Canada to donate Pfizer vaccines to other countries?

**Mr. Fabien Paquette:** They were allowed to do it as soon as they were receiving vaccines. It was in the initial agreement, the first one that we signed with the country. That clause—

**Ms. Heather McPherson:** Sorry. They had a conversation with you first?

• (1250)

**Mr. Fabien Paquette:** Yes, absolutely. No, they just needed to make sure they....

We need to keep in mind that when Canada started to receive vaccines, the priority of the public health agencies across all provinces was to deploy the vaccines locally. That said, at any time there was an opportunity for Canada to engage with us to ensure that there would be a realignment of doses to lower- or middle-income countries.

**Ms. Heather McPherson:** If the Government of Canada bought those vaccines, why did we have to negotiate where those vaccines went? Why was it not possible for us to donate them as soon or as late as we wanted to? We had paid for those vaccines.

**Mr. Fabien Paquette:** Yes, absolutely. I think it was more a question of ensuring that we understood where these vaccines would be going. We wanted to ensure, of course, that those countries had the capability to deploy the vaccines optimally. It was more a discussion in that regard than anything else.

**Ms. Heather McPherson:** Okay.

**The Chair:** Ms. McPherson, I apologize. We'll have to leave it there. You'll have a chance to go in the second round, which we will get to next.

Colleagues, given the schedule and the timing, we have time for a compressed second round. We have the capacity to go until 1:15, but I understand that not every member is able to. I want to be mindful of that consideration and also give every member a chance to ask at least one question.

At the end, I'm going to ask you briefly for a housekeeping motion, which I think will be unanimously approved, but I need to have that motion for the clerk to be able to move forward on one of our projects.

I would suggest two-minute rounds and very quick questions and answers across the six members who are currently listed in round two.

If that's amenable, Mr. Aboultaif, would you lead us off for two minutes, please?

**Mr. Ziad Aboultaif:** I'm sorry that it's a short time, but I'm going to try my best.

Mr. Paquette, you have a tiered pricing policy, with three levels of pricing. Was this pricing policy universal among all countries, yes or no?

**Mr. Fabien Paquette:** Yes, absolutely. It was established that way at the beginning of the process.

**Mr. Ziad Aboultaif:** If the price for a wealthier nation was equivalent to the cost of a takeaway meal, what would that be?

**Mr. Fabien Paquette:** Well, it would depend on the cost of the meal in that country, but as you can see, I would say from what we've seen, generally speaking, that the cost of vaccines—

**Mr. Ziad Aboultaif:** If the pricing was universal, that means it should be equal among all wealthy countries, correct?

**Mr. Fabien Paquette:** Depending on the country, they would be in tier one, tier two, or tier three pricing, so—

**Mr. Ziad Aboultaif:** In tier one, for example, shouldn't Canada and the United Kingdom pay the same price?

**Mr. Fabien Paquette:** Well, not exactly the same price, but I would say it would be the same ballpark figure, as I don't have access to other countries' prices. That's what I understood is the case.

**Mr. Ziad Aboultaif:** Will you be able to provide to us what Canada has paid for tier one, two or three?

**Mr. Fabien Paquette:** As a tier one country, Canada has paid a price in the range of tier one countries.

**Mr. Ziad Aboultaif:** What was that price?

**Mr. Fabien Paquette:** As you can realize here, there have been some confidentiality components in our agreement with the Government of Canada—

**Mr. Ziad Aboultaif:** Why?

**Mr. Fabien Paquette:** —and as such, I'm not allowed to disclose any prices.

**Mr. Ziad Aboultaif:** Ms. Combs, do you have the same policy as far as pricing and pricing tiers and all that goes?

**Ms. Kiersten Combs:** In Canada, right now, we do not have a contract for Vaxzevria with the Canadian government.

**Mr. Ziad Aboultaif:** Then how did you sell us the AstraZeneca? I'm an AstraZeneca-vaccinated person.

**Ms. Kiersten Combs:** At the time, at the height of the crisis, we did. The pricing was a no-profit pricing model.

**Mr. Ziad Aboultaif:** What was that price, given that you had no contract?

**Ms. Kiersten Combs:** I do not have the price here right now. I would have to follow up.

**The Chair:** If you could provide that to the committee, Ms. Combs, it would be helpful.

Mr. Aboultaif, thank you very much.

