Te Tira Ārai Urutā

Royal Commission of Inquiry into COVID-19 Lessons Learned

Official interview transcript: Sir Ashley Bloomfield KNZM (follow-up)

11 September 2025

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	[redacted introductory comments]
AH	Excellent, thank you. Okay well look, Sir Ashley, if you don't mind I think we'll get straight into it. We are wanting to talk a bit about some mandate and mandate-related issues today and I'll go in some background for what we are looking at. I wonder if we could just start straight in with the Education workers' mandate, and I wonder if we start high level. If you could just talk about the general public health advice and the rationale for that mandate and as we go through, if you could think about the different cohorts of students, the different vaccination rates within those different student cohorts and potential implications for the way one might think about adults in that environment. So that's the subjects that we're thinking about. But let's talk first about the public health advice that went to the Education workers' mandate. Could you just kind of go through that …
AB	Sure thing. If there is a specific document or documents you want me to look – you're referring to around those mandates …
AH	Not at this point.
AB	Okay. So I think if I could start myself by being quite high level.
AH	Yes.

AB	With my response and I think my comments I'll make are pertinent really to all of the areas that we'll cover today, and I will start by saying it was four years ago and so one's memory of course is not as good as it was at the time.
AH	Sure.
AB	And secondly, that the – as you'll see from the documents here and the histories of the time, there were an enormous number of issues being canvassed, policy work or policy briefs being written, operational work being done to implement those policies, and so my recollection about individual decisions or advice is really quite blurred. So I don't, you know, I'd have to put on a front that I doubt that I can add a lot in terms of – in fact I'm not sure I can add much in terms of specific detail.
AH	Sure.
AB	Other than what is in the briefings. So that's the first sort of set of comments I'd make. I think the second is just to rehearse briefly the process that would be gone through regarding any of these sorts of potential decisions that of course were ultimately made by Cabinet, and generally the initiation of that process would be a request from the Minister or from Cabinet or the Prime Minister for advice on something. When the original set of questions came out for the public hearings, there was one additional, one additional suite of questions which related to an alert level change. And so I think just if I could use that as an example, but it's equally relevant to these other matters that perhaps we'll talk a bit more about today, and that's the process internally was a – the convening of a group by the Director of Public Health. It included experts and a range of people from within the organisation as well as medical officers of health and others out in the sector. And then the development of, for example, for an alert level consideration – and this was one that was completed on the 30th of September which related to the original questions that came through from the public hearing – you've got this document but just to point out it was 35 pages long, with a range of different information sources canvassed. And that was signed out by the Director of Public Health with a number of recommendations that came to me. Then internally a group of us would meet, including our policy leaders and the people with the pen on the advice going through to the Minister, we would discuss the recommendations. And I should say for the most part I would concur fully with all of the recommendations. I may have some questions and ask for further information and on some occasions there might be options put to me, but this was internal advice and I would then

	provide some guidance to the team about what we might put through in terms of our advice. So the next step of course, and you can see this in the suite of documents that you sent through to me, was advice to the Minister, health report. Of course all of this is happening at pace, and so in parallel we are also in close conversation with our colleagues [interruption of a siren].
AH	That wasn't part of our plan. [Laughter]
AB	I assume that was just a test. The Department of Prime Minister and Cabinet, and they would be developing up advice in parallel.
AH	Right.
AB	And in the case of alert level considerations, or as you can see with the relative sort of how close together the documents were around some of these other matters we'll discuss, what were very large policy issues with a range of information to be canvassed to inform decision, there was a lot of work happening. So that would be happening in parallel, and then of course we would put our advice to the Minister and you can see from the response to our health reports the Minister at the time – Chris Hipkins at the time of this decision we're talking about – would provide his feedback. He was very clear in his feedback and his decisions and then we would develop, provide that advice into the development of Cabinet papers. So I thought it was helpful just to lay out that process that we would go through and it started with a very intensive internal and gathering external information to inform often an internal document then a health report and then of course through to the Cabinet paper. With respect to the specific decisions around mandates for Education workers, whilst your question might appear high level, I don't have any particular memory of discussions around particular cohorts or settings. But what I can say is of course as part of the process to develop the advice – first to the Minister and then of course through to Cabinet – our team was working incredibly closely with their counterparts in the Department of Education who would have had, would've been reaching out to and talking with people out in the sector, quite close, I think one of the documents we've got here which you may have seen is a briefing we provided to the Minister that actually related to Health worker mandates but was a briefing for a meeting with the unions so we were working with a full range of stakeholders even in developing that advice so that the options we were putting up to Ministers were as well informed as they could be, and if we go further on, and we will come to it particularly around vaccine mandates for Health workers and of course

	vaccine passes, you can see documents there that were put together by DPMC and/or MFAT, gathering information from around the globe about exactly what the situation was in a range of countries, so our missions, our embassies and consulates around the globe were also providing information that was then summarised and that informed decisions. So in response to your question, I don't have any specific recollections about those particular settings, vaccination rates amongst children. Of course children were not brought into the vaccine programme until further down the track in the scheme of things, quite different settings in early childhood education, primary, secondary school and of course tertiary institutions. But I think the advice speaks for itself in that it canvassed what the issues were and plus there were nuanced approaches and certainly nuanced advice put up regarding those different settings for Ministers to consider as the ultimate decision makers.
AH	Thank you. A follow-up question around the process. As you indicated, Mr Hipkins would give quite clear instructions or decisions. In the process of the thinking that you had done, the preparation of the papers, the advice to the Minister, was there any discussion with Mr Hipkins in any detail or did he – what was the level of engagement within …? Again, I'm just understanding the process.
AB	Well all of the decisions or all of the considerations that were taken forward for advice were the subject of iterative processes so the discussion even about whether a mandate should be extended into the Education sector would've perhaps happened between the Minister and his Education colleagues, or senior Education officials. For my part at that time, of course, I was meeting with the Minister probably on an almost daily basis, if not for no other reason you'd be here for daily standups which were happening regularly.
AH	Yeah.
AB	And often in those pre-briefings, I guess, it would be casual conversations or just conversations, iterative conversations, and then the Minister might give a clear direction or like advice about Education sector workers, and we would take that away and then do the work. And I think you can see perhaps again speaking more generally about that advice, is in the 19 documents that I've had a chance to have a quick look through again. There's evidence of wide consideration of the issues of consultation and/or – but before the Minister makes a decision and is presented with the option, or

