HOUSE OF COMMONS

Public Accounts Committee

Oral evidence: Roll out of the COVID:19 vaccine programme - 28 03 22, HC 1101

Monday 28 March 2022

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Watch the meeting

Members present: Dame Meg Hillier (Chair); Shaun Bailey; Sir Geoffrey Clifton-Brown; Mr Louie French; Angela Richardson; James Wild.

Questions 1-93

Witnesses

I: Shona Dunn, Second Permanent Secretary, Department of Health and Social Care, Amanda Pritchard, Chief Executive, NHS England and NHS Improvement, Dame Dr Emily Lawson, National Director Vaccine Deployment, NHSE&I, Dr Jenny Harries, UK Health Security Agency, and Madelaine McTernan, Director General Vaccines Taskforce, Department for Business, Energy and Industrial Strategy.

Gareth Davies, Comptroller and Auditor General, Adrian Jenner, Director of Parliamentary Relations, National Audit Office, Tim Phillips, Director, NAO, and Marius Gallaher, Alternate Treasury Officer of Accounts, were in attendance.

HOUSE OF COMMONS

Report by the Comptroller and Auditor General

The rollout of the COVID-19 vaccination programme in England (HC 1106)

Examination of witnesses

Witnesses: Shona Dunn, Amanda Pritchard, Dr Dame Emily Lawson, Dr Jenny Harries, and Madelaine McTernan.

Chair: Welcome to the Public Accounts Committee on Monday 28 March 2022. Today we are looking at the rollout of the covid-19 vaccination programme in England. That has been one of the most successful elements of the response to the pandemic; nevertheless, with the fourth booster being rolled out and lots of questions still about what the money was spent on and what it achieved, we need to look at the value for money and how the vaccine programme will be managed in the longer term.

I am pleased to welcome our witnesses today. We have Shona Dunn, the second permanent secretary at the Department of Health and Social Care, Amanda Pritchard, the chief executive of NHS England, Dr Dame Jenny Harries, who heads up the UK Health Security Agency, which was formed last autumn to take over test and trace and a number of public health responsibilities, and Dr Dame Emily Lawson, who is the national director for vaccine deployment at NHS England, and who really led the deployment of vaccines—of course, they were procured through another route, but she led the deployment that was so successful.

I am delighted, also, to welcome Madelaine McTernan, who is the director general of the vaccines taskforce at the Department for Business, Energy and Industrial Strategy. Can I just check, Ms McTernan, were you there when Kate Bingham was part of that taskforce?

Madelaine McTernan: I was, yes. I wasn't DG then, but yes.

Q1 **Chair:** That is helpful to know. I mention Kate Bingham as she was responsible for setting some of the direction of how we procure vaccines, which has made such a difference to us in the UK.

Before we get into the main session, I want to turn to you, Dr Harries, and talk about the UK Health Security Agency. As I understand it, you do not have your budget for next year settled yet. Is that right?

Dr Harries: Our budget is in the final stages of being sorted through—clearly, it is very much involved with the testing programme as we go forward—and those announcements will be made in due course. I am sure you understand why I won't divulge that just at the moment, but I can assure you those will be happening shortly.

Q2 **Chair:** We are right at the end of the financial year. Are you expecting to know at the beginning of the financial year what budget you have to play with?

Dr Harries: I am confident we will have that. Many of our stakeholders, who I know have been concerned about testing programmes, have been engaged in conversations, and the UK Health Security Agency has been able to put forward all of the public health views on what testing should be available in the future.

Q3 **Chair:** A large percentage of your budget must have been Test and Trace, because that was the largest single expenditure. Is that right?

Dr Harries: That is true, but obviously we are a health security agency, and along with the other programmes, which I am sure we will come to with the vaccination programme, we are looking forward to a much broader array of health security issues. While that will remain a key component of our work for the forthcoming financial year, it is obviously not the only consideration.

Q4 **Chair:** Given that £37 billion was allocated to Test and Trace over two years and that UKHSA took over part way through the second year of that spending, is it fair to say that we can expect a diminution in your overall budget because the Test and Trace programme at that level has been reduced?

Dr Harries: The Government have signalled that. Epidemiologically, we are now in a different phase of covid, which I am sure we will come to as well, so it is entirely appropriate that the testing changes as we go forward and settle into a different programme of living with covid. It is reasonable to say that there will be a diminution, but the detail of that programme will be announced by the Government shortly.

Q5 **Chair:** As of this Friday, we won't have free tests paid for by the taxpayer; tests will not be available as easily to people and they may have to pay for them in certain circumstances. You talk about the epidemiology, so are you content with that approach? How are you going to keep track of what variants are out there?

Dr Harries: I am very happy to talk about how we track variants. The thing we have in this country, which I am confident will be sustained, is a backbone of epidemiological prowess in the community infection survey. That will continue. We monitor the PCR tests coming from that and look for new variants.

Equally, we monitor and sequence all our hospital cases, particularly those vulnerable individuals who are perhaps more likely to have recurrent infections and may therefore be more at risk if a new variant grows. The national backbone of epidemiology and the higher risk patient cases will continue to be sequenced, so we should have a good review of when a new variant may or may not arise.

As well as that, we link routinely with other public health agencies overseas and we liaise with a lot of different countries on a weekly or

twice-weekly basis. We exchange information on what cases they are seeing, as well as sequencing our own.

Q6 **Chair:** What balance will there be between testing people in hospitals, where you have a captive audience and PCRs are relatively easy to deal with, and testing in the community, where we are encouraged not to take PCRs if we have had a positive lateral flow test?

Dr Harries: As I said, you will understand why I cannot give the details at this moment. It is for Ministers to decide on the detail of the testing programme, but the public health principles of it are that higher risk clinical cases will all continue to be sequenced. Not every single patient will be because not every sample can be sequenced, just for practical reasons. Clearly, there is likely to be less community surveillance and testing, but the PCR testing that goes along with the community infection survey, which is our continuous record of what is happening epidemiologically, will continue as well.

Q7 **Chair:** That is a sample of people who have covid whom you track through PCRs.

Dr Harries: Yes, but it is a systematic sample, so it is modelled across the country to reflect different regions and the whole national picture.

Q8 **Chair:** And epidemiologically, you are content that your advice is being followed and we will have the information we need.

Dr Harries: In relation to the community infection survey, we are content that that gives a good granularity across the country.

Q9 **Chair:** You were very careful in how you chose your words there. What about the wider testing in the community? Are you content that if we drop testing on Friday, we will be left with the right information that we need to manage this?

Dr Harries: You will appreciate that you are perhaps leading me towards making a statement about what testing will happen on Friday, and I am carefully trying to avoid that, because it clearly is not my decision in total. I think it has already been signalled that the testing in the community will change. We have already changed our policies in relation to who we are tracking through the community, for example. I am confident that the backbone of our surveillance will remain in place.

Q10 **Chair:** I will leave that there for the moment. One of the other aspects of not having a budget settled at this point is that you are relying on a lot of interims to do the jobs in your agency. What percentage of interims do you have in place compared with permanent staff?

Dr Harries: This is a very difficult question, because we have services in the organisation that are not what you would call routine services for the civil service. If you contrast it with the Department of Health service on a policy perspective, we have logistics specialists which we do not normally have. We have people on various social marketing types of things, which have been a critical part of the Test and Trace capacity. We are ramping

that right down and I am happy to send you a copy of where we are going. In fact, until some recent changes when we were asked to take on more through the omicron wave, we were reducing ahead of our performance indicator for that. I am happy to come back to you with the precise number, because I think that would be helpful to explain the word "consultant", which is problematic in our organisation. We have management consultants, contractors and clinical medical consultants, so it is important that the numbers are correct.

Q11 **James Wild:** It is an issue that we have raised as a Committee in our Reports and in previous hearings. Within that bucket, what is the current number of consultants who are contracted to UKHSA?

Dr Harries: Do you mean management consultants?

Chair: Yes, not medical consultants.

Dr Harries: I apologise but I can't give you a figure, because I thought we were here to talk about the vaccine programme, rather than the Test and Trace programme. I am happy to give you the detail. I think we are running at around 40% of previously.

Q12 **James Wild:** The figures at the end of October showed that management consultants made up 10% of the workforce and around 1,000 consultants were being used. What is the highest day rate you are currently paying to consultants?

Dr Harries: I do not have that information with me today, but I am happy to share it with you. We have a detailed ramp-down plan for our consultant use, which picks up the Chair's earlier point that our finances would change significantly as we go forward. The only issue I would raise is that, in order to ramp down some of these services very quickly, we are reliant on having short-term contractors and consultants in; otherwise the systems that have been built to manage the IT processing and various other quite difficult processes will cease to function. What we are trying to do is hand them over safely to a new system, so that we can learn from the benefits of what we have done in terms of logistics and connecting with individuals and the public while landing them safely as we go forward.

Q13 **James Wild:** I think we are due an update this month anyway. One of our recommendations in our October Report was to get updates in March and June on this. If you can provide that breakdown of management consultants and other types of consultancy referred to and the highest day rate that is currently being paid and the average day rate, that would be helpful for the Committee.

Ms Dunn, when you were here in July, you assured the Committee that this was a sharp area of focus and the Committee could be assured you would not take your eye off the ball. Are you confident that we are going to get to a position where there is a justifiable number of consultants being used, which I don't think has been the case for some time in this programme?

Shona Dunn: Absolutely, I am still confident that that is the case and what I said in July stands. Ministers are still very focused on this issue. As Dr Harries said, we have a detailed plan. That plan was adjusted in some respects during the course of Omicron, but it was very much on course before that and is still a strong focus for the senior leadership of UKHSA. I have no hesitation at all in confirming that it is still absolutely the intention to get to a much more sustainable place. Just to re-emphasise the point that Dr Harries made, it is not as simple as permanent civil servants, good, all other forms—

Chair: I don't think we were suggesting that.

James Wild: But you said there was a significant ramp-down plan. We would expect given the last figures were 1,000 that a significant ramp-down would be markedly lower than that. We look forward to the update in the next few days.

Q14 **Chair:** Dr Harries, one of the projects that some of us know—the ZOE project, which does some useful data gathering—lost its funding, and it suggested that it lost it with very short notice. Is its characterisation—that one minute it was having conversations that it would be continued and the next, suddenly, the funding was cut—down to the fact that you are having very late discussions about your future budget?

Dr Harries: I hope that is not how we would normally want to work with our stakeholders, particularly our research colleagues in academia. As an organisation, we very much set out to work continuously with them, and that will come through when we get on to the vaccine programme. We are out of necessity, and as I think the Committee would expect, having to look at which programmes are providing the best and most cost-effective data, so that we leave the country safe with the right information but not duplicating programmes, with a number of studies started at the beginning of the pandemic when the future was very uncertain. We are really grateful for the work that the ZOE team have done. I am happy to speak to them if they need any further explanation, but I am sure colleagues from our digital and analytics surveillance team have already done so. To be cost-effective, we will not be continuing to fund every programme where there is duplication, and I think you would expect that.

Q15 **Chair:** We appreciate that. I guess one thing about the ZOE project is that it reaches our mobile phones quite quickly compared with some other schemes; nevertheless, it seems to have thrown up some useful evidence. Dr Lawson, I want to touch on the fourth booster plan currently being rolled out. Will it reach over-50s by the autumn? I have a vested interest.

Dame Emily Lawson: As you know, the spring booster programme, which launched last week, is for those aged 75 and over and the immunosuppressed. On the autumn booster, we have written to systems to give provisional guidance, which was agreed with JCVI, but JCVI will continue to look at the data, the emergence of new variants and so on, and then give us guidance closer to the time about the exact nature of the

autumn programme. We have asked systems to plan for a base load likely set of cohorts and to know what they would have to do to surge to a broader set of people should that be requested. We simply will not know until nearer the time.

Chair: So logistically you are lining up the ducks, but obviously the science will determine what happens.

Dame Emily Lawson: Yes.

Q16 **Chair:** Fantastic, thank you. I turn to you, Amanda Pritchard, as head of NHS England. You wrote a ministerial direction to your Secretary of State about the use of the independent hospital sector and the baseline payment of £75 million to £90 million a month to be on standby in case there was an additional need during covid. I have to say it was one of the best direction letters I have read, and it was very clear and trenchant in its position. What has happened with that money? Have you had any work done by the independent hospital sector as a result of that input?

Amanda Pritchard: You are absolutely right. Back in December, we were directed to ensure we could maximise use of independent sector capacity if necessary. At that point, the omicron variant was with us, but we did not know, of course, quite what form it would take. We sought direction, having negotiated a minimum income guarantee with 10 independent sector providers. That was based on an arrangement whereby that was a payment against activity but provided a minimum level to give the independent sector confidence that it could surge if required.

In practice, we have been able across the NHS—both the independent sector and the main body—to continue to have much higher levels of elective activity going through our system than during previous covid surges. It is actually now up above 90% of pre-pandemic levels. The independent sector has been playing a very significant part in that—indeed, it is way above pre-pandemic levels of activity. However, happily it turned out that we did not need to use that for the non-elective surge.

Q17 **Chair:** Just to be clear, you spent the money and they got the minimum income guarantee. What did they deliver for that?

Amanda Pritchard: They delivered a combination of all the things they were previously doing. Something that was important at the time and remains important going forward was giving us more confidence that we could deliver more complex pathways. We were keen to use the independent sector to support cancer pathways in particular, and we were able to do that as part of this arrangement. At the end of the financial year, we will be able to come back to you with greater clarity on exactly what was done over this quarter period—obviously it has not concluded yet. I will happily come back to the Committee to provide clarity on that once we know.

Q18 **Chair:** In a very good letter, one of the things you raised was the challenge for clinicians of handing over a patient on a particular cancer pathway to another team of clinicians. From what you have said, you did

manage some of those complex programmes. Were some of your worries unfounded? How did you manage that process?

Amanda Pritchard: The independent sector relationship is very different depending on where you are across the country—hospitals are set up very differently depending on what they're equipped to do and what staffing model they have. Across the NHS, we have found that where there are really close working relationships with good operational management arrangements—which involve clinicians as well as administrative staff—that helps to manage patient flow more smoothly. We have certainly seen that work well across the country. Again, that is something we are seeking to build on for the future.

Chair: So it depends a bit on that relationship with the private hospital and the local health economy. Sir Geoffrey Clifton-Brown is going to pick this up now.

Q19 **Sir Geoffrey Clifton-Brown:** Good afternoon, Ms Pritchard. To clarify that last answer, does that leave the door open for you to think about negotiating a future contract with the private sector, or will the end of March be the end of it?

Amanda Pritchard: You are absolutely right that that is the end of this particular contract arrangement. However, the independent sector will continue to play an extremely important part in our overall elective recovery plan. It is an ongoing relationship. As I say, our learning is that it is best managed locally, because then it is about local clinicians and local patients working out what works best for them.

Q20 **Sir Geoffrey Clifton-Brown:** Again, that is skating around the question—I know when I hear an answer that is skating around—so let me ask you a direct question. Is it likely or possible that, after the end of March, the NHS will continue to pay for some form of elective treatment through the private sector?

Amanda Pritchard: It is certain that we will continue to do that. We have run NHS activity through the independent sector for a very long time and we have no intention of changing that. In fact, something we have learned through the last two years of the pandemic is how to work more effectively in partnership with the independent sector, and we will seek to build on that as part of our elective recovery programme.

Q21 **Sir Geoffrey Clifton-Brown:** Will it take the same form as the existing contract? In other words, will there be a minimum income guarantee?

Amanda Pritchard: That is what will change. This contract arrangement was a particular response to a set of circumstances that was largely driven by the pressure in December to make sure that we could surge capacity into the independent sector and use it for non-elective purposes. That is what the minimum income guarantee was designed to enable us to do.

Q22 **Sir Geoffrey Clifton-Brown:** Will you let the Committee know what that might look like, as soon as you are able to give us details? That would be very helpful.

Amanda Pritchard: Of course.

Q23 **Sir Geoffrey Clifton-Brown:** I will stay with you for the moment, as we are at the top of the agenda—we are not yet into the vaccines part of this hearing. I refer to an article in the *Daily Mail*, which was headed "GPs are quitting over criticism of lack of face-to-face appointments, MPs hear." As opposed to that, it seems that the percentage of face-to-face appointments around the country is extremely variable. The article says that in Bury, for example, only 37% of consultations are taking place in person. What is the NHS's view about the necessity of GPs actually seeing patients face to face?

Amanda Pritchard: One of the things that I would like to say and I think it has come through the whole of the vaccination programme—I will talk about it a bit more—is just quite how important GPs have been over the course of the last two years, both in providing that crucial vaccination activity and in continuing, of course, to do all the other things that we rely on primary care to do. GPs continue to work unbelievably hard.

However, regarding your point about face-to-face appointments, you are absolutely right that the data show the situation is variable. Across the country, the data for January 2022—our most recent data—show that over 60% of appointments across the county were reported as being face to face. The guidance that we have given to GPs consistently is that the important thing is patient choice. For some conditions it will always be appropriate to be seen face to face, and for some patients it will always be appropriate to be seen face to face. But the other dynamic will be about what the clinician and the patient both want, and that is part of what explains some of that variation.

Certainly, some of the difference is about different populations and what they want and need, and some of it is about how advanced are some of the things, such as the digital technology, that support appointments that are not face to face.

Nevertheless, our message is still very much to encourage patients and to encourage primary care to think about what will work best for that individual in that circumstance, and therefore it has got to be about a choice rather than being absolutely fixed in every circumstance regarding what the best answer is.

Q24 **Sir Geoffrey Clifton-Brown:** In a constituency like mine, which has a high percentage of elderly patients, many of whom are not particularly IT-savvy and some of whom might be a little confused anyway, is the expectation that where a patient wants to see a doctor face to face, that should happen?

Amanda Pritchard: It has always been our expectation that patient preference should be taken into account. However, one of the things that we have found is that overall satisfaction with general practice has gone up. We hear back from the surveys that we carry out that people in many circumstances find appointments that are not face to face more convenient, including some older people for whom travel is not always

necessarily straightforward. In those circumstances, it might be that phone calls are easier than video calls. It is not a one-size-fits-all approach; we have always tried to be very clear that patient preference should be taken into account.

Q25 **Sir Geoffrey Clifton-Brown:** I overheard this weekend, with his permission, my son having a consultation by Zoom, where he was actually able to show the GP what was wrong. It was very efficient and very efficiently dealt with, and a prescription was given, so it can work fantastically.

Last question from me: can I go back to you, Ms Dunn, please? When a lot of these vaccine procurements were made, they were made with contingent liabilities. Can you tell us if you have any latest assessment of what these liabilities might amount to? Also, can you tell us how successful you are being at renegotiation, because I gather you are now trying with some of those companies to renegotiate those contingent liabilities? How is the contingent liability changing for future procurement of vaccines?

Shona Dunn: For greater detail, I will hand over on this one to Ms McTernan. However, I will just say in the round that you know that we have been very focused on contingent liabilities. We appreciate that we are in an unusual position on contingent liabilities. We have a substantial number of contingent liabilities as a Department; we will obviously aim to bring those down and manage them effectively.

On the specifics of the vaccine contingent liabilities, over to Ms McTernan.

Madelaine McTernan: We engaged in a private context previously on the details and estimates around the contingent liabilities, and I would be happy to do that again, because obviously there are quite a lot of commercial and other sensitivities around this—

Q26 **Chair:** Yes, we are arranging a private briefing. But on the main headlines, if you could just assure us…

Madelaine McTernan: Sure. Clearly, as we continue and as the market evolves around covid vaccines, that will give us more leverage for the market to normalise, so that we can move back to something that we would see as being more in keeping with the usual terms for contracts.

I think the market isn't quite there yet, so of course every time we engage with a company and every time we look at entering new commercial arrangements, we test these factors. But I think we are still on that journey of moving back towards something that is a little more standard.

Q27 **Sir Geoffrey Clifton-Brown:** Are we sure that the vaccine manufacturers are not playing one country off against another? Dr Harries was saying that on the sequencing you are talking to other countries weekly; I think she even said twice weekly. Are you talking to other countries or are you aware of what their negotiations are with these vaccine producers?

Madelaine McTernan: We obviously are not aware of the exact terms that they have with the vaccine producers, because those contracts are, to the extent that they are published anywhere, heavily redacted. We took steps to ensure that we did not end up out of line with other countries. Again, I am happy to cover that in a bit more detail in a private setting.

Chair: I should just acknowledge that we had some quite heart-wrenching evidence from an anonymous contributor about someone who had suffered as a result of the vaccine, so I think we will want to talk a bit more in our private session about how people go about taking claims. That is an early stage one, but of course this is something that will potentially go on for decades. I want to thank that individual for writing in—it is not ignored, but it might not be the main focus of today's session.

Q28 **Shaun Bailey:** On visitation policies, I wrote to you at the start of the year about Sandwell and West Birmingham NHS Trust and the fact that they were not allowing birthing partners in. I must say that your office were fantastic in their engagement on that. I was slightly concerned that after we had seemed to resolve that in mid-February, they were still not allowing birthing partners in, despite a reassurance from the chief executive, and indeed your office, that that was the case. Can you just clarify for me how you are ensuring that, across NHS England, separate trusts are adhering to NHS England guidance and are not going rogue? As I say, a constituent of mine who was at the height of her pregnancy had her partner excluded from many of her appointments, despite the fact that I was told that Sandwell and West Birmingham were allowing partners in, so I would be keen to understand how you are enforcing guidance across NHS England.

Amanda Pritchard: I am very sorry to hear the story about your constituent, because we have certainly been very clear and consistent about maternity in particular and the importance of not being in a position where somebody is expected to attend appointments alone, let alone be in a position where they are labouring alone. We have recently written out to the NHS to reconfirm the visiting policy and make it absolutely clear that the expectation is that visitors will be accommodated. Obviously, we are expecting people to then think about safety and risk management around that. On any occasion that we hear about any example where that has not been followed, of course we will happily follow that up. It is one of the things that we will regularly talk to NHS colleagues about through all the mechanisms that we have—whether that is big webinars and roadshows or specific regional follow-up.

Chair: After that little canter through topical issues, we are now moving on to the vaccine programme and seeing what lessons can be learned. As we know, we will be going through the spring booster at the end of it. I will ask Sir Geoffrey Clifton-Brown to kick off.

Q29 **Sir Geoffrey Clifton-Brown:** Dr Pritchard or Dame Emily Lawson, could you tell us more about what you did to adapt the existing health data, and the systems that hold it, in order to roll out the programme at speed? On the face of it, this seems to have been a tremendous success,

and we have had some evidence on this, but could you just tell us a little bit more about it? Tell us how you are going to use it in future and how it could be used more broadly in vaccination programmes.

Dame Emily Lawson: Thanks to very close working between NHS Digital, NHS England, UKHSA and, indeed, the providers of the existing IT systems across the NHS, we were able to, as you say, build at speed a system that took anonymised data from patient records so that it could not be used for any other purposes, compare it with data in other databases and the vaccination event data, and then drop that data back into people's GP records and extract it in other ways to compare with testing data, survival rates and so forth, so that UKHSA could publish surveillance reports.

This is a testament to excellent joint working between different organisations, to working with NHSX on the covid pass, which was not designed in at the beginning but became critical during the spring, and to having a clear purpose at the beginning of the programme that we were building the same complexity as a fairly substantive supermarket but were transporting gold. We needed to know exactly where that gold was at every stage, so we needed a system that could track the supply, and that could obviously also track the recipient and understand who was and was not vaccinated. There is a very complicated chart, which I will not try to reproduce verbally for you now, that shows all those data flows.

One of the reasons we built the reporting over time, for example, was that we did not want to report any data that was not right. What is built into that system is quality checking of the data. The vaccine events flow into the system from four different databases overnight, they are checked, records are then uploaded into GP records and then they are also reported into the overall NHS database that we have been building since the beginning of the pandemic.

The key success factors, as I said, are the joint partnership, the vision at the beginning, and the flexibility to build out that data and share it with academics and so on that we added as additional functionality over time. As we got feedback from patients, from other Departments—for DWP, for example, when we needed to vaccinate people who receive carer's allowance—we extended the flexibility of the comparison of those databases to make sure we could adapt as we went along. We have now extended some of those learnings to flu for this winter, for the one that we have just done, and the NHS England section 7A team that covers all vaccination, immunisation and screening is now working with NHS Digital to see how we extend that further—what the plan would be over the next several years to make sure we have the same level of operational data, as well as the strategic and surveillance data that we have always had.

Q30 **Sir Geoffrey Clifton-Brown:** That is a huge success story. Are you able to use this system to predict, first, what the likely demand is from different cohorts, and secondly and perhaps more importantly, how you could improve the demand from certain cohorts that are not taking up the vaccine?

Dame Emily Lawson: The holy grail of a system that could predict that accurately is not currently what we have. Jenny may want to come in on the long-term expertise UKHSA and academics have in looking at these kinds of issues. We do have modelling inside the programme that continually seeks to learn and project demand. It is pretty difficult to do by cohort, partly because the database on ethnicity, for example, is different than the database on age, so it is harder to compare some groups than others. However, we can roughly predict now how fast cohorts will come forward and to a lesser extent which types of site they are likely to go to.

There are academics looking at this data all the time, to look at uptakes. For example, I noticed there was a study published this morning that looked at what started to explain the lower uptake in black and minority ethnic groups. It said that about a quarter of the lower demand is attributable to bad previous experience and lack of trust in the health system, but the rest of it was not explained by that. This is a constant evolution and we should not do all of that academic research; there are lots of people who are trained. The idea is to build the partnerships and make sure the data is accessible, so that we have our own view and we can use it operationally, and the academic and strategic interrogation of the data can continue.

Q31 **Sir Geoffrey Clifton-Brown:** I do not want to go too far down the line, because others will be coming in on why certain groups are not taking up, but on the macro point, I gather you have about 150 million doses procured for the remainder of this year. Is that correct?

Madelaine McTernan: We entered into new contracts with Pfizer and Moderna in December that procured vaccine for this year and next year.

Q32 **Sir Geoffrey Clifton-Brown:** This year and next year. Does that amount to about 150 million? Is that correct?

Madelaine McTernan: That is 114 million doses in total and clearly we have some in inventory at the moment, which is supporting the current spring boost campaign.

Q33 **Sir Geoffrey Clifton-Brown:** How many doses do you either have or have procured at this moment in time?

Madelaine McTernan: At this moment in time, we have 114 million doses from Pfizer and Moderna over the next two years, we have a contract with Novavax for 60 million doses and we have a contract with GSK and Sanofi for 7.5 million doses because, clearly, we have the contracts that we entered into back in 2020—some of those are still running—as well as an inventory position of about 18 million doses.

Q34 **Sir Geoffrey Clifton-Brown:** Golly. Roughly adding up all those figures, that is 287 million doses either procured or in hand. Even if this fourth booster vaccine goes absolutely swimmingly and better than the previous boosters, that seems like an awful lot and likely to lead to quite a surplus, doesn't it? What does your modelling show you on this?

Madelaine McTernan: That is over two years, and it is obviously important to remember that for some of the legacy contracts—some of those vaccines—we have had to take decisions on procurement ahead of those vaccines being regulated. For example, Novavax received MHRA approval earlier this month, so as we were trying to secure the outlook for this year, we had to do that ahead of knowing whether that particