
PRESIDENT JOY JOHNSON:

Welcome everyone, we are going to get started in just in a minute just let everyone gather into this room because it is a beautiful evening, really looking forward to this lecture. We will just give everyone a 2nd to get themselves settled in and in from the waiting room. Thank you for joining us.

As they say in the chat, feel free to introduce yourselves, let us know who is joining us this evening, that would be great. And we are just going to get started in a minute, I have my watch a minute-- we will start in a minutes time.

Let's get started, everyone. Good evening and thank you for joining us, I am in Vancouver this evening and it is a beautiful sunny evening. I want to thank you for joining and taking time out of your day, my name is Joy Johnson and I am the president of Simon Fraser University. I want to begin today's event to include and it's my honour to invite Elder Margaret a member of the Skawahlook First Nation to offer a traditional welcome to us.

ELDER MARGARET GEORGE:

Good evening everyone thank you for taking the time to come to this very special event with the president. An welcome president, to your event, always good to have you here. You are on the territory of the First Nations Musqueam, and Tsleil-Waututh, just a quick prayer, great spirit, thank you for taking care of us, thank you for bringing us together this evening and guide each and every one of us on the path that we are on, especially our families, thinking the communities from which we come from for allowing us to do the work that we do and our families as well, and a very special blessing on the little ones who witness what we do and what we say. I asked, great spirit, to bless each and every little one that is in our community and who are with us on the relations.

PRESIDENT JOY JOHNSON:

Thank you so much, Elder Margaret, for that wonderful welcome. Speaking to you from the traditional territories. I also want to say to everyone watching and listening today that the entire SFU community is really standing in solidarity with indigenous peoples as we grieve the unfathomable loss of life in the Kamloops residential school, Elder Margaret mentioned the little ones and we remember them this evening the devastation that has been caused by Canada's residential schools knows no moral limits and as we gather today I want us all to acknowledge the collective responsibility that we share with a system that has taken so many lives.

I'm going to switch gears now because I am also really pleased to be welcoming our presidents faculty lecturer Dr. Kelley this evening. Going to be addressing a shortly on Pandemics and Borders how to manage travel restrictions as many of you know, the presidents factually lectures are part of SFU Public Square, a signature initiative of Canada's engaged university, by providing you with opportunities to hear from and engage with leading researchers designed to enlighten and promote dialogue on important issues of public interest. There has been 6 lectures in the series exploring the theme of resilience, recovery, and a variety of disciplines. I think it's really fitting topic for our time and I think it is a great way to share ideas to connect. And we are using the Zoom meeting today, you can

turn your cameras on if you want to see one another. But also we feel it gives a chance for more connection in the webinar platform on Zoom. It allows us to communicate through the chat box and to connect.

As I mentioned earlier, please feel free to introduce yourself and the chat now, let us know where you are joining from, gives us a bit of a sense of who is in the room with us this evening. There is a chance this evening to raise questions and offer comments after the lecture and encourage you to do so. We will keep track of them as best I can and at the end of the lecture I will call asking a question so feel free to type your questions in the chat box and we really appreciate you being involved in that way.

I also want to note that we are Closed Captioning this lecture this evening and if you need Closed Captioning you can click the CC button at the bottom of your screen. Please also note this lecture is being recorded and will be available on the SFU Public Square website and YouTube channel.

And I will remind you our community guidelines which are posted on the slide as well as well as in the chat box and above all, we really want to promote a really positive environment and don't tolerate any discrimination or harm towards others.

Let me introduce Kelley Lee, Kelley Lee is a professor and a Canada Research Chair in global health--as Simon Fraser University. In her research focuses on collective action to address the impacts of globalization on population health and disease. Was trained in public administration and the received grants from the US National Institute of health, Canadian Institute for health research, the new frontiers for research in the Wellcome trust in others. She has chaired at WHO scientific resource group, codirected a WHO collaborating Centre and served as associate Dean published more than 200 papers and more than 60 book chapters and 15 books, I have to say. We are excited to hear her presentation Pandemics and Borders, how to manage travel restrictions more effectively. On top of it all I do want to say Kelley was one of the newsmakers of the year this e yeacbbcashesher research fvcd 0 in t4su6

What has been the role of travel during this pandemic, how can we make sense of the many forms of restrictions that have been adopted, what is swaying on her mind to think most of all is how are we going to get moving again and what can we learn for the next time?

I can imagine these are questions that are being collected on for many months and answering them is far from a simple task. But in half an hour of trying to give you a recently full picture of what has been happening, and many things during COVID, things are still evolving, but I wanted to try and do you understand what has happened over the last 18 months and what we can do to move forward. I'm going to share my screen.

I want to start off tonight with these holiday brochures. For the summer, for this summer. I want to ask you to think about how they make you feel. Like things during this pandemic that we previously took for granted, concert halls, parades, large undergraduate lectures, mosh pits, so many things we are never going to feel the same about again after this pandemic is over, travel may be one of them.

Prior to the pandemic, you look at holiday brochures, generally, they make you feel excited, anticipating fun, enjoying the time away from work, but if you look at them now 18 months into this pandemic, you probably would be forgiven for feeling anxious, concerned, even a bit frustrated seeing them, and indeed, the subject of travel has become so highly emotional or emotive and even sharply divisive. What actually has happened, how to travel whether it's local or global travel go from something that is generally positive to something that is laden with so much negativity, and why has travel become so thought, did have to be this way and perhaps most partly, can we get to feeling positive again and excited again about travel?

