HOUSE OF COMMONS

Science and Technology Committee
Health and Social Care Committee

Oral evidence: Coronavirus: lessons learnt, HC 908

Wednesday 30 November 2022

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Watch the meeting

Science and Technology Committee: Greg Clark (Chair); Aaron Bell; Dawn Butler; Tracey Crouch; Rebecca Long Bailey; Stephen Metcalfe; Carol Monaghan.

Health and Social Care Committee: Steve Brine (Chair); Paul Bristow; Chris Green; Mrs Paulette Hamilton; Dr Caroline Johnson; Rachael Maskell; James Morris.

Questions 1509 - 1617

Witnesses

I: Professor Sir John Bell, Regius Professor of Medicine, University of Oxford.

II: Dr Dame Jenny Harries OBE, Chief Executive, UK Health Security Agency; and Dr Thomas Waite, Deputy Chief Medical Officer, Department of Health and Social Care.

III: Neil O'Brien MP, Minister for Primary Care and Public Health, Department of Health and Social Care; Michelle Dyson, Director General, Adult Social Care, Department of Health and Social Care; and Clara Swinson, Director General, Global Health, Department of Health and Social Care.

IV: Dame Kate Bingham, Chair, Vaccine Taskforce (May-December 2020).

Examination of witness

Witness: Professor Sir John Bell.

[Greg Clark took the Chair]

Q1509 **Chair:** This is a joint meeting of the Science and Technology and Health and Social Care Committees. We are continuing our joint inquiry into coronavirus: lessons learnt, which we have been pursuing since 2020 and on which we published a report about a year ago.

Since my previous joint Chair, Jeremy Hunt, has been called away on other business, the new Chair of the Health and Social Care Committee, Steve Brine, has taken his place. He has our congratulations and, as before, my fellow co-Chair and I will alternate chairing the different panels of witnesses that we will hear from today.

We will start by hearing, virtually, from Professor Sir John Bell. Sir John is the Regius Professor of Medicine at the University of Oxford. He is chair of the Office for the Strategic Co-ordination of Health Research and was an early member of the Vaccine Taskforce. Sir John, thank you very much indeed for helping once again with the joint inquiry and our evidence today. Where are we with covid-19? Has it got to the point of being a bit like the flu—endemic—or is it still a temporary emergency?

Professor Bell: Where we are now is that in most western countries that have had widespread vaccination, the disease has become very much more endemic. There are background levels of transmission going on at a reasonably high level, with occasional peaks, but in terms of mortality the disease we saw in the early part of the pandemic, which killed a lot of people with inflammatory pneumonia, has pretty much disappeared in countries that have high levels of vaccination. But that is not true in China, where, of course, there is a very severe problem. Like most pandemics, it will not go away all at once and become endemic everywhere. It will happen differently in different geographies around the world, which is exactly what has happened.

Q1510 **Chair:** Briefly on that international difference, is that because of a failure, if I can put it that way, of the vaccine strategy in those countries, or is there a different explanation?

Professor Bell: It looks to me like the issue in China was that they were highly effective at controlling the spread of the virus by a very aggressive lockdown strategy, which they have perpetuated right up to now, but they did not back it up with highly effective vaccines to vaccinate the population. That gave rise, of course, to vaccine hesitancy and scepticism.

My understanding is that only about 40% of the elderly in China have actually had a good vaccine. The Chinese vaccines probably do not work very well. They have been unsuccessful in making a good RNA vaccine and they chose not to use the adenovirus vaccine, so I think that is really

the reason that they are having difficulty. If they release the lockdown now, they will release a very large number of non-immune people to a much more infectious form of the virus. The virus that we have now is much more infectious than the original Wuhan strain, so they cannot really do that. It is going to cause all kinds of trouble. They need to get on with a proper vaccine programme.

Q1511 **Chair:** It is helpful to have that analysis. It clearly points up the importance of vaccination, which takes me to our next question. Where are we in the effectiveness of the latest booster jabs that, in this country at least, people are receiving?

Professor Bell: Let me start by saying that all three of the original vaccines—the AstraZeneca vaccine and the two RNA vaccines—have been unbelievably effective at eliminating the really dreadful disease that caused so many deaths early on. The durability of those vaccines in preventing those problems has been impressive. I am not entirely sure that they even needed boosters. We do not have any real, clear data on that. That syndrome associated with the covid virus has now essentially disappeared, and that again is a good thing. We are still getting some deaths, but they are largely in elderly people, and they are people who often have covid infections alongside other particular medical problems.

The booster programme is interesting. There are two models for a booster programme. You boost as many people as possible in the hope of eliminating transmissions, because we do not need to worry about the severe disease any more. It turns out that the boosters are probably a safe bet for the elderly, but we have just put a paper on medRxiv, based on the ONS data, where there has been continual sampling of people after boosters to see who gets infected. This is work from David Eyre's group.

It is rather interesting that boosters now are associated with a level of protection against transmissions of around 67%, which is an arbitrary number, but they last only about 70 days. The boosters are not really providing any prolonged protection against transmission. You could have one now and by mid-January you would be getting very little protection against transmissions. Interestingly, natural infection is much more effective. The effect of natural infection in preventing reinfection with covid lasts about 180 days, which is a material amount. The extremes are out to about 10 months.

We need to think quite hard about our vaccination strategy with boosters now because it may well be that allowing the virus to circulate and transmit in populations that are not at risk of death is probably the best way to protect the population.

Chair: Thank you. That is very useful food for thought for the Committee and its inquiry. I turn to my colleagues, starting with Aaron Bell.

Q1512 **Aaron Bell:** Thank you, Chair. Sir John, it is good to see you again.

Following what you just said about transmission, do you think we can expect a vaccine that is more effective at reducing transmission in the future? Given the reproduction rates of the dominant strains at the moment, 67% for only 70 days is not going to push this down to low levels, so do you think we can expect a vaccine that might be more effective at reducing transmission?

Professor Bell: That is a good question. There are two things to remember. If you look at natural coronavirus infections, the durability of natural immunity to those is there but it does not last forever. Kids get reinfected every year from coronavirus. It is one of those viruses where, I think, getting prolonged and durable responses, even from natural infection, is unlikely to be the answer.

What is clear is that the current vaccine platforms are not providing protection against transmission in a durable way. There is a lot of work now going on to see whether one could develop intranasal vaccines, vaccines that generate different aspects to the immune response and a better innate response—in fact, a response so that when you see the virus you get an immediate response that eliminates the virus. There has not been any success in that space at the moment, but there is quite a lot of work going on. My personal view is that that is going to be a very hard lift. I think it will be really hard to get a transmission block into a coronavirus vaccine.

Q1513 **Aaron Bell:** Will the long-term prospects for vaccines be something a bit like what we do with flu, with seasonality or keeping it going all year round?

Professor Bell: There is evidence for seasonality. At the beginning, we did not think there was a seasonality factor with covid, but I think there probably is if you look at the data. I think we will need to have annual injections, particularly for the elderly where their immune systems do not work that well anyway, in the form of boosters, and let the rest of the population muddle on with the odd head cold or odd episode of flu-like illness into the future. That is what we do with flu, to be honest. That is a strategy that does not work too badly. I think the two will sit side by side.

Q1514 **Aaron Bell:** Finally, what is your prognosis for the evolution of further strains of coronavirus? Do you think it is likely that it will have any more step changes, as we saw with Delta and Omicron, or do you think it has become a bit more mature and stable?

Professor Bell: The good news is that the protection that we are seeing against the most severe form of the disease has been very successful at preventing that disease across multiple variations in the spike protein. I suspect that we will probably have prolonged immunity against that syndrome, which of course will be welcome, because that is the thing that caused the crisis in the early months of 2020. I think that is probably where we are headed. For the foreseeable future, we just have to get used to living with a virus that is endemic in the way that this one is.

Aaron Bell: Thank you very much.

Q1515 **Rebecca Long Bailey:** The Health Advisory and Recovery Team have raised consistent concerns about a number of possible side effects from the vaccines, including myocarditis, lower levels of general immunity among children and negative impacts on pregnant women. What assurances can you give on the safety of the vaccines, including the most recent bivalent versions?

Professor Bell: This is a crucial issue and is a point that needs to be made repeatedly. The three vaccines, but particularly the two vaccines we are using now, have pretty good safety profiles. In fact, they have very good safety profiles. That does not mean that they are not without some very minor issues that need to be tracked, obviously, but for the moment they look very safe.

The biggest issue with the RNA vaccines, in my view, is the incidence of myocarditis, particularly in young males aged 15 to 30. It was observed very early on, originally by the Israelis, and everyone has replicated it. The incidence of that myocarditis is higher than most of us anticipated. Two good papers have come out in the last few months—one from Canada and one from the US—which have showed that an incidence in that particular age group, in males, is that about one in 30,000 will get a myocarditis that is severe enough for them to seek medical attention in hospital. That is a higher number than you would like.

On the whole, the myocarditis goes away, the enzymes go down and there is no evidence of ongoing inflammation. There is an interesting question about whether there might be some long-term effects, and that requires continual scrutiny. I know that the CDC in America is following up their myocarditis patients very carefully. My view is that it will probably be benign over time, but when it relates to the safety of any of these interventions, including drugs and vaccines, you can never be too careful. Keeping a high level of scrutiny about that is very important.

It is important not to confuse those legitimate issues with a whole load of spurious issues about vaccine safety, which have emerged mostly from social media and are untrue. The vaccines are very safe in pregnant populations. That has been validated by a very large number of real-world data. Pregnant women need to remember that this virus is a neurotropic virus. It gets into the brains of people who are infected. It is not a good idea, in my view, to have a foetus with a developing brain with a pathogen circulating in it. There is no question in my view about the risk-benefit ratio for vaccinating pregnant women.

Q1516 **Rebecca Long Bailey:** More generally, what improvements have been made, including in the UKHSA, since earlier stages of the pandemic to prepare for new covid variants?

Professor Bell: The UK needs to be pretty proud of its ability to track variants at scale using genomic sequencing. We were in the forefront of getting this done at scale alongside places like Australia and South Africa.

That capacity still exists. In fact, it is still operating around the UK to track and monitor variants. That is an important issue, so that at least we know what is happening. It is all being led by Susan Hopkins and her team at the HSA. They have done a terrific job. We are actually in quite good shape for tracking variants, at least in the UK.

Of course, the big issue is not what happens in the UK but what happens globally. Getting a read on what is emerging in other jurisdictions has always been an important feature. There is capacity. It is not hooked up very well; there is not a very coherent way of tracking variants as they emerge globally. There are some databases, but they are not ideal for this. That needs a bit of a look.

Q1517 **Rebecca Long Bailey:** You mentioned the monitoring of international variants. Are there any other areas that you think require improvement within the UK?

Professor Bell: First of all, I think the HSA has come out of this pandemic a great deal more capable and competent than PHE was when we went into the pandemic, frankly. They have done a good job in setting up the necessary things we need to respond should there be another surge.

Where I am less confident is whether we are really properly prepared for a novel, new, pandemic that might occur at any time in the next 10 years. There, I think we still need to do some thinking and work out what we are going to need to put in place to manage that. The HSA is very cognisant of that. You perhaps would not have expected them to have a fully worked-up plan by now, but what worries me is that we are being distracted, for very good reasons, by the cost of living, the energy crisis, the war in Ukraine and all the stuff with China and Taiwan. People have forgotten about the pandemic, but the reality is that another pandemic could be much worse than the last one we had, so we need to keep attuned to that.

Rebecca Long Bailey: Thank you, Sir John.

Q1518 **Mrs Hamilton:** Good morning, Sir John. With everything you have said about preparedness for another pandemic, which country do you think is best prepared for a pandemic, and what can the UK learn from them?

Professor Bell: It is fair to say that nobody has the perfect answer in preparation for the next pandemic. It is worth looking, though, at the countries that did rather well in the last pandemic because they obviously have a system that works well. The Nordics did pretty well; Denmark did well, Norway did well and Sweden did well. Some countries did well at the beginning and then badly at the end, such as Germany and those sorts of countries. Canada did badly at the beginning and better at the end. It was patchy.

I don’t think there is a perfect answer to that question, but the things that were crucial for the formula for success in all countries were the

rapid availability of testing, which proved to be a really crucial component; the resilience of the healthcare system, which was an issue here in the UK because our health system was already under pressure before we got the pandemic; and, thirdly, the development and rapid roll-out of vaccines. If you get yourself ready to do those three things, you will be pretty well prepared.

Mrs Hamilton: Thank you.

Q1519 **Paul Bristow:** Sir John, you said in your evidence a few moments ago that you would not expect the HSA to have a plan for a future pandemic right now. When would you expect them to have a plan?

Professor Bell: It will probably take a bit of time to get completely organised for that. I would certainly give it another year or two to work out what we are going to need in place. There are a lot of issues about how we particularly prepare ourselves to be able to make and deploy vaccines quickly around the UK. We are making progress in that direction. There are conversations going on with a number of the RNA manufacturers and the RNA vaccine companies that provide a very good rapid response to any pandemic.

