

TRANSCRIPT

LEGISLATIVE COUNCIL ECONOMY AND INFRASTRUCTURE COMMITTEE

Inquiry into the Impact of the COVID-19 Pandemic on the Tourism and Events Sectors

Melbourne—Monday, 28 June 2021

(via videoconference)

MEMBERS

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Ms Sheena Watt

WITNESS

Professor Catherine Bennett, Chair in Epidemiology, Faculty of Health, School of Health and Social Development, Deakin University.

The CHAIR: I declare open the Economy and Infrastructure Committee public hearing for the Inquiry into the Impact of the COVID-19 Pandemic on the Tourism and Events Sectors. Please ensure that mobile phones have been switched off and any background noise is minimised.

I wish to begin by acknowledging the traditional owners of the land, and I pay my respects to their elders past, present and emerging.

My name is Enver Erdogan and I am Chair of the committee, and I would like to also introduce my fellow committee members present with us here today: Mrs Beverley McArthur, Mr Lee Tarlamis, Mr Tim Quilty, Mr Andy Meddick—and Mr Davis and Ms Sheena Watt, who will also be joining us shortly. That is who is appearing on my screen at the moment, so I hope I have got everyone covered.

Our first witness is Professor Catherine Bennett. She is the Chair in Epidemiology at the Faculty of Health, at the School of Health and Social Development at Deakin University.

Before I begin I will just read a short witness statement. All evidence taken at this hearing is protected by parliamentary privilege as provided by the *Constitution Act 1975* and is further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during this hearing is protected by law; however, any comment repeated outside the hearing may not be protected. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded, and you will be provided with a transcript following today's hearing. Ultimately transcripts will be made public and put on the committee's website.

We welcome any opening comments but ask that they be kept to a maximum of 10 to 15 minutes to ensure we have plenty of time for discussion. Could you please state your name for the benefit of our Hansard team and then begin your presentation. Over to you.

Prof. BENNETT: Thank you. My name is Catherine Bennett. Thank you for the opportunity to present today. I would just like to begin by saying I am going to try and frame this as where we have been with COVID, possibly also touching on where we are now, because things are shifting dramatically this week as things unfold, as well as looking ahead to more that legacy view and what we can look at longer term. Initially in a pandemic we are almost by definition flying blind. We often have a delay in finding out what the virus is that we are working with, what the challenges are going to be, how transmission actually occurs and the best methods for control. So that is almost inbuilt. But from there it is about using your experience, building that experience really quickly, particularly to build an evidence base, and ultimately hopefully striving to get those tailored responses that you know now fit what you understand about the organism, what you understand about the threat and what you understand about how our populations move and mix when you are talking about communicable diseases.

Also just by way of background it is important to remember that the COVID-19 virus—the one that we are dealing with—is one that actually has a particular type of transmission or spread pattern in the population. It is what we call either cluster transmission or overdispersion. What that means is that the virus does not move smoothly and freely in a consistent way through a community infecting a certain percentage of people, it actually goes in steps and jumps, and you end up with a situation where it is estimated—and this has been estimated in a number of different settings—that 10 per cent of cases actually contribute to 80 per cent of second-generation cases. So a smaller number of individuals are responsible for that wider spread. That has often been talked about in relation to COVID-19, or SARS-CoV-2, as superspreader events, and that is, I think, important in the context today to understand those a bit better as well.

With superspreader events, when we think about these things as epidemiologists, we are concerned about not just the virus—the agent—but also the host and the environment. Host behaviours become very important when you are talking about communicable diseases. So in looking at the superspreader events that have been

observed around the world with COVID, the concerns have often been that you might have some individuals, particularly immunosuppressed individuals, that end up having a higher viral load and can be just biologically more efficient spreaders. If you combine that with behaviours—people who either do not distance as much or people who are loud talkers, you know, loud speeches—it is associated with a 50 per cent increase in the amount of virus you shed, and it is not always something people have control over. But other activities, like singing and so on, can contribute. We also know that the environment matters, particularly in workplaces. Things like your humidity, how people work together and the movement of workers and contact—all those things can make a big difference.

So there are those elements, and then we have the virus, and of course we understand even more painfully this week than before how the variants actually do shift the risks associated with transmission. We will probably come back to that, but I think that is important to think about, because it puts an element of luck, or un-luck, into predicting what is going to happen in certain scenarios, including large events and other places which could potentially be seen as risks in association with, you know, superspreader events. What is interesting is that when you do look at superspreader events around the world, they tend to be associated with places like aged care, as we saw ourselves in Victoria, but also cruise ships. They have had school superspreader events—we had not typically seen that in Australia—but also religious ceremonies, prisons, shopping centres, and we have all seen a bit of that now, and workplaces and dorms. But the other thing to remember is a lot of big events were actually stopped early in the process of understanding what was happening with COVID, and few events were run. So that is the challenge—that we do not actually have as much data as you might otherwise want, but we have got enough to know what contributes to risk in some settings to help with some of the planning and some of the COVID-safe preparations.

Wave 1 was a success story for Australia. We did not quite know what to do. We did go to blanket lockdowns. We did it nationally. We closed our international borders early. Though we did have the virus in the country and we did see community transition—though we do not know how much actually occurred—lockdown was effective. For six to eight weeks you were able to actually stop the spread across the community, and even with our essential workers still working we managed to contain and in all states including Victoria eliminate the virus that was circulating at that time.

The second wave—and there has been a lot of analysis—did not work out the same way. We were not able to successfully close it down. It had been more established in the community before we went even into partial lockdown. Despite comparing to Sydney today, Victoria had a daily seven-day average new case rate of about 78 cases before we went into the partial lockdown with some suburbs, whereas Sydney has gone in as soon as their total case number was 78, which is a very different scenario. But in Victoria that was the challenge, because we actually not only had widespread community transmission but it had got into a larger workplaces. So it was not, again, about events. Even though we had started to ease restrictions we had not really re-established large events and at that time of year, going from late May when we were coming out of lockdown into June, there had not been a time with major tourism and travel and so on.

