

TRANSCRIPT

LEGISLATIVE COUNCIL LEGAL AND SOCIAL ISSUES COMMITTEE

Inquiry into the Victorian Government's COVID-19 contact tracing system and testing regime

Melbourne—Wednesday, 18 November 2020

(via videoconference)

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WITNESS

Dr Alan Finkel, AO, Australia's Chief Scientist, Office of the Chief Scientist.

The CHAIR: Good morning, everyone, and I would like to declare open the Standing Committee on Legal and Social Issues. It is our public hearing for the Inquiry into the Victorian Government's COVID-19 Contact Tracing System and Testing Regime. I know it goes without saying, but please ensure that your phones are on silent—and maybe puppies as well, if that is possible.

Before we get going I would like to begin this hearing by respectfully acknowledging the Aboriginal peoples, the traditional custodians of the various lands each of us are gathered on today and pay my respects to their ancestors, elders and families. And I particularly want to welcome any elders or community members who are here today to impart their knowledge on this issue to the committee or who are watching the proceedings today.

Welcome to everyone who is watching the proceedings of this inquiry today. I know we had a terrific group of people who were watching on Monday, and we have really learned a lot in this short time that the inquiry has been run. Dr Finkel, I would like to introduce you to our committee. We have Dr Tien Kieu, the Deputy Chair; Ms Georgie Crozier; Ms Wendy Lovell; Dr Matthew Bach; Ms Kaushaliya Vaghela; Ms Melina Bath; and Mr Lee Tarlamis.

Just so you know, Dr Finkel, all evidence taken at this hearing is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the Legislative Council's standing orders. Therefore the information that you provide to us today is protected by law. However, any comment repeated outside this hearing may not have the same protection. Any deliberately false evidence or misleading of the committee may be considered a contempt. And all of this obviously is being recorded today, and you will receive a transcript of this session. I might encourage you just to have a look and make sure that we have not misrepresented you in any way. Ultimately it will go up onto our website, and obviously this and the really terrific report that you did is assisting us greatly in this inquiry. I understand you would like to make some opening comments, and then we will open it up to a more fulsome committee discussion. Thank you again.

Dr FINKEL: Well, thank you, Chair, and members of the committee, for the invitation to appear before the inquiry today and for the opportunity to make this opening statement. This inquiry is investigating Victoria's COVID-19 testing, contact-tracing and outbreak management systems. These are crucially important capabilities in our battle against COVID-19, but their context is important. And as you know and just mentioned, I chaired the National Contact Tracing Review adopted last Friday by national cabinet.

During our travels around Australia my fellow panel members and I saw in all states and territories, including Victoria, a well-established two-stage response to COVID-19. The first and most important stage is prevention. Prevention starts with the help of each and every member of the community. We are all familiar with the list: physical distancing, personal hygiene, staying away from work and gatherings if unwell, testing if symptomatic and mask wearing where required. Prevention continues with the public health measures related to workplaces, institutions, venues and special circumstances. These include appropriately managed access to aged-care facilities; COVID safety plans in workplaces, schools, hospitals and restaurants; attendance limits at public events; and quarantine for international travellers and others who are at risk of having been exposed. And finally, prevention depends on the authorities being well prepared, preparations that include an enduring commitment to public health, so that experts are on hand at all times; appropriate emergency legislation that is ready to activate; clear lines of command; training programs for the public health workforce; and stockpiles of personal protective equipment and training on how to use it.

But prevention is never perfect. The coronavirus that causes COVID-19 is an insidious enemy. It is driven by a biological determination to reproduce, and to reproduce, it has to infect human beings and jump between them. Despite vigilant efforts to contain it, we should not be surprised that the coronavirus will appear in our community from time to time, as we have seen in the last few days in Parafield, following nearly six months in South Australia without a case in the community.

When cases appear in our community, we depend on our second-stage response: the combination of rapid-testing, contact-tracing and outbreak management systems. These systems are powered by people and technology. Both are important—in that order. So let us start with people. They must be trained within the

police force, emergency services and the department of health. To run large numbers of tests pathology labs require a skilled workforce and the test sites need health administrators, nurses and doctors at the ready. Prudent preparation for a sudden rise in cases requires that health departments train a surge workforce for contact tracing to be held in reserve and called upon instantly if the case load soars. To analyse the pattern of spread and the origin of the infection we need trained epidemiologists and data analysts.