These are the source of questions I'm going to try and guide us through in this lecture and what I want to do over the next half hour or so is take you on a brief journey through the twists and turns of border management and travel restrictions during COVID-19. And I will warn you it is a bit of a bumpy road, and despite announced plans for reopening in BC and other parts of Canada, this journey has somewhere to go yet. But we can get through this sooner and what I'm going to argue is that we can do this safely with the right fixes and the right policies in place. If you are already to go, I encourage you to buckle up and then off we go. The way I want to begin our journey is really by looking at the rear view mirror. And to remind us how travel restrictions became such a thought topic, if you cast your mind back to January of last year, when WHO declared the public health emergency of international concern, one of the recommendations that WHO issued was that it did not recommend the adoption of travel or trade restrictions based on current available information. This recommendation was because available evidence of the time suggested that it was unnecessary to use restrictions especially if they are justified based on current information. And if you cast your mind back to January of last year, when WHO declared the public health emergency of international concern, one of the recommendations that WHO issued was that it did not recommend the adoption of travel or trade restrictions based on current available information. This recommendation was because available evidence of the time suggested that it was unnecessary to use restrictions especially if they are justified based on current information.

People began thinking that doesn't sound quite right, but the issue is that people can be less forthcoming if you put travel measures in place. And so, about a month later, Debbie HO updated its recommendations, it stated while generally travel and trade restrictions are still not recommended, under specific conditions, it was recognized that they can help prevent or reduce disease transmission. Going from there, what you have is that what happened after these recommendations were issued is where I think our journey begins by that point already, many countries were not following WHO's blanket advice, and had begun to adopt travel restrictions quite readily.

The situation had become very uncoordinated really quickly. What this graphic showing is the number of measures that were adopted upon declaration of this emergency of national concern and then after the updated recommendation and then again, when the pandemic was formally declared a pandemic on March 11, and so by mid April, what you are seeing is the pace of the measures declined by that point that was because most countries had already adopted travel restrictions, they put them into place.

The reaction to that happening a lot of restrictions being put in the place was immediately quite divisive. International legal scholars gave the sharpest criticism of these measures, their argument was on the grounds that they were unsupported by existing evidence that they were violated international

And they had to do with the kind of way multiple policy goals. I don't envy their job when it comes to to adopt restrictions or not. I very much acknowledge this is a complex issue, it is very difficult to make decisions on the last 18 months.

Having said all of that, we must also recognize is that the use of travel restrictions and border management more generally has been far from ideal. One major source of tension has been claimed by some political political leaders that travel is not represented in major risk at all during COVID-19, and we have heard federal officials in Canada and sometimes provincial ones claimed that travel counts were very small percentage of total COVID-19 cases in Canada. This figure of less than 2%, 1.8% or 1%, is repeated quite often by people in government, but also in media, and it has become received wisdom among many people. Except that 18 months ago, 18 months, stars COVID to arrived in Canada via travel, 6 months ago, we had multiple variants of concern beginning to arrive via travel.

And a report earlier this year, the general recorded that Public health agency of Canada, was unaware that around 66% of people international arrivals who were may arriving in May and June of last year and actually at the quarantine, they were sure whether they were doing so or not because of poor records and weak contact tracing.

We did not introduce mandatory testing arrivals until January 2021, and only for some travellers. There has been incomplete reporting of travel infections from the provinces and territories and I think most concerning of all, a large number of international rivals by air and land you can see the figures they are, are actually exempt from any testing and quarantine. That group is about 750,000 international arrivals per month entering Canada without testing or quarantine.

All of this is really to say that if you are not testing or quarantining, hundreds of thousands of international arrivals per month and have poor systems of contact tracing, for the rest, that is an awful lot of travellers that you are not actually factoring in to your less than 2% figure. Indeed, my colleague here at SFU publish an article back in February in the conversation which set up why Canada doesn't know how many COVID-19 cases are linked to travel. And shortly afterwards, interestingly, he had added a footnote to the data that it was reporting on its website related to international travel exposures and the footnote reads the counts are quote, and under estimate of the total number of cases among returning travellers as exposure history are not available for all cases, and not all jurisdictions have consistently recorded history during the pandemic.

Unfortunately, that is true, and even more unfortunately, this does not stop government ministers and even advisory committee last week using that statistic. Still, despite the footnote.

And similarly, you cannot attend a media briefing on travel restrictions by the federal government without someone claiming that Canada has among the most strictest travel measures in the world. On the one hand, its claim that travel only accounts for 2% cases on the other hand, very strong measures in place, something doesn't quite add up there.

But more importantly, the problem with this kind of self awarding of a gold medal is that the evidence

simply does not support it, our project, the Pandemics and Borders project, team has been conducting a lot of comparative analysis of the travel measures used by every country in the world, and what this analysis shows that Canada is not really following best practice. It is simply saying that it is, it doesn't make it true.