There were a whole lot of other things that started to happen and we became aware of that are a challenge as you go ahead, including lockdown fatigue and other issues around compliance, but certainly as the second wave progressed we took a different approach and we introduced different steps into lockdown, including the curfews, including travel limits and reinforcing all of that with the ring of steel—the difference between metro Melbourne and the regions. That of course would have a big impact not just on people's movements for tourism but also in families staying connected, and people who might have landed up in metro Melbourne but had their substantial home somewhere else who were not able to move back to their other properties.

So the question then is: what do these things add? How important are they in containing spread? It is one of the areas that we have heard from our health department is difficult to evaluate because it all comes as a package, but I actually think we can evaluate these and we need to evaluate them. If we are understanding what happens when people can move even within metro Melbourne more freely, does that mean you have the same number of exposure sites but they are just more dispersed and we have to follow them up wherever they are, or does it change the dynamics of the outbreak? While modelling struggles to unpack this and look at it, at the end of the day what we really need to be doing is looking at those individual transmission stories that are buried in the data—that rich data we have, with over 20 000 cases in Victoria in the second wave. So I do think there is a lot of information there that should be guiding us as we go ahead, even within the components of various lockdowns, particularly when they do have these wider impacts.

The ring of steel—in the second wave when we had the road map out—was important in this story, because it actually continued longer than it was originally, I guess, perceived of in the road map. We had regional Victoria and metro Melbourne out of step. The rules to go to the next stages or steps out of lockdown were different for regional and metro Melbourne. Regional Victoria had to get down to zero cases eventually, but in that the important step from step 3 to step 4, which was a significant step, was that in regional Victoria they had to get below five cases—so out of 1 million to 1.5 million people, five cases—but for metro Melbourne it was less than five cases but for the whole of the state. So in fact it actually meant they had to get down to equivalent to 0.75 per million cases just to get to the same step as regional Victoria. So again there might be arguments for that, but it was never part of the communication to the public about why we would have these different levels and why we needed to sustain that ring of steel. It is a concern.

I will come back to public health messaging, because I think it reinforced a sense of us and them. There was a mix of feelings from resentment, jealousy and fear about, you know, Melburnians taking the virus out to the community. But in fact for the last 31 days, before the ring of steel was removed, the average case number in Melbourne was 3.6 cases a day, so, you know, we are talking about one case per 2 million. Even if we missed half the cases, that is still a very, very low percentage rate. And in fact we had a number of days—in the end, 10 days—where we had zero cases. So I do think it is about trying to look at these risks and understanding what are the costs of putting these restrictions in place versus the potential reality of a rare risk of having a case when your numbers are that low, landing or seeding in a regional community and our response to that. Certainly our dispersed public health response was strengthening over the second wave but really had not been built, so that was a limitation, and going ahead I think we have got better coverage in both regional and metro Melbourne now rather than the fully centralised approach.

So coming back to this question of dispersion or the distribution of the virus, I think this is the biggest challenge for the health department, because you are actually working to almost the what-if scenario rather than the worst-case scenario. And that is a challenge because, as we have seen with putting circuit-breakers in more recently, thankfully, generally that has not been required, but it is put in place as an insurance policy. So how do you approach these situations where you need to put some buffer in place? How do you determine that buffer? It is a combination of understanding to date where you are at and what the risks are—the true risks, the measured risks, what the evidence is telling you from your own understanding of the virus in your own community. But it is also then that margin of risk tolerance or safety that you need to put in place. So there are various ways that these buffers are put in place.

In Victoria they have a very comprehensive response to outbreaks, so going to contacts of contacts. It is something I championed from as early as we could possibly put it in place as our numbers came down, because it does allow you to get in front of the virus, and you are basically bringing lockdown to those with that exposure risk. In Victoria they have also, in different outbreaks, treated exposure sites differently, and sometimes that is based on the evidence. You see transmission—a cafe in Kilmore—beyond the definition of a normal close contact, so you have to call everyone in the cafe a close contact. We have seen the same happen in Sydney recently. So you have to be responsive. But we have also had situations—the Holiday Inn outbreak, where as I recall it every exposure site, even terminal 4 at the airport, where someone could have walked through and not been within a kilometre of the one case who was working there, but everyone going through that terminal was required to quarantine, which was an enormous sort of shift in the way we would handle those sites normally. And in that Holiday Inn outbreak we then had a lockdown as well on top of that and in effect the ring of steel around Melbourne, because you could not have the movement either. So I guess that is the concern—that you can end up putting so many layers on in rings around the risk that we are not sure what they are all contributing or whether they are in fact duplicating effort. And if we need to pull back and have lockdown, then how do you manage that based on the data?

When we are talking about prevention, often given that sort of worst case scenario thinking, it is working to the lowest common denominator. I have worked in partnership with people across a range of sectors—art galleries, Ballarat Choral Society, people trying to have events and to have places open and look to the way to manage that—but I recall actually conversations in wave 2 with someone tied up with the meatworks, which was an important area in the wave 2 outbreaks because until it really became centred around health and aged care, meatworks were one of the main contributors. And here was someone who had instituted, of their own volition, a best practice approach. They had had the virus brought into the meatworks in Warrnambool, and they wound up not having the local transmission. One case is not evidence that their methods worked, but it certainly gives you an approach to evaluate. And it raised the question about how we would put COVID-safe practices in place

that could allow workplaces or events or other things to go ahead. The best way to do that is to do some at least process evaluation if we do not have the virus circulating or, if the virus is circulating, use those opportunities to understand what is safe. That way, you come up with solutions in partnership that can potentially not only really fully understand the problem, given the nature of that event or workplace, but also actually set the benchmarks that inspire or reward people who are doing it well and in fact encourage others to lift their game, particularly if they can only open under certain circumstances.