But now let us continue with technology. It can help at every phase. Pop-up test sites initially used paper forms for collecting patient information and tracking the test sample. When the numbers are high processing these paper forms leads to significant delays and the likelihood of data entry errors. A modern system based on digital data collection and digitally tracking the data all the way through and into the contact-tracing system is much more efficient and less error-prone. For contact tracing confirmed cases are allocated to a contact-tracing officer to call the patient and interview them to identify their close contacts and then alert those close contacts that they have been exposed and must start quarantine. These interviews often take up to an hour. Traditionally the cases are allocated manually to the contact-tracing officers and interview details are recorded on paper and then subsequently manually entered into a database to assist with follow-up. This manual process works at low numbers but is easily overwhelmed when the case numbers are high. Moving to digital allocation of jobs and digitally prompted and digitally recorded case interviews is much more efficient and less error-prone.

Speed is of the essence. Even at high case numbers test results should be available within 24 hours of the COVID-19 test sample being collected. Even at high case numbers for positive test results no more than 48 hours should pass between the time the test sample is collected and the close contacts of the confirmed case are told to quarantine. If an outbreak occurs, the authorities must bring people and technology rapidly to the front line in order to contain the outbreak.

I referred earlier to the coronavirus as an enemy. There is another less obvious enemy: complacency in the population or in the system which, if we are not careful, will occur in times of low prevalence, such as we now have across Australia. Well, we can overcome this enemy too by constant preparation, including frequent, consistent and clear communication with the public, appropriate preventative measures, continuous staff training and desktop simulations to test the system in peacetime.

Finally, we should appreciate the difference between risk minimisation and risk elimination. Risk minimisation, for example, means that we allow Australians to return home while minimising risk through compulsory and well-managed quarantine measures. Risk elimination means refusing entry to citizens who want to come back to Australia. Risk minimisation means an open economy where we work and travel even in the absence of a vaccine or therapeutic while minimising risk through personal and workplace preventative measures. Risk elimination means wide area lockdowns with all their negative consequences. I have no doubt that risk minimisation is the way to go—risk minimisation based on constant preparation and well-trained workforces supported by modern technology to prevent outbreaks and to rapidly contain them should they occur.

To conclude, let me say that from our review of all the states and territories in Australia we saw that the people and systems are now in place to minimise risk while maintaining an active economy and community mobility. Thank you.

The CHAIR: Thank you, Dr Finkel. We very much appreciate that. Having your insight, having looked at all the systems in place—if I could start off with that—we have seen some of the technology that Victoria is using today, and it really does look at the QR code from the test right through to the contact tracing and secondary contact tracing. But it appears that we were either underprepared or overwhelmed a number of months ago in June and July. Do you think that that is the case, and certainly what were we missing back there that I think we have probably fixed now?

Dr FINKEL: Chair, it all comes to preparation, and there is no question that the Victorian system was overwhelmed and cases just were not being managed end to end—some were lost, duplications occurred. It was difficult. If you have a system that is designed for a certain low case, measles and other infectious diseases, and then you are hit by a pandemic with large numbers that are doubling every four or five days, unless you are fully prepared for that and supported by an appropriate technology base—fully prepared in terms of training, anticipation and preventative measures to slow the rate of increase in the first place—it is easy to get overwhelmed. And yes, Victoria was overwhelmed.

The CHAIR: And some would have said that in fact, yes, we have been talking about whether our system should have been more decentralised—and that was one of the issues that faced Victoria specifically—but I have also learned that if any state had faced those same numbers they too would have been overwhelmed whether they were decentralised or not. Do you think Victoria had some real specific issues?

Dr FINKEL: Chair, it is very hard to be specific on something like that: you know, would another state collapse at 100 cases per day sustained per million in their population? I prefer to talk per million because there is such an enormous difference in population sizes. I know that many of the states are training to be able to deal with something like 50 cases every day for a sustained period per day per million, which in the case of Victoria would be training for, say, 350 cases per day without losing the ability to manage those cases. That is not easy to do, but we do believe that it is achievable through all the measures I was talking about. It is a combination of having surge workforces in place, already trained, authorised to do the work, and having the technology in place to make each person's contribution as efficient as possible. If Victoria in the past had had better systems in place, they might not have gotten to the point where it was being tested to the breakdown limit. So it is a combination, as I said, of preventative and responsive approaches to handling the pandemic.

The CHAIR: Thank you, Dr Finkel. I will hand over to my Deputy Chair, Dr Tien Kieu.