	is presented with the options, and then subsequent to refine that advice. So that of course is the hallmark of a good policy – and there was no more important situation for us to be doing that and despite the time and the size of the issues, I think those processes were not just undertaken but documented well in the advice.
AH	I agree. Can I – as you know, we are focused on a forward-looking dimension here in terms of lessons learned and what could we do as a country in the future that might, you know, help us. And as we think about the flexibility of the mandate and consideration of measures that could minimise the impact on those sectors not to be vaccinated, as you'll appreciate, it's a them everywhere, and as you can reflect back and think forward, what do you think about how might we engage more flexibility for a workforce – we're talking Education, and we can talk Education for the moment, but this is a thinking forward hypothetical, okay? Are there ways you think that we could encourage or provide for more flexibility in the operation or operationalisation of a mandate? We're open to any ideas in this space. Accepting a mandate is a legitimate tool in the box.
AB	Yes.
AH	It's about how do we put some flexibility around it.
AB	That's the key question, isn't it. The thing about mandates is that if they've got too much flexibility then they [talking over]. It undermines the value of having them as a tool in the toolbox and so I should say I don't recall the specifics, but for all of these pieces of advice and then decisions, these were some of the trickiest ones and the range of issues and the different groups that could be impacted. A good example here of course was the family member in-home carers, and you can see there was a switch in the approach to that based on feedback that was coming and the desire to try and ensure there was consistency. The flexibility that was put in of course had exemptions and that led to the establishment of a separate process to consider request for exemptions and what was – I think I signed off, my recollection is I would sign those off, they were on the basis of advice from a specially constituted expert group. So I think that, again, in terms of mandates it's as much about whether or not to use them, if so when to use them, and then what potential flexibility can be in there without undermining the initial, the intended purpose of the mandate.
AH	Yep.

AB	And those were all issues that we were grappling with on a daily basis.
AH	I did want to talk about exemptions, we might go there now. I've got some – jumping around a little bit, but let's follow the train of the thought in terms of exemptions. Clearly there was an informant tool as you in part just touched on. Can you talk us through – there was a different rationale for the Health exemptions and other basis for exemptions. And we understand the process that was operating around you, that there was an expert medical group of advisors who effectively considered and made recommendations that went through to you. But can you talk us through again, help us understand the different bases on which exemptions were made?
AB	So my recollection, again, it will be a little hazy.
AH	Sure.
AB	And you've got papers.
AH	Indeed, yeah.
AB	Broadly speaking, there were two types of exemptions, and we've pointed this out. There were individual exemptions that applied for people in any category of worker, perhaps it was covered by a mandate, and that was an exemption on a sort of a medical ground, and that was assessed by a particular panel and my recollection is usually those applications would come from a nurse – a doctor or a nurse practitioner – so the equivalent, and they would be considered by a technical panel. The other type of exemptions were – particularly, and this is worth checking, of course, but I think just applied in the Health system, and these were around the impact on a service, a particular service, there might be a small number of individuals who were absolutely critical and one or two of them decided they didn't want to be vaccinated, there could be an exemption to ensure that the service provision was not compromised. And so that was a separate process but again, I don't recall the details of just how those played through the organisation. But the fact that they were both considered and set up and there was a process in place, I think demonstrates that there was this understanding that there would be a need for exemptions to apply. I should say just on the second one, mostly that would be just an extension of the timeframe is my recollection, rather than saying yeah, that's fine. Because my recollection is District Health Boards might struggle to staff a service because it was just a tiny matter of staff getting their second vaccination before they could be

	classified as fully vaccinated and then be able to work in the service. So there would be extensions of the timeframe set for different services.
AH	Right. The decision to centralise was made pretty quickly, fairly initially there was [inaudible 20:24] and then it was brought back into the centre. So almost led to the Ministry and to you at that point. Can you talk us through as you think again through that and think about next time, issues that you kind of anticipated and issues that the system might not have anticipated around that model and the centralisation, de-centralisation, you know, we understand consistency was a fairly big part of that, but just reflect on that? Again, we're thinking as much forward as anything.
AB	Look, I really don't recall the detail of the considerations around that except, as you pointed out, the need for national consistency was really, was a very, was a paramount consideration and to have a single process that applied wherever people lived in the country was important.
AH	Can I turn back to – let's talk about Education as a good example of a mandate. Just one of the things we're thoughtful about is the frequency with which mandates were reviewed over time and part of that reflection is thinking about the information that was available as a review of a mandate might take place. So again I've got a 'what happened' type reflection, and a "what could happen in the future" kind of thinking going on here. As we think about the frequency of the review of the mandate, the nature of the review and the kind of information that would help such a review, can you just give us your reflections on that and you probably don't recall the detail of the specific reviews that were undertaken but clearly there was thinking about a mandate and its effect, particularly as one reached the point where the mandate was going to be lifted. What do you think about frequency of reviews?
AB	Well I'll make a general point first. There should be a process for regular review, as had been locked in, and like we did with the alert level, you know, a clear process for establishing what data and information would go into that, and my recollection is it's certainly what happened, although …
AH	For mandates?
AB	For mandates, you can see where mandates were – when there was reconsideration, formal reconsideration, there was a pretty thorough piece of work that canvassed all the information. So just as a general principle, regular review would be important, but

	a clear process established. And if possible, of course, if possible – and these are a priority – some criteria that might be left to lift a mandate. So just make those as a general comment. The second comment I would have is I found the point made in the report of the first phase of the Inquiry helpful in this regard, and this was specifically something that I know Professor Tony Blakely looked into, and that is to take into account emerging information, and it was very much emerging information, about that waning of vaccine protection and/or any information that might be available about the protection of vaccine against newly emerging variants. Now of course these things were happening very rapidly and often that information isn't available until after the fact. I've got an example here and I can leave you with the paper. And so one applies, I guess, as we did as a country – and many countries did – in a sense a generally cautionary approach.
AH	Yeah.
AB	In the absence of good evidence. And the paper I'm going to refer to is – and this is really important, but it may well be we could set up mechanisms to collect this sort of data in real time, and this is a study from New Zealand of transmission of the Omicron variant in households which demonstrates – and it was only published this year and it's actually from the SHIVERS [Southern Hemisphere Influenza and Vaccine Effectiveness Research and Surveillance] study which the organisation's now Chief Executive of Public Health and Forensic Science, is the organisation that runs that survey, and it shows quite definitively the sort of secondary attack rate we got in households, which is the highest risk setting, for the Omicron variant, and the protective effect of being vaccinated, both in terms of still some residual protection from passing the virus on, so less likely to infect others, which is quite interesting because we know that as the virus evolved there was increasing vaccine escape, but there was some significant residual protection from infecting others. And likewise if other family members were themselves vaccinated, they were protected as well. So it's taken until April 2025 for a study, and we were in quite a unique situation of course in New Zealand and also having the data that had been collected as part of this study. Well one could imagine an opportunity in the future that could really help inform those regular reviews to actually set up cohorts of people where you could