So this brings me to public health communication and messaging. I think one of the key challenges for everyone in all of this, including the health department, has been trying to have a consistent approach. New information comes in and you need to respond to that, but we do have an incredible degree of inconsistency across states, for example, and around different rules that do not always seem to make sense—to even me as an epidemiologist. I often come back to the example where you could play cricket into a net in a park but you could not play tennis across a net in a park, without using the facilities, because that was considered not safe—cricket nets were. The idea was you had to draw the line somewhere, but a lot of this drive in the second wave in containment and lockdowns was about reducing movement. We often heard from the health department in the messaging that movement equals virus, and I just think that by the end of the second wave we knew more than to keep it to such simple adages—that in fact all movement does not equal virus. There are particular movements that are more at risk.

If you look at events, there are a number of challenges that you have to deal with if you are trying to bring a number of people together. Lockdowns often did remove the possibility of having those events, but even in stepping out of lockdown we had a number of constraints in place. It is about the number of people. It is about the density. It is about the nature of the event. If it is an event that encourages singing and dancing, whether that be a wedding or that be a concert, you can put rules in place on our behaviour, but then it is about how compliance works in that setting, particularly if you are adding in the mix things like alcohol. And then you have got to manage all the other things, like getting to and from the event.

So there are a number of things to think about, but people have been doing fantastic work in thinking about that. I wonder that we are not seeing some of the innovation because we tend to pull back to full shutdowns rather than each time we go into any sort of restriction—it would have been great to hear, ‘And this time we can keep this going at this level because we’ve now got these things in place’. The one exception to that, I would say, is the football, because it is recognised they have done so much work in zoning crowds and doing other things so that the football might go ahead—and the Australian Open, for example—where others might not. It would be good to have that model, given we are a year and a half in, where we are constantly seeing that kind of innovation in partnership and in building COVID-safe operations that have been evaluated and are going to continue to be evaluated so we can learn what is best practice.

That brings me, then, to the concept of legacy and thinking about where we are. Do we have more answers than questions? No. I think we are still the other way around. I do think there is a lot of evaluation that can and must be done around understanding risk as well as mitigation and doing that in partnership so that you do come up with those innovative, feasible and sustainable solutions that can be dialled up and dialled down as our responses need to change, because clearly, from what we are seeing today and with our vaccine—that is the other part of the story, and I am sure we will talk about that—it might actually change our risk levels for the better or the worse, and we need to be responsive to that. I might stop there.

The CHAIR: Thank you, Professor Bennett. Thank you for sharing your insight and your contribution. I found it quite informative. On that point I do have a question about the vaccines, but before I get to my question I might go around and ask committee members if they have a question. I will ask committee members to limit themselves to a maximum of two questions in light of the time constraints we have with today’s hearing. I might hand over to Mr Meddick to ask the first question. Then I will go to Mrs Beverley McArthur if she has a question, and then we will go around to fellow committee members. Mr Meddick, do you have a question?

Mr MEDDICK: Yes, I do. Thank you, Chair. And thank you, Professor Bennett, first of all for the continued work that you are doing in this area but, not just that, also your many media appearances. I think you along with others in your position have been very good at keeping the public informed of the clinical responses that are needed for things to happen, and I think that does give the community some sense of surety. So thank you so much for that.

Given that this is an inquiry on the effects that COVID-19 and the responses have had on tourism, I would like to stick in that vein if I can. Not just Victoria but the whole of Australia is extremely reliant on the tourism industry, and we are all very conscious of trying to get that back up and running as much as possible not just from a domestic perspective but as an international tourism thing as well. That also turns into returning international students to Australia, very much a big part of the Victorian economy. I am curious about what your thoughts are around having dedicated quarantine centres and also whether we need to make sure that anyone then who is trying to come in for tourism from this point on is not just using those centres—they will become I think, if we get them up all around the country, a mainstay of international travel for at least the foreseeable future—but we are just having those people vaccinated as well. Does that also then become a prerequisite for them entering Australia in your opinion?

Prof. BENNETT: Thank you, Mr Meddick. I think these are really important questions, because I do think this is shifting as we speak, and I do think vaccination is an important part of it. What we have seen overseas are tiered approaches starting to emerge around people's vaccination status and also the countries they are arriving from and the risks associated with that. So having this tiered approach to assessing risk and then looking at your quarantine needs in relation to that is where I see us heading. I do think purpose-built quarantine will have a place, as you say, but I do not think it will necessarily be for every incoming visitor or student. I think it is more likely to be people who are deemed high risk either because they are only recently vaccinated or not vaccinated, they have been found to be carrying a variant of concern or they are coming from a country where there is a high risk of that.

If we still have hotel quarantine, that might be, again, for people where you still need to manage them—they cannot isolate at home or they are at lower risk coming in internationally and do not have a home setting to go to. But then we might be in a position with fully vaccinated Australians returning to their own homes, and they might be able to have hotel quarantine now moved to home isolation in the future. I know there are people working in that space as well on how that could support government initiatives around that to make that perhaps even more secure than it was previously, but that has worked for us, actually, during outbreaks. People's compliance with home isolation and quarantine is usually pretty good, so I do think that gives us the option to open up the borders more, and we will see a progression towards that. All our CHOs are talking about the fact we are not ready for it yet because our background rates of vaccination are not high enough to allow for the risk that even a vaccinated person might bring the virus in.