Mr. Sorbara is next, please, for two minutes.

**Mr. Francesco Sorbara (Vaughan—Woodbridge, Lib.):** I'll be short. Thank you, Chair.

I have a quick question. I just want to follow up on the issue of vaccine hesitancy, something that we deal with in developed and developing countries. I just want to say that I've had AstraZeneca as a first dose and Moderna as a second dose. With that, what are you folks seeing on the ground? What works and what doesn't work in getting over vaccine hesitancy?

**Mr. Fabien Paquette:** Kiersten, did you want to start?

**Ms. Kiersten Combs:** Yes, I'll start and then I'll turn it over to you.

Quickly, I have two observations. It's interesting, because as you have all self-identified what vaccine you've taken, I think that is a step in overcoming vaccine hesitancy in some way. It has become much more of a top-of-mind thought for all people everywhere as to what they get vaccinated against and how. The increase in public attention has helped with that.

I think we have more to do, and some of that is a balance in the media around how we talk about the risk and benefit of being vaccinated in any disease today, but specifically in this case.

Third, I think we do need to make a grassroots effort, and specifically in certain populations, to increase education.

• (1255)

**Mr. Fabien Paquette:** Absolutely. I think those were two fundamental elements that Kiersten talked about. Education is fundamental, and also making sure that immunizers have the education and capability to provide the vaccines to their population.

**Mr. Francesco Sorbara:** Given that the supply chain is being impacted both by COVID and now by the invasion of Ukraine by Putin, do you have any comments on production issues that you may or may not be having at this moment?

**The Chair:** Make it just a brief answer, please.

**Mr. Fabien Paquette:** At this point in time, we have absolutely no issues with production. We can still supply the vaccines around the world.

[Translation]

**The Chair:** Thank you very much.

Go ahead, Mr. Bergeron. You have two minutes.

**Mr. Stéphane Bergeron:** Thank you, Mr. Chair.

Ms. Combs, in response to a question from Mr. Aboultaif, you stated that at the worst moment of the crisis, you had adopted a policy of providing vaccines on a not-for-profit basis because you had received public funds to develop the vaccine. We know that Pfizer, for example, said that it never received any public money to develop its vaccine and that it made a profit of \$37 billion U.S. in 2021 alone.

Why did you choose to move from a not-for-profit vision to one where it was possible to make a profit too?

[English]

**Ms. Kiersten Combs:** I'm assuming that question is for me.

[Translation]

**Mr. Stéphane Bergeron:** Indeed.

[English]

**Ms. Kiersten Combs:** Through the entire pandemic stage, AstraZeneca offered the vaccine at no profit globally. That included a significant amount of donations that were made either through countries or directly on AstraZeneca's behalf. At the beginning of the year, as we moved into an endemic phase, we moved to tier pricing in countries that we have vaccine contracts with.

[Translation]

**Mr. Stéphane Bergeron:** Does this change in your policy or practice correspond to the presumed loss of profits equivalent to the public subsidies? Did you decide that from that point on it was time to make a profit, since you felt you had taken into account the potential losses equivalent to the public contributions?

[English]

**The Chair:** Please give a very brief answer.

**Ms. Kiersten Combs:** To briefly answer that, this change in pricing policy—which, by the way, still offers low-income countries a no-profit option, and we're still delivering it there—has happened in just the recent months, so there are no public financial implications that can be discussed at this time at a global level. We have to wait a little bit longer.

[Translation]

**The Chair:** Thank you very much.

Thank you, Mr. Bergeron.

[English]

Ms. McPherson, you have two minutes, please.

**Ms. Heather McPherson:** Thank you very much. Thank you again to the witnesses for being here today.

I wanted to follow up with our guest from AstraZeneca. She spoke about this being a humanitarian crisis. I greatly appreciate that, because I think we can all agree that this is a humanitarian crisis. The challenge we have with the rollout of the vaccines, of course, is that it very much appears as though the profit motive has trumped the humanitarian crisis and the need for people around the world to be able to access the vaccines.

I have to say that I am disappointed that you aren't able to share some of the numbers with us. I certainly look forward to receiving those numbers from you in writing at a later date. We do have information, or it's been reported, that Pfizer, for example, has made approximately \$37 billion in profits with the COVID-19 vaccine. There's that, and also the public dollars that have gone into the development of the AstraZeneca vaccine.