	actually collect those data in real time and inform policy decisions, and so it's sort of a small cohort study.
NL	Like the Dunedin study.
AB	Yes, well the Dunedin's study – yeah, so it was a long term study …
NL	Yeah, but the one group idea, yeah.
AB	And if you've got a study like this that's already in place you could potentially use those households to just add to the other information that's coming in. It wouldn't necessarily be the key information but it would really help because I think Professor Blakely's perspective on this was really interesting and not one that in the moment we were thinking about. We were focused on vaccinating as many people as possible, then rolling out the rest of the campaign of course. But that's something that could be done prospectively that would really help with these decisions.
AH	Thank you, that's helpful – I'm sure staff may have seen that article; I haven't. It's interesting that both of those studies you mentioned are consistent with kind of technical advice that we hear, you know, in terms of the vaccine impact even today reducing transmission and obviously a protective effect. Thanks, that's very helpful. I'm going to turn now to Health and Disability workers for a time. Before I do that, can I just check with colleagues if there's anybody with supplementary questions on Education?
GI	Yeah, I might just review the questions, just some very basic points, but just to ensure that we've got a cross-check against conclusions that we might be likely to reach in relation to the mandates issue. One view that is available to us is that all of these tools in the toolbox are interconnected and they each rely upon the other for their rationale. I'm not sure if I'm made that clear, but do you understand what I'm saying there?
AB	I do, yes.
GI	So in relation to mandates, that makes sense if vaccinations are working properly. There's an interrelationship there. And vaccines working properly require an assessment of the effectiveness of a particular vaccine as against the current virus, or current variant, the waning effect that you've spoken about. And probably a number of interrelated issues. So as part of the decision-making process, how important is it

	for the interrelatedness of tools in the toolbox to be considered and how should that be done?
AB	So it is important and I think you've described well and with what laid behind the advice at the time, and I think this is clear in many of the documents about the idea of a package of measures in that both mandates and vaccine passes were part of the package of measures all designed to protect people at the time. So yes, the view that was taken, and I think this is particularly in the documents to the back of the pack – 11 to 19 – most of which are DPMC documents, the range of issues that they were canvassing and the way these are presented even through to the document 19, the COVID-19 response after the peak of Omicron, was really considering again what's the suite of measures that are needed. I went through the documents – these ones – and also when the initial questions came in for the public hearings I had asked colleagues at the Ministry of Health to pull out, not just the publicly available documents but some of the internal documents I had received and there was one – and you may have it but it's dated the 4th of March which is signed off by [name redacted] which is about the – which was I think the first advice I received, probably on my request or perhaps because the Minister had asked me and I don't recall, you know, what does the package look like after the Omicron peak and again, a 10-12 page document canvassing the full gambit of measures, from vaccinations through gathering sizes through requirements for people to stay at home if they're infected and so yes they do need to be considered as a package. I think the second comment I would make, and notwithstanding the point I've made and the paper I've just provided, the new variants were emerging quite rapidly. The global evidence was it was being pulled together and published in very short time, and even in the time period from our first vaccinations, it was a year through to when essentially we had our Omicron outbreak and in that time there were two or three different variants and the effectiveness of the vaccine. The knowledge about the effectiveness, the efficacy and the trial effectiveness of the vaccine waning was emerging in real time and no sooner had you got some evidence then there's a new variant. Again, I think this goes back to perhaps the desirability of putting in place some sort of prospective surveys. So saying, we didn't have many infected people until the Omicron outbreak because of the approach we took.

GI	That raises another issue which is, looking into the future and what seems throughout the whole pandemic – New Zealand had an advantage in that it could look into the future in the sense of seeing what was happening in other countries before things happened here. To what extent does that intelligence gathering need to be improved?
AB	If I was just to make a general comment, I think our intelligence gathering was excellent, and I think that's evident in the documents here. And if you think about even going back to March 2020, the fact that we felt we had enough intelligence, well certainly from our position to provide the advice and Ministers to make the decision to go into that first lockdown at the time we did, when another week might have ruled out elimination altogether, or even another few days. So there was not just the intelligence gathering, domestic intelligence gathering about knowing what cases there were and contacts, but right from the start our canvassing through all the channels we had of what was happening in other countries, I mentioned MFAT, I mean the role of our diplomats around the world was unbelievable and probably part of the story that's never been told. They were constantly gathering and providing information daily. But likewise in parallel we had the Prime Minister's Chief Science Advisor, and Dr Ian Town the Science Advisor from the Ministry of Health constantly tapping networks to counterparts around the globe, particularly the Five Eys countries. We were in more than daily contact with our Australian counterparts. So I think in many respects that was one of our strengths and probably underpinned the fact, the nature of our decisions being able to be made with enough headroom as – you know, we realised early on that if you feel you need to make a decision in two weeks' time, make it today, because that was the environment we found ourselves in.
GI	Right, so as early as your Borrowdale – your first Borrowdale affidavit, you were talking about seeing what was happening overseas – Italy in particular – and using that to predict what was likely to happen here. So gathering that intelligence about overseas development seems to me – correct me if I'm wrong – to be absolutely vital in terms of good decision making for New Zealand.
AB	Yes, critical.
GI	And you've told us, or you've just mentioned very briefly something that I hadn't heard about before – others may have – which is the intelligence gathering through the diplomatic network. Can you just expand on that a little?

AB	Well, it's a long time ago, but I'll make two comments. One is we had, as part of standing up our National Health Coordination Centre, we had to call on other agencies to provide it because we were running a 24/7 process. We had people from MFAT who came up and undertook for periods of time – maybe three or six months – critical roles, and they were fantastic people as they tend to be in MFAT, and I think what a lot of people don't realise is right through the response, MFAT ran its own 24/7 coordination centre as well, because not only were they responsible for their diplomats around the world and making sure they were okay, but they had responsibilities to Kiwis all around the world.
GI	Travel warnings.
AB	Travel warnings and people who may not be able to get home, they might be in quite difficult circumstances in different countries. So they were running – and I don't know for what period of time, but for a long period of time their own 24/7 coordination centre as well as assisting the All-of-Government one. And as part of that, and you can see there's one example here, but they would weekly – there was a weekly intelligence brief from MFAT that provided an update on what was happening around the globe on a whole range of measures. And that was a really – I would be reading that every week and looking and it deeply informed a consideration of the advice around measures like mandates and vaccine passes, but not just those.
GI	So again, in relation to good decision making under pressure and uncertainty in New Zealand, that would be a key component for the future.
AB	It would be, and it's one of our strengths because they – a relatively small public service. A relatively small public service but like our wider society, two degrees of separation, probably half a degree of separation, so a lot of ability to get information and act on that quickly, and it's one of the strengths.
GI	In terms of gathering data, what you say earlier indicates that gathering data is good but gathering data quickly is vital.
AB	Yes.
GI	And that involves gathering data from what is happening overseas, but also within New Zealand. A lot of that was done through TPM [Te Pūnaha Matatini] in the period of question, Shaun Hendy's organisation.