So even if you home isolate people—we are probably not ready to have anyone coming in and not isolating in any way or quarantining—if you do combine it with testing, as is done in the UK, with tests after a few days and maybe tests again after that, you are just monitoring it and making sure none of your vaccinated people are returning positive tests and could be infectious. They are lower risk. What we understand is they can potentially be on average a 50 per cent lower risk of infecting people in their own households, which is your highest risk circle, but at the same time we are still learning about these new variants. So I think we have to be cautious, but I do think there are options to move across that international border and also rethink our state border responses in these outbreak settings where vaccine status is a big part of that.

Mr MEDDICK: Thank you so much. But the key thing I think that I have taken out of that then, if I can just ask this one, is that background vaccination rates will be key to the community being safe and the biggest safeguard that we have against any of those scenarios happening.

Prof. BENNETT: I think that is right. I do not think it means, you know, this 75 or 80—or 85 now, they are saying, with the new variants—per cent vaccinated story; I think it is the progressive vaccination protection that will allow us to look at more and more things as more and more people are vaccinated. So while we are trying to achieve the maximum vaccination levels possible, there might still be steps we can take that start to, as I said, tier the border crossing response so that in certain situations people might be able to home quarantine with testing and with some monitoring, and then you might move from that later as more of the population is vaccinated. So I think it is having a tiered approach to quarantine itself, but also over time, as our resilience builds, as our protective levels of vaccine in the wider community build, that individual risk reduction, because of their vaccine status, can then come into consideration in terms of what is and is not allowed at that border crossing.

Mr MEDDICK: Thank you so much, Professor. Thank you, Chair.

The CHAIR: Thank you very much. I might pass over to Mrs Beverley McArthur and then to Mr Lee Tarlamis to ask the next questions. Mrs McArthur.

Mrs McARTHUR: Thank you, Chair, and thank you, Professor. I would like to go to how other countries are now viewing this pandemic. In Singapore, which has been extremely successful in combating the spread of the virus, they have decided that there will be no daily case numbers. It will be much easier for people to move around and even come into the country, because they believe we have to live with the virus. It will mutate and there will be ongoing issues with a virus, but they have to get on with life.

In the UK, where it is much talked about as to how bad it is—with 10 000 new daily infections, and even with this deadly moving quickly beast of delta—they are only averaging single figures in COVID deaths these days, and last week in fact the flu caused 10 times more deaths than the COVID variant. So do you believe that Australia is going to have to have a plan not of zero transmission, which appears to be what we are always looking for to manage this, because it is obviously going to go on for a long time? First of all we heard that we had to be in a lockdown because we had to flatten the curve. We were worried that hospitals were not going to be able to cope. We did not have enough PPE equipment, ventilators et cetera. Then there were new reasons as to why we had to be locked down, but we never, as you quite rightly point out, seem to get the medical advice that backs up all these reasons as to why we are in lockdown. I am not sure anybody assesses the costs of these lockdowns in mental illness, suicide deaths, the economic impacts of businesses closing down, people losing all their savings because their business is no longer in existence, people without jobs. Surely these impacts have to be taken into consideration when you are locking down something.

One cannot believe that the events industry, which is extraordinarily capable of managing and moving people, logistics, apps—they do it with great expertise, and Victoria once was the events capital of Australia: \$12 billion brought into the economy each year—from March of last year has not earned a cent. In fact they should have perhaps used it to manage some of their hotel quarantine management or contact tracing or even vaccine rollout. Surely that industry would have even been safer to hold events than even the football. So what are your views on how we are going to have a plan moving forward in a scenario where this virus will clearly go on who knows for how long?

Prof. BENNETT: Thank you. I will just touch on your last comments to start with before I go back to the bigger question, but I agree that actually one of the basic principles of public health communication is engagement with stakeholders, and that is because often that is where the rich information is that helps you understand the risks and the solutions. So I do think that those partnerships are really critical, and it also brings that expertise in to health departments or government departments that then have to operate in a very different way in a pandemic setting, including contact tracing, including how you actually manage, monitor, design, all those things around people movement that are quintessentially the important part of risk mitigation for communicable diseases.

Coming back to the bigger question, I agree: when we went into the process of flattening the curve and aggressive elimination, which has now kind of morphed into this zero tolerance accepted stance, at the end of the day that was never seen to be a sustainable solution—that was until we had the vaccine that would then do the heavy lifting for us and would give us the opportunity then to open up, including our international borders if possible. In the early days we were not sure; it was buying time, so we could understand where vaccine development could go and whether we could design, access and roll out a vaccine program. So I do not think this is sustainable where we are, and I think what we are seeing now is absolutely the beginning of the end of zero tolerance for COVID community transmission. It just shows that this is not sustainable and we have to move to these next steps. I do think it is going to be hinged on the vaccine rollout.

I do think, despite people putting a lot of information out—they are still saying it is not proven to stop transmission—it is proven to reduce the risk of infection even with these latest variants, particularly on the second dose, and it also can reduce up to 40, 50 per cent your risk of passing the virus on. Most importantly, it markedly diminishes the risk—still over 90 per cent for delta—of serious illness and hospitalisation. Hospitalisation protection is still well over 90 per cent for both AstraZeneca and Pfizer, when you look at the data coming out of the UK that they report each week.

Your observations are quite correct about what is happening around the world in that space. They are seeing though, with delta, up to a doubling of hospitalisations, but this is a variant that is now concentrated in younger

age groups. Because vaccine coverage is high, particularly in the older age groups in the UK, the cases are concentrated now in younger adults, so it is presenting differently. Hospitalisation rates are thankfully very low—death rates, same. But even doubling a rare death rate, or a hospitalisation rate is [Zoom dropout] concern.