Dr KIEU: Thank you, Chair. Thank you, Dr Finkel. Thank you very much for contributing to the inquiry. We definitely were overwhelmed, but having successfully come out of the second wave we are now the envy of the world, no doubt—and lately I have been told that our standard in test results is under 24 hours and the contact tracing is under 40 hours, as recommended by you and your team. Now, moving forward, there will be outbreaks from time to time and maybe or maybe not a third wave, and on top of that there might be some mutation of the virus and complications piling up. You have been talking about using technology and that we need data and a central national system, so I would like to have your thoughts on the centralised data system, given the different technologies and also given that in each jurisdiction we have different privacy laws—some people from New South Wales travel to Victoria and they will be subject to different ones from their home state and so on. So how would it work in that case? Because technology is the way forward, without doubt, or we cannot maintain or effectively trace and control the virus.

Dr FINKEL: Okay. So you started off by asking, Deputy Chair, about speed. And I must say that most of my observations of Victoria are recent ones in the last few months, and even in that short time I have seen an enormous difference as Victoria has come out of that overloaded situation. I have seen regular data in recent weeks that shows that the turnaround time from sample collection to people getting their results is actually very, very good, substantially below 24 hours. There might be outliers, but the vast majority of them are substantially below 24 hours. And 24 hours is a target, as you acknowledge, that we put into the report because it fits in with the overall target of 48 hours, which has been shown by modelling to reduce significantly transmission in the community compared to an unconstrained case.

But also 24 hours is really important not just from that epidemiological point of view but from a community compliance point of view. I would struggle as a responsible person to obey the instruction to self-isolate after a test if, when I went for the test, they told me it would be three, four, five days or thereabouts. But if they could tell me with confidence that it is 24 hours or less, then why wouldn't I be a compliant patient working within the system? And that is being achieved through the private pathology labs and the public pathology labs but very much in the case of the pop-up sites because of the enormous investment that Victoria has made to develop what they call a digital test tracker, which is the ability to take all the patient information that you would normally take for pathology plus additional information that is relevant to subsequent contact tracing—whether the patient was symptomatic or even what language is preferred at home, because you want to get a demographic insight to make sure that your testing is thorough across the communities and also assist the contact tracers. So that investment in a digitised system of collecting patient data and following that all the way through the system has made an important contribution.

The second part of your question was about technology and what contribution it is making. As you would be aware—I believe on Monday you had presentations from Salesforce and others—in the last few months Victoria has made an enormous commitment to developing a brand new system in parallel to the old system that it is in the process of switching over to, and that brand new system allows everything to be done in real time. So the data from the pathology labs comes into the department of health's new system in real time, and a positive case can be allocated to a case interview officer through that digital system, and then literally in real

time the system prompts the case interview officer, who is a trained person but still needs to go through a formal interview process, and their results of that interview go straight back into that system and can be used by the outbreak management people. So that real-time aspect and full digitisation makes a huge difference.

The other big benefit of a system like that is that it has what I call or many of us call easy onboarding. So if there is a surge and you have tapped into your available surge workforce—we can talk about surge workforces later—and it is a really big surge and you need to reach out and there is available capacity in other states in Australia, you can onboard trained case interview officers from those other health systems into the new contact management system in Victoria very easily through multifactor authentication systems, the kind of stuff you have done in your own lives. The case officers do not have to be physically present in the building. It is just a modern system. It makes it easy to do things and to increase your workforce that way, so that is yet another benefit of the new technology.

I think the third part of your question was about privacy. I actually do not know the correct answer to that, but my understanding is that each state has absolute responsibility for public health within its borders. And if somebody from New South Wales is in Victoria and succumbs to COVID-19, they would be subject to the privacy legislation requirements of Victoria, not of New South Wales, so I do not think that that is a problem. But you would have to check with an expert.

The CHAIR: Thank you. And thank you, Tien.

Ms CROZIER: Thank you very much, Chair, and thank you, Dr Finkel, for being before us this morning—very valuable insights that you have provided not only just this morning but also through your review that you have undertaken on behalf of the Australian population. I would just like to go to some of those aspects. You and Commodore Hill came down to Victoria to look at our processes and systems that were in place, and clearly at that time it was very concerning—the numbers—and you have said yourself the system was overwhelmed. In your report you talked about clear governance. I am just wondering if you could provide an overview to the committee of what you found when you first arrived with Commodore Hill about DHHS and some of those governance issues.

Dr FINKEL: Commodore Hill arrived before me, and he had a formal posting and a responsibility to assist Victoria and to analyse some of their things. I had a very loose arrangement through a letter of invitation from the then minister—

Ms CROZIER: Minister Hunt or Minister Mikakos?