AB	Well that organisation played – provided one input. And of course they were I think in Shaun's book, which I haven't read yet, he makes a comment about he'd be watching the daily briefings to find out what the numbers were to put in the model to update the model on a daily basis which in my mind is a good example, in fact no-one was privileged with the information actually, there was a very small group of people who knew it. Everybody in the country found out at the same time. But that was only one input. And of course we were getting the information from our public health units on the ground. There was this 9 o'clock cut-off, the number of cases, the number of contacts and a series of meetings every morning to get the numbers because that was absolutely critical when you've got an elimination approach is to know exactly the numbers of what the cases were and a sense of what the issues were on the ground, the likelihood of which groups were affected, the likelihood of being able to trace contacts and following those people up that they would comply with isolation – would be able to comply with isolation requirements and so on.
GI	It's a reference to the elimination strategy. If we fast-forward to 2021 and the Auckland lockdown, what was the role of getting the data quickly then?
AB	Exactly the same. It was right through.
GI	And to what extent do you think there was efficient process for getting data back in relation to Auckland?
AB	I think it was – by that point in time we had a pretty well oiled process for getting data back in and of course it was all Auckland and Northland and then Waikato as well at different points in time.
GI	So just describe, if you would, the process for getting the data back. I know we're going off the script a little bit.
AB	So what data in particular are you … ?
GI	Well, you've just said it's important to know what's happening on the ground. So how did Central Government know what was happening on the ground in Auckland in a way that was relevant to your role? How was that intelligence being gathered?
AB	It was being gathered through our daily – I wasn't directly involved but the Director of Public Health or the Deputies might have been – any one of them who was on call or on duty would be meeting on a daily basis with the Medical Officer of Health – probably more than daily. There would be constant information flowing about what

	was actually happening on the ground and of course that was one part of it and also in the health system as well, so it wasn't just the cases but also the impact on primary care, on hospitals as well and that was – so our purview was of course the health system per se but then equally we had comments from MSD working alongside us who were working on the support that people might need to go and isolate at home and/or take time off work, so there was a lot of information coming in that would be helping to inform the briefings each day and then of course the daily media standups.
GI	So to what extent were the District Health Boards involved in that process?
AB	They were very involved, particularly in canvassing information around what was happening in the health system per se, so I don't recall exactly, but can find out, but I suspect it would be daily calls with another one of my colleagues with the Chief Operating Officers at the hospitals or the Ministry's Chief Medical Officer was probably meeting with, at the time, his counterparts from around the District Health Boards, so there was an enormous number of different groups that were meeting on a regular basis. And of course then, really importantly, canvassing information about what was happening in the community through different groups, iwi leaders, Pacific leaders, church leaders, migrant community meetings and some of those hui would have been led by Ministers but others by different officials, so all of this information gathering was feeding into the decision making and that was, again, I think part of our strength because being able to rapidly get the information.
AH	Thank you. So just doing a time check, we're just approaching 10:20 and we're over half-way so I'd like now to talk about health and disability workers.
NL	Sorry, I just – I do have a question. It's from outside the room.
AH	Sure, sorry.
NL	It's from our other Counsel Assisting who's not here at the moment but it's been sent to me and I think it's worth asking you, Sir Ashley. Now I'm going to explain to you something you said back in February 2022 in your affidavit, opposing the application to take down the Education mandate. And you were talking about the public health rationale for the Education mandate, and I'll just explain to you what you said and then I'll ask the question. You said, "In my opinion there remains a clear public health rationale for the Order," and then you had four or five reasons, the first being:

	"… currently responding to a community outbreak of Omicron which is highly infectious. The vaccination rates amongst those aged 5 to 11 are rising and currently 46%, but there are education institutions and places where there are large amount numbers of unvaccinated people." And then you said, "To remove that protection now would not only increase the risks of Omicron being transmitted within education institutions and into the community, it could also undermine the effectiveness of the campaign to have as many children between 5 and 11 vaccinated and as many people as possible who are already vaccinated receive a booster. Effective public health campaigns require clear, consistent messaging from sources in whom the public can have confidence. Our campaign (vaccination campaign) takes place against a backdrop of misinformation about the vaccine. For Government to remove this mandate at this particular point risks undermining the message about the importance of as many people as possible being vaccinated as we address the Omicron outbreak." And the question is, where was the work being done – or you may not know – about when those sorts of goals, so, 'maintaining confidence or maintaining the message' became, or the effects of those sorts of goals became disproportionate to the benefit that you were seeking to achieve? Was that work done in the Health space or was that done once your advice or the Ministry of Health advice had been given?
VC	Excuse me, Nicolette. There seems to have been a presupposition in that question that there was a point when maintaining those goals became disproportionate to the public health response and therefore in asking when work was done to recognise that.
NL	No, sorry. No, I didn't mean to imply that. I'm asking where was the work done on that issue of proportionality? If you know.
VC	Proportionality between what?
NL	The proportionality between the public health interest and, for example, in maintaining confidence in the mandate system against the human rights impositions of requiring people to be mandated to retain their jobs.
AB	I just don't recall the details of that, although I think reflecting on the advice that clearly reflected our thinking, and I would have written that affidavit with input from public health advisors and I guess like many of these issues, at any point of time there's a matter of judgement about whether or not the benefits outweigh the