What it is doing at the population level is that now we are not seeing the deaths at the same levels. We have fewer cases in those who are vaccinated. Of the cases reported up to a couple of weeks ago, over 83 per cent were people who were not vaccinated, and of those fully vaccinated there were only 3.7 per cent of cases meeting that definition. So clearly vaccination really shifts your risk of hospitalisation and severe disease and fatalities, and that was what our main focus was.

Then you bring it back to something else and, as you say, Singapore's decision not to report daily cases. You know, we still have epidemiological maps showing the relationship between cases for COVID coming up in the media as well as daily counts of everything, and that will ultimately shift. If this is destined to be an endemic virus, until possibly we find vaccines that are even more effective and can be rolled out globally in a way that contains it, then it is about adjusting to this as one of the concerning communicable diseases we need to manage and one we need to monitor. We would need ongoing surveillance to monitor for variants of concern, just as we do with flu, and we are concerned about pandemic flu with the shift in strains that can then pose a whole new challenge to the global population. That is where I see us going with COVID too—something we need to watch closely, but that we would certainly shift our thinking in terms of how we attempt to close down every single case or cluster in the community when we have got our vaccination levels sufficient. And it is not just the percentage of people vaccinated, it is who. We have concentrated on the most vulnerable, if they are infected, and in the short term on those frontline workers, particularly at the borders while that still matters. But longer term the risk is that we could still end up with parts of our community with low vaccination rates that could be vulnerable, and we would still potentially see serious illness and so on. So we just need to make sure that we are not rolling it out in a way where we are ticking a box with total numbers but not actually looking to see what that protection translates to at the whole population level.

The CHAIR: Yes. Thank you for that.

Mrs McARTHUR: Chair, do we ask the second question now or later on?

The CHAIR: Yes, I am happy for you to ask another question, Mrs McArthur. But I would just remind all committee members to please keep preambles to questions to a minimum, just to allow everyone to get through their questions. Thank you, Mrs McArthur.

Mrs McARTHUR: Thank you, Chair. Thank you, Professor. Professor, given that we announce how many cases we have and how many a day and how many tests we are doing and how many vaccinations we are doing, do you think we should also be announcing the fact that we have no deaths—we have had none all this year—but also the deaths from other causes, the costs in terms of people not being able to present for medical services for other complaints? You know, these are factors that surely are making life very difficult for many people, if not causing death, and that is because of the way we are treating a virus which at the moment has not caused a death for the entire year.

Prof. BENNETT: It is about balance, I agree. At the moment this preoccupation with case numbers also for some people translates to, you know, transparency but also a sense of understanding what is going on that gives a bit of control. It is a bit akin to the side effects associated with vaccine. You want people to understand what is going on but at the same time we can create a great focus on something that is a very rare event, and people actually do have difficulty knowing what to do with that information. It is not zero risk, but it is an incredibly tiny risk of having an adverse event, but once you know about it then people can fixate on that. Balancing against the risk of contracting COVID in the community is important, because that actually helps people make up their own personal decision about where their risk balance sits and what they are going to do.

But I agree. I think we have not had as comprehensive an approach to evaluating the impacts of lockdown, and while many have said you look after health first and then the economy actually benefits from that and you follow, we have to understand whether that is true. And it is not enough just to look at, well, a number of countries did that and their economies have bounced back and it is all okay. It might be that our economies did not have to have the hit they had and we might still have had the same positive health outcomes if we had been

able to keep getting more and more precise and tailored with our responses. In fact New Zealand, which went the hardest in the first wave, actually have pulled back and taken a more nuanced approach, a localised approach, and still succeeded in maintaining the virus at a negative level, or at a zero level. If you compare it to Victoria, we have actually tended to go broader, even doing statewide responses when we have a very local outbreak.

So there are differences in responses. A lot of this comes to public health messaging, and then the data you provide to the public both drives some of the mood in the community but also sometimes it is a response to negative information. I do not think we always have the right information. I am not sure that the layperson finding out exactly how cases are linked is actually changing anything. What they need is a really clear summary to understand if there is a threat, if this outbreak—even if it is in another state—might impact on their state. And I think we end up as public health practitioners having to do a lot of media work to try and interpret the numbers for people.

I can very quickly give you an example out of the UK, following your previous question. When they look at the death rates that came out in the very latest report this week, it shows that the death rates actually look pretty bad when you look at the deaths in people who have had two doses compared to the people that are not vaccinated. But the reality is the people with two doses are primarily the people who have high risk rates for death otherwise, and the fact that they are now comparable to people in their young adult years actually shows the work of the vaccine in bringing the risk down. But people naive to understanding how epidemiological analysis works on data see those raw data being presented, misinterpret them as showing that vaccine does not do anything and then, you know, just another wave of misinformation goes out to the community.

So I do think it is not just about raw numbers. It is about actually having a trusted, comprehensive review of where we are at and doing that regularly enough so people are in touch but not fixated on daily numbers, which are often an aberration of catch-up on old cases or daily reporting or whatever.

The CHAIR: Thank you, Professor Bennett. I will pass over then to Mr Tarlamis, then Mr Quilty, then Ms Watt, in that order. So Mr Tarlamis.

Mr TARLAMIS: Thank you, Professor Bennett, for your insights and for coming and giving us the opportunity to talk to you today and draw on your expertise in this area. It is really valuable for us as committee members to have that opportunity. I wanted to talk about public and business confidence, which is obviously going to be an important component for the events and tourism sectors going forward in terms of coming out of this, and the obvious parallels with the vaccine take-up and rollout. I think one of the concerns I have got is that there is that connection and that link, and my concern is that there are a lot of misinformation campaigns that have been running and getting a lot of attention around that vaccination take-up. We have spoken a lot about the focus and the emphasis on some of the side effects and things like that, or perceived side effects and the prevalence of those when that is not entirely the case and all those sorts of things. I am just conscious that there has been a real lack of a national media campaign to basically promote the take-up of the vaccines and to dispel a lot of these myths—a public education campaign. I am just wondering whether you think there should or could be more done in that space to basically address that, and if we had gone out earlier in that space, it could have maybe avoided or got ahead of some of this?