The pushback against this evidence of best practice that I heard is we are exceptional, we are too big as a country or large geographically on trade relationships are expensive, winter weather is's we can do these things, we cannot apply the measures to the countries applied and we are somehow different. We were told we we have done all we can do, and accept the evidence does not support this, most compelling of all, I would say is the fact that we have had substantial and ongoing virus importation through travel into Canada. Setting aside the first 6 and even 12 months of the pandemic, one might argue decision-makers were overwhelmed and lacked scientific knowledge and role models to learn from, but if you look at since December 2020, governments were warned of the fast emerging threats, various concern, there was an opportunity to put into place though stricter measures that we like to talk about. It was like a new pandemic was happening.

And so there was an opportunity to do better at that point, so if you look at this graph, what it shows is that here in BC, various-- spread in any region within a few months, January we are at zero, and you can see the green line go up and up. International travel brought the variance into BC, interprovincial travel spread them through the province, and interprovincial travel-- spread around the province and interprovincial travel spread them around the country and there is just no getting around the role of travel.

And as for the claim of stopping all nonessential travel which is what various have claimed, even though it doesn't hold up to scrutiny, each week what we are seeing is media reports poles, workarounds and sheer noncompliance for most people, those of us who continue to stay close to home, are being told that border management is working well doesn't ring true. It just did not feel right.

Local people just want to spend time, for example, in a local park with their families, and they are not looking to fly out of the country and meanwhile, what people were seeing was people continuing to fly into BC, people from other parts of Canada over from abroad to come to our province and to ski in our ski resorts, it's no wonder people started to feel anxious, to feel frustrated and really to feel let down. It felt very unfair.

And I guess if that wasn't all enough, to get blood pressure up, at a time I think when evidence

Given all of this, it is no wonder that we are all feeling a mixture of confusion, concern, frustration, dismay even, where we think about travel at present. WHO recommends-- criticisms that travel violate international law, government claims travel is not at risk and then followed by government claims that we are doing a world-class job and managing this insignificant risk, the introduction is spreading variance through travel, despite having the world's most strictest measures, and that headlines about noncompliance and so on, and finally political leaders weighing in on this, it all adds up to a really thought and divisive policy environment.

This how border management during the pandemic was supposed to play out, and was this really what was supposed to happen and of course, frankly, no. According to the international agreement known as international health regulations which is administered by WHO this was not supposed to happen. The history of the IHR based on the 19th century and its dual purpose was to balance prevention, protection control, response to international disease outbreaks, with the careful use of measures, so that they avoid unnecessarily-- with travel and trade, you might ask why not just report it why is it just not concerned with stocking spread of diseases?

And the reason is that you don't want countries with policies in response to outbreaks and they are not appropriate or if they are excessive. This is because these kinds of restrictions can have profound impacts on people's lives, on individuals and on societies, we have seen this happen, and it can cause a lot of hardship and they can devastate economies and they do, and so, it can cause retaliatory measures as well, we want to be very careful of the government, very sure when you apply these measures they are necessary and they are warranted. And so, the IHR is supposed to prevent that happening. And it sits out to states parties including Canada, certain principles about when you use these measures, there are 66 articles in the IHR, article 43 covers what is called additional health measures. And travel related measures under article 43.

And these measures can be used they can be more restrictive and intrusive than reasonable alternatives, they have to be based on scientific principles or available scientific evidence, you have to inform WHO if you are going to use them within 48 hours and the review them after 3 months. Collaborate with other states parties with WHO and finally, they have to respect human rights and fundamental freedoms of persons. All these principles are laid out. And so, they were supposed to ensure cooperation.

Then we were hit with COVID, and we have never had a pandemic like this before, and what we have not had, first we had pandemics before but we hadn't had one with the world is such globally interconnected, and I think this is what the big different is and of course travel is a critical aspect of being interconnected.

If we think back to your before the Pandemic, pre-Pandemic 2019 was 1/3 year in a row that we welcomed a record number of international visitors to our country. 22, over 22 million visits from people from all over the world and we welcomed these visitors, of course, they supported our tourism industry which is worth about \$105 billion one in 10 Jobs in Canada. These visitors are very, very important to us, they connected with us as Canadians as family members, as friends, as students, work colleagues, some became permanent residents or new Canadians to help their country, and just

in general, visitors overall enrich our lives in so many different ways. This is not of course unique to Canada, the tourism industry reported record numbers of travels in 2019 as well. Hitting about 1.5 billion tourist arrivals around the world. And that represents about 6% of the world economy. It is an incredible, it was an incredible year, 2019. And of course, in spring 2020, we had to do this. For the public health emergency declared that a pandemic flights were cancelled, cruise ships were docked and then shattered, land border crossings were restricted, this was all done to try and stop the spread of the virus, at first it was thought this would be temporary, and then weeks turned to months, and now months into years.

And it has been a remarkable change and a quick change, I keep thinking of Hollywood was going to remake the old film, the Omega man, for those of you that know the film, this would be the time to film it, this is very eerie in many places.

I guess the question that researchers have asked, been asked to address is was this necessary, was adopting all of these restrictions the right thing to do? There is a growing amount of evidence now I think the most compelling is the sequencing data which now shows that travel has been implicated in the unfolding of the pandemic. This included not only the initial introductions of COVID-19 into populations early on in the pandemic but also repeated introductions of the time. In Scotland for example, the study by DeSilva Phillippe and colleagues found that when they sequenced about 1300 virus genomes, it was estimated that the virus was introduced to Scotland at least 283 occasions, just between February and March 2020 and a mainly came from Midland to Europe.