Dr FINKEL: Minister Mikakos. It was a very light-touch arrangement, so I was effectively an attendee at many meetings. I was welcomed and given the opportunity to help with the transition into the new system—develop its vision, its rationale, its targets, its business case. At the time it was still in the overloaded condition, so there were just numerous people trying to help. And as often happens in these circumstances, they would effectively be making overlapping decisions, and things can struggle in those circumstances. But Commodore Hill was the one who was advising on those operational structural details. I am much more focused, through the national contact review, on what the system is at that moment. Certainly from the point of view of the technology development, they have good management structures in place at the moment. For each of the major modules—and there is one major module on developing the digital collection of the data and the demographic analysis to make sure that the pop-up test sites are getting adequate coverage. It has got a steering committee with a clear decision-making authority and an implementation team. And then for the second module, which is contact tracing and outbreak management based on Salesforce that you heard about, there is a separate steering committee with a clear management decision-making authority. They meet regularly—

Ms CROZIER: Sorry to interrupt you. So that is all happening now, but when Commodore Hill came in you said there was lots of overlapping and duplication. It sounds like and it was pretty clear that the department was struggling. It was quite chaotic at the time. I am trying to get an understanding of that governance structure within the department and how the decision-making process worked.

Dr FINKEL: I really cannot answer your question. I did not go in and investigate it; I just felt that it was not where it needed to be, and within a modest amount of time it was clear that structures were in place. Do not forget when I was advising the Victorian department it was purely about this technology transition. It was not about how they managed the department overall. And when I first entered, it was in the middle of the firefight,

if you like, and so any observations that I would have had then I would perhaps suggest that you do not take them with as much surety as the observations that I have been able to make since then, where the system has settled down out of that overload into a development period. The system has settled down into actually quite a best-practice management structure for the project of the digital transformation and modernisation of the testing, contact-tracing and outbreak management system.

Ms CROZIER: Thank you. I will leave it there. I will have more questions. Thank you, Chair.

The CHAIR: Thank you. Kaushaliya Vaghela.

Ms VAGHELA: Thanks, Chair, and thanks, Dr Finkel, for your submission and your time today for the presentation. You mentioned in your initial remarks two very important aspects of a contact-tracing system—training and technology. Now, as far as the training and technology is concerned, that is one part. You also mentioned that, instead of risk elimination, risk minimisation is the way to go, which again depends on two aspects, which are training and technology. So my question is in two parts, relating to training and technology. As far as the training is concerned, how has Victoria improved the training of its public health officers? And the second part, which is related to technology, is that Salesforce uses Amazon as the web server, which is a US-based company. What are the risks associated with that? Because if we are talking about technology, of course technology comes with its own risks. So what are the risks associated, especially the data risks, and what measures do we need to put in place?

Dr FINKEL: On your question about training, again I was not looking at that previously, but I do know for sure that Victoria had access to nearly 3000 contact tracers at the time, some from within the department and some—or a lot—through Healthdirect. Healthdirect itself—and we did have an opportunity to speak to the leadership at Healthdirect when we were doing the national contract-tracing review—has medically qualified professionals, mostly nurses, who they can contract into tasks such as this. So in terms of having access to the right people, I think that Victoria has a large number. They have to be trained, not just with a health background but in contact tracing. I do not know how the training works with Healthdirect, but certainly where the department is training its own people, they get somewhere between two and three weeks of training in the actual contact-tracing processes. There is a real subtlety to interviewing somebody and helping them to remember the information that you need in order to do the contact tracing. So they get a couple of weeks of training on that and some additional training on the legal obligations and privacy obligations as an authorised officer representing the department of health. There is access to a lot of people in Victoria who have the training. There is the additional training on the user interface of the new system versus the user interface of the old system. There are far fewer, I believe, people. It is a subset of the 3000—it is a couple of hundred or thereabouts—who have been trained in the new system, which is more than adequate at lowish case numbers. But that is a training exercise that obviously they have started and they will be continuing to roll out. But you would have to ask them what the rollout plan is.

The second part of your question was about what level of security and comfort should we have, or what level of comfort should we have, in the integrity and reliability of a system that is built on a cloud-based platform from an American company and actually using an interface and database platform from another American company. Well, Amazon Web Services, Salesforce—the word ‘ubiquitous’ is probably too strong, but they are everywhere. Big companies and governments are using them. I do not know the situation today, but when I first started looking at it, 35 of the 50 states in America were using Salesforce for contact tracing. Obviously they have not done the preventative measures that I was talking about. They have gotten into trouble, probably not because of a lack of contact tracing; I am not sure that in many cases they have had an opportunity to let the contact-tracing work properly because they have not done preventative measures as well as Australia. Salesforce is used around the world for contact tracing, but it is also used as the backbone of business in many enterprises around the world.