Prof. BENNETT: Yes, very good questions again, I think. There are plans. They are working on campaigns. They had campaigns that were going to line up with the various stages of rollout as we moved through different age groups. But in fact a lot of the damage had been done before the rollout—well and truly before it—so in fact we should have been pulling that forward and trying to get messages out that resonate with all members of the community so when their time to be eligible came they have not had all this other information made available to them.

It is difficult. We have never seen anything like this in terms of vigilance over adverse events. And even before we had vaccines, we had anti-vaxxers really starting the drive to get the anti-vax message out there. Then since then there has been a whole range of things that have contributed to hesitancy associated with confusion about the information or uncertainty about how to weigh up risk versus the complexity of the rollout that we aimed for in Australia, particularly going out through GPs, which actually I think is still a good thing to do. A lot of people over 50 wanted that; they did not want the vaccine hubs. But at the same time it has proved to be logistically difficult, and then you get the messaging around, ‘Don’t bother. It’s too hard. We can’t get

appointments' or, 'We go and we get sent away because now they are not taking drop-ins' and so on. So I think there have been a lot of things that have contributed to that, and I do think messaging is a critical part.

I know the government did do work in trying to understand people's attitudes to the vaccines generally and to this vaccine specifically, understanding how attitudes shift across different parts of the community, working with a whole range of community leaders. That work is actually being done. A lot of it is not always visible to the wider community, but I do not think they estimated how widespread and how concerted the effort would be to get a lot of this misinformation out there. Some of it sounds funny to us, but it is actually not funny when you have got smart people actually believing that you could be magnetised or there will be nanobots roaming around your system and a whole range of other things. Some of them are a bit more credible, some of them are being shared by so-called physicians overseas and scientists, and that adds to the level of communication issue for the average person trying to make sense of all of this and know who to trust. So having a trusting voice is absolutely important. It does not take a lot of good, consistent information to displace wrong information. Modelling a new case showed that as well, but you have to get that messaging absolutely right so people do understand what the trusted source is.

Mr TARLAMIS: When you look at other countries in terms of the rollout that they have got in terms of where they are at with their vaccination rates, Australia is quite low in comparison to where a lot of other countries are. With some of those countries that are a lot higher, is that because they have got a lot more availability of the vaccine, or are they doing better than we are at that public information campaign and rolling out, or is confidence higher in terms of the vaccine? Are there any parallels that can be drawn there in terms of what they are doing and what we could be doing?

Prof. BENNETT: Well, ultimately—

Mr TARLAMIS: Other than availability.

Prof. BENNETT: Yes. I was going to say ultimately supply is your limiter. But in terms of motivation and making sure demand stays up to supply and you get the fastest possible rollout, then you are talking about people who have a different understanding of COVID generally in countries that have not kept going with a zero transmission policy, and that is fundamentally the difference. You know, I have talked to reporters across countries—New Zealand a lot, but also in Asia—and that is what is perceived to be the big difference. You know, few people actually understand how devastating it is not even just to know people with COVID or to have COVID yourself or to know people who have passed away from COVID but where your hospital system is overcome. I mean, here we have a lot of younger people saying, 'Well, I don't care even if I get it'. But if they were in other countries, they would know that their care is compromised even if they come off a motorbike and have to go to hospital. So there is a completely different understanding about what COVID can mean, and I think that is difficult to work with in a setting where you have protected people in a way that is not sustainable but there is a proportion of the population that thinks, 'We'll just keep doing this. This is working, and we don't need a vaccine. Why bother? And it keeps our flu rates down as well'. I think it is the reality check that is coming with what are seeing at the moment: a multistate and territory outbreak that, as we just saw in Victoria recently, does shift people's thinking. I do think that is a major component to this. It is actually that balancing of risk and not having a full understanding of the potential risks associated with COVID because thankfully our strategies to date have prevented us from seeing that.

Mr TARLAMIS: Thank you.

The CHAIR: Thank you. I have got Mr Quilty, Ms Watt and Mr Davis still to ask questions. So Mr Quilty, please proceed.

Mr QUILTY: We have been calling for the evidence and the reasoning around decisions like lockdowns to be released, and obviously that has been kept concealed to deflect political criticism. Is it important that this be made public so we can have proper analysis and debate about the levels of risk elements, and how do we get past the politics in that?

Prof. BENNETT: I agree. I have been calling myself, and we have been offering our help to the government. I do think it should be all hands to deck. It is not necessarily going back and saying, 'Well, we did this wrong'; it is saying, 'Well, that worked eventually for us in the second wave, but what was driving that outbreak? How do we go about it next time? Which elements of lockdown really made the difference?'. And

some modelling has been able to tease out parts. We had things like masks introduced between stage 3 and stage 4 in the second wave, and you could see the impact. We could see it at the time. We modelled it. You know, that could have been enough. Probably stage 4 took us down a bit faster in terms of dropping our reproductive number and getting those cases down, but it would be really good to see the data on that, because my data corresponds to what we are seeing out of a published modelling study from Monash that suggested that masks did the heavy lifting. That really did shift what stage 3 could deliver. Stage 2 flattened the curve, masks brought it down.