The surveillance is good at the moment. We could sustain that. To my knowledge, there isn't a plan as to how we would turn around a new testing platform for a new pathogen quickly onshore. That needs a bit of work. There are some things that are good and some things that are bad. Things will move at different speeds, but I am pretty reassured that the HSA is very focused on this set of issues and will be making steady progress towards a good outcome.

Chair: We will take a couple of quick questions from Stephen Metcalfe and then Steve Brine.

Q1520 **Stephen Metcalfe:** Thank you. Good morning, Sir John. I have a couple of points of clarification. Going back to your previous answer regarding what we, as the UK, can learn from other countries, during the pandemic we were continually told that international comparisons on impact and outcomes were very difficult to draw because of the difference in the demographic, the population density, households of multiple occupancy, and so on. Although there are obviously things that we can learn, that presumably still stands true. Judging us against Nordic countries is perhaps not the most helpful way of viewing our outcome.

Professor Bell: You are quite right that there is no set of metrics that you can apply systematically to this. Not only that, but the perception of who was doing well and who was not doing well in the pandemic changed over time. It is not crystal clear which the best country actually was. The comparison with the Nordics was simply that in the end they had very low mortality rates. They were able to reopen pretty quickly. In fact, some of them never really closed. Their economies were able to steam on pretty well, but the UK is not Denmark or Sweden, so we will probably have to develop our own methodology for how we deal with it.

Q1521 **Steve Brine:** Sir John, it is nice to see you. Thanks for your concise answers. I want to conclude, if I may, by asking you this. You said that the next pandemic is likely to be worse than the immediate past pandemic. I guess some members of the public listening to this today may think, "Why on earth is Parliament going over all of this?" Many people have moved on and are looking forward to Christmas, which is going to be significantly better than last Christmas for many of them. The fact is that the origins of this virus are still unclear. Do you have a view, with a little bit of benefit of reflection, as to how quickly the scientific community across the world dismissed the lab leak theory, and whether that had an impact on our ability as a world public health community to respond?

Professor Bell: The debate about where the virus actually came from is going to go on and on. I doubt that we will ever have a definitive answer. It is quite possible that there was an accidental leak out of a lab in Wuhan. To be honest, handling highly pathogenic viruses in any controlled circumstances has a lot of risks associated with it, and there are leaks. We have had them ourselves. We let foot and mouth out of one of our facilities. We had a smallpox leak many years ago at Birmingham. These things happen, but I do not think that where the virus came from would have made any difference to how we managed the pandemic. It was what it was. I am not sure that we should spend a whole lot of time going back worrying about it.

There are lots of sources of very serious pathogens which only, I suspect, need a few mutations before they can migrate into a naive human population. Avian flu is the obvious one and is what I thought this pandemic was likely to be. That carries a mortality of 20%, 30% or 40%. What we have been through with a case fatality rate of about 0.8% is pretty small compared with what you would get if you had a really pathogenic virus that caused a lot more trouble.

Q1522 **Steve Brine:** I hear you, John, but surely the point in understanding where it came from, and the agitation about that, is that if we do not understand where it came from—let's say that it was the lab in Wuhan—and if the world community was very quick to dismiss that, backed up by the WHO, then next time, why would they not just dismiss it again? Maybe it did impact on our response because we were not aware as quickly as we might have been, and the international community was very quick to coalesce around the theory that it did not come from a lab leak. You may be right that China are never going to 'fess up to that, but surely should we not, as a world community, have higher standards than a conspiracy of silence around something that has killed hundreds of thousands of our fellow citizens?

Professor Bell: Whether this came out of the Wuhan lab or not, we have to have the highest possible standards when we are holding pathogens in containment facilities in many sites around the world. That is an obvious place where they are going to leak from. On that basis, I do not think we should dismiss the idea that there can be animal-to-human spread of

pathogens, which could also cause quite serious problems. Of course, avian flu is an example where there is animal-to-human spread. What there isn't is a chain of human-to-human spread following that, but that only requires a few mutations to happen. We need to be conscious of both sources of transmission across the animal barrier, either via the labs or directly. That should be the way we approach it.

Q1523 **Chair:** Sir John, a final question briefly from me. You wrote an article in *The Daily Telegraph* last month calling for people to volunteer for future trials of new drugs and new treatments. You pointed out how important it is to develop them. Everyone will recognise the value of that.

Why was it the case, in your view, or how can you explain, that there was a decision to close down the NHS registry, in which half a million people during covid volunteered themselves for trials for covid-related drugs and other things as well?

Professor Bell: First of all, it looks very odd to me. This was a set of volunteers who stepped forward to say, "We want to help." It is pretty odd to then turn around and say, "Well, we don't want your help." My understanding is that it was one of the issues about the consent that was taken from people, and whether that allowed them to be used in other studies besides the existing vaccine studies.

I get the sense that it reflects a problem in our interpretation of some of the ethical issues. If people volunteer for these sorts of things, I suspect if you go back to them and say, "Would you volunteer for the following other things?", they would probably wave their hands around and say, "Of course we would." The British public have been absolutely terrific about making themselves available for testing and evaluation of not just vaccines but a wide range of other, novel therapeutics that will help sick people all over the country. We need to be more open about that and not lock ourselves in by rather rigid ethical governance rules.

Q1524 **Chair:** Dame Kate Bingham, from whom we are going to hear later, has been critical of a reversion to what she called "business as usual" compared with the impressive flexible, agile responses during the pandemic, of which this might be an example. Does it worry you that we are reverting to a less positive and less proactive way of dealing with future emergencies?

Professor Bell: Can I endorse that thought? I have seen an absolutely dramatic reversion to what existed before the pandemic. During the pandemic we had an amazing environment for testing and evaluating the vaccines, drug testing and the like. It was the best in the world. Now, our clinical research environment is much worse than it has ever been in my memory. That is partly because of the pressures on the NHS, which is completely understandable, but we need to move and get back in place so that we can do some of these things.

Similarly, I do not think we have thought very hard about things like data. When we opened up the data sources with the COPI notice during

covid, we ended up with the best data in the world for working out and evaluating who had covid, who had been tested and who tested positive and got very sick. We could link it all up. Now, of course, we have gone back to the fact that everybody is sitting on little databases all over the country. I hope that NHS England will be able to fix that because it takes us way back, and we cannot afford to do that.

Chair: Sir John, as ever with your appearances, we could go on for longer with lots more questions and you would enlighten us further. We are very grateful for your evidence today. Thank you very much indeed.

I am now going to hand over to my co-chair, Steve Brine, to introduce our next pair of witnesses.

Examination of witnesses

Witnesses: Dr Dame Jenny Harries OBE and Dr Thomas Waite.

[Steve Brine took the Chair]

Q1525 **Chair:** Thank you very much, Greg. Good morning, panel two. We are going to move on to talk about covid-19 and influenza cases and how they interact, and of course the NHS and its winter preparedness. We have two very good guests before us: Dr Dame Jenny Harries OBE, who is chief executive of the UK Health Security Agency, and Dr Thomas Waite, who is our deputy chief medical officer. Thank you very much for joining us in person. You are very welcome.

Dame Jenny, we start, you will not be surprised to know, with the news that hit the wires last night about UKHSA publishing the findings of an investigation following covid-19 testing errors at the private Immensa laboratory in Wolverhampton. What is your reaction to that story, please?

Dr Dame Jenny Harries: The UKHSA has been investigating that, as the press notice said. It was a private laboratory that was contracted at a peak time for surge capacity for testing. We published a report trying to understand both what had happened at the laboratory and, particularly as a new organisation—picking up your earlier point—what we could learn in detail as a new organisation to ensure that we could maximise finding those sorts of things earlier.

The basic problem was within the laboratory. The thresholds for PCR testing had been inaccurately set, and therefore people who had sent in a test were being given negative results rather than positive. I should say that it is a very small proportion. It was 0.3% of the total testing that was going on at the time, but nevertheless it was very important for the individuals who were affected. What we have been trying to do in the intervening period is, first, to understand, and try to get from Immensa an accurate result for all of the individuals in the community who were affected. Secondly, we published a very detailed and highly transparent document, a serious internal investigation, which we carried out to say what we could do in the future.

The key learning points for us were around ensuring that we are joined up as an organisation. That was the first fortnight when the organisation started. I assure you that actually the incident management for that has, in many ways, corrected it. We have multidisciplinary inputs. The second point is that we have had a complete reset of our commercial contractual processes in order to ensure that we manage our contracts as well as we possibly can.

Q1526 **Chair:** What does reset mean? It is reported that Immensa had a £119 million contract. That is public money. What is their status at the moment in respect of that?

Dr Dame Jenny Harries: It is really important. The quality of a laboratory output is the responsibility of that laboratory. It is not something that UKHSA controls. We control it, and it is our responsibility, for the labs that we run. For example, the Rosalind Franklin Laboratory is our responsibility now. We inherited that from Test and Trace. Similarly, the high-containment laboratories and specialist ones that the UKHSA runs are our responsibility, but the quality controls within the lab relate to Immensa.

In that case, the contract was a surge contract. It automatically came to an end in November last year. We immediately stopped testing there on 12 October. We found what the issue was on 11 October, and we stopped sending samples on 12 October. We reached out to every individual with a text message to advise them, with public health messages over the next two or three days. We clearly have not renewed a contract with the lab. Without going into the detail, there are some ongoing legal proceedings.

One of the points, for clarity, is that I have always taken the view that anybody who has sent a test in would want to know what their result was. One of the reasons we have been quite late in publishing this is that we have continued to try to get a re-analysis of the test in order to provide that to individuals. That work continues.

Q1527 **Chair:** Do they have any other contracts?

Dr Dame Jenny Harries: They have no other contracts with us. It is a very complex accreditation process. The accreditation is overseen by UKAS.

Q1528 **Chair:** Thank you very much. Can we talk about current cases? What are the figures from the ONS and your own surveillance telling you at the moment about the number of current and, indeed, the number of projected covid-19 cases as we move into the key winter period?

Dr Dame Jenny Harries: I will start, and Tom and I will interact between ourselves, if that is okay. The community infection survey, as Professor Bell said, is one of the best in the world. That continues to run and will do so through the winter. It is slightly retrospective. It looks back two weeks. The current prevalence rate is around 1.48%. It is around

800,000 cases in the period prior to the last report, which was on 25 November.

What we are broadly seeing—I will hand over to Dr Waite in a moment—is that cases have come down for covid. To be very clear, we are not talking about flu but about covid. Cases have come down for covid. They are probably highest in the young adult population, around 25. They tended to plateau across the country. It is reasonably similar.

There is a slight suggestion—we may well come to this on variants—that what we have seen are variant surges. There have been about four through this winter. They are not necessarily causing increased hospitalisations of significance as the Omicron wave did, but the data is starting to suggest that it might be on the uptick again. We are coming out of the BA.5 and then heading into BQ lineages as we go forward.

Q1529 **Chair:** Briefly, Dr Waite?

Dr Waite: In addition to covid, which Professor Harries has outlined, we have multiple respiratory infectious diseases that are putting pressure right across the NHS and, of course, causing disease in the community this year. Flu and RSV are probably two of the best known.

We had two years when we had almost no flu. In fact, we have seen a normal flu season return now, albeit potentially a couple of weeks early. We had an early sign of it in March/April-time this year, when we saw a small flu wave in the UK. Australia saw a large, early and nationwide flu wave, larger than any they had seen in recent years. We have now authorised the use of flu antivirals in the community as we are back in the grip of a flu wave. It is early days, but that plus RSV will continue to put pressure on acute services through the winter.

Q1530 **Chair:** Dame Jenny, on 24 November, last Thursday, NHS England published your winter sitrep, basically. It showed that in the previous week there had been an average of 344 patients a day with flu in hospital, more than 10 times the number seen at the beginning of last December, maybe not unsurprising given the loosening of restrictions and behaviour, and of course waning immunity to seasonal influenza. The press release talks about a warning from clinical leaders of a tripledemic.

I thought it was bad enough when we were talking about a twindemic of covid and flu, but the tripledemic—for those who are wondering—is of course the pressure that the service is under at the moment in terms of demand, workforce and industrial relations. How concerned should we be?

Dr Dame Jenny Harries: I obviously do not oversee the NHS workforce component and probably cannot comment in detail on that. I think that was an NHSE publication, but I can certainly comment on some of the pressures.

As Dr Waite said, we have an earlyish flu season here, so it is really important, and why we are promoting it very strongly, that people get both their covid and their flu vaccinations as quickly as possible. We have covid dying down but likely, I think, to come up going forward. Although you have mentioned as the triple point the other pressures in the NHS, of course there are other infectious diseases. The one that I would highlight is respiratory syncytial virus. It is slightly down again now, but we have had some rises in that. We look continuously at data in other countries. Some of them have had particularly difficult periods—Canada, for example, in terms of paediatric intensive care.

It is unpredictable, which is one of the risks. We are getting peaks of things on top of each other, which we cannot identify in advance. They cover mostly the ends of the age groups, particularly the most vulnerable at the top end of the age group, but we should not forget children as well, given the pressures on paediatric intensive care.