Similarly, Amazon Web Services, even more so, is the cloud-based service, alongside the Microsoft Office offering and the Google offering and others, that—I do not know the numbers, but I would guess—more than half of the big companies in the world, between those three cloud-based services, would be totally dependent on their proper operation. The Department of Defense in America is using cloud-based services. You cannot not have a concern, but at some stage you have to say it is a managed risk to accept that, for example, our telephone system will stay up in the middle of a crisis. It is not always the case, if there is a bushfire or mobile phone towers are being destroyed by the intense heat. But fundamentally we run our systems based on

backbones such as the internet and the telephone service and nowadays backbones such as cloud-based servers. With my vote of one, I would say I am comfortable using those two technology bases.

Ms VAGHELA: Thank you.

The CHAIR: Great. Thank you. I do not think we have much of a choice really in the 21st century. Wendy Lovell.

Ms LOVELL: I am going to cede my time to Ms Crozier.

The CHAIR: Thank you. Ms Crozier.

Ms CROZIER: Thank you very much. Dr Finkel, you spoke about lost cases. How many do you think were lost? What was your observation in that? What were the lost cases that you were speaking of?

Dr FINKEL: I genuinely have no idea. I do not have data in front of me, but it was a concern that was being expressed by others. I apologise. Treat that as hearsay evidence.

Ms CROZIER: The implications of those lost cases are fairly significant though. Obviously they can go on to infect a number of people. If that was communicated to you or that was what was spoken about—obviously it is a huge concern to know that if there were lost cases and they could not be tracked, that community transmission was significant, and we know what happened here in Victoria because of that. There are many, many stories that I was getting and others were getting about not being followed up and misinformation, as you also highlighted. I am just keen to understand whether those lost cases, in your view, would have had a huge implication to that community transmission and whether we have sorted that out.

Dr FINKEL: My understanding for this inquiry is looking at the what is the here and now, and certainly our National Contact Tracing Review was looking at here and now and into the future. I put it to you, Ms Crozier, that with Victoria at the moment going onto the new system where the test results are flowing through the system digitally and then into the contact-tracing management system based on Salesforce, I personally cannot see how in future cases could actually get lost. It may be that the human beings at the terminals of the system are overwhelmed. In the future if the numbers are just vast, they might not have time to deal with those cases, but the systems need to be designed on a risk-minimised basis to do less and less and less per case as the numbers go up. I cannot tell you whether this has been implemented yet, but it is certainly contemplated that if the numbers were just vast, then instead of doing all the things that you would like to do, which is call the cases and interview them for 14 days prior to symptoms, you would cut back the number of days that you interview them. If you cannot get to the last contact, you would not worry about that, but at the very, very least, if the system was totally overwhelmed, and I cannot see how that could happen, you would have the system automatically send text messages and emails to the confirmed cases. Going forward, I cannot see how there could be lost cases.

Ms CROZIER: Good. I am concerned because the Premier in recent weeks has said pen and paper is often best—old-fashioned measures are often best. But you are saying, ‘We don’t want to go down the paper and pen aspect. We want to have this system digitalised’, and I think that is what all Victorians would hope to have that confidence that you spoke about to be able to open up and manage in the current circumstances during this pandemic.

Dr FINKEL: Correct. I would like to see it fully digitalised. But, as I said in my opening remarks, the human being who is trained and expert at speaking to the cases, or if you are doing it at low prevalence and you are dealing with contacts of contacts or secondary cases—so you need human beings to speak to the primary case and their close contacts to interview them and to help them to remember who they have been in contact with—that is difficult work that needs a really well-trained population, and that part of the system does not change. So on the paper-based system, you need well-trained human beings and on the digital system you need well-trained human beings. The advantage of the digital system—well, there are many advantages because so much is happening in real time that each individual case officer and outbreak management officer can do more, but the other advantage is you do not lose track of what is going on, you do not lose cases and you get data reports.

The CHAIR: That is right. Thank you. And you can make sure that we do hit those benchmarks of 24 hours and 48 hours and that it is properly measured. Mr Lee Tarlamis.

Mr TARLAMIS: Sorry, Chair. Can you maybe go to the next one and come back to me, if that is okay?

The CHAIR: Of course I can. Let's go to Sheena Watt.