	disbenefits at that point, that the advice I was receiving and therefore conclusions I put forward, the balance was still in favour of maintaining the mandates.
NL	Alright. I suppose the reason that the question arises is that maintaining the mandates to keep the message about the importance of vaccination is a slightly different reason than maintaining the mandate because of the direct health benefits. So I just wondered whether there was any distinction that you remember being made about that.
AB	If I reflect, I think it was one of several points though that was made to support the continuation of the mandates and I think they will need to be considered together.
NL	Yeah. Okay, thank you.
AH	So, can I take you back to health and disability workers and just thinking about the discussion about the breadth of that mandate and flexibility. Let's do breadth first. Can you just talk to the extent and the breadth of that mandate. At one level it's fairly obvious and on the record but, you know, these were people dealing with vulnerable people and it made a lot of sense to protect the vulnerable people they were dealing with so vaccination was a way into that. Can you just talk us through the approach to the breadth of that mandate first.
AB	The only thing I've got to say about that is, as I re-read the original paper and advice that went up to the minister, we put options up. And one of those options clearly related to the breadth of the mandate and the Minister made a decision, based on the advice, and I think a really good outline of the issues that needed to be considered, that the decision was taken by the Minister to opt for a broader mandate, and so we then developed up the response based on that decision. Our job of course was to put up the options, and I think we did a good job of that.
AH	Yeah. As we think about what the future might look like, would you – what would you say about the options going forward, do you think that an option of a less broad mandate would remain viable? Do you think that we need to adopt that kind of model or do you think there's room for more kind of variation within it?
AB	It's impossible to say because-
AH	The whole thing's hypothetical.

AB	Well we don't know what the nature of the next pandemic may turn out to be. And so the important thing is to be able to ensure there's a really good process for canvassing the options that's well informed, that all the impacts, positive and potentially negative – potential positive and potential negatives – are well considered and then a decision made, and then a process for reviewing the decisions as we've discussed already.
AH	Yeah. So a frequent review of the criteria and so on.
AB	Yeah, and that's the advantage we've got now, although I would also make the point that – and this came up in the discussions around the revision and the National Health Regulations – the risk is that we prepare for a future COVID-19 pandemic, whereas a future pandemic won't be a COVID-19 pandemic and in the sense that was our big challenge early on in the COVID-19 pandemic as all our planning and assumptions had been around an influenza pandemic and we found ourselves in a very different situation. So it's very much about the decision-making processes, the leadership, the expectation around what information would be gathered to help inform decisions, and careful consideration of options that are available and the benefits of [voice fades 53:04].
AH	Okay. Can I talk about the benefits, this benefits dimension, and thinking about labour market consequences and measures that could be taken to kind of minimise the impact on those chosen not to be vaccinated. Clearly that had – it deployed differently in different cohorts of health workers, and one impacted midwives, there was a different kind of impact in primary care – medical officers had a different impact again, and SMOs within a hospital setting. Can you talk about the extent to which labour market consequences were a factor in thinking about the mandates as you were deploying them in the health system first?
AB	I can't comment on – the question was the extent to which they were considered. I can say they were considered and I think the establishment of that specific exemption process that recognised the issue of potential service disruption or inability to provide a service was a clear recognition that it was a potential issue and an important one to be able to address, and that was the response, I guess having both identified – canvassed that as an issue and then identified what could be a problem, in particular in the health system.
AH	Yeah. Do you recall if any particular work or particular activity was undertaken in relation to known areas that had quite high levels of concern? Midwives would be a

	good practical example of that. Do you recall if there was anything in particular done in relation to midwives and workforce supply issues?
AB	I recall that there was, specifically around midwives, because that was a group that was identified as, and based on my experience as a District Health Board Chief Executive, tended to have a lower vaccination rate themselves and of course there are very specific considerations because of the model they work in.
AH	Indeed.
AB	As maternity carers and often the only one or two available in a certain region, and the fact that they're working with a highly vulnerable patient, so really there was specific consideration given to that group and I think quite a lot of the exemptions or exemption requests that came through – when I say 'quite a lot', in terms of the total but proportionately, quite a number of them related to midwives.
AH	And there were cohorts within cohorts. So essentially the exemption mechanism was the primary release valve for managing – "release valve" is the wrong phrase – primary mechanism for dealing with some of those pressures.
AB	Indeed. They had been identified and considered and that was the response policy and operation response.
AH	We talked about the need for relatively frequent periodic reviews of mandates, and you've already said some helpful things about that. Would you wish to add anything to your earlier comments in relation to health and disability workers, in particular, around the nature or frequency of reviews of the mandate?
AB	Nothing specific, no. It's a very active process of considering the exemptions both through the individual route, and also of course those service sustainability – I'll call them broadly service sustainability – challenges and therefore exemptions, so both those processes were highly – were regular and were functioning well. And sometimes – I can't remember any specific examples – but I do recall on occasions I'd get a call from a DHB Chief Executive to say, "we've got a specific issue here, we just need an extra week" or, "we just need an extra two weeks for this group of people," so there was that responsiveness and flexibility to specific situations that may have arisen.
AH	Great. Right, thank you. I'd like to turn now to some issues around vaccine passes and you assisting us to understand the broader context for the period of time that we're

	thinking about as well. Before I do that, colleagues, any further questions on that? Okay, so we're turning now to – sorry, did you … ?
GI	Well, the whole exemptions regime. We've heard quite a bit of evidence that exemptions were extremely difficult to get and in some cases the failure to get exemptions had the potential to cause a lot of harm. Is there anything you want to respond to on that?
AB	The main comment I would make is that I think it was very important to have the exemption considered by an independent group of experts with a range of different expertise that would be required. So I relied very much on the advice of those experts. And I guess the general principle was that the bar should be quite high to help support the integrity of the policy decision that had been made which was around the mandates.
GI	But I think you'd accept that in that particular area a generous element of humanity would also be important? To ensure that people weren't resenting and getting antagonistic towards the process.
AB	I think that the consideration of impacts on individuals, say 'a generous element of humanity' I think is the phrase. 'Kindness' is another word perhaps that was actually a consideration right throughout the response and there were always, you know, not just in the vaccine area but particularly in the lockdowns, really, really challenging situations. For example, access to loved ones who may be dying, those attending tangihanga, these were considerations right through our response. I know we applied that lens to this process as we did in terms of all our advice. And likewise, I know that applied to issues like people being able to access MIQ, there were compassionate grounds for people being granted a place in MIQ. So I guess my response is that the process was not devoid of humanity or kindness and my sense is having a process that was clear, reliable and consistent was an important part of that.
GI	Thank you.
AH	Just to follow up on that, did you ever get feedback from ministers to you personally about the way the exemptions regime was operating? From any minister?
AB	Not that I recall. If you mean, did I have representations made to them about individuals?