Here in Canada, a study by colleagues showed that international introductions and interprovincial transmission of SARS COVID 2 contributed to the Canadian COVID-19 throughout 2020.

And so, it is clear that that was a factor. They also concluded interestingly that more stringent order controls of quarantine measures may have pertained introductions and we still be warranted and indeed we have learned because travel has been so important to the spread of the virus in countries, that all the measures adopted by governments around the world response to COVID-19 Social Distancing and travel restrictions have been the 2 most effective. Non-pharmacy to control transmission. This study shows that using regression analysis that there is a large number measure you could put into place, but those 2 are important.

And colleagues also reached the same conclusion saying that limiting ability to the greatest extent practical would best strain COVID-19 diffusion in the absence of widespread vaccination. We will come back to vaccination because that is a bit of a game changer when it comes to tresponIDspwluans,



This is what I want to focus on for the remainder of this lecture, what have we learned about the best ways to apply travel restrictions and we can begin with terminology. We have learned there is a lot of topic across purposes, so much inconsistency and terminology, a lot of the imposition around what do we mean by order management, border measures, travel restrictions?

We often hear the term travel bands and border closures, and in fact, those terms are not terribly useful because they are quite imprecise and they can be misleading, there is no country really that has banned travel or closed their borders of travel continues, and what is key is what they have done is they restrict who can travel and who cannot travel, and they post the conditions on which people who are able to travel must adhere to. Usually testing in quarantine.

That is one of the contributions of our team is we set out a kind of tight-- in some ways of definitions that make it clear, we are talking but the same thing, start the comparative analysis and we can start to think about how we can improve the quality of the data that we have to inform our decisions about these measures.

A 2nd lesson is timing. Our systematic review and other systematic review suggested that countries that acted early in the pandemic, playing precautionary approach to travel restrictions fared much better than those countries that took a sort of wait-and-see attitude, it is kind of a you snooze you lose kind of thing, put them into place early before you see the virus coming in, and that makes a lot of sense. And hopefully that will make more sense going forward. But we also have seen is the timing impacts when you announce a travel measure as well. If you give people too much notice, you can actually trigger a kind of race by people seeking to be at a deadline when the travel restriction comes in force. We saw this in the UK in December of last year. When they announced that most travel domestically would be shut down within 24 hours, 24 hours or 48 hours. What happened?

People rushed to the trains, the trains were overcrowded, and actually, what happened is the variant was spread around the country as a result. In post measures and give people notice, then this can potentially happen, but if you don't give people any notice, and this happened in India, it can cause real hardship as well. We saw this unfold were a lot of migrant labourers who were not given any notice at all suffered quite considerable hardships. That is really important when you think about these measures.

We can also think about applying these measures into different points in time in the year, surges, there are different things that trigger population and ability like the holiday spring break, holiday break, religious festivals and so on. Make sure you plan for surge capacity and then finally, you have to deal with the pathogen that behaves in a certain way, periods of how long people become infectious and so on. The timing is super important, it is not just a matter of we are going to impose a policy and I'll think about these things.

The 3rd lesson we would identify is geography. One reason that I think often given for why Canada says it can't do more is geography. We have heard this a lot, we are a large country, and undoubtedly, geography matters, so how big a country you have to be dealing with, important points of entries, where your country is situated, who are your neighbouring countries and so on. All of this matters, of

course it matters. A country like Singapore is going to have a much easier time managing its borders in Canada or Russia, this is just a fact. But I think what this table shows is that even if geography is against you, that it is harder, it is still possible to have effective border management, we think Thailand which is not on this table, but these 2 countries have longline borders, a lot of labourers, actually a lot less resources than we do and yet, they have been able, until a little bit more recently, until recently, have coped with managing borders very well, and they followed a COVID zero strategy, and they have maintained those measures throughout the pandemic. They have had a very positive use of measures.

So, I think we need to recognize that geography is important, but it is not overwhelmingly a constraint. The next lesson that I would say what we are trying to figure out is which specific measures to adopt and when to apply them, I already talked about timing, that comes into play as well as which measures. One of the tasks of our project team has been coding this massive data set and then analysing it in terms of which countries have adopted which measures over time.

We are mapping if you as case studies and this is the graph for Hong Kong and we started to compare practices, different practices and different context and hopefully draw some lessons for effectiveness, thanks to Jason and Ray of our team, they created the graphic, it is all the travel measures that have been adopted by Hong Kong and it shows that Hong Kong acted very early on and it shut many of its points of entry and concentrated its resources on those that remained open, they shut a lot of their places that people could come in and they focused on the ones that were remaining.

It's probably a bit tiny, but if you look at the specific measures applied what you see is mandatory quarantine was introduced for some travellers as early as February 2020, compulsory testing as early as the summer of 2020. A proof of the negative PCR test also introduced in the summer of 2020.

Keep that in mind, as you look at Canada, and hear what you see is there has been no lack of measures introduced over the last 18 months as you can see, and thanks to my colleague, Julianne Piper who was put this together with Jason EN, what you see is quite a big difference in what measures were introduced and when they were. What we see is the proof of the negative PCR test, Canada was introduced in January 2021, later than Hong Kong, and mandatory quarantine was introduced in Spring 2020, but this was largely self administered, wasn't introduced until of course, earlier this year, and I will come back to the issue of exceptions which were of course a big deal.