Ms WATT: Thank you, Chair, and thank you, Dr Finkel, for coming along today to present to this, and for your important work to date. It is really something—I wish I had a better word to describe it. It is very informative as we explore this. I do have a question, which is: in the final report of your review, the *National Contact Tracing Review*, it notes that some states or territories in particular have low or no case numbers, and it is really hard for them to have an opportunity to train staff and practice interviews and develop staff in preparation. I am just wondering: I did note that a couple of the jurisdictions had offered to provide support to Victoria during our outbreak, and it was a good opportunity for their staff to practice and refine their skills. With Victoria being the only jurisdiction to have dealt with a large-scale outbreak and the lessons we have learned through the second wave, I am just trying to think about how other states have used those lessons in the application of contact, test and trace processes in their states, and if there are some broader pieces that are missing in terms of what we have learned, because we have done a lot of learning very rapidly and some we have partnered with around training and skills development, because it is quite a unique skill set. As we heard on Monday, it is not something that workforces have kept in the ready, because it has been a really long time since we have had anything like this.

Dr FINKEL: Which is a good thing.

Ms WATT: It is a good thing.

Dr FINKEL: A good thing in one sense, but difficult for preparation. Look, a number of elements to an answer on that very important question.

Ms WATT: Yes.

Dr FINKEL: First of all, some of the jurisdictions did comment to us that by virtue of the fact that some of their people had been called in during the heights of the outbreak in Victoria to assist they had been able to report back to the managers, the designers of that jurisdiction's systems insights that they had gained of limitations and positive lessons as well. So that is a good thing.

Second of all, there are some formal processes for sharing of information. We certainly recommended in the report the importance of sharing, and I will return to state-to-state and territory sharing in a moment. But through national structures there is one called the AHPPC, which is the health professionals, the chief health officers of each state. They are a committee called AHPPC that reports to national cabinet, and they meet frequently. I think they meet at least once a week, and more often if they need to. The Chief Medical Officer of Australia representing them attends every national cabinet meeting. But through the chief health officers getting together they are sharing information, they are sharing insights, war stories if you like, and ideas about preparation.

That committee itself is informed by a subcommittee called CDNA, the Communicable Diseases Network Australia, which is peopled in the main by deputy chief health officers and other health experts, including the public pathology network and others. They also share information and create guidelines for how to define and manage aspects of the pandemic, so that is a good thing as well. And then at the highest level of governance you have got national cabinet where the premiers can share. At a lower level, I know from talking to the chief health officers that because they know each other they will pick up the phone and will actually ask each other for help or give each other solicited or unsolicited advice from time to time.

Look, what we have not had, and it is not in the report but it is probably one of those things that would be done when it all settles down, is, say, a national conference to think about the learnings and share experience, but that is not the sort of thing you do in the middle of the actual pandemic and outbreaks and the learning experiences. What goes against those benefits, if you like, is the fact that every state has its own system. A lot of people think, 'Oh, my gosh, that's terrible'. I do not. Every state and territory is responsible for public health in their jurisdiction. They are under the constitution, and they will properly preserve that responsibility, and so they will

build the systems at the time with the resources that they have got available to them. What is important is that as people are moving between states and territories across the borders it is necessary that contact tracing can seamlessly continue across those borders as people move. That is done at the moment at low numbers by telephone calls and email. That is not practical if the numbers are bad, so one of the things that we recommended in the report is that a data exchange be built. The data exchange really translates a request from one jurisdiction, finds the response and translates it back to the originating jurisdiction, because they all speak different languages or in computer parlance, they speak different syntaxes. The data exchange would not hold data; it would just be like a telephone line. The telephone line does not hold data but it joins two parties. When it joins two parties it really does not matter if the different people on the call—some are using iPhones, some are using Android phones and some are using a landline. The phone exchange takes care of that and similarly the data exchange that we propose would take care of all the disparities between the different systems.

So it is answering your question at a different level, but I am talking about sharing—sharing information about, ‘Gosh, we’re managing a case here in Victoria and somebody who was a contact left and went back to New South Wales before we had a chance to call them so we’re telling you in New South Wales and it will pop up on your screen as a contact that needs to be followed up, or you could give us permission to follow that person up as well’.

Now, we propose that that be staged. If you just go out with a national system, you might find that it is not as appreciated as it was thought it would be; it might not have the right design elements. In a company you would go through what is called alpha test and beta test, and similarly we have suggested effectively a pilot implementation that Victoria, New South Wales and the ACT would be the first participants in because they have high population densities and are geographically adjacent or connected to each other. They are enthusiastic about doing that and I am hopeful that implementation of that through planning and design and actual coding will start shortly.

The CHAIR: Great. Thank you for that. I certainly think looking at what is happening in South Australia, having that data exchange would be incredibly useful in keeping borders open. Dr Matthew Bach.