To go to that next stage of restriction was really a game changer in terms of the public response to it, because it was really the tipping point into a pecuniary process where the emphasis was on fines. There were also assumptions that were not based on epidemiological arguments. But when we questioned things like the 5-kilometre rule or later the 25-kilometre rule, the responses were actually more about a supposition, if you like, about human behaviour. And I remember the Chief Health Officer saying on numerous occasions you needed kilometre limits in place because you had a limit in the number of houses you could visit at the time. You could only visit one house, but if you went beyond 5 kilometres you would have more houses to choose from and therefore you would be more tempted to break the rules. So the idea that you would not break the 5-kilometre rule but you would break the number of houses you could visit rule did not seem to make logical sense. But the difference between those two rules was that the 5-kilometre rule could be checked by a licence check by a policeman or whatever. So there was this, I think, conflation of issues around enforcement and policing that were kind of presented as epidemiological arguments but were in fact in terms of this movement of virus thing. But I think there were a whole lot of other things operating from an operational sense.

So going back and looking at that, seeing whether actually we did stop the spread, we know that the spread we saw was reported to be in our essential service workers, who were working anyway. But we also know, because we have got this incredibly rich data for those parts of the community that were impacted—home contacts of workers and so on—what their actual connections were and what could have happened in these ‘what if?’ scenarios. We knew we had curfews in place so that people would not be out—younger people in particular—mixing at night, yet the first week after that was brought in our Chief Health Officer reported a case where there had been people illegally now meeting and still passing the virus onto each other. You could go back and look at the data and see what was the shift in those events before and after curfew was brought in to see whether curfew did make a difference or not. And I just think the more we do of that, the more we interrogate the data to understand, like we have in the recent outbreak in Victoria—two outbreaks—and like we are in New South Wales now, that is incredible data, because it then says, ‘What are the main components you focus on when you are trying to reduce the spread of the virus?’. Let us not just say it is a blanket. Maybe it turns out to be that, but we would want to be sure it is that, not something more specific that we could put in place or that we could tailor to the particular characteristics of an outbreak or a variant, and I think that is where we are going. We need to have access to the data and/or hear the government’s own analysis. Every time we go into a lull after an outbreak we ideally, three or four weeks later, should be hearing a summation of what they have learned from that and what they have taken from it and what new things we are discovering about the virus or about our interventions, and unfortunately we do not get that.

Mr QUILTY: Thank you. It seems obvious now that not everyone is going to get vaccinated anytime soon. We have the dissenters out there. Do we need to just accept that and set a target date where people need to get vaccinated by and if they are not going to get vaccinated by then, well, too bad and we start opening up anyway?

Prof. BENNETT: It is a difficult one. I do think that the first step is to have some guidance on what it might look like, what that path is, so that when we get to certain levels what that translates to in terms of our international borders, in terms of our state borders, when we have these sorts of episodes. If you do that and then you can actually tie dates to it, those dates need to tie to a realistic estimation of accessibility to the vaccine. So to go to the end game, where you are opening up completely and you say, ‘We’re not going to put state border closures in. We’re going to go back to business as usual. We’re going to be following up the virus only if it’s a variant of concern and we’ll work across states to do that’—so that more complete transition to what I would see as COVID normal down the track with surveillance and so on—you would have to be sure that everybody had access to the vaccines relevant to their age group by that time so that there is plenty of time for people to get fully vaccinated. Then you set dates around vaccine supply that link to these goals, and that is what then gives people a time line.

I think what we are hearing at the moment from the Prime Minister is, 'When we get to levels then we will look at it', and so on, but that just means you might never get there because people do not exactly know what level or what it will achieve. So I do think having particularly that end point in mind and then steps along the way that actually show people how we will benefit, even as we are on track to get there, I think is really critical to get people motivated and better able to see that getting it done now is the right thing, not just waiting to see what it might look like next year.

The CHAIR: Thank you for that, Professor Bennett. I notice that we are at the end of our allocated time. I do note that Ms Watt and Mr Davis do have questions. Maybe we could allow them to each ask a question and then if there are any other questions on notice, because I have also got a question, is it okay if we write to you directly and we can send the correspondence all in one piece and then you can respond to our questions on notice—

Prof. BENNETT: I am happy to do that.

The CHAIR: Thank you. All right. Ms Watt and Mr Davis to ask a question each. Ms Watt.

Ms WATT: Thank you, Professor Bennett, for your expertise and your time here today. I have got a quick one, which is really related to the events industry. What I have seen in the US is that they are actually stipulating particular vaccine types as a prerequisite for attending particular events and this is creating real concern with international events and international visitors and the international economy. As a state that often hosts international visitors that come for our big sports events and others, it has got me thinking about what the path looks like here in Victoria and Australia. Do you have any comments on that as a particular practice from an epidemiological perspective? Because it is something that I know has caused a little bit of a ruckus in the states. And when we are talking about major events, these are a very big part of the Victorian economy. I am just thinking ahead to the time when we are indeed very much vaccinated.

Prof. BENNETT: Absolutely. Thanks, Ms Watt. What we are seeing there is some organisers are just saying, 'We'll only recognise US-approved vaccines', and so that, for example, excluded AstraZeneca not because it was a terrible vaccine, just because it has not gone through their regulatory process. They focused on mRNA initially and then Johnson & Johnson. So that is an issue. Not every vaccine is absolutely equivalent, but equally the same vaccine in every person does not initiate exactly the same immune response. So there is always going to be some give in terms of how it works. So in Australia currently we have the two vaccines. Some people will have better protection on AstraZeneca than Pfizer, and vice versa—even though we have few who have had their second dose in AstraZeneca. I do think you have to have rules that recognise that someone is vaccinated with a vaccine that actually has not got good efficacy or effectiveness at the population level, and we have seen some of that possibly coming out of China, with some of their vaccines being 50 per cent efficacy, versus what we are seeing in Russia now and a resurgence in St Petersburg. So there are questions about some vaccines, but it should not be down to which ones are regulated in your own country; it should be down to which ones are on the list of reputable vaccines.