So, that is really important and I will come back to that in a minute. The need for different parts and levels of government to work together has been another key lesson and I think this is one that I think is very prolific to Canadians. If you think about the movement of people whether it is from mobile to global, and terms of scale, this should all be considered integrated, all travel should be sort of seated in an integrated way with restrictions. The first year, the focus we had was international borders. And we saw some countries like the UK and US implement some restrictions at their international borders but then domestically, did not have a lot and that was proven to be challenging, we have seen in our country, different levels of government arguing who is responsible and federal government do more, and places like Whistler asking the provincial government to do more. It is a lot of disagreement about who is responsible.

The analogy that I used, that is why I'm showing a picture of the castle, it is very similar to a traditional medieval castle, if you think of the castle across Europe, they were built to withstand sieges and sieges in a way that you had a layer of defence strategy. The outer walls are to fend off the initial attacks, kind of moats and towers, and drawbridges and so on and the enemy would then reach the outer wall, there is a 2nd wall and there is even 1/3 wall in this diagram so you have these kind of layered approach. If you think about border management in the place, the outer wall is the international border and so, if we effectively use travel measures to identify all the incoming travellers that are connected, and we prevent them from reaching the wider Canadian community, then we have done well. And always there are going to be a few this weekend but you got the 2nd wall which would be the provincial or territorial borders.

And then if they slip through, you have your community. It's kind of that layered approach, but the key point here is that it actually makes more sense to keep the outer wall as intact as possible when it comes to COVID-19 and travel restrictions. This is because that is where our checkpoints are, this is where we have the formal borders, provinces and territories don't have checkpoints between BC and Alberta, for example, we would have to create them. And that is a large resource, it is better to keep that, the virus at the battle lines than the outer wall and then the inner wall don't need to be moving so much. And we haven't seen that, we have seen the walls of breach all the way to the tower in the middle and that is problematic.

I think the final lesson and I'm going to come back with this issue is that the most effective way from a public health perspective of using travel measures is to mirror how the pathogen affects people. This seems kind of obvious, SARS doesn't just infect people who are travelling for nonessential reasons, they don't just infect people who have, through the air but not the land. We have to make sure that we designer measures in ways-- that the virus poses. It's hard to understand then why travel restrictions have been applied in Canada in a way that they have without pages and pages of exemptions that have little to do with the virus, a lot to do with economics, social and political goals. Essentially. And so, my argument from public health perspective is that if you want the measures to work and to keep

Which we find very concerning. And so, – it's not possible to go through the report in detail but there are number of quotes I want to point out. This really demonstrates why I think we need to think more carefully about this issue. The first report says "border measures serve to reduce risk but not eliminate it through testing and quarantine." That is actually not true. Yes, in Canada that is the goal and has been assigned to border measures but many countries such as Australia and Taiwan elimination has been the goal.

It's really a choice you make for border measures. It's a political choice. Whether you go for mitigation or you go for elimination. Is not – it is not a scientific fact. A second quote I pulled out is "site visits for 121,006 and 17 quarantine travellers were done." This is proven how the auditor General reported contact tracing of travellers previously, it has improved sure. The numbers are up but we would estimate roughly 325,000 arrivals each month into Canada to require quarantine so we represent 40% of people being checked. I will let you judge whether that is an acceptable level or not.

Thirdly, there is a decrease of 41% in the rate of imported cases of COVID-19 from early January as the report claims. This sounds great but this claim is based on data which I already described is incomplete. If were not testing everyone, how do you know there is a 41% drop? That is kind of problematic.

Finally this "three-day quarantine in government authorized accommodation – which everyone loves or hates – it's a policy measure that has been poorly implemented. This panel is saying that it does

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use of travel restrictions or not. Not all do. We need to be able to tell the difference. We need to improve to see surveillance so we can proactively or preventively put these in place and not just reactively. We need a forward plan on managing points of entry. Winning mechanisms of coordination between different levels of government. We need evidence. We need surge protection for contact tracing. We need a better all-around to be collected, analysed in shared. And of course, it's not just Canada that needs to do these things. Every country would be wise to implement effective border management during this pandemic and some have done well. Some have done very badly. None have really achieved the final point which is supporting global coordination these efforts. It's chaotic, chaotic for governments, businesses, for everyone.

That is not a way we want to go again. That's a long list and I believe each of these tests are quite doable with political will and with the right resources. Then, I guess, if we do these things each will help us to feel less confused and less anxious about travel measures and therefore about travel. Each of these will help rebuild the confidence we used to have in travelling. We can move from a position of strength. We can only do these things if we admit there's actually a problem to the way we are managing borders during this pandemic. So beyond the partisan politics, beyond the lobbying by economic vested interests, we need an open and honest conversation about border management and travel measures. We need this urgently. Thanks for listening.

PRESIDENT JOY JOHNSON:

Thank you ever so much, Kelley, for your fantastic presentation. Taking us on a tour of restrictions and understanding how different countries have approached this. Some of the challenges. It has been really enlightening. Obviously a very complex area to be thinking about. I will start out by asking you some questions and again, I encourage people to put questions in the chat as we move forward.

Let me begin by trying to get a sense of what kind of policy impacts you hope to achieve from the pandemics and borders project. Where do you see this going in terms of a policy frame or a policy impacts?