Dr BACH: Thanks very much, Chair, and thank you, Dr Finkel, for being with us today and for your evidence before us. I have been really interested to hear your remarks about the current state of contact tracing and in particular the system that is being overseen by Salesforce. We heard interesting evidence from Salesforce earlier in the week, and I would like to ask you a question about that based on what you have already discussed regarding your role in helping the Victorian government transition to what you described as a best practice model and also the inquiry, which I know, of course, and we know as a committee, that you have already overseen.

We have heard, Dr Finkel, that Salesforce first sought out the Victorian government to offer their services—to offer this ‘best practice solution’, to use your language—back on 30 March but that it took a full five months, right through the second wave and the crushing lockdown, for the Victorian government to ultimately sign a contract with Salesforce. Given your significant experience working with the Victorian government and the review that you have already conducted, could you shed any light on why it was that it took so long?

Dr FINKEL: Dr Bach, I actually cannot. My formal engagement—and as I said, it was a light-touch engagement—with Victoria only commenced at the beginning of August and pretty much the first thing that I participated in was the decision to go to a new technology platform, because they had a platform but it was really a database that needed a lot of work at the time. So really the first couple of weeks were the decision to go to a new platform and a process of choosing who the contributors to that platform would be in terms of the underlying technology, such as Salesforce, based on an Amazon web server, and project managers and coders and implementers and things like that. I just focused on what was in front of me at the time and what we needed to do to go forward. So I am not deliberately avoiding it; I really cannot offer any meaningful comment whatsoever on your specific question.

Dr BACH: No, that is fine. Thank you, sir. Given what you have said about the huge inadequacies of the paper-based system that we saw at the start of the outbreak and your testimony, that I find very heartening indeed, regarding the system as it is run by Salesforce, I wonder, though, what your views would be about how things may have gone differently in Victoria. Had we engaged Salesforce earlier, had we put in place a best

practice model, as you say, earlier, would Victoria have needed the crushing lockdown that we experienced for so many months?

Dr FINKEL: Look, as you say, I am enthusiastic about the benefits of having a fully digital end-to-end platform going forward, and so having that at any earlier stage would have been better. I really cannot speculate on what would have been the outcome if we had it earlier, but I would say having a well-trained workforce supported by a fully digital platform end to end—and it is not just the contact tracing and the outbreak management; it is something relatively new that Victoria has introduced, which is the complete digitisation of the test information even at retail and pop-up sites—has to be better.

Dr BACH: Thank you. I was very interested, Dr Finkel, also about your commentary regarding compliance.

The CHAIR: Matthew, you have only got a very short time.

Dr BACH: Just quickly, Dr Finkel, I have noted your comments about the extent to which tests are coming back in a timely way and how that can lead to greater compliance. Logically, therefore, a slower turnaround of tests would lead to less compliance. Before we made this significant move that you were a large part of, can you talk to us about what the average response time was for tests?

Dr FINKEL: It would be hearsay evidence because I have not seen any data on that. Like others, I think it was mentioned earlier in this session, in many cases it was up to five days. My comment about compliance is based on my own personal opinion about how I would respond, but also just talking casually to other people, including experts. It is just clear logic that it is easier to comply, whether or not you do comply, it has got to be easier to comply, if you have got a job that depends on you turning up, you are being paid or you have got other obligations—it could be caring or whatever—it is obviously easier to comply if you are told, ‘You will get your result within 24 hours’, compared to actually getting your result in several days. But you really need to ask that specific question of people who have been observing the system from within and know what the data says.

Dr BACH: Thank you.

The CHAIR: Thank you, and I think we will have the opportunity to do that today and in the coming days. Melina Bath.

Ms BATH: Thank you very much. Thank you, Dr Finkel, for being here today. I have got two questions but they relate both to much of the commentary you have been making this morning. You talked about a fully digitised system and the need for that complemented by a well-trained workforce. So in relation to the well-trained workforce and the need for surge capacity, what is missing at this point from Victoria that would fully implement or sustain or hold that surge capacity? That is the first question. Also, in terms of the fully digitised system, what is the time frame, how far away do you feel we are and what measures need to be implemented for there to be a fully digitised system in Victoria?

Dr FINKEL: Thank you. So in terms of the surge workforce, Victoria already has access to a large surge workforce, which it picked up during the overload. And so the main challenge for Victoria now—and this is a very modest challenge that I am about to talk about—is just training that health surge workforce or the surge workforce trained in contact tracing and the health aspects and the authorised officer aspects in using the particular user interface that comes with the new system. And that is not a particularly difficult task, and as I said, they have already trained a few hundred, or a couple of hundred at least, to do that. So they have got access to the professionals who just need the systems-level training.