I'm just wondering if either of you can talk a little bit about when it will be enough money for you, when it will be enough money that you will be able to give the vaccines to people around the world to ensure that they're available to them. My concern, obviously, is that right now we have lots of vaccines. We're experiencing hesitancy and we're experiencing other reasons for the vaccines being hard to get into people's arms, but we all know that at the beginning of this pandemic, there weren't enough vaccines. They went to wealthy countries. They went to countries that overlapped and took the supply from COVAX, and the pharmaceutical companies made massive profits.

If another pandemic or another variant of this pandemic was to come forward, how would we know that the exact same thing wouldn't happen in the future?

• (1300)

**The Chair:** Be very brief, please.

**Ms. Kiersten Combs:** I think the entire industry and specifically our organizations have shown that we are in this fight with the entire system. The idea here is not necessarily to make money, per se, on the vaccine; it is to continue to invest in the development of our vaccines, as they, to your point, need to evolve. As variants come, it requires investment and an R and D perspective to actually be able to continue to evolve the vaccine to be effective.

I think there is a balance between how we continue to vaccinate the world and continue to make sure that we have medicine and good science that is evolving not only to treat the variant, but also to have, at some point, hopefully, an easier mechanism of delivery that is able to transport across the globe in a more efficient manner.

**The Chair:** We'll have to leave it there. Thanks very much.

Mr. Genuis, you have two minutes, please.

**Mr. Garnett Genuis:** This question is for both witnesses. We'll start with Ms. Combs.

A previous witness told us that the global distribution of vaccine is subject to indemnification clauses that countries have to sign on to, meaning that if something goes wrong, your companies are shielded from liability. People cannot sue if they experienced or perceive they have experienced vaccine injuries. Instead, any com-

pensation would be paid out by a no-fault mechanism funded by COVAX, to which industry does not contribute. This witness further told us that you had asked for this protection as part of your agreements.

Could you please explain why your company asked for indemnification clauses, why public bodies should assume those liabilities, and whether these indemnification clauses would apply if information had been withheld by your company with respect to risks?

**Ms. Kiersten Combs:** I'm not privileged as to specifically the indemnification clause in the contract that you speak of. What I can say is that AstraZeneca stands behind our medicines and the safety profile of our medicines, and so—

**Mr. Garnett Genuis:** Ma'am, I'm sorry to jump in, as the Canadian president of the company, are you telling me you're not aware of the details of the indemnification clauses? We were told that you asked for them, so why did you ask for them?

**Ms. Kiersten Combs:** I asked for the indemnification clause on the Vaxzevria contract with Canada, to be clear—

**Mr. Garnett Genuis:** We were told by a previous witness who's affiliated with Gavi that industry representatives asked for indemnification clauses as part of contracts for the global distribution of vaccines. Why?

**Ms. Kiersten Combs:** I think that indemnification clauses, in all of my time in the pharmaceutical industry, are a standard part of contracting. With regard to the specific details you talk about, I don't have the knowledge to answer.

**Mr. Garnett Genuis:** I don't.... I wonder if Mr. Paquette can come in on that.

**The Chair:** I'm sorry, Mr. Genuis; we'll have to leave it there. Thanks very much.

Mr. Ehsassi, you are next, please, for two minutes.

**Mr. Ali Ehsassi:** Thank you, Mr. Chair.

I'd like to share my time with MP Vandenberg.

**Ms. Anita Vandenberg:** Thank you very much.

I'd like to ask a question that hasn't come up yet.

We know that right now, certainly in the global south, testing and treatment are becoming vitally important. In terms of treatment, the antivirals—I'm looking at Paxlovid and some of the others—are becoming very important. I'm not a scientist, but there seems to be some anecdotal evidence that this could also be effective in terms of long COVID.

We're looking at a pandemic right now, but we know that the debilitating long-term effects of COVID are still not known and there will need to be treatments for that as well. Are you putting any money and research into antivirals and into long COVID? How do you see this as being something that could help in terms of the global south and where the pandemic is going next?

Could we have Pfizer first, please?