AH	No, I would be surprised if that occurred, but I'd be interested to hear about it. I'm just more interested in whether you had feedback from ministers about what they were hearing or thinking about the exemptions' operation.
AB	Not that I recall. I know, I'm confident that ministers would have been receiving feedback from their colleagues, from the public and groups from unions perhaps. However, I don't recall the process being questioned at all. And I think in part that was because ministers understood the way that it was a well-documented process, that it was an independent process. There was careful consideration given to every single application.
AH	Thank you. Commissioner Kavanagh.
JK	I do have a question just formulating it in my mind. And you said about clear, reliable and consistent. You effectively had two exemption regimes running. One was on an individual basis and the other one related to a service. And so it might be perceived from someone who was working in the health system who had particular personal objections to having vaccination who couldn't get an exemption because it just so happened that it wasn't disrupting a service, compared to a colleague who might be working in another health service who could get an exemption because otherwise that service was at risk. And so the mere fact of having two sets of criteria if you like might in the minds of some healthcare workers to be perceived to be not consistent in their application. And so I'm just sort of putting that out there as a potential source of people questioning why is it that you get an exemption in some circumstances and not in others, and that if we apply that even to other so-called essential services like, for example, being able to keep supply chains operating in other areas of the economy, some people might perceive that to be well you've got to keep the economy running, but you're not going to have an exemption for very well-held, closely held, personal beliefs about the right not to receive medical treatment.
AB	That was clearly a tension.
JK	Tension, yeah. And was that something that you were very aware of at the point of which mandates were put in operation and being the exemption regime was considered, actually I quite like the term that Anthony uses 'that was the release valve', seemed to be about the only release valve that there was to allow that mandate regime.

AB	Yes, it was one of the considerations definitely. And can I make two quick points. One is just to go back to my comment that actually I think mostly the health service sustainability resilience exemption was used for a period of time and it generally related to getting people fully vaccinated. There were particular workforces or particular situations – and we've talked about LMCs where there were different considerations. So it wasn't an easy back door as it were. I think the second point I'd make and it's just a general point I want to get on the record, is you'll see all the advice about mandates starts with 'Here is what we are doing to support and encourage and make sure vaccination is readily available to people'. So it was not the first tool, so there was a huge amount of effort that went in, even as the mandates came in, and was ongoing to support people with information to make sure that they were able to access vaccines easily and so the mandates were part of a huge broad effort to get high vaccination rates amongst the health workforce and most of them did without the requirement for a mandate.
JK	So I have a follow-up question about that. Looking forward and thinking about workforce planning into the future with the potential for a new pandemic, and a possibility of course that there might be a vaccine that becomes available. Would you consider that for a group of workers like healthcare workers that it would be appropriate to have in employment contracts ahead of time the requirement that they receive any vaccination that was necessary in order to perform their employment duties?
AB	I think it's an option. It would be a very difficult one to implement in practice. And again, if you had over 85% of the workforce that got vaccinated without requiring it to be in a contract, does bring me to another point that of course there was another very big tension in this whole area, in particular in the health workforce that for those health workers, the 85[%] or perhaps 90% who had been vaccinated, felt very strongly about the risk that their unvaccinated colleagues could be exposing them to and the people, the vulnerable people, they were caring for. And that was a really important consideration. Of course not one that necessarily gets the publicity, but that was a very, very strong, there was very, very strong support for mandates amongst healthcare workers because many people felt that it was a professional obligation to protect not just the people using the services who were, by definition, generally vulnerable – can be high risk but also to reduce the risk to their colleagues.

JK	So that may well be further justification for the employment contracts [inaudible 1:09:05] rather than – yeah.
AB	Potentially.
JK	Potentially. We certainly heard that argument with respect to the Police as well.
AB	Sure. I should say, if I recall, if I go back quite a long way when I was a frontline health worker, before you started a job you had to – my recollection is you had to have a Hepatitis B vaccination, you had to have blood tests to check if you had antibodies for Hepatitis A and you had to be swabbed for MRSA.
AH	Correct.
AB	So there are already obligations there that I assume especially in something like Hepatitis B which is blood-born and/or probably HRV as well.
JK	Right.
AH	Those things the pressure from colleagues was evident right across many sectors that you've just talked about, a very common theme. IS1, you have any questions?
IS1	Yes, I did. I just wanted to pick up on the comment that you made in response to Nicolette's question before around what factors came into decisions to mandate. And as you said in your affidavit, there were some various factors that added up into those decisions and then similarly, the I think governing legislation allowed for mandates in the public interest, including continuity of services. Would it be fair to say though, that the therapeutical population health benefit of a specific vaccine should be the preeminent consideration when imposing a vaccine mandate?
NL	Is it a mandate or is it the specific vaccine.
IS1	The specific vaccine itself because you can't – my thought is that perhaps you can't impose a mandate unless the vaccine is working well.
AB	It's a – what's the phrase I'm looking for here – it's the starting point for any consideration of mandate – or well actually it's a starting point for offering a vaccination programme. And we were very fortunate, we were incredibly fortunate, to have not one but more than one vaccine available that was rapidly through trials able to show it was highly effective. What we knew about safety was that it was safe and we put in place mechanisms to monitor that safety. And the fact that it was protective not just in preventing the vaccinated individual from being hospitalised or dying – and

	at 95% protection against the initial strains, but also that it reduced on transmission was also clearly an amazing benefit and then underpinned a lot of the thinking about the use of vaccines, and it would be harder to justify mandates if there was no evidence of any protection against transmission, if your question is, is that sort of the most- the first criterion.
IS1	Yes.
AB	Then yes, the vaccine has to be effective.
IS1	Thank you. My follow-up question was going to be, is that your recollection of how that health advice was packaged, with the vaccine itself and that safety and efficacy being the starting point.
AB	Yes, and of course when starting the programme itself, those criteria had to be met against the Medsafe approval process to provide an assurance about that.
IS1	Thank you. Was there ever any point in time where how well the vaccine was working was called into question with regard to the COVID vaccines and the mandates?
AB	I don't have anything to add to the comments I made earlier that actually things were evolving in real time and the evidence – we were watching what was happening in other countries of course, the evidence around effectiveness in preventing infection and reducing hospitalisations and deaths in countries that had widespread outbreaks which for most of our vaccination programme we didn't. So we were fortunate in that sense. But all the evidence that was emerging was increasingly supporting the protective role that vaccines were playing, particularly the one we had selected as the mainstay for our programme.
IS1	Thank you.
GI	Was there any point at which doubts crept in over whether the original vaccine that was chosen was still being effective as against developing variants like Omicron?
AB	Not so much that doubts crept in, but we were watching what was happening and you could see that there was, and this was of course where the virus was very good at is mutating to be able to escape the vaccine. So you could see there was this vaccine escape evolving but just the extent – there was still very good evidence that from these large vaccination programmes in other countries that there was a significant population benefit.