In terms of your question about where they are in terms of activating, the new system is already active. It is handling cases. And if—I have to put it in parentheses; we all of course hope it does not happen—there are cases in Victoria and it is a small number, up to some handful of numbers per day, the new system could currently deal with those and give the workforce the real-time digital advantages. If the numbers were in excess of that, then they could overflow back into the old system, which has by the way been tweaked and it is better than it was a few months ago. So I would say from that point of view they are in a good place. My understanding from fairly close observation is that they are in the final stages of development, mostly about report writing rather than operational functionality in the system, and I would be confident that by the end of this year Victoria would be in a position to fully commit to the new system and for COVID-19 leave the old

system by the by. I am also convinced that the commitment to complete that will not wane. I challenge people, and they are committed to finishing this.

Ms BATH: Thank you. One very quick one: just in relation to report writing, when I hear that—I am an ex-teacher—I always think, ‘Does the system get bogged down in report writing?’. One of my recommendations for government—

Dr FINKEL: It is not report writing, it is reporting data, and once the code or the structures are in place for the system to report the data it just spits it out—easy. Others outside the system, from the so-called ‘intelligence division’, will take that data and synthesise it into a written report for Premiers and national cabinet and the public as appropriate. So there is no reason for putting out the data—the dashboard or the reported information—to bog the system down. But it takes time to develop that capability, and that is still being finished at the moment.

The CHAIR: I went to a testing site on the weekend, and it was very sophisticated already with QR codes and digitisation. Tien, the last question for you.

Dr KIEU: Thank you very much, Chair. I have a question for you, Dr Finkel. What are your thoughts on the modelling? It is a very unprecedented event that we have had to deal with, and still are dealing with, and one thing that guides us out of that, apart from the medical knowledge, is the modelling. That is going to give us some of the predictiveness—what will be happening if we do this or we do that. Despite what the naysayers have said, we are now successfully out of the second wave. So could you take us briefly around the importance and how the testing time and the contact-tracing time would be important for the modelling? What are your thoughts on modelling? Thank you.

Dr FINKEL: Dr Kieu—modelling, modelling, modelling. Modelling—you asked the question for a reason. I have been involved in a number of modelling exercises for electricity systems and hydrogen economic uptake and things like that, and the one thing you can say about modelling is it can never be perfect. Right? Is just a question of how not perfect is. If it is based on a lot of existing data and multiple models and they converge on a similar answer, such as climate change modelling based on massive collections of data, you should have a lot of confidence in models of that kind. But when you have got something very new and you are modelling from a small dataset over a short term into the future, the models can be wildly divergent if you go from one modeller to another. So with models in those cases the utility is really to say, ‘This is what could occur in the absence of any sensible intervention. And be alert, be on your toes’. Modelling in those circumstances is best used to give you multiple scenarios. They cannot give you predictions but they can give you scenarios, which would then show: ‘Look, if you put a restriction on gatherings of no more than 10 people at a location, then the curve will come from that to that’. But the absolute value of that curve and the absolute value of this curve are immaterial. So the models are good for relative responses.

The last thing I will say on modelling is when I talked about 48 hours as the target from sample collection through to notifying people of their results and then calling them, finding out who they met and calling those contacts and telling them to quarantine—so start with a sample collection, finish with notification of close contacts that they have to quarantine—doing that in 48 hours is a recommendation based on modelling from a number of institutions: the Burnet Institute here in Melbourne, the South Australian Health and Medical Research Institute in Adelaide and some international institutions. And they are all slightly different but they all show a similar effect—that compared to an unconstrained case, if you can do the contact tracing and closure within 48 hours, you get a vast reduction of the actual numbers. Is it an 80 per cent reduction or 70 per cent or 60 or 50 per cent? It does not matter. It is the direction of benefit that is really important, and that comes from modelling.

Dr KIEU: Yes, I know how data-hungry a model could be. Thank you.

The CHAIR: Thank you so much, Dr Finkel. I think we could have maintained a steady flow of questions all day today.

Dr FINKEL: We could.

The CHAIR: Yes. Your time and our time will not allow for that. Thank you so much for your time today. Also, I think the timing of your contact-tracing review could not have been more perfect for us personally. It has been a very useful document. As I mentioned before, we will send you a transcript.

Dr FINKEL: By all means consider that we timed it for you.

The CHAIR: Thank you. Indeed, we are most personally grateful in that case. Thank you very much. On behalf of the committee, again, we appreciate your time.

Dr FINKEL: Okay. Thank you.

The CHAIR: The committee will have a 2-minute break to reset. Thank you.

Witness withdrew.