KELLEY LEE:

Great place to start. We started this project last March focused on very specific task which is better understanding compliance within international health regulations. It seems very dry but very important. Because if you have noncompliance with an international treaty that we can have coordination. This is a collective action problem.

As the project has progressed we realize this is smack in the middle of a lot of policy relevant debates. At the global level we have been working with our colleagues at WHO in trying to inform revision of IHR. That has been great. We have seen our research taken up and cited in the report. It was good to see. There was impact there. I think more closer to home we found ourselves being pulled in to a lot of discussion around public debate of travel restrictions here in BC and then in Canada.

What we would like to do is make our findings available. Make our lessons available. We are sharing everything on our website. We are trying to engage and we have engaged with government at different levels to inform better decisions. If we keep in mind the castle analogy, our research is trying to be

relevant to provincial and local levels of government as well as local and national. We are trying to ultimately integrate effective border management into any future pandemic preparedness plans at BC level, Canadian level and global level.

That is ambitious but this is what we are trying to do.

PRESIDENT JOY JOHNSON:

So looking at the province of BC right now we, you know, kind of zooming in to BC it is now announced its reopening plan last week. What we are seeing right now, Kelley, is recreational travel within the province could be starting to happen as early as mid June and then recreational travel across Canada potentially by Canada day, July 1. What do you think about that? Do you think they are getting it right? Do you have concerns? What would your advice be?

KELLEY LEE:

The BC government and the people involved in the vaccination rollout need to be congratulated. They are doing a remarkable job and we are seeing the numbers go down and that is great. We are now back to where we were free third wave so that is great news. I understand the total desire to restart travel again.

We need to support our business owners. Need to support people who are hanging on by their

bit to vaccination. We have a lot of people in Canada now, more than half, more than 70% in BC have received one dose of COVID-19 vaccine now. I will make a little plug here, everyone get vaccinated. Is the best thing you can do to protect yourself, your family and your community.

But I want to turn to this idea of, you know, I know we are focusing on a lot of vaccination can about what is Canada's role right now, do you think, in global vaccination? People talk about you heard it's not over till it's over everywhere this pandemic so what is your sense that Canada's role should be at this time?

KELLEY LEE:

That is absolutely right. Regardless of how well our population is in Canada, Canadians are not through this until the rest of the world is through in terms of vaccination.

As long as the virus is circulating uncontrolled and there are countries with high numbers of SARS-CoV-2 infections and rate of transmission continues to be high, and we know it is, variants will continue to resolve -- revolve and spread worldwide.

I think this poses a threat because of the potentials I just mentioned about community escape or current vaccines become less effective so that's a real concern. I cannot say this strongly enough, we need to stop hoarding vaccines. Just like the toilet paper issue.

This doesn't make any sense. We need to share vaccines with the rest of the world. The federal government, I know, has not yet come out to say that it will. It makes some noises but I would like to challenge the federal government to join more than 120 other countries in many organizations that have backed this waiver on protection of COVID vaccines. Countries including the US, China and Russia. Canada should really be at the forefront here. We are at risk of being on the wrong side of history – we do not need to wait until every man, woman and child, cat, dog in this country has been vaccinated.

It's a basic premise in public health the population level immunity is a public interest. In a globalized world that population includes every country. We have to reengage with the rest of the world. And really it is dependent on us to share the vaccine as much as we can as an editorial put it in nature, it's the right and fair thing to do.

PRESIDENT JOY JOHNSON:

Challenging. Interesting. So much political pressure at home as well that we see to be showing Canadians that we are attracting vaccines here and are getting our country vaccinated. It is quite interesting to see the behaviour.

I think they're going to be a lot of papers written in the future about this whole dynamic of both borders but also vaccinations, that is for sure. In one of the borders that I think we are all particularly interested in is the US Canada border. It's a very long unprotected border. You know, I'm interested in your view – and we rely on the border so much for trade, right? – What is your sense of how we are going to get that border open? How are we going to start to, and we are seeing some good rollout of vaccines in

the states to some degree but what is your sense of opening up that border?

KELLEY LEE:

Thanks for asking me, or not asking me when, because that's hard to answer but how is a question we definitely should be tackling now. I think reemphasizing we need to sort out the leaky pipes. We need to open up from a position of strength, I guess. We need to have a system in place that can effectively

can't falsify. They also have to be compatible across countries so people can travel and maybe show their app on their phone that they have some sort of technological proof that is reliable.

That is all been worked out. I know in Europe they are racing ahead but that. You see the countries with high vaccination rates are the ones that are the key to this. I think this is on our horizon. I know the US and Canada have started discussions about this and we will see where it takes us.

PRESIDENT JOY JOHNSON:

I can only imagine logistically how far that's going to go and how much work that is going to take. Someone in the chat is asking if we go down this road, what about equity deserving groups and people who might not have access. Are there downsides to these kinds of – implementing these kinds of programs?

KELLEY LEE:

And I understand that. There's inequities of who can have access probably across countries and in countries if we were talking about Canada. But we just talked about there is vast inequity. So people who have been vaccinated will have more freedoms than those who have not. That is true.

I guess the way I would see it as well is you have to balance that with the inequities that have been created by the travel restrictions. People who are stranded and cannot get home from, you know,

up in some countries have testing even beyond 14 days. There is also the asymptomatic cases. The virus is particularly sneaky as I say and that's why you need to do all these tests and the quarantine as well. They go together. It's about picking up the virus and the ones you do not pick up you do not want them going into the community and potentially transmitting the virus into the community.