GI	So this comes back to watching the rest of the world to see what's going to happen here and getting intel from overseas to be satisfied that the vaccine is still working against the evolving nature of the virus.
AB	Yes, and I can vaguely recall because again, a lot of its blurred, we would have regular emails with all the key papers that were being published internationally. You know, the media of course was extremely interested in this so if there were any significant studies that might be published internationally, and of course a lot of the major journals were publishing these papers and there's pre-prints, there were invariably pre-prints making them freely available so that the evidence was available as soon as possible to inform decisions.
GI	It won't have passed your notice that there are international developments in which vaccine hesitancy is being promoted. What's your view on that, having been through the whole process and looking back on the situation now?
AB	That's a separate huge issue. What it does emphasise is the issue and it wasn't so much we had vaccine hesitancy, because I don't believe you get over 90% population coverage if hesitancy is a problem. The issue was just the activeness and disinformation that was happening and I've seen a study quite recently published, or maybe not a study but information that shows that actually New Zealanders had very high exposure to misinformation, higher than in other countries through social media channels. So that was a challenge we were dealing with, and it is an ongoing challenge; and in fact had always been a challenge, having been a public health physician for my specialist career, had always been a challenge with respect to vaccination.
GI	People in the community now looking at the situation that we now enjoy, which Is for all practical purposes the pandemic has ended and there's not of lot of danger in the virus for most people. That's a stark difference from what was happening in 2020, and your examples of people dying in Italy in great numbers, etc. What would you say to the public now about the difference between those two situations? Why are we in the situation where COVID is just, for most people, just like a cold or like the flu? Whereas before it was deadly.
AB	Because there are three reasons. One is the virus has mutated and it followed the pattern that generally happens, that it becomes over time can't overcome more

	transmissible but less virulent as it were, and so saying, Delta was still a really nasty variant. Omicron was almost like a lucky break for the world, to be honest. The second is our high vaccination rate. And the third is, most people have now been infected and in New Zealand we were able to defer the majority of the population becoming infected with COVID to the Omicron or subsequent variants which are less harmful, less likely to cause serious illness or death. And so the population now, and most individuals in the population, have a combination of vaccine mediated in natural [inaudible 1:18:32].
GI	Sorry for asking simplistic questions but I want you to be on record so that we can cross-check.
AB	I do want to say that COVID is still not as treatable disease for some people, and that includes how unwell it can make younger people. It's not a trivial illness and for older people and people with chronic conditions, it's still lands them in hospital and kills some of them every year.
AH	And Long COVID is still …
AB	And Long COVID is the other issue. Dealing with Long COVID, the health system is trying to manage, not just the health system but society is trying to manage, because for some people it's extremely impactful on their ability to undertake their daily lives and be employed.
AH	It's 10.55, you've got an 11.10 exit, and we will hold to that and …
NL	Yes, I'm sorry to jump backwards and forwards, Sir Ashley, but just one more question on the exemption question and the humanity in the way that that system was, all the attempts that were made to be kind in dealing with that. We've heard from more than one person that if a person experienced an incidence of myocarditis as a result of their first shot, they shouldn't have been made to have a second one. Now there's the medical perspective on that, that they may or may not have been at greater risk, but there's also the human perspective on that being too much to ask of a person. Can you comment on that?
AB	The only comment I would make is that I would rely on the advice of the team – of course there was a human perspective, actually to all of the …
NL	Yes, yeah.

AB	Regardless of whether they'd had a reaction to the first dose of vaccine, so it goes without saying. I would always rely on the advice of experts who were examining those exemptions in those particular cases. I know we were looking very carefully at the medical records.
NL	I suppose my question goes not so much to the medical justification for insisting on the second vaccine but the issues of trust and fairness and how the system was seen by the public, if that was required.
AB	Yes, thank you, it goes without saying that these were really challenging issues and for some individuals the system – it wouldn't have felt fair or reasonable.
JK	I always have a question related to this, that if we were thinking about – for the future – a vaccine strategy relating to a pandemic and bearing in mind that a new pandemic may be very different, are there general principles that we should in fact insist upon applying in a new vaccine strategy that would be useful to have now and kind of ready to go, and would that include issues that we talked about, you know, vaccines that help with transmissibility, these sort of criteria that you have for mandates. Is having a choice of vaccine – and I'm particularly thinking about those that are mRNA and those that are not, is that another potential release valve for people because it appeared to have been a flashpoint, and if you were thinking about a vaccine strategy going forward for another pandemic, whether that would be a principle that you might put in such a strategy as being, if possible, a good thing to have?
AB	Three quick comments, two of them – the third one relates to that question. The first one of course – a vaccination programme is a population health intervention ultimately, and it needs to be considered. Of course it requires individuals, like a screening programme, ultimately, it's a delivery of a population of a programme, and the benefit is an overall population health benefit. And individuals for the most part – particularly if you've got a very safe and effective vaccine, will individually accrue some benefit, some individuals won't break any intervention, including in a screening programme. Some individuals are harmed because you're taking well people and offering them an intervention that is never 100% safe, there's always some risk. So first of all, vaccination programmes are a population intervention. Second, it doesn't get much – the fundamental issue around a vaccine strategy is having an effective vaccine, being able to get access to it, and being able to deliver it to the vast majority of the population. That's the 90% of your vaccine strategy. The

	other things are actually lesser considerations. The value in the vaccine strategy and the vaccination programme is the fact we protected the vast majority of New Zealanders from – and our health system and so on and so forth. The third comment in terms of your specific point is that it's just we now know the sorts of issues that might come up and that can and should be considered in future situations, but they are sort of second in my mind, second order issues, compared to the overall challenge which is to have a good vaccine, be able to access it, purchase it, produce it. It's an important consideration, we've got a big investment here in mRNA platform, so perhaps ensure that in the future we may be able to produce and be able to roll it out to the population.
JK	So are you telling me that while these are considerations about individual uptake of vaccine and you've got a population, but if covering off, if you like, some of those individual concerns actually increases your vaccination rate, it's a legitimate thing to be considering in an overall vaccination strategy?
AB	Yes, and first and foremost it goes into making a vaccine available to people, ensuring they can access it readily and for some populations who may not trust the government or the health service or have had bad experiences, to work very hard and put extra resource into building that trust so those people can access the vaccine in an equitable way.
JK	So some of the things that I have read, in fact I think it ended up being in one of the Cabinet papers and it was advice about vaccination, was that in general for vaccines, you know, you get about 10% of the population who don't want to receive a vaccine or who are vaccine hesitant, there are probably a whole bunch of reasons in there but getting to 90% is a big deal, and we got to 90% and then it's about, I guess that argument about how much we already need, and then in a cost-benefit sense – you can see where I'm coming from with that– is that the amount of extra effort that might be required in order to get the extra 1[%] or 2%, maybe you might get to 93%, maybe to 95[%], is a lot of effort and then you wonder about the benefit of that for the population and transmission and what have you. But thinking about the things that you might be able to do ahead of time and thinking about getting those hard-to-reach people for whatever reason is worth thinking about in a future vaccine strategy.
AB	Absolutely, and just to be clear, every percentage point over 90 is material. And if you think about measles, 90's not enough for a population, you need 95% to have herd