**Mr. Fabien Paquette:** Thank you for the question.

We are investing significantly in looking at further options. We have Paxlovid, as you mentioned, which is an important treatment that is available right now around the world. Of course, we need to continue the research. We need to look at other studies to see what the impact of Paxlovid will be on long COVID.

As we're doing this, we are also continuing some research to see if there is anything else that could be used eventually to address the long COVID issues.

• (1305)

**Ms. Anita Vandenberg:** Would AstraZeneca also be interested in doing research for this?

**Ms. Kiersten Combs:** As I talked about in my opening statement, we are in the process of making available a long-acting antibody for the prevention of COVID in patients who don't mount an immune response to the vaccine, which I think is really important for an untreated population today. The commitment to longer-term development in this space is something that AstraZeneca is doing.

**The Chair:** Thank you so much. Thank you, Ms. Vandenberg.

Colleagues, on our collective behalf, I'd like to thank our witnesses from the second panel for being—

**Mr. Garnett Genuis:** On a point of order, Mr. Chair, if we have until 1:15, you might find consent from the committee for every party to have another 90 seconds.

**The Chair:** I know some colleagues have advised me that they have obligations, but is there unanimous consent for another 90-second round per member?

**Mr. Ali Ehsassi:** No.

**Mr. Garnett Genuis:** My understanding is that adjournment is by consent of a majority. You don't need unanimous consent to prolong—

**The Chair:** If we can trigger a majority to extend, that's certainly within the will of the committee. I don't know whether there is.

We do have another point of business that I am hoping to get the committee's agreement on.

**Mr. Garnett Genuis:** I suspect that there's a will from the majority of the committee for every party to have another 90 seconds.

**The Chair:** Can we do a quick thumbs-up or thumbs-down for 90 seconds per member?

I see two...three...four thumbs-down. Monsieur Bergeron has to leave as well, I think.

[*Translation*]

**Mr. Stéphane Bergeron:** I do, Mr. Chair.

[*English*]

**The Chair:** Okay, thank you.

That's the way we shape the will of the committee. Thank you for the suggestion.

Colleagues, let me thank the witnesses on our collective behalf.

Ms. Combs, thank you.

[*Translation*]

Thank you very much, Mr. Paquette.

[*English*]

Thank you for being with us. Thank you for your work and your expertise this afternoon.

Colleagues, there are two things. One is a point of information as we let our witnesses disconnect. The analysts are going to circulate, through the clerk, a proposal for committee travel. There's a deadline on Friday. Submissions at the top level have to be brought to the liaison committee if the committee wishes to travel from the end of June through September and October. They will prepare that for discussion and potential approval on Thursday.

The other thing I need is a motion and agreement from the committee to hear the delegation from Tibet, which we have been advised of through the vice-chairs. I think there is unanimous consent, as far as I can tell, to have that meeting. We need a formal motion and approval for the clerk to be able to organize that meeting.

Can somebody bring that motion?

**Hon. Michael Chong (Wellington—Halton Hills, CPC):** I move that.

**The Chair:** Thank you, Mr. Chong. It is so moved.

Is there any opposition?

(Motion agreed to [*See Minutes of Proceedings*])

**The Chair:** We have agreement on that, colleagues.

Thank you very much.

[*Translation*]

Go ahead, Mr. Chong.

**Hon. Michael Chong:** I have a question: What committee travel have you already proposed?

**The Chair:** No committee travel has been proposed at this time, but a trip to Eastern Europe may be in the cards. There are other options as well.

[*English*]

**Hon. Michael Chong:** Okay. You're going to come to us with proposals for that at some future date.

**The Chair:** The analysts will, through the clerk, send us proposals; I am not writing them. We will have some proposals on that.

[*Translation*]

Go ahead, Mr. Bergeron.

**Mr. Stéphane Bergeron:** Mr. Chair, I just wanted to know what happened to the witness from the World Health Organization that we were supposed to hear from and did not.

**The Chair:** Are you talking about the witness that we were to hear from today, Mr. Bergeron?

**Mr. Stéphane Bergeron:** Yes, Mr. Chair.

**The Chair:** I don't have any information on that right now. We'll see if we can include his testimony at a future meeting. I'm not sure at the moment.

[*English*]

Okay, colleagues, thank you. With that, we are adjourned until our next meeting.

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