The other risk, if you have got people coming onshore, is being sure that their record of vaccination is accurate and reliable. That is something else that is going to be a challenge as more and more international borders open up, and vaccine demonstrated proof of status is part of that. So I do think there is some work to be done in that space. There may be some vaccines that do not count in the same way as others, but it should not just be based on which vaccines your country has chosen to use. It should be recognising what is on probably the WHO list of efficacious vaccines to look at in context of, as you suggest, further work we do around events and safe operation.

The CHAIR: Thank you. Mr Davis to ask a question.

Mr DAVIS: Can I just first say, Professor Bennett, that your contribution to the general debate has been remarkable, calm, thoughtful, rational, well informed, and I think that has added a great deal to the debate. But my questions today relate very specifically to the events industry, and you have advocated for a more sophisticated approach, a more nuanced approach. It seems to me that the events industry—and I am not so much talking about these very large events; I think they are better understood. One of the things we have learned in this inquiry is that the smaller events—so it might be a business event or a corporate event of some type or something of that nature—are very controlled. We know exactly who is coming to it. They are prepaid.

There are tickets. There is a series of tight functions. It seems to me it should be possible for the department to work with the event organisers and to carefully put in place protections and nuanced controls that make these sorts of events safe. Is that a fair summation?

Prof. BENNETT: Yes. Look, I do think we should be getting smarter as we go with this. I would have loved to have seen Australia as a world leader, using our low-COVID and often zero-COVID background to put our efforts into these, as I say, dial-up, dial-down, adaptable COVID-safe plans. We do have COVID-safe plans in place, but they are often looked at at the individual level. So you follow a framework, you put together a proposal and it may or may not get passed. We are not hearing a lot about that. We are not sort of learning from that process, and it should not just sit with decision-makers. It should be an iterative process so that events people can come back and say, 'Well, actually, we ran that event, but it was really difficult for these reasons. Can we review that part of it? And what does the epi tell us versus the logistics and feasibility?', and get that balancing as a continual process of improvement.

Mr DAVIS: So in that context it would be very difficult for event people, if the department had not met with them for more than a year, to have that kind of dialogue and exchange.

Prof. BENNETT: Absolutely. It is about that communication, as I said. Then other events providers are learning from that particular iterative process, which has to include follow-up afterwards. I do think there has been, in my understanding from outside, a process where people are given almost impossible decisions sometimes, which are kind of like, 'Will this work? I don't know'. We use the best evidence, but the evidence tends to be very high level, so, you know, movement equals virus; lots of people together equals virus; indoors versus outdoors, a lot worse. Then it is sort of a very simplified approach as opposed to looking at nuanced approaches.

Mr DAVIS: In the context of the *Public Health and Wellbeing Act*, which has a requirement for transparency, accountability and proportionality at its core, as well as a requirement for consultation and so forth, is it your view that some of these briefings and background documents should be public? I think you have kind of said that in terms of the assessment of some of the outbreaks. I should say it is my view that the briefings that are concurrent with the orders should be in the public domain because people can make better assessments and those with knowledge elsewhere—including epidemiologists, I might say—are able to make contributions.

Prof. BENNETT: Yes, no—yes-no. I absolutely agree. Taking the time to explain the evidence as it comes together—they have got great people in the department pulling together everything that is known around the world. That is driving some of the decision-making—a lot of the decision-making initially—but we do not hear a lot of that just as we do not hear about evaluations after an outbreak to say, 'This is what we did really, really well. This is what we've learned. This is what we'll do next time, should there be a next time'. And I do think sharing both the analysis that leads to public health orders and the evaluation of those in real time—you know, after the event—to understand those processes is a great way to engage the public but also the sectors that have been impacted through those interventions. If people understood what some of the assumptions about human behaviour were, that might be a really good way to change behaviour and actually get people on board rather than adding layers or increasing fines associated with certain activities and so on. That might give you a better way to focus on holding events, because people are more trusted and they are more trustworthy at the same time because they understand the dynamics here, and if they are likely to comply, then it means they do not have to have more serious restrictions. That can reinforce the kind of behaviour that actually minimises risk in a pandemic.

Then you could look at events, including ones I have been involved in like the choral group, where this is an incredibly important connection for older Australians that goes way beyond our normal understanding of basic health issues to social inclusion, social connectedness and all those things that actually tie to health as well. They are easy to put aside because they are smaller community events, when in fact they can be the very thing that is so critical to people particularly—

Mr DAVIS: The glue that holds the community together.

Prof. BENNETT: Absolutely, and the individual together if these are people that otherwise live in isolation. A lot of these people were people who live alone. They went from having a community connection to being

very alone. Now, there is risk with choirs, but there are ways you can do it safely, and we are learning—we are seeing some work done overseas. This group has really taken the initiative, particularly in loco with COVID times, to try and come up with new models of both, from their perspective, operating but hopefully feeding that back to the governments at state level to help them understand what might be safe ways to go ahead. So you do not have to shut things down completely every time but you dial them down, so that you say you can only sing outdoors or you need to take these various tech solutions they have put in place that remove that risk, individual to individual in the choir or to an audience.

So I do think there are things we should be doing. In our downtime we are not hearing about the evaluation or the innovation that I think should be then taking us to a better place. Even if we unfortunately have the virus seeded again, we know that we are just a step ahead next time.

The CHAIR: Thank you, Mr Davis. Thank you, Professor Bennett. On behalf of the committee, Professor Bennett, we would like to thank you for your contribution and presentation today. It has been very informative, it has been very helpful. I know there are a number of questions on notice, and we will get them to you as soon as possible.

Witness withdrew.