	immunity because it's now three or four times more infectious than having COVID-19 and so it depends on the virus or the agent, pandemic agent. Just to be clear, there is a difference between 90[%] and 91[%] and 92[%] and 93[%]. So of course, your big difference is up to 60[%], 70[%], 80[%], 90[%]. So every percentage point above 90 and I think that we did peak out at 94% at the end of the operation.
JK	And so information about that is the actual marginal benefit that you actually get is really, really important when you're justifying that continued drive, and that will be specific to the disease and to the efficacy of the vaccine.
AB	Arguably if your vaccine's less efficacious you want – actually you just want as high a coverage as possible, that's the thing.
JK	And that was the thing that came through, yeah.
GI	I've just got a follow-up question on that. In relation to the lockdowns in Auckland, Northland, etc. in late 2021, that was delayed because we hadn't quite got to where we wanted to go in terms of vaccine coverage.
AB	It was one of the key reasons.
GI	One of the key reasons. And one of the aspects of that was that Pasifika and Māori people were not vaccinated to the rate that was designed, is there a strategy to deal with that sort of thing in the future, such as targeting groups that are known to be hesitant early on in the process.
AB	Not just for the future, but it's in fact what we did in the COVID vaccination campaign, and it doesn't get much publicity because those inequities were still there right through, and you will see in one of the Cabinet papers actually where the views of other groups were canvassed at the Iwi Chairs Forum and some public experts felt that the lockdown shouldn't be lifted until 95% of those groups were vaccinated, which was actually not achieved, although we did get them up over 90%, which was good. Can I just say that early on in the vaccination programme one of the key target groups was older people, and actually for the first two months of the campaign we had higher vaccination rates amongst Māori and Pacific older people than amongst non-Māori, non-Pacific, because vaccines were specifically ringfenced for Māori and Pacific providers to vaccinate those people. I can say that right from the very first discussion about the vaccine programme this consideration of equity was an issue right through for Māori, Pasifika, disabled people, people with mental health issues, people who

	might be in quite challenging home or housing circumstances like the homeless. So there is a range of challenges that need to be addressed to vaccinate those populations, and they were an active consideration and they should absolutely be part of a vaccine strategy.
AH	Okay.
JK	Sorry.
AH	No, they are very important issues and I appreciate that. So, Sir Ashley, what I'd like you to do in the next five minutes, summarise the entire key things for some strategy and tools in the next phase of the Aotearoa response. So we've moved from elimination to living with the disease, we have put in place a COVID Protection Framework and in that context, there are some actions that were taken to continue to both protect and develop the vaccination levels in the population. So, as we reached 90% being vaccinated, there's a question about – and it reflects that ongoing thinking that was clearly happening about the benefit/dis-benefit of this tool, at this time, in this context, which was constantly changing. So as we reached 90% of eligible people and we still had some tools available, we used vaccine passes even in that context. What do you think about – at what point, or how do we go about that in the future, when you've got a high vaccination rate, accepting every percent matters. The value-add of the vaccine pass, and conscious that the dis-benefit started to appear relatively quickly, conscious of very high pressure from the population saying, "I want to be protected, I want to go to places where I know people are vaccinated," so complex. What do you think about the use of that tool in 90%-plus scenario and how we sell that in the future? Would you think it's still on the table in the future?
AB	Just two really quick comments. One is, I don't have anything to add from the advice that's in the DPMC papers, I think they canvassed the range of considerations and issues really well. And the second is, there are now a whole lot of tools that we are able to consider in the future that were never even contemplated pre-COVID. And one I use was the pandemic influenza plans from around the world, including from the WHO, the use of border measures was almost actively discouraged. The word "lockdown" mustn't appear in New Zealand's – or I don't think any pandemic plans. The idea of lockdowns, the use of vaccine mandates, of vaccine passes, were responses that our country, and many other countries, took to the pandemic that we found ourselves with. These are

	now – we now have a lot of experience with, including when might be the appropriate time to use them and which populations, and we should reflect on that and think about what the decision making criteria might be that we apply and who makes those decisions and what information sources we might canvass to do that. So we're in a better position than we were six years ago certainly, and that's one of the key lessons, isn't it – we can reflect on the experience, what value there was, but with the idea that we can't plan for a COVID-19 pandemic, we've got to have these tools available and be really aware of what happened last time and what might happen before next time, but respond in an agile way with what is now a much more comprehensive toolbox.
AH	Yeah. And do you think that comprehensive toolbox allows us to perhaps be more flexible in terms of less restrictive options – I'm thinking testing, the availability of RAT tests for individuals, and so on.
AB	Possibly, but again it depends what we've got available. One can only hope that we get a vaccine rapidly, and we're probably in a better placed globally because of what this new mRNA technology – whether or not tests, including rapid antigen tests can be made available. We don't have rapid antigen tests readily available for influenza, nor do we have – the other thing about COVID is we had effective treatments. We still don't have effective treatments for influenza. So it really depends on what the nature of the virus will be and what that future pandemic looks like. Flexibility, regular review, clear decision making, good process. These are the pillars I think of a good response, really, really good communication.
AH	I'm going to leave it there and thank you so much for your time again, we really do appreciate it. It's hugely helpful for us as we think about where we land and what recommendations we might make as we try and help improve the next one, whatever that looks like. So we are deeply grateful and as I said at the first interview, also very, very grateful for the role that you played in terms of the response, so thank you again.
AB	Thank you to all of you here, I appreciate the opportunity and I really do wish you all the best. It's a really important piece of work and I really hope that we can as a country, not just be better off ourselves in terms of what we learn, but also that we can act as a bit of a beacon and help support other countries in the wider global response. There are many things distracting us at the moment but there is an extant risk of another pandemic, and we should make sure we're well prepared for it. So thank you for the opportunity.

AH	Thank you.
NL	Thank you.
GI	Please pass on our regards to the Scottish Inquiry.
End of interview	