Q1531 **Chair:** On the paediatric warning signs—the bedside manner part—what would your public health message to parents be on what we should be looking for?

Dr Dame Jenny Harries: With many of these infections it is quite difficult for parents because the general signs and symptoms often overlap. Children are off their food; they are unwell; they get temperatures; and they are sniffly. Clearly, parents know their children. If there is something wrong, they should seek help. Most importantly, we should be trying to prevent these. For example, we should encourage flu vaccination uptake, which is slightly lower than it was last year in pre-school children and in primary school. That is a really good preventive measure for parents to take. Then they know that that particular one is covered, and it will prevent onward transmission of flu to others as well.

Q1532 **Chair:** Why is it slightly lower?

Dr Dame Jenny Harries: The data suggests that we have good flu uptake this year in 65 and older. We usually struggle a little bit with the under-65s with underlying health conditions and the younger adults. If you are over 50 this year, you have a covid and a flu vaccine available to you. Picking up the earlier question on pregnant women, it is really important that pregnant women also come forward for their flu vaccine. That will protect their infant from both flu and covid for the very early weeks of life when they are developing their own immune system.

Q1533 **Chair:** Dr Waite, with regards to children and the nasal vaccination—the fizzy nose, as my children describe it—why do you think those rates are a bit lower? Are you concerned about the so-called ghost children, of whom there are way too many, who have not reported back into the education system post covid? Of course, that nasal vaccination is administered through schools.

Dr Waite: Yes. It is very important that people know that the flu vaccine is available to their children. For two to three-year-olds, as Professor

Harries mentioned, you can book and arrange to have the flu vaccine through primary care, whereas for children who are in primary school, they come to you. The vaccine is given in schools. I encourage anybody who has children in that age group to keep an eye out for the form coming via email or via your child. Often they come at quite short notice, but it is really important that people take the opportunity to get vaccinated when they can.

People often do not appreciate that flu is actually quite serious in young children. In the last two years we have got quite used to talking about how covid, in particular, is at its worst in older people and people with long-term health conditions. It is not quite the same relationship with flu, where a much higher number of people go into hospital at the bottom end of the age range, as well as the top end.

Yes, that absolutely speaks to your point, Chair, that it is incumbent on people knowing that the vaccine service is there and having the opportunity to do it. Both covid and flu vaccinations for us all will keep us healthy, keep us in school and keep us in work. Right now, focusing people's minds is the fact that Christmas is coming up quite soon. It is not too late to get vaccinated. Getting vaccinated now will protect you and your loved ones throughout the Christmas period and enable us to all get back to the things that we love and have missed in the last couple of years.

Q1534 **Chair:** Finally, Jenny—then I will bring in Stephen Metcalfe—when we produced our "Coronavirus: lessons learnt to date" report, we talked about UK pandemic planning. We said it was too narrowly and inflexibly based on the flu model, failing to learn from SARS, MERS and Ebola.

For full disclosure, I was a Minister in the Department just after Exercise Cygnus, when we were working out what to do with the findings of that, one of which was to prepare the draft pandemic flu Bill that became the draft coronavirus Bill. Did we plan too narrowly and inflexibly based on a flu model?

Dr Dame Jenny Harries: Many of the points that you raise will obviously be picked up formally in the public inquiry. Dr Waite and I will be contributing to that on both the personal and the organisational front.

The fact that you have just mentioned the Bill is interesting. What it demonstrates is that work which came out of Exercise Cygnus recognised the need to have a legal statute ready to go for a pandemic and then using it in a slightly different way for the pathogen concerned. That is a successful point. It also highlights that you cannot quite do a pandemic plan properly for absolutely everything. There has to be something there. I think where we are moving now, which is the right way to go and will be recognised through the work that is described, is very much to have pathogen-agnostic plans. Rather than only for flu, although that may still be at the top of the risk register—it always has been and I think it will stay there despite the recent pandemic, certainly for the time being—the

two points are that, first, it should be pathogen agnostic and we should think through that and, secondly, we should be looking at all hazards when we are out with our surveillance.

One of the things that the UK Health Security Agency is doing now, working alongside the Cabinet Office and other parts of government, is to use our new data analytics and surveillance techniques—it was the Joint Biosecurity Centre, which we have taken into the organisation—to look at things much more holistically and continuously prioritise and review where different pathogens are. It is not just pathogens, but all external health threats. We have a role for chemical, radiological and environmental hazards as well.

Chair: I think that is partial agreement with me.

Q1535 **Stephen Metcalfe:** Good morning. You touched on this earlier, but I was interested in what your analysis of the various covid variants is at the moment and whether there are any of concern or particular high consequence.

Dr Dame Jenny Harries: I think the short answer is no, but it is only as long as that variant is at that particular time point in the current context. The reason I say that—this is available to the public and I think Professor Bell referenced it—is that we are continuing to review variants on a regular basis. We publish a technical variant document. The last one was out on 25 November. From working directly with other public health institutions—for example, CDC, and to a large extent colleagues at the WHO—I know that they are using the UK's technical briefing to guide global understanding of disease.

Part of that is because we have uploaded huge numbers of genomic sequences on to GISAID, the international database, which again is freely available to others. We look at that and see what else is around. We use some of the testing information we have at our lab at Porton Down. We now have a vaccine development and evaluation centre, but one of the other pieces of work it does is to continuously check the variants against current therapeutics and vaccines.

As I said earlier, you can see a wave potentially starting to rise around the BQ lineages and many sub-lineages. There have been over 4,000 since this virus hit us. We clearly do not look at each one. We look for signals. It often takes a few weeks before you can see how serious it is. We are not getting strong signals at the moment. The only one that we do not have, which I think has been picked up with some caution, is BA.7 from Australia, and in France the BQ. They have seen a slight increase in hospitalisations, but it is too early for us to be sure. We are monitoring it.

Dr Waite: Could I add a detail on that? This is quite an important point about the situation we are in now, compared with the three or four waves we have already had this year, and indeed in previous winters. Each of those so far has been driven by a single variant that we have been able

to see coming as the previous wave was ending. As the BA.1 wave was ending, the BA.2 was already very visible and growing quickly. As the BA.2 wave ended, the BA.5 began. There are quite a number of variants in circulation at the moment. Professor Harries mentioned the BQ family—BQ.1 and BQ.1.1—and, while that is now approaching probably the largest overall proportion outside BA.5 in the UK, it is a much less rapid growth and a much more mixed picture than in previous waves.

Q1536 **Stephen Metcalfe:** Obviously, you are continuing your surveillance. There is nothing of particular concern emerging at the moment, but that could rapidly change. Who knows? What would the threshold need to be, or what threshold would need to be reached, for you to recommend introducing preventive measures?

Dr Dame Jenny Harries: We need to be careful about what we mean by preventive measures. Our key preventive measure is maintaining the immunity of the population. Certainly, the variants and indeed the alert levels that have been established, and which UK CMOs review regularly, are based not on whether there is infection around but, broadly, on whether we are able to prevent severe disease, hospitalisation and death. That is obviously protecting the most vulnerable, which is a key point that we may come on to; the majority of it is about preventing severe disease.

We discussed earlier with Professor Bell that transmission is an interesting point. We are not trying to prevent total transmission. We are trying to manage the disease, as we do for other respiratory infections.

Q1537 **Stephen Metcalfe:** For clarification, the vaccine programmes that we have at the moment reduce severe disease. They do not necessarily impact on infections.

Dr Dame Jenny Harries: If you have a population which is immunised, they are less likely to get infected. In the early days, as Professor Bell said, there probably is a reduction in transmission. As we have different backgrounds, some people have had infection and had two or three different vaccines; some people have had several different variants. We all now have what somebody described at an international conference as a soup of covid immunology within each individual one of us, which can be quite different. When you then look at what the impact is of a particular new variant on a whole population, it begins to get quite difficult to read. The important thing is that, if people are immunised, there will be less infection around. People should take very sensible precautions, which are standard winter respiratory virus management: don't be streaming pathogens over your nearest neighbours and stay away from them. Those behaviours have been learnt very well by the public. They are managing the infections themselves in many ways.

You can never rule out one way or another, but at the moment the immunisation programme is our primary response. It is then about developing and maintaining good therapeutic agents for people who

succumb to severe disease or who are less able to manage an immune response themselves.

Q1538 **Stephen Metcalfe:** It is good to hear that the vaccine programme is our main preventive measure. What I am trying to get to is whether or not you think there are circumstances in which we would have to go further than that and reintroduce some restrictions. My follow-on question to that would be: do you think the public would accept those?

Dr Dame Jenny Harries: I am probably not a representative member of the public in many ways. I think I was asked this on a BBC newscast at one time. I said that when I was at medical school you never, ever ticked the multiple choice question "Always" or "Never", because you could never be that sure.

I know that we are talking about covid, but if you look at almost any infectious disease you can see differences in the pathogens. You see them presenting with different severity rates. We need to manage that in the moment, as we see it. If we had a significant, severe outcome and all of a sudden our vaccines were not effective, we would be slightly back to square one, but that is not what I anticipate at the moment. In fact, one of the things we are trying to do is exactly to maintain the relationships that Professor Bell was talking about, to ensure that we have ongoing working relationships with pharma so that we can capitalise the safety in new products coming through.

Q1539 **Stephen Metcalfe:** Just one final and, hopefully, quickish question. You mentioned a soup of covid protection through vaccines and infections, and infections that we may never even know we have had because of the way the disease presents itself. Do you therefore think that China's zero-covid approach is completely misguided, in that you cannot have zero covid? You need a mix of people who have had infections to be out there, as well as an effective vaccine programme?

Dr Dame Jenny Harries: I think I can politely report back what I have seen other scientists say in the papers recently. What you can see, and as Professor Bell was saying this morning, is that we have different populations and different population densities across the world, travel and different restrictions. The important thing is about exposure to the pathogen plus the immunisation policy.

The issue with China is that the vaccine they have largely been using, exactly as Professor Bell said, has probably not been taken up by those at most risk, and the elderly particularly. The vaccine is probably less effective than those we have been using here. That combination is quite difficult as you open up, whereas what we have managed to achieve, with a great roll-out from the NHS, volunteers and most of all the public, are extremely high rates of good vaccination in this country. That is protecting us really well at the moment.

Q1540 **Rebecca Long Bailey:** Dr Waite, what does the latest data tell us about

the uptake of the covid-19 vaccine and successive booster jabs among those with protected characteristics?

Dr Waite: We are doing well this winter at the overall roll-out for both the covid and the flu vaccine. I think we are just over 16 million boosters given so far this winter. The earliest roll-out was in care homes, then in the older population and we rolled down from there. Gaps remain. The highest uptake is in white people. The lowest uptake is in black Caribbean people. That has persisted throughout the pandemic and throughout the roll-out. We saw the highest case rates, for example, in some groups.

The NHS is responsible for operational delivery, but they have been undertaking quite a lot of targeted activity in particular ethnic groups. They have undertaken some targeted activity for people in particular health risk groups, for example. We know that that is where the focus of attention needs to be, not just throughout the campaign but particularly as we get towards the end of the campaign, in filling the gaps as effectively as we can.

One example is that I was at a Q&A roundtable with a whole range of groups from different minority ethnic groups: the Hindu Council, the East London Mosque and so on. The reasons why people do not get vaccinated are complex. There is no single reason. For some people it is about understanding information. For some people it is about understanding what the benefit is for them. For some people it is about making the vaccine as accessible as possible. Those are quite different questions. The NHS roll-out needs to be flexible to those.

I think there are about 3,000 different sites that are available to get vaccinated. Some of those have been chosen deliberately to target particular groups or to be as accessible as possible to different groups, but there is always more work to do.

Q1541 **Rebecca Long Bailey:** Are you seeing the same level of vaccine hesitancy among those groups for flu booster jabs?

Dr Waite: A similar pattern. If you look at the overall uptake at the top level, it is very good for flu jabs; just over 17 million people have been vaccinated. I am absolutely keen to stress that hesitancy is only one way of describing it. Being clear about whether it is an accessibility thing—making it easy for people to get vaccinated—or a knowledge issue, where we are explaining issues in a way that makes sense to a particular group or is useful to a particular group, are two quite different pieces of activity.

Q1542 **Rebecca Long Bailey:** What current actions are taking place to address those disparities?

Dr Waite: Targeted Q&A sessions at roundtables, as I said. It is making sure that you are putting vaccine clinics in places that are convenient to people. It is translating materials into the languages in which people need that information, as well as putting it out through those who are trusted to provide it. It is all well and good having somebody, or us sitting here

for example, saying that vaccination is good, but if that is not the trusted voice for a particular population or a particular group, that is not the way to do it. Making sure that you can pass the information on is one pillar of that.

Q1543 **Rebecca Long Bailey:** Finally, how effective do you think the yellow card scheme is in picking up and establishing possible adverse side effects of covid-19 vaccines?

Dr Waite: The yellow card system, which is run by MHRA, is a way of reporting suspected adverse reactions to any forms of medication, not just vaccines. It is deliberately a very sensitive programme. It will pick up any number of signals. Anyone can report anything just because they suspect it. In that sense, it is very effective because it casts the net very wide, and they can analyse that information and look at particular themes or emerging topics.

At the moment, with the vaccine programme, all top 10 of the signals they are picking up are absolutely the signals you would expect after any vaccination: soreness at the site, fevers, chills, mild headaches and so on. That is very reassuring. The MHRA publishes that data every month so that it is transparent. It is publicly available, and you can see what side effects are being reported. In fact, at the moment the information is out for the monovalent vaccines, and I expect they will have enough information gathered on bivalent vaccines as well, now that we are a couple of months into the programme. I understand that the sort of signals being seen are exactly the same—no difference—and, if anything, they are at a much lower rate, so that is quite reassuring.

Rebecca Long Bailey: Thank you.

Chair: A brief supplementary question from Dr Caroline Johnson.

Q1544 **Dr Johnson:** I want to ask you about the children's vaccine. What has been the take-up for the covid vaccine in healthy children under the age of 15?

Dr Waite: It varies a little by group within that, Dr Johnson, but it has overall been quite a lot lower than adults. There are a number of reasons for that. On the one hand, we know that children overall are at much lower risk of the most severe consequences of covid. That is quite different from flu, as I mentioned earlier. Also, a lot of children have been infected; for example, if we look at the ONS study data, the vast majority of children have immunity to covid, either through vaccination or through infection. That rate of infection gets lower and lower as you go up through the age groups. It is inverse to the number of people who have been vaccinated. There is a lower overall uptake, but if we look at the ONS data for the most recent week, for example, we see quite low levels of disease activity in that group.

Q1545 **Dr Johnson:** The chief medical officer, when talking about bringing in vaccines for children, said it would only be done if the vaccines

themselves were benefiting the child to whom the vaccine was given. The JCVI did not initially recommend them. If you remember, the four chief medical officers said that the vaccines should be given to prevent educational disruption.

I think the Government are now pretty clear that closing schools is not good for children, and I hope that they will not do that again, so do you think it is still reasonable to offer healthy children a covid vaccine at all?

Dr Waite: It is absolutely reasonable to offer a vaccine to a population group if there is a benefit for them. In the case of vaccination for children, of course, it is an offer, as you said, as it is with all population groups. Parents can make their decisions on whether or not they wish to take up that offer. Vaccination is not mandatory. The decision making at the time was when Delta was our dominant variant, and an awful lot of children were out of school with covid, even if their schools were open. That has changed over time as the immunity profile has changed in the population, but also as the dominant variant has changed. Omicron has overall caused a lower rate of hospitalisation right across the age groups, even once you allow for the very high level of vaccination in some age groups, so it is reasonable to continue to offer a vaccine that is of benefit and to make sure that parents are in possession of the facts about the benefits when they decide whether or not to take this offer.

Chair: That's great; thank you. We are not even halfway through, so we are going to move on. Thank you, Caroline. Finally, on this panel, Chris Green.

Q1546 **Chris Green:** Dr Harries, masks became a bit of a symbol of covid and the restrictions we had. At the beginning of the pandemic, they were not imposed. Why was that?

Dr Dame Jenny Harries: I think I would rather use the word "recommended" in answering. They definitely were recommended in areas of high risk: in healthcare settings, and with vulnerable individuals. One of the problems is that the mask debate became very polarised, and I think we need to try to resolve it as we go forward, with more evidence. Masks are used in healthcare settings, where there is fairly clear guidance, although some would even debate that; and there was mask or face-covering wearing in populations, which also became difficult because they are composed differently and people wear them differently. In all those things, masks on their own are probably not of high significance in controlling infection. They always have to be used with other measures.

With much of the evidence, you find that somebody who is wearing a mask correctly is also probably taking all sorts of other precautions, and those who are not will not be doing the others. I flag that because the evidence base is really tricky. Just yesterday, I think, there was published the first randomised controlled trial trying to compare the use of FFP3s, the higher-grade masks that you need to have fit-tested for healthcare workers, as opposed to surgical masks. That has also been a big debate.

In fact, it varied across different countries, even though the trial was controlled, and does not give a significant benefit. It depends how you read the study. There are a lot of these areas that are difficult. The point is that we always recommend them if somebody is infectious. If you know you have an infection, or if a resident in a care setting is infectious, for example, we always recommend it: you are protecting others from you passing it on, but the protection to yourself varies significantly.

Q1547 **Chris Green:** I appreciate the distinction between a clinical and a more general setting. I think at one point you were asked about wearing a mask on the underground and at the time you suggested that it would have very little, if any, positive benefit at that point. The principal point I am getting to is that during the course of the pandemic we went from a position where the basic message to general society was, "Do not wear a mask," and, therefore, also, "Do not buy a mask," to, "You must wear a mask if you want to go about in normal society." There must be a quite compelling, robust body of evidence to deliver that reversal of opinion and advice, and for the police to be able to enforce it as well. Was evidence published at the time, so that we would have a broader understanding in society—"Okay, the evidence has now reversed that decision and we can judge as a society that this decision is right"?

Dr Dame Jenny Harries: One part is the evidence and the other part is its context, which is exactly why, for infection prevention and control measures generally, you have hierarchies of control. You are looking at different things in the context in which you are. I am going back to healthcare settings, and now, if you go into a hospital setting, for some areas you will not be—

Q1548 **Chris Green:** I want to try to focus more on the broader—

Dr Dame Jenny Harries: But it is the context. This is what I was trying to get to. For example, if you have low prevalence of infection, and lots of ventilation in an area where there is very little crowding, the additional benefit, if any, of wearing a face covering, will be very small. At the peak of a pandemic wave, which potentially or actually is causing very severe illness with large numbers going into hospital, potentially overthrowing the health system, that level of benefit, even if it is quite marginal, may have a significant impact on population welfare.

Chair: Thank you very much. I am sorry, I gave you a premature early bath: we are not quite done yet. Greg Clark.

Q1549 **Greg Clark:** Thank you. Dame Jenny and Dr Waite, thanks for coming before the joint Committees. Were there to be a very dangerous new variant that suddenly emerged, how long would it take for mass testing to be established and reach its optimal point?

Dr Dame Jenny Harries: Point No. 1 would be what type of testing we would need. Our approach at the moment is that within a week we have a stockpile of lateral flow tests. Those tests are procured with slightly different manufacturing, so that we think we would have some resilience

in terms of any small changes in a variant, and we cannot guarantee 100% that they would continue to work, but the likelihood is that they would. Rather than trying to go straight to a mass testing on site type of facility, which we saw before, we would go to a lateral flow test approach.

Nevertheless, we have contingency labs. The Rosalind Franklin Laboratory is still there at the moment. We have hundreds of thousands of tests available, so there is a capacity, currently, that is being underutilised. We can step up to that. If we really needed to stretch, if lateral flows were less competent at detecting disease infection, it would take several weeks to step up.

Q1550 **Greg Clark:** Several weeks?

Dr Dame Jenny Harries: Yes.

Q1551 **Greg Clark:** Four weeks? Ten weeks?

Dr Dame Jenny Harries: We are currently reviewing this, because with the capacity we have now it is very clear that you cannot completely maintain huge laboratory capacity indefinitely, for 100 years, in case a new variant comes along. We are trying to create what I call an elastic system, which, in an appropriate timeframe, allows us to step up to reach capacity level. We still have test capacity of hundreds of thousands available right now, and before that is stepped down, which is the likely direction, we will ensure that the plan is there to step it back up. It is that piece of work that we are doing at the moment. It includes, importantly, things like rolling out a new assay, and making sure that that is as quick as possible, developing a test and rolling it out into both the NHS and wider laboratory testing.

Q1552 **Greg Clark:** We are two years on from a period in which the members of this Committee were taking repeated evidence as to how inadequate the testing arrangements were. Are you confident that, were there to be a dangerous new variant, we could have surge testing to an acceptable degree within an acceptable timeframe—let's say, four weeks?

Dr Dame Jenny Harries: We can surge the lateral flow testing almost immediately, within one to four weeks. We have a stockpile ready to go for that.

Q1553 **Greg Clark:** To reach how much of the country, in one to four weeks? What proportion of the population?

Dr Dame Jenny Harries: I think in many ways, if you would allow me to come back another time, I will be able to set that out, because it is in active consideration at the moment. The stockpile is there, and we have retained a large amount of PCR testing. As I say, it is very unlikely, with the current covid pandemic, that we would need to step back up to PCR testing. One of the areas we are looking at is exactly going back to your earlier point about pathogen-agnostic pandemic preparedness, because I think we need to have ready not just a covid step-up but the ability to do

that for any pathogen that comes along. That is the piece we are working through at the moment.

Q1554 **Greg Clark:** On the vaccine front, suppose we needed new vaccines for new variants. How quickly could we count on them being available to be delivered?

Dr Dame Jenny Harries: Again, there are two points to that. One is what protection you get from wider coverage. There is quite an interesting scientific debate at the moment around whether having very specific vaccines overall is better in the long run—over a time period—than having a broader one. That is for a number of reasons that we do not have time to go into. The advantage of things like new mRNA technology is that while people talk about it as plug-and-play, and it is clearly not that simple, it means that, if you have a process set up and the platform more or less agreed on a regulatory basis, you can quickly pop in another variant.

Q1555 **Greg Clark:** But for this winter, for the next four months.

Dr Dame Jenny Harries: We are already prepared for this winter. We have no reason—

Q1556 **Greg Clark:** In terms of vaccine capacity for new variants?

Dr Dame Jenny Harries: The view on our current vaccines would be that, for example, both of the bivalents that are being used here are active against Omicron and the original, what we call the wild type strain. That breadth of valency should allow us, I think, to manage new variants coming through. As Dr Waite said, in most of those actually coming through, their lineage is related to Omicron at the moment.

Q1557 **Greg Clark:** Well, they have done, but Omicron turned out to be less bad than feared. We were set for a lockdown last Christmas, until it became established, and the Cabinet was not persuaded that it was necessary. It turned out that existing vaccines were effective against Omicron; but the expectation was at least to entertain the possibility they might not be. This might happen in the future. Specifically on that, do we have the necessary contract signed yet, with Moderna, for example, to supply vaccines for a new variant, were it to be required?

Dr Dame Jenny Harries: The Moderna agreement is, I think, not yet finalised, but clearly they have announced in the media that they are investing in research.

Q1558 **Greg Clark:** Why hasn't it been finalised, given we are now in the middle of—

Dr Dame Jenny Harries: That is not really a question for me to answer, I am afraid. That would be for Ministers. The point that you make is: are we working with industry in order to be prepared? The absolute answer to that is yes. This is one of the learnings that it is critical to share. We have absorbed into the UK Health Security Agency the Vaccine Taskforce and

the work with industry is continuing through that group. For example, we are working with Moderna as well as with other pharmaceutical companies. One of the benefits of the Vaccine Taskforce was that the close working relationship meant that things could happen quickly, but, equally, you can signal ahead where the public health risk is, and work alongside pharmaceutical, and that is continuing now.

Q1559 **Greg Clark:** That is precisely behind my question as to whether we have the agreement signed in advance. In our joint inquiry report we observed, at paragraph 394: "The decision to procure, at risk, and long in advance of regulatory approval, a broad portfolio of supplies of potential vaccines was bold and prescient, as was the commitment to order vaccines in quantities in excess of what was needed." That came from the Vaccine Taskforce. The founding chair of that taskforce, Dame Kate Bingham, has been very clear that she thinks that those lessons have been lost—in particular, having contracts in place in advance. It may be a question for the Minister who is waiting to take your place, Dame Jenny, but it is a concern, is it not, if we do not have the contracts in place that happened under Kate Bingham?

Dr Dame Jenny Harries: I will leave it for the Minister to answer in particular detail on the contract. You will realise that there is likely to be some commercial sensitivity around this, so probably I am not able to go into it in detail. The critical point is that all our vaccines for this winter are here, and we anticipate scientifically that they will cover the population going forward. Not only that, but we have additional supplies ready to use should we need to reboost or revaccinate.

Q1560 **Greg Clark:** But they are for the current variants.

Dr Dame Jenny Harries: For current variants, but my point at the start of this is that the likelihood is that those vaccines will give the breadth of protection that would manage a new variant. In the unlikely situation of a very new variant or a different pathogen, which is the test case, what relationship do we have, and are we growing, with pharma and our scientists? That work of the Vaccine Taskforce is continuing. For the UKHSA, for example, we have established a vaccine development and evaluation centre that is set up precisely to have a front door for the pharmaceutical agencies, so it is easy for them to come and work with us when they have new vaccine candidates going through, and they are all ready. There is a lot of work, on which I am happy to send the Committee the detail after this meeting.

Q1561 **Greg Clark:** So Dame Kate Bingham is wrong when she says that the UK has lost its leadership in preparedness when it comes to vaccines, and that we have gone back to business as usual. She is wrong in that assessment, is she?

Dr Dame Jenny Harries: I absolutely share Dame Kate's ambition in this. It is exactly what the UK Health Security Agency wants to do. It is one of the most exciting opportunities in science that has come from the

pandemic. She may not be seeing everything that is happening. The Vaccine Taskforce came into the UKHSA on 1 October. Clearly, the prime issue is to move them across safely so that the vaccination programme continues and the country can continue going forward. The work is absolutely ongoing, and that will become evident as our plans materialise. I think Dr Waite wants to come in.

Dr Waite: Can I give you an example of how this worked through the spring and summer to get the bivalent programme we have now off the ground? Over the spring and summer, the UKHSA, the Department of Health, the Vaccine Taskforce and MHRA worked together to make sure that we purchased and then planned with NHS England how we were going to deliver the bivalent programme. That was before BA.5, our most recent wave, was even a thing, let alone BA.4. We made a plan around procuring the BA.1 wild type bivalent vaccine, because, based on information from Porton Down and other places, we were confident that we were procuring a vaccine that would be effective against future variants. Up until now, wild type has covered all the variants, and still does. There is still wild type activity against BA.5 and BQ, and so on.

By the time we had licensed, via MHRA, the BA.1 wild type vaccine, nobody else had a bivalent vaccine at all. By the time the BA.4/5 was licensed and rolled out in, for example, France, in early October, we had already vaccinated 4.6 million people against BA.1 wild type combined, starting with the oldest age groups. That is a good example of how the process still works. We are still following those examples, and 4.6 million people were protected who otherwise would not be. We have gone on to vaccinate 16 million people since then, so it is working well.

Greg Clark: Thank you.

Chair: Thank you. Excellent to hear.

Q1562 **Tracey Crouch:** Before I come to my specific question to Dame Jenny, I want to follow up the question from Rebecca Long Bailey about inequalities in uptake. I discovered from my own case load at the time that many people with learning disabilities have quite significant, severe and debilitating needle phobia. Dr Waite, I wonder whether you could update the Committee on progress on a nasal spray alternative for the covid vaccine.

Dr Waite: Yes. I am aware that there are nasal spray vaccines in clinical trials, but I think it is important to remain circumspect about those. A lot of products that are in clinical trials do not get to phases 2 or 3, or indeed to market, so I do not want to put too much hope or expectation on those being delivered quickly. The mechanism of delivery is important—nasal vaccines are absolutely more acceptable to children, as well as to the large number of adults who are needle-phobic—but we need to make sure that it is an effective way of delivering the vaccine. We are not at that stage yet. It is not just for covid; it is quite a promising area of delivery for a range of vaccines that are currently delivered via needles.

Q1563 **Tracey Crouch:** Thank you. Dame Jenny, news relating to avian flu is featuring prominently at the moment. While it is clear that the risk that bird flu poses for humans is very low, it is there, and presumably could change and increase. With that in mind, what steps are being taken to deal with an avian flu crossover to humans?

Dr Dame Jenny Harries: That is routinely part of our comprehensive biosecurity planning. What is particularly challenging this year, for a number of reasons, is that I think this is the first year when although normally we would see a seasonal variation, so you would have wild birds not infected, actually we are not seeing that. Through this last year they have retained an infectivity, if you like. Just since 1 October 2022 we have had 111 infected premises, and significant numbers of wild birds reported as infected as well. It feels like a slight scale change. Obviously, that requires us not only to maintain our current risk alertness, but to review in more detail.

The current pathogen is an avian H5N1, and one of the issues there is that we do not have as much detailed knowledge about that as we would like. It appears to be relatively low risk from a human perspective, but we have absolutely recognised that we need to understand more. In fact, a new risk assessment was done last week. Dr Waite is on a group working with academia and others, and with APHA, on each of the different concerns around risk of transmission, particularly looking at the structural biology—whether, for example, antivirals that we have would work. While that is ongoing, we continue to work with APHA. We put zones around. It is their lead, but we support the work there, identifying individuals who could potentially become at risk—obviously, poultry workers—understanding on an individual basis whether they have been wearing appropriate PPE and then advising on antivirals. There are some challenges because of the numbers. It takes a lot of time from our local health protection teams, increasingly. Also, the population themselves, the people involved, are often not English speakers, so translating and getting risk communication right for that group can be quite tricky.

Q1564 **Tracey Crouch:** Is there a vaccine in place to deal with an outbreak of avian flu in humans?

Dr Dame Jenny Harries: They are dealt with by prophylactic antibiotics. There is an international surveillance programme as well, which we are docked into. One of our concerns is probably more to do with increasing cases of two or three avian flus that have transmitted to humans in China currently. We have only had one transmission here, last Christmas, in a particular case where the individual was literally living with poultry. There usually has to be very, very close association between the poultry and the human. At the moment, our focus is on ensuring that we prevent any illness developing, and any risk of onward transmission.

Chair: Thank you. There is huge public interest, obviously, in the subject. We have Carol Monaghan and Rachael Maskell. We are going to conclude this session at 11, so brevity on all sides would be much appreciated.

Q1565 **Carol Monaghan:** Thanks, Chair. Dame Jenny, I have four very quick questions, so hopefully I can keep to time and possibly have a supplementary. First of all, what is UKHSA's budget?

Dr Dame Jenny Harries: It will vary. We had a one-year settlement, so our budget going forward is in discussion at the moment. Clearly, we were born in the middle of a pandemic to support the management of the pandemic, and that is a very unusual set of circumstances.

Q1566 **Carol Monaghan:** I thought that should be a straightforward answer, but it is not.

Dr Dame Jenny Harries: It is not, I am afraid.

Q1567 **Carol Monaghan:** What was last year's budget?

Dr Dame Jenny Harries: Well, the budget goes back: of course, I have inherited predecessor organisations as well.

Q1568 **Carol Monaghan:** You are definitely a politician, Dame Jenny.

Dr Dame Jenny Harries: The budget is £2.4 billion, but part of that is not our budget. I'm sorry; I am not trying to avoid the question. We, as a health family, manage the covid element across the areas that are most required, given that you cannot predict what the pandemic is going to be doing. As an example, for lateral flow tests you allocate a budget against them but then they are used by other parts of the system, and they have been underused; equally, we have stepped down the onsite testing stations, because we are using lateral flows and sending tests directly out to individuals ahead of time, so we have done that very efficiently and created an underspend, which then goes back to colleagues in the Department of Health who are managing other covid pressures.

Q1569 **Carol Monaghan:** Assuming we are in a kind of steady state at the moment, £2.4 billion is kind of a decent estimate.

Dr Dame Jenny Harries: That is the covid budget plus, which includes the UK Health Security Agency component. As we go forward, part of the discussion, at the moment, is to do with the UK Health Security Agency—effectively, the national health protection agency—and what is the right non-covid, business as usual state to do all of the things we have described, which can ensure we stand up. Of course, for a number of reasons, as you said, we are doing mpox, we are responding to and supporting asylum seekers, and supporting work in Ukraine. We are doing all sorts of things on a regular basis, so the importance is that this is a very unusual year, as was last year, because of the covid pandemic.

Q1570 **Carol Monaghan:** That was only question 1. I thought it would be really quick. How much of your budget at the moment is for disease surveillance?

Dr Dame Jenny Harries: That is a very difficult question to answer. I am happy to try to provide some separate estimates of that. The reason I say that is that some of the learning from the pandemic is about, as I

think others have said earlier, ensuring data linkage. When we think about surveillance, there are things like the community infection survey, the commissioning of which has come through the UK Health Security Agency; it also includes things like work on global international health. We are working with the development of the Berlin hub, the international pathogen surveillance network.

Fundamentally, it includes provision, which was in our budget, to improve the digital technology and infrastructure that is absolutely critical to ensure some of the new systems we have, like our second generation surveillance system—SARI Watch—lab tests for respiratory infection in hospitals and other infectious diseases that come through and which we routinely survey. Again, I am sorry that that is not a straightforward answer, but it is coming from technology, international work and a number of other areas.

Q1571 **Carol Monaghan:** It might be useful if you could write to the Committee with some sort of figures. The next question should be easier. What is UKHSA's headcount?

Dr Dame Jenny Harries: At the peak, the combined organisations were around 18,000, but we are now at, I think, around 6,700, which is around 6,500 full-time equivalents. That is not a stable workforce at the moment. When the organisation came into being, it was only 30% substantive posts. That reflects the difficult period. What we are doing now is downsizing in some and increasing substantively in others, with variation in size in different places.

Q1572 **Carol Monaghan:** How many of those individuals are working on disease surveillance?

Dr Dame Jenny Harries: I will include that, if you—

Q1573 **Carol Monaghan:** Maybe a different question, then: you have not quite been able to answer questions on budget. On headcount, you have given us some idea. Maybe the question is: are the budget and the headcount enough for horizon-scanning the situation that we have now in terms of global threats?

Dr Dame Jenny Harries: I think it is easier if I come back. I am not wishing to detract from the question, but what I am trying to say is that the same individuals, for example, who will be evaluating monkeypox vaccine—again, we put out a publication last week—will also be using those skills to evaluate against new variants. The same people who are using building technology are building different systems to link us into hospital data on every other infectious disease—on antimicrobial resistance. If it is just covid, we would have to proportionalise it. I am happy to come back with some of that data.

Q1574 **Carol Monaghan:** Not just covid, but generally looking for what is the next threat. What you are saying is that a lot of people are multi-tasking.

Dr Dame Jenny Harries: One of the difficult things to explain as a health security agency is that you cannot divide a programme budget off very easily. You need a digital infrastructure. You need analysts who can turn to different diseases. You need infectious disease experts on different topics. But they will also be individuals who are leading the response to an incident management team; if there is an outbreak, you pull them in. If you start dismantling one bit, often the other bits do not work, which is why giving an individual figure is probably not representative of the different inputs to that section. They need to work together.

Carol Monaghan: Thank you.

Chair: The personification of brevity is Rachael Maskell, from the Health and Social Care Committee.

Q1575 **Rachael Maskell:** Thank you. Good morning. The rapid containment of the virus was absolutely crucial in containing the disease. Turning to track and trace, clearly there were inefficiencies in having a national system, whereas locally there was better data, it was more responsive, and people knew their own communities. What would you do differently, looking forward, around containment and track and trace?

Dr Dame Jenny Harries: Speaking as an ex-director of public health, I often liaise directly with directors of public health and understand this from both sides. Test and Trace was set up at a time when local systems could not have coped because of the scale required. Nevertheless, those local systems continue to work, as do the UKHSA health protection teams. There is strong recognition as we go forward that what we are doing now is to take the learning from both of those and put it together in a way which works routinely and proportionately but is scalable efficiently and effectively when you get something as significant as a pandemic.

To some extent, we have tested it with the mpox outbreak, because where you get a significant regional or national infection we have tried that. Obviously, it is not as problematic as the pandemic was for the whole population. One of the examples is that we now have a single service centre for contact tracing. We can work with directors of public health either to take calls centrally or move them over. We evaluated the work that local and national teams had done. What it shows broadly is that, for some families in particular, local directors of health will know their communities. For those that are hard to reach, they would be able to reach them where central systems could not. However, for overall efficiency the central system with large numbers was more efficient. It is horses for courses in what you are trying to do.

The important point is working together. We have a piece of work which UKHSA co-chairs—myself—with Jim McManus of the Association of Directors of Public Health, looking at the future of the health protection system to clarify post pandemic the roles and responsibilities of each bit,

so that when we go into urgent mode, we automatically click into the right streamlined approach and we can hand things backwards and forwards as appropriate to manage the risk.

Chair: Thank you very much. We have covered a huge amount of ground. Dame Jenny Harries and Dr Thomas Waite, thank you very much.

Examination of witnesses

Witnesses: Neil O'Brien, Michelle Dyson and Clara Swinson.

Q1576 **Chair:** We move on to the third panel of this marathon session. For the first time before any part of the Health and Social Care Committee, we have Neil O'Brien MP, Minister for Primary Care and Public Health at the Department of Health and Social Care; Michelle Dyson, director general of adult social care at the Department; and Clara Swinson, director general of global health, also at the Department. Welcome. We are sorry to have kept you waiting, but I am sure you enjoyed hearing that evidence.

Minister, it is nice to see you. Other than preparing for today's session, how much of your time is taken up thinking about work on covid?

Neil O'Brien: First, it is a great pleasure to be in front of my former Committee once again. I emphasise that this piece of work is something we regard as hugely important. It is good that we were able to support the overwhelming majority of the recommendations in your report, which is incredibly useful. Obviously, we are also supporting the covid public inquiry which in a very forensic way is going through all of these questions as well.

To come to your question, I am not the Minister for UKHSA; that is my colleague, Maria Caulfield. I am responsible for primary care and the OHID side of public health. None the less, the impact of the pandemic on public health and primary care was enormous and is something I have spent a decent amount of time thinking about and following, not just as part of preparing for this Committee, but more generally, following work on how we make sure that we are better prepared for any future pandemic.

Q1577 **Chair:** You are right. The Government responded with partial acceptance of pretty much all of the recommendations of our report, to the exclusion of the stuff around the involvement of the Army where they did not accept our recommendations in the way they were put. One of the things they said in their response was: "The government intends to set up a catastrophic emergencies programme to focus on 10 risks which may give rise to whole system emergencies, including pandemics." Could you tell us about the catastrophic emergencies programme?

Neil O'Brien: In quite a lot of different ways we have changed our whole approach to pandemics. First, there is a change of fundamental approach. We have what we call a pathogen-agnostic approach to planning for

pandemics. Previously, a criticism made by various people was that the focus was on pandemic flu, which was identified as the No. 1 risk, and now our approach is to think about a much wider range of pathogens with different disease characteristics and scenarios. In the case of covid, asymptomatic transmission is the thing that everyone will always come back to. That capabilities-based approach involves thinking about all the different tools that we had to deploy during the pandemic: the diagnostics, surveillance, scientific advice, clinical countermeasures, border controls and legislation.

The second part of the approach is the change of fundamental structures, with the splitting of PHE and the creation of UKHSA in October last year. At UKHSA, the centre for pandemic preparedness within it is effectively a cell; it is like the heart of a global network that involves thinking about pandemic preparedness. The third thing about our change of approach is the massive improvement in surveillance and international co-ordination on it. The UK was a founding member of the international pathogen surveillance network which co-ordinates international detection of pathogens and data sharing on emerging threats. We are also a founder member of the G7 100 Days Mission, which co-ordinates work on diagnostics, vaccines and therapies specifically. The fourth element of how we will do things differently now is the constant improvement work that goes on within UKHSA, which involves both regular exercises at different scales and learning from the day-to-day response and the kind of day-to-day activity of managing local outbreaks and particular challenges.

The fifth and final way we have changed our approach, which we have already touched on a bit in this session, is capacity building—thinking in a more straightforward way and reviewing our requirements for critical countermeasures and things like PPE. We have already talked a little bit in this session about the agreement with Moderna for UK development and production of new vaccines to ensure resilience. The NHS supply chain and DHSC are also working with PPE manufacturers to make sure that we have resilience of supply chains, which was such an issue at the start of the pandemic all over the world. About 75% of the FFP3 masks used by the NHS and social care are now made in the UK, up from approximately 0% at the start of the pandemic, so there is an overall change of approach to the way we manage pandemics. Perhaps I may bring in Clara.

Chair: You sat there and heard Dame Jenny give you a nice pass on Moderna, so I will let my fellow chair, Greg Clark, ask a question.

Q1578 **Greg Clark:** It is a simple question. Has the contract been signed?

Neil O'Brien: We agreed the heads of terms of the agreement in June. Both their desire and ours is that for the great majority of the agreement, we resolve all the main issues of principle in that initial agreement, so the great majority of the negotiation is done.

Q1579 **Greg Clark:** Doesn't this illustrate the problem Dame Kate has described? Dame Kate's time running the Vaccine Taskforce went from May to December 2020, just over six months. Since you agreed the heads of agreement—we are now nearly in December—that accounts for nearly the whole time that Dame Kate performed her miracles when in office. Doesn't it show that what she says is true, that you dropped the ball? You agreed something nearly six months ago and you have not been able to sign anything beyond heads of terms.

Neil O'Brien: I do not agree with that, much as I have huge respect for what was achieved so quickly by the Vaccine Taskforce. This is a very long-term agreement. Broadly speaking, it is a piece of industrial strategy and resilience architecture. To be clear, we have agreed a lot of this. We agreed that construction of the facility will start next year. We agreed that vaccine manufacturing in the UK will start in 2025.

The great majority of it is agreed, but because of its open-ended nature—we are not buying just one thing; we are buying a capability to buy vaccines against respiratory viruses of various kinds—and the fact that we are buying a very flexible tool, it is fundamentally a complicated negotiation. I have been across some of the more recent rounds of exactly how we land that. We are extremely close to finalising the remaining detail. To reassure you, when you say, "You haven't signed this yet and you just have some vague agreement in principle," that is not the case. We have agreed the substantive bulk of all that needs to be agreed and we are now chasing down the detail. That would be a better characterisation of where we are with it. The reason that takes a few months is not that anybody has dropped the ball but that, if I was a company going into a deliberately highly flexible and quite open-ended long-term agreement with a Government to provide a capability, not just a product, I too would be going quite forensically with my lawyers through the detail of it.

Q1580 **Greg Clark:** I will not pursue it further now, but the Committee might want to take that forward. All I will say is that the evidence that the joint inquiry took during the pandemic was that, if we had not had signed legally binding contracts, we would not have got the supplies. When the balloon went up lots of other jurisdictions wanted them, so the existence of those signed contracts was crucial.

Neil O'Brien: There is a slight difference between that global scramble to secure things, which also happened on PPE, as you know, and this, which is a piece of something we have discussed before and leads on from John Bell's work back in 2016 and 2017. This is a piece of industrial strategy and resilience architecture. It is not just whether we have signed a contract in order to buy a thing; it is to get and create a permanent new capability for the UK.

Q1581 **Carol Monaghan:** In our joint report, there were questions about the set-up of SAGE and how it was made and operated. One of the statements we made was: "The Government and SAGE should also

facilitate strong external and structured challenge to scientific advice, including from experts in countries around the world, and a wider range of disciplines." Minister, have any reforms been made to SAGE and, if so, what are they?

Neil O'Brien: That is what SAGE does. SAGE drew on something like 240 different participants during the pandemic response. Of course, it was not the only advice we could have. We also have NERVTAG and JCVI. They drew on a very wide pool of expertise from many disciplines, and built on top of the work we had from GO-Science.

Q1582 **Carol Monaghan:** With respect, Minister, one of the findings of our inquiry was that, certainly at the start of the pandemic, a very narrow range of disciplines was involved and international experts were not involved. That was one of the issues at the start of the pandemic.

Neil O'Brien: I have touched on and will come back to in a second the point about international connections, but I want to push back slightly on the idea that SAGE is some sort of haven, a groupthink of like-minded individuals who all have the same expertise. That is not the case. The Government accessed all of the different advisory groups, including SAGE, which is itself highly diverse intellectually in terms of people's expertise. We also have the CMOs—you have heard from the deputy CMO—UKHSA's own expertise and GO-Science. Ministers have access to advice from people with a very broad range of views and in a very broad range of contexts. During the pandemic they deliberately went out and took the views of all kinds of people and from minority positions.

Richard Feynman said that science is not a democracy. That is always a very important thing to grasp. Ministers were challenging the evidence put to them. We talked a bit earlier in the session about the discussion around Omicron and whether there needed to be another lockdown. That is another example of where Ministers and the Cabinet collectively stress-tested very hard the data on what was emerging. I believe that sometimes it is overdone and we forget the sense of the fog of war that was happening with this novel pathogen and the uncertain evidence. There was a huge range of views about what was going on in SAGE during the critical early stages of the pandemic. We are always trying to improve these things, hence the connections to the international pathogen surveillance network to make sure that we are not insular and that we see everything happening all over the world. There is the central connection to the G7 and the centre for pandemic preparedness that I mentioned earlier. Although it is just a decent-sized unit within UKHSA, it is the centre of a spider's web of our connections with the rest of the world, to make sure that we are always further diversifying our sources of evidence and are seeing everything we possibly can across the whole world.

Q1583 **Carol Monaghan:** I think you have half-answered it. There are greater international connections. That was one of our criticisms. I am not sure you have answered the first bit, but we will move on.

Avian flu is a current concern. What role has SAGE played in advising Government? What sort of advice have you received from SAGE on this?

Neil O'Brien: I will have to ask Clara to come in on this, beyond what you have already heard from the deputy CMO.

Clara Swinson: While it is animal-led, it is a DEFRA lead; I do not think SAGE has been set up for avian flu. In terms of the Animal and Plant Health Agency, UKHSA does a lot of surveillance both for the birds themselves—genetic testing—and for poultry workers and so on. That is based on their advice, and then it will be a DEFRA lead and its agency in the management of avian flu outbreaks.

Q1584 **Carol Monaghan:** If we saw any crossover, what do you envisage as SAGE's role in that?

Clara Swinson: Obviously, it would depend on the scale, but, first, if there was a threat to human health, that would go to NERVTAG—the new and emerging respiratory virus threats advisory group—as coronavirus did. If the Government decided to set up SAGE for any emergency, it would be chaired by the Government's chief scientific adviser, if that was necessary.

Q1585 **Carol Monaghan:** How quickly do you reckon that could be done?

Clara Swinson: SAGE can be set up in a matter of hours.

Q1586 **Chris Green:** Minister, if we impose a lockdown it will protect us from the virus and the disease, but it will also have wider impacts on schools, healthcare and the wider economy. One of the concerns about the second and third lockdowns—not the first one; we appreciate why it was done in that way—was that there wasn't a published impact assessment on those other areas. Will the Government reconsider the decision not to publish those impacts, because people around the country and certainly Members of Parliament voting or making decisions in this area should be better informed?

Neil O'Brien: First, as a piece of reassurance, I do not see any future in which we are doing further lockdowns. There is no particular reason to think any such thing would ever happen again. To answer your question directly, we always want to improve the information available to Members of this House and the Government. So, we would strain every sinew, if we ever again found ourselves in anything even vaguely similar, to make sure that we had as full an account as possible of as much of everything we could give to the public. Lots of things are not knowable, but we would make every effort to make sure that we published whatever we could.

Q1587 **Dawn Butler:** We heard earlier about some of the preventive measures for the impending triple threat of diseases over the winter: maybe the washing of hands, the wearing of masks and all that stuff. To clarify, have any masks been burnt?

Neil O'Brien: I am not aware of masks being burnt, but I can ask Clara. There is a deliberate PPE stockpile of the things we need so that we can surge capability.

Clara Swinson: We have a large amount of PPE. The NAO has looked at this extensively. Where it is surplus to our requirements, there is a range of things: donating, working out the length of time and so on. If you want more detail specifically on masks—because there is a range of things in the PPE stockpile—we can get back to you on that.

Q1588 **Dawn Butler:** That would be brilliant. Thank you. The NHS was publishing weekly consumption data during the pandemic, which is important and will be important going forward if we face another pandemic. How did we come to buy five times as much PPE as we needed?

Neil O'Brien: On both PPE and testing capacity, there is a big choice about what level of resilience you want and how much you are prepared to have that. For example, on testing, which we were discussing earlier in the session, we made a conscious choice to have excess testing capacity. We will have the ability to scale testing far beyond the levels that we currently need and, therefore, we are making sure that we do lots of things so that those people are not simply standing around but are doing other useful things. To be clear, taxpayers are paying a price for us to have the capability to scale very rapidly, which I think many members of this Committee would want us to have. Generally, resilience comes at a price and the same is true in PPE.

At the start of the pandemic, all of us as Members were frantically trying to do everything we possibly could to get more PPE into the system. We now want to make sure that we are not back in that situation again. That involves two things. It involves both having some degree of stockpiling—one can debate the details of how big the stockpile should be—and having a resilient UK supply chain so that we do not end up in the situation we were in where there was a global scramble at the same time.

Q1589 **Dawn Butler:** Therefore, to buy five times the amount was deliberate?

Neil O'Brien: I do not think you can say there was a deliberate decision to buy a particular multiple of "what is needed". It is often difficult to work out exactly what will be needed. It was certainly a decision in both cases to have enough capacity to be able to surge and meet the need if it increased, and there is always a price to pay for having that kind of resilience.

Q1590 **Dawn Butler:** We are looking at lessons learnt. Going back to our joint Committee session, there is still some missing information. Is it possible to get a breakdown of the PPE that was provided from each company? If you could provide that to the Committees later, that would be useful.

Neil O'Brien: We will undertake to give you whatever we can.

Chair: Thank you for those concise answers.

Q1591 **James Morris:** I want to turn to social care. It is fair to say that, particularly at the beginning of the pandemic, there was a sense that decisions were being taken about social care that actually had a devastating impact on the social care system at that time and caused lots of issues. In thinking about responding to future pandemics or planning, how do we make sure that the social care sector does not feel it is being done to, and that it is part of the preparedness and planning for a future pandemic?

Neil O'Brien: That is a hugely important question that we have thought a lot about. The relationship between DHSC and the social care sector has been completely transformed by the pandemic and the things we have done during it. I would group those under several headings. The first is about data and knowing what is going on. During the pandemic, we created the capacity tracker. We have 1,000 times more information than we used to have about what is going on in the sector. We legislated last year to give the CQC inspection power over local authority social care functions. That will give us from next year even more data about what is going on in the sector.

Q1592 **James Morris:** Minister, all of that sounds good stuff, but on the specific point, do you think that our social care system will be adequately funded in the future to be able to cope with another pandemic and the issues that come along with it? There is an argument that the reason the social care system was put under so much pressure in the first wave of the pandemic was that it was in a very weakened state to start with. Successive Governments have not adequately funded social care, so there is an important point about its resilience and capacity to respond.

Neil O'Brien: The record increase in funding announced in the autumn statement is absolutely right, and I agree with the spirit of your question. We will put in up to another £2.4 billion next year and then up to £4.8 billion the year after. That is to address exactly the points you raise, to increase the capacity in the sector both for day-to-day purposes and to have greater resilience.

To reassure you on the scale of the change, everything has changed. The structures in the Department are different. We have a DG in the Department where we did not before. We have a chief nurse for adult social care, Deborah Sturdy, who was not there before. We have a completely different and much more active agenda. We had the White Paper on adult social care, which was about workforce, qualifications, data and the creation of digital care records, which will let you have a much better sense of how people are flowing around the system, and will cut a load of bureaucracy to save the people who work in social care a lot of time. We have had the integration White Paper. Again, we have a huge push going on about the greater integration of NHS functions with local authority functions. At one time, they were quite poorly integrated.

Q1593 **Chris Green:** Minister, are you confident—maybe Michelle or somebody else can assist—that in a future situation, with a future pandemic, there is now a structure and process whereby decisions that may be taken about social care will be taken in conjunction with the social care sector and will reflect their concerns, and we will not get into the situation we got into with the first wave of the pandemic when all kinds of decisions were made that had quite devastating unintended consequences?

Neil O'Brien: I am confident that we have both the money and the better connections to the sector to deal with future pandemics. Perhaps I could bring in Michelle just to talk a bit about her connections.

Chair: I would like to keep it with you, Neil, if that is okay. Paulette Hamilton has a very specific question relating to the record sums for social care announced in the autumn statement. Paulette, do you want to ask your question?

Mrs Hamilton: I thought it was about the ONS and health inequalities.

Q1594 **Chair:** Fine. You ask your question, Paulette. Minister, we understand what you say about the record sums, but that relies on local authorities choosing to go to the 5%. The question rather hangs on what if they do not choose to do that. That must concern you.

Neil O'Brien: To be clear, some of the money is straightforwardly granted to social care. We have additional new money from the Treasury going directly into the better care fund. We have new additional money going into adult social care grants. We also have the social care grant on top of that. Part of it is about council tax flexibilities, but to reassure you, there are also new direct grants from central Government to social care about which there is no ambiguity or choice; it goes straight into social care. But, yes, there is localism and a role for local authorities in making choices.

Chair: Editing out the last exchange, there is a question from Paulette Hamilton on health inequalities.

Q1595 **Mrs Hamilton:** Data from the ONS shows that the death rates during the covid-19 pandemic were disproportionately higher for black and Asian ethnic minority groups. First, why did it take so long to understand the ethnic disparities? Secondly, I have this thing about information being included on death certificates as standard, which still has not happened. Finally, what is the Department doing to reduce health disparities, and will they be outlined in the upcoming White Paper?

Neil O'Brien: You put several crucial questions. I absolutely agree about the importance of this. In my own constituency on the edge of Leicester, a majority minority ethnic city, I was personally worried about it right from the start, as a constituency MP, because I have a lot of large multi-household homes in my constituency. In fairness to the system, very quickly in the pandemic there was great emphasis, as soon as we had proper data and testing, on linking up and getting some sense of what was happening with hospitalisation and fatality rates. I remember that

very early on we started to see data about the very concerning disparities in the effect of the pandemic on different minority ethnic groups. There is a huge amount of work now going on to try to learn from that and narrow some of those health inequalities overall.

In our overall framework for thinking about this, as you know, we have our goals to increase healthy life expectancy and narrow the gaps in healthy life expectancy between the best and worst areas. We also have the agreement across the NHS to use as a framework for doing that, the so-called Core20PLUS5 framework, which is about the 20% most deprived plus a series of ethnic minority groups, and then five major conditions, which we will focus on, that drive health disparities. In the Health and Care Act that we passed, we put the duty on ICBs to pay due regard to health disparities. As well as those structural changes, we had Kemi Badenoch's four reports on covid in minority groups, which led to the Inclusive Britain action plan in March, and then to things like the Maternity Disparities Taskforce. There is a change of framework and also a bunch of specific actions.

We talked earlier in this session about driving vaccine take-up where it is lower. To add to what the DCMO said, we have seminars with faith leaders. We deliberately chose vaccination centres in places of worship. In our national communications and in our choice of local advertising and targeted advertising, we have made efforts to drive up vaccination. We have even used things like vaccination buses and taxis and direct door-to-door knocking, some of which I saw a bit in my constituency. We are doing lots of things to drive up vaccine take-up, particularly in the groups where it is low.

In our work on the elective recovery and busting the backlog from the pandemic, we have pressed all trusts to have a plan in place to identify disparities in elective recovery and deal with them. In blood donation, which is a long-standing issue, we have a campaign going on at the moment, particularly for black blood donors, called "Not family, but blood". We have done things like tie-ups around the recent "Wakanda Forever" movie, which has driven a lot of extra black blood donation. We have also made legal changes to things like the selection criteria, which previously ruled out people from donating blood if they had been to particular countries. We have taken a better approach to that.

We have created the Office for Health Improvement and Disparities, which launched in October, and that drives a huge amount of other work that tackles the causes of health disparities—for example, the £900 million that we are investing additionally in the drug strategy that was launched last year. That takes us up to investing £3 billion in drug treatment over the next three years, which will hugely increase the availability of treatment and give us something like another 55,000 extra places in drug treatment. We are doing things like the Start for Life programme. The first 75 authorities that are part of that programme are deliberately targeted because they are the most deprived areas.

Q1596 **Mrs Hamilton:** Will the disparities around the death data be included on the death certificate any time soon? That was part of the reason we struggled at first to find out what the proportions of the different groups were; it was not there.

Neil O'Brien: I will try to bump faster anything that needs to be bumped faster on that particular front. I have been following lots of the data on disparities in ethnic minority hospitalisation and death rates from the pandemic. We now have, particularly because of Kemi's four reports, a much better understanding of the things that drove that. If there is anything more we can do in terms of better understanding, I am happy to push it.

Mrs Hamilton: I hear that a lot has been done, but I would like to see what the result has been from all the scattered work that has been done, and at the moment I am not hearing that. Thank you, Minister.

Chair: Thank you, Paulette. We are just going to wrap up now with a little one from Aaron Bell and from Rachael Maskell.

Q1597 **Aaron Bell:** Thanks, Chair. Thank you, Minister. Continuing with health inequalities and disparities, another thing we picked up was disparities within the workforce, particularly the fit of PPE to NHS and social care staff. The Government have said that they have made more masks available. Are there still disparities in the pass rates for those masks? How widespread is the availability of those masks? Do people know how they can get hold of them if they need them?

Neil O'Brien: As part of the effort that I described earlier to build up a more resilient UK supply chain, one of the things that has given us the ability to do is to have a wider variety of masks. I think we have gone up from something like eight types of masks to 16, broadly speaking. On top of that, we provided a lot of additional fit testing—something like 300,000 extra fit tests—so that more people are able to get a truly well-fitting mask.

I think the overall success rate for fit testing has gone up a bit. From memory, it is something like 70% to 85%. I do not think it is the case that there are ethnic disparities in fit now—if that is wrong, Clara, please jump in—partly because we have been working to provide a greater range of masks so that everyone can get the PPE they need.

Q1598 **Aaron Bell:** In the response, the Government said there was a pass rate of over 80% on the range of masks currently available. If you are able to send to the Committee the details of each mask and the pass rate, that might be helpful.

Neil O'Brien: I will get you whatever we can get you on that.

Q1599 **Aaron Bell:** On people with learning disabilities, whom my colleague, Tracey Crouch, referred to earlier, have we been able to improve communications to improve vaccine uptake among people with learning

disabilities?

Neil O'Brien: I am so sorry I did not mention this before. Yes, the DCMO has been doing seminars on that point, and there has been a parallel process to the one that I described on ethnic disparities in vaccine take-up for the learning disabled as well, with similar things happening in it. Apologies for not mentioning that before.

Q1600 **Aaron Bell:** Do we have any figures on the effectiveness of that work?

Neil O'Brien: We will certainly have figures on take-up rates, which I am afraid will continue to lag because there is a problem that we are trying to solve there, but I will try to get you an account of the efficacy of what we have been doing.

Aaron Bell: Thank you, Minister.

Chair: Finally, Rachel Maskell has a question on Evusheld.

Q1601 **Rachael Maskell:** Minister, Evusheld has been conditionally approved by the MHRA, yet immunosuppressed people remain unvaccinated, isolated and at risk. Your predecessor said that he hoped to have a NICE assessment prior to April 2023. NICE has said that it could be faster. Could you assess exactly where things are on Evusheld and protection for the immunosuppressed? Will it also be effective against new variants?

Neil O'Brien: It is a very good question. To answer it, I need to explain a tiny bit about the framework. The normal process, as everyone knows, is that MHRA licenses things as safe for use and effective to some extent, and then NICE does work on cost-benefit economic analysis and consults widely to give you better data on efficacy, and the process takes longer.

During the pandemic, we had RAPID C-19, an independent group of clinicians and scientists, which recommended purchases on an emergency basis because of the nature of the pandemic and the pace of what the normal NICE process looks like. They judged that it was right, on an emergency basis, to buy antivirals for treatments like Paxlovid and Molnupiravir because they are not very sensitive to new variants, whereas monoclonal antibody treatments like Evusheld are quite specific to the nature of the spike protein because of their nature of operation.

This issue is not specific to Evusheld. Ronapreve, which is an antibody that we used in the NHS last autumn, has been withdrawn from clinical policies because it was not effective against Omicron variants. RAPID C-19 did not recommend buying Evusheld through the emergency route. They thought that there was insufficient evidence to justify it, so it should go through the normal NICE process. To be clear, when the MHRA licensed Evusheld, it did so on the basis of older clinical trials data pre-Omicron and noted that it might not be as effective against newer variants post Omicron. In vitro tests suggest that it is, in fact, less effective against newer variants. The USA's FDA and its Canadian

equivalent have written to providers and to patients using it to warn them of that.

At the moment, NICE has been reviewing the cost-effectiveness of all the medicines that we use in the NHS to treat covid. Its draft recommendation on that is out for consultation, and that draft suggests that Evusheld is not recommended for use as a covid treatment for someone who has it rather than as a prophylactic. I totally understand that the decision not to buy it on an emergency basis, but to go through the NICE route, is disappointing for some who have worse risk outcomes for covid, but there are several things to say about that.

First, the success of the vaccination programme has meant that the requirements for shielding that were there before are no longer necessary. Of course, there is still a shared national effort to behave sensibly, to use masks where appropriate, not to spread viruses and to help those who are vulnerable and worried about these things. Within the group of people who are concerned, there is a smaller number of people whose immune system puts them at more risk, and we have enhanced protections for them, with free testing, more guidance on managing risk, and quick access to the antivirals that I mentioned we have bought.

If they get covid, the risk is further reduced because we have new technologies that we did not have at the start of the pandemic. Of course, Evusheld was never going to be any kind of protection against other dangerous respiratory viruses like flu, which will always be out there, so we always need to help to protect those people by taking the basic steps that we can all take to protect them. We are also very actively exploring options for covid antibody testing this winter to help people who are worried or who have immunosuppression to understand their risks better. That is something we are working on.

Chair: That is a very clear explanation. Michelle Dyson, Neil O'Brien and Clara Swinson, thank you very much. That concludes the third panel. Greg Clark and I are going to swap chairs for our fourth and final panel.

Examination of witness

Witness: Dame Kate Bingham.

[Greg Clark took the Chair]

Q1602 **Chair:** While we swap chairs, I am delighted to spot on the screen Dame Kate Bingham. Dame Kate was chair of the Vaccine Taskforce from May to December 2020. She is a board member of the Francis Crick Institute and is managing partner at SV Health Investors.

We are very grateful for your patience, Dame Kate. This session has overrun a bit, but we are anxious to hear from you. Of course, it is the case that your work in that relatively brief period of a little over six or seven months made us the first country in the world to be able to

administer a vaccine against covid.

Dame Kate, perhaps I can kick off with this question. You said in an interview published today with *Die Welt* that "the UK seems to have lost its leadership approach in vaccine R&D, manufacturing, and procurement. In 2020 we were clearly world leading. But the UK went back to business as usual." What has gone wrong?

Dame Kate Bingham: What has gone wrong is that there has been no expert or leader to co-ordinate the activities for everything from vaccine innovation scale-up to landscaping and figuring out where the new variants and the new potentially pandemic viruses may come from—people who understand manufacturing scale-up, clinical development and regulations. All of that is gone. Maybe there is somebody secret out there who is doing that, but not as far as I can see. We have the capability in the country, but it cannot be done in a vacuum. We need to have an expert leader to bring that together and to try to get us back into a better position.

Q1603 **Chair:** You are not talking about a Minister; you are talking about an expert—you just mentioned experience—appointed to run this operation.

Dame Kate Bingham: Yes. It needs to be someone who understands the space. It probably means somebody from the outside who has experience in industry. It was the first recommendation we made. When I left in December 2020, we gave some very specific recommendations as to what we thought should happen, and the first was that an independent, industrial-experienced chairman and board should be established to bring together the various strands of vaccine activities that will define the UK as a global leader in vaccine development and manufacturing. That has not happened.

Q1604 **Chair:** Why has that not happened? Do you have a view on that? Is it because it has been transferred into the UK Health Security Agency and it has been discontinued and the model that you worked in, the Vaccine Taskforce, was a separate body?

Dame Kate Bingham: To begin with, I thought it was lack of experience of officials since we do not have a lot of people within Whitehall who understand vaccines, relationships with industry and all of that, but actually, I am beginning to think it is deliberate Government policy not to invest and not to support the sector. I cannot explain why we have not appointed somebody who can bring all this together. We have the capabilities, and yet systematically things are being dismantled that we put in place.

Q1605 **Chair:** Our joint Committee's report was very clear that, of all of the aspects of the response to the pandemic, the creation of the Vaccine Taskforce and its work—yours, and you led a team of people coming from outside government who gave extraordinary public service—was one of the beacons of success. Have you had any conversations with anyone in government since as to why they thought such a successful model should

be abolished?

Dame Kate Bingham: The announcement from the Office for Life Sciences that was out on Monday is to create four missions specifically to advance cancer, dementia and so on, and that has been apparently modelled on the Vaccine Taskforce. I have been talking to them about how to bring urgency, goal setting and delivery to those missions, but I have not had a discussion about why the decision has been taken not to appoint anybody with the sort of experience to bring together the activities and capabilities that we have in the UK, nor have I had a discussion with anybody about why things that we put in place are now being dismantled.

Q1606 **Chair:** Do you have an example of things that you have put in place that are being dismantled?

Dame Kate Bingham: VMIC, the Vaccines Manufacturing and Innovation Centre. We scaled it up with Oxford Biomedica to help massively increase the manufacturing capability, in that case for the Oxford vaccine. That was sold to Catalent earlier this year. Catalent has now announced that they are mothballing any expenditure on VMIC until 2024 at the earliest. Far from supporting and investing in manufacturing onshore, it has been sold and mothballed. That is the example of Catalent.

Cobra Biologics was bought by Charles River. It was a key part of the early scale-up for vaccine manufacturing and getting, first, into clinical trials and then, ultimately, into bulk manufacture. That manufacturing is being transferred to the US. On bulk manufacturing of antibodies, we had interest from industry to partner with Government to build up that scale.

I noted the last conversation was about Evusheld. I disagree with the comments that were made, but there again none of that has been taken forward. I am a member of the NHS registry. I have had two emails telling me it is closing down. I tweeted it. I said, "I think that is a pretty dumb decision." Robert Jenrick managed to reverse it, but only after substantial good will had been lost. About 550,000 people who thought they were trying to help with clinical development in the country have been repeatedly told, "You're not helping. You've got to start again and join a different registry." I am baffled as to the decisions that are being made.

You asked why, in your last comment, the Moderna contract was not signed. Goodness knows. It does not take six months to go from heads of terms to a binding contract.

Q1607 **Chair:** You heard what I said to the Minister on that point; that I seemed to recall that you regarded as crucial that we had signed contracts that we could insist on, otherwise we would not have had the supplies that we did and that made such an impact here. Is that a fair reflection?

Dame Kate Bingham: People work to legal contracts. You have to have binding legal contracts to ensure delivery. I absolutely welcome the

concept of a big relationship with Moderna to provide and bring both R&D and manufacturing to the UK. I am very positive about that. I have not seen it happen. I have not seen, nor do I know, whether or not the same offer was made to Pfizer-BioNTech, with whom we have a close relationship, and they have clearly delivered for the UK. It just seems odd that nothing has yet been signed. It also seems odd to me that there is a singular focus on mRNA as opposed to maintaining a broader capability across different vaccine formats.

Q1608 **Chair:** One of the key lessons in our joint inquiry's report was that we had to be better at preparedness for future pandemics of whatever type they were. Does the devastating assessment of what you see lead you to lose confidence in our ability to respond adequately to future pandemics?

Dame Kate Bingham: I do not think we are in a much better place to deal with a new pandemic. I think we are marginally better. First of all, we are quite pro-vaccination, which is good. We clearly had a positive reputation. Other countries around the world clearly saw us as doing a good job. We have some greater vaccine manufacturing capability through the work that we did in scaling up some of the existing suppliers—the contract development and manufacturing organisations.

As I said, the concept of the Moderna contract is great. We have invested in skills to support biomanufacturing expertise. All of that is really positive, but without the leadership and without ongoing relationships looking at vaccine innovation, our vaccines currently are not good enough. We need to improve the quality of the vaccines, the durability, the ability to stop transmission and the way in which we give them. Lots of things need to be improved, and that is not going to happen in a vacuum. That is where we need to bring together the capabilities that we have, working in partnership, as we did effectively in 2020, to make sure that we stay ahead of the game and are not constantly looking in the rear-view mirror.

Q1609 **Chair:** Before I turn to a couple of colleagues, starting with Stephen Metcalfe, I have just one thing on innovation. The Vaccines Manufacturing and Innovation Centre predated covid. I should disclose that it was part of the industrial strategy. It was an assessment that we made that we needed that capability in manufacturing and innovation. My reading of what has happened with VMIC is that the innovation mandate for VMIC has been lost and deleted. Have I understood that correctly?

Dame Kate Bingham: That is my understanding. It is not that we have necessarily lost the people and the skills, but there is no leadership and there is no mandate. The "I" in VMIC, as far as I can see, has been eliminated. We have lost the manufacturing side of it because it has been mothballed and we have lost the innovation side because no one is actually continuing that or supporting it. Now, if we have innovative vaccine companies that want to work with the UK to develop next-generation vaccines, I do not know who they talk to or where they go.

Chair: I am grateful. You have spoken very clearly, very powerfully and concisely. It may be that you have anticipated some of the questions that my colleagues have, but nevertheless I will go to Stephen Metcalfe.

Q1610 **Stephen Metcalfe:** Thank you. I think you have pretty much already answered my question, Dame Kate. I was going to ask what the weaknesses are in UK capability to deal with new variants as they emerge, and you have already highlighted some of those. Is there anything you would add to your thoughts on how we can become better prepared for new variants as they emerge?

Dame Kate Bingham: One of the things that we invested in was scaling up the assay capability at Porton Down for evaluating new variants. That has worked well. It allows us to evaluate the effectiveness of vaccines against new variants as they emerge. But again, as far as I understand it, there is no leadership; there is no one co-ordinating this, and there is no one working with industry to basically work out what we could be doing to address new variants. Across the industry, over 70% of new drugs and vaccines being discovered come from small and medium-sized enterprises working closely with academia; 70% of the industry is small companies, and they need to be able to work with somebody in government on how they can scale up and evaluate their new formats. That is not happening at the moment.

Stephen Metcalfe: That has come across loud and clear. The one thing that will overcome many of the challenges you have highlighted is some proper leadership. Thank you for that. That is all I need to ask.

Q1611 **Dawn Butler:** Thank you, Dame Kate. Your frustration is palpable. We can feel it in the room. On a point of clarification, do we have the infrastructure and manufacturing base to produce vaccines for a future pandemic?

Dame Kate Bingham: Broadly. We have capability in the Cell and Gene Therapy Catapult, the Essex-based vaccine plant. We have the contract development and manufacturing organisations: Oxford Biomedica, Fujifilm in Darlington and Wockhardt are all independent companies that we helped to scale up their capacity. As I said, Cobra Biologics, with its new US owners, is moving a lot of the manufacturing to the US. We have some capability.

We do not have any capability to manufacture bulk antibodies, so we are dependent on external exports. We are definitely better, but we are short of being able to not depend on imports, because at the moment we are dependent on imports for, certainly, mRNA vaccines. Moderna is not going to get built any time soon. CPI, the group in Darlington, has developed a very fine process, but that is a low-scale, low-volume process. We cannot scale population vaccines there. We are better, but we are still a long way away.

Q1612 **Dawn Butler:** I think the pandemic showed us how important it is that

we invest in our own infrastructure so that we can mass produce to scale. There was lots of public money invested in developing the vaccine with Oxford, but when the vaccine was developed it was offered at different price points globally, and that might have had an impact on the vaccine roll-out in other countries. In a pandemic, if a country has a prevalent problem, it spreads to other countries, so we cannot vaccinate ourselves in isolation. What is the global value of having vaccinations made with a focus on protection rather than on profit?

Dame Kate Bingham: To be clear, the AstraZeneca vaccine was not sold at a profit; it was sold on a non-profit basis to high-income countries and at a very discounted basis to low-income countries. AZ, Sanofi-GSK and Johnson & Johnson all worked on a non-profit basis. Those major companies forwent the profits they could have made if they manufactured other products, in order to provide vaccines. Because of that, the AZ vaccine, according to the economists, saved more lives in the world than any other vaccine.

I do not think profit was the motive for those vaccine companies. Profit was a motive for the mRNA vaccine companies, and those vaccines were less widely distributed to the low and middle-income countries because they were too expensive and too complex to deliver with the various significant cold chain requirements.

Q1613 **Dawn Butler:** Can I come back on that? You are absolutely right; AZ was developed, of course, as not for profit, but it was still offered at different price points in some countries. I just want a bit more clarity from you. AZ was more popular because it was offered at a cheaper price point than the mRNA vaccines. Is that important if we are ever going to cope with another global pandemic? Is it important that vaccines are offered as not for profit? Is that an important method to go forward?

Dame Kate Bingham: In order to control pandemics, we need to make sure that all the people who are most vulnerable are vaccinated. If there are significant costs to get vaccines, the low and middle-income countries will not get those vaccines, so it is critical that everybody who needs to be vaccinated is vaccinated and in a way that is doable. AZ was not a vaccine company, yet they managed to stand up licence agreements with manufacturing companies all around the world to manufacture their vaccine, as you say, at very low costs in some countries, and that is the right thing to do.

Dawn Butler: Thank you so much.

Q1614 **Chair:** I have a couple of brief final questions, Dame Kate. The world does not stand still, and other countries that might not have done as well originally have looked at our example. I was struck by what you said about Europe: "Europe is now thinking about pandemic preparedness in a systematic, professional, effective way" and have "put in place a comprehensive process to explore vaccines of all modalities with a budget for advanced purchase agreements, capacity reservations etc. They

engage constructively with vaccine companies." It sounds like they have studied what you did and copied it. Would that be inaccurate?

Dame Kate Bingham: Whether they have copied it or not, they have done the right thing. They were slow to get off the blocks to begin with, but they have now done what needs to be done, which is to recognise that this is not going to be the last pandemic, and we need a better and quicker approach to identifying potential pathogens and to be able to build vaccines very rapidly against new variants or new pathogens. They are doing exactly what we have recommended that the UK does, but our approach seems to have been to go backwards rather than to continue the momentum.

Q1615 **Chair:** We have a new Prime Minister. We have a new ministerial team. Your advice for them would be to turn the vehicle around instead of going backwards and in the opposite direction from where you recommend. Would it be fair to say that it is not too late to change course?

Dame Kate Bingham: There are some things that are pretty severe. VMIC is not a good outcome for us. I would recommend to the new Prime Minister and Ministers to go ahead and read the recommendations we gave in December 2020. Those recommendations have not changed. I have not shared them with Europe, but they are certainly following a lot of them.

Q1616 **Chair:** I have one final technical question on intellectual property, which is important in developing new drugs and treatments. The UK is in negotiations to join the trans-Pacific agreement, the CPTPP. The IP regime in that agreement differs from what we have in the UK now. I think it involves a year's grace for registering patents. Is that a problem? Is it something that negotiators need to be aware of to preserve our ability to have a flourishing life sciences industry and get the benefits of that?

Dame Kate Bingham: Yes, it is. Anything that puts us in contravention of the European patent convention would be catastrophic. Our companies depend on being able to protect their products and intellectual property using patents. If we are forced out of the European patent convention, it will basically create significant costs and hassle for our companies because we will have to duplicate all of that work. The reality is that our companies will relocate. They will not be based in the UK; they will be based in areas where they can secure patent rights at lower costs.

That seems to be potential for an own goal, and we need to make sure that there is an opt-out in the intellectual property clauses in that trade agreement, otherwise we risk really harming the biotech sector and our patent agent profession, which punches disproportionately above its weight with the patent work that it does on behalf of international companies as well as UK companies.

Q1617 **Chair:** But that is a risk, not a certainty. What you are saying is that you hope and want the negotiators to be cognisant of it and not do something

inadvertently that could be, as you put it, catastrophic.

Dame Kate Bingham: Correct.

Chair: Thank you very much. I think there are no other questions from colleagues. You have been admirably, remarkably concise, but at no cost whatsoever to the force of your evidence. We are very grateful to you for your evidence today, Dame Kate, and for the contribution that you have made to the development and deployment of vaccines during the pandemic. Thank you very much indeed. That concludes this meeting of our joint Committee.