PRESIDENT JOY JOHNSON:

That's interesting. Another question, and it's really about the Canadian response, in your view does it make sense that we have restricted flights from India and Pakistan direct flights in the Canada Punnett from countries like Brazil? Are we being arbitrary, what your sense of that kind of approach?

KELLEY LEE:

These targeted, they are more like a flight bans to hotspot countries has been quite politically driven and maybe to some extent economically driven rather than risk-based. If we have all the data that say Hong Kong has it probably would make sense that we know X number of people came from this country and our flights, they have such good data they can track every case they have had and where they travelled from. They are all travel -related.

We cannot do that in this country. We are making educated guesses in some ways. And in some ways I call it performative policy because you want to look like you're doing something and people are kind of worried, will just restrict travel from X country but we didn't do it from every country and we certainly did not do it from Brazil as we know. We did it for Mexico some of the holiday resorts early on. The UK. The virus is always three steps ahead of us so you're fighting a fire. The data is like three weeks old because we have to test in sequence these cases before we know which countries are hotspots. And by that time it's too late. So that preemptive for the preventative approach is actually better that you test in quarantine everyone except for a very small number and by the time a variant comes along you would have caught at the border and that waited till it arrived and then we will just slap a travel restrictions on that country.

It makes little sense and has not really been effective. People travel globally. The variants are spreading globally. It would be difficult to geographically constrain that variants from that country and so on. It is not generally a good way to impose restrictions.

PRESIDENT JOY JOHNSON:

An interesting question here what grade would you give the Canadian government for their handling of the pandemic overall?

KELLEY LEE:

I got into some interesting discussion with the minister. He was claiming gold standard and I said you're more like a bronze. I don't even think, you know, sometimes we even reach the podium. I think as a grade may be a C- would be my calculation.

And because, you know, we have done some good things. We recognize now that travel is important but we have been awfully slow about it and we have been halfhearted. I think lack of effort. If it was marking a student lack of effort, missed a few questions and partial answers. I would say C minus. We

have the opportunity to do better. We have the personnel and we have the potential to collect better data and so on. I think we are a potential A student who is underperforming I think is how I would write the report card.

PRESIDENT JOY JOHNSON:

That's interesting. Another thing people are talking about is we are dealing with two pandemics. The pandemic COVID-19 but also the pandemic of misinformation. I think in your area that is also very much at play. Just wondering if you can comment on what kind of a challenge that is in terms of trying to move this work forward?

KELLEY LEE:

It is been a huge challenge especially at the beginning of this research. We had, I think, some of it was misinformation from just people using different terminology in understanding what we are talking about in different ways. Understand -- evidence of that with what we called female that would come in and accuse us of trying to re-create North Korea in Canada and trying to turn the country into a big prison camp and really, it was a misunderstanding of what we were talking about which is border management.

We are never wanting to shut the borders or ban people from travelling, it's just trying to keep people safe and so on. You do have to kind of accept that people feel strongly about these things and that there is a lot of misunderstanding. As we go forward, of course, you also hear a lot in the media about these people who may not be complying and you have to be aware do not stigmatize people or play that game of look at that person or this group of people and try to understand the policy levers you could use to give incentives to people to behave in certain ways rather than blaming. I think when you get into the blame game, it is a dangerous path to go down.

That persons worthy of travelling, they can travel there they are essential, your nonessential. I think we need to look at this from a public health perspective and see that we need to keep the community safe, we need to keep Travelers safe and go from there. I believe it became quite fraught at times and we saw that with the kinds of interaction we have the public.

Hopefully, there is none of fourth wave and we are moving towards opening again and let's see if we can do this in a more, you know, more systematic way.

PRESIDENT JOY JOHNSON:

Interesting. You know, Kelley, your lecture really focused on pandemics and borders but it's also really about decision-making and how we think about these complex challenges and I'm just wondering if you have overall lessons in ways that we look at data and interpret it and make difficult decisions that might apply to across areas were applied to people's lives in other ways?

KELLEY LEE:

That is a great question. During the pandemic I think each of us as individuals personally have had to make a lot of difficult choices in how we live, what we do, who we see and so on. We are just making these decisions. I think we have been bombarded with a kind of relentless stream of new information

each day about COVID-19.

It is been exhausting for all of us, I think, and overwhelming at times trying to process this information and trying to make the right decisions for ourselves and people around us. I think it is essential that we all needed to stay informed and make informed choices. So, I guess, I have no doubt that as challenging as our decision-making as individuals has been over the last 18 months the responsibilities of public health officials and political leaders, as hard as I have been on them during this lecture, as professional decision-makers they have many more times challenging than us.

Be required to make these continual decisions in real time with imperfect and often evolving information and on an unprecedented array of issues that we have probably never thought about before and with profound consequences. All of this makes the decisions made, I think, when we look back we need to keep that in mind.

We need to reflect on how the decisions were made, for sure and how they can be better but I do not think attributing blame is the right way to go. So to see where decisions could have been better, provide more support, improve the methodology, increase the data as I was saying and I guess reform the governance systems. Those are where we need to put our focus and so to me the lessons are to recognize how challenging decision-making has spent during the pandemic on a professional level but also personal level for each of us and to be understanding about those challenges.

So, you know, as artists we can on addressing those challenges going forward and be kind as well. Future pandemic preparedness is as much about better decision-making as it is about building new vaccine factories or stockpiling PPE. We have to have better decision-making and we need to support each other in doing that.

PRESIDENT JOY JOHNSON:

Interesting. Another area in the chat that is raised is we talked about the grade we may give our government in terms of its response, which country would you give – would you put onto the podium in terms of their response? Who do you look to? We saw little bit of that in terms of some of the data you presented but maybe shine a light on that for us.

KELLEY LEE:

There's been a lot of talk about Australia and New Zealand that for whatever reason they are far away from other countries, they are islands and so on. They would get maybe a B+ to A grade for travel restrictions. They had low numbers of infections in imported cases although there are many impacts on Australians and people coming in and out. They are often seen as the kind of gold standard.

But I wouldn't say that many other countries. You look at countries like Taiwan which has now had an outbreak but they are getting on it because they identified pilots coming in and unfortunately infecting airport staff and so on. But they have had a very good record in terms of managing travel and borders. Thailand and Vietnam I mentioned earlier. Countries that have – really fearful about their healthcare systems. They cannot afford to have a large surge of cases. So they really focused on border management. South Korea, Singapore, Hong Kong. There are many we can follow. There's a lot of

variation in terms of geography, as I say, and points of entry but I think there's a lot we can learn from those countries. They should all deserve an A great.

PRESIDENT JOY JOHNSON:

I think this is a interesting question about the Summer Olympics and Japan's desire to land this event, what are your thoughts about these big events at this time given some of the concerns that you have?

KELLEY LEE:

Excellent question because we are all, of course, looking forward and we can see ourselves maybe gathering again in these large events. Thank you Janice for that question. I am feeling a little bit of that conflict again. I was asked about the NHL playoffs the other day and it was like I love hockey but all those people going back and forth across the border.

I think we need to start small. Those big events. We did have the bubble when we had the NHL playoffs last year. I don't know how they will bubble that many athletes. There so many venues. No Japan is going through major outbreak at the moment. It's not looking great. They may have to scale it down if anything. I know they put it off are ready for a year we will come into two Olympics in a row if we keep delaying it, I suppose.

I think really we need to take a stepwise approach. I think going from zero to a huge event like that is worrying. The Olympics and the crowds will look different for sure the crowds and audiences. But it's important for those athletes as well, of course, to recognize that. They have been training their whole lives for this. It's a difficult one. I have mixed feelings again. I think we do it carefully and we do it in a different way we may be able to have some sort of Olympics.

PRESIDENT JOY JOHNSON:

Interesting. I think what you're really shining a light on is just this tension. I think this is really about the

you could go hard, fast and early or you can keep this kind of balancing act. That is part of the debate. Which one is preferred? Which one can you implement in a country with certain cultures versus political systems and so on?

It is incredibly complex.

PRESIDENT JOY JOHNSON:

We have time for one-two more questions. If I missed you in the chat reposted or put up your hand. One question that has come from Anna is you mentioned the team is working with the WHO in ways to improve the IHR, can you tell us what your recommendations are in terms of -- in relation to the IHR?

KELLEY LEE:

We are really encouraging them – and they have accepted this – blanket recommendations, the one issued in January last year that no country should use travel restrictions at this time actually was not very helpful because context matters. And the pathogen matters.

So really working with WHO to help them create maybe a decision instrument that says you have this sort of pathogen, this is the context in countries work there to see if it's appropriate for their context to introduce certain travel restrictions or border measures. Then every country does not do the same thing but it still is coordinated because everybody is working through this decision instrument. That seems a better way of compliance. Comply because you are using the instrument rather than saying you can't or you cannot use these measures and if you do use them you're noncompliant and you're breaking international law. It is too blunt. We are working with WHO in that respect.

They are excellent partners. They are opening -- open to listening. I think they are recognizing the need input from researchers. I have been a bit, I guess, protective of WHO in my other interviews and lectures because it is a very under resourced organization. If we get rid of it or at one point defund it or whatever, we are really in big trouble.

They do things that we do not realize they do. And they need to do it better sometimes but I think the best ways to strengthen the organization rather than getting rid of it. I think the same with every level of governance we need to do better in terms of public health but we need to strengthen it and support and give better resources. I am happy to be working with WHO. It is a tough job and certainly I think we are starting to realize that from this week's world health assembly that that is the way forward.

PRESIDENT JOY JOHNSON:

Interesting. May be a final question for you. I know the government so far has been a bit noncommittal and there's a question here about having an objective review at the end of the day, an inquiry or review into Canada's response. Do you think that is something we should be asking for?

KELLEY LEE:

I do. You know, it's not as I said, a finger-pointing finding individual blame. I think a lot of the things we experienced was unprecedented but going forward we are what some people say going into an age of pandemics. There are going to be pandemics in the future. We would be fo orePhnot ao liarcnfrom twat

we have done right and wrong during the last 18 months, two years. It will be a long time and a lot of lessons to learn. Lots of things we need to fix and do better. It is an opportunity to do that. We did that after SARS -1 and there's a lot of lesson learning their. This time we very much want to implement those lessons because this is – this did not have to unfold the way he did. I think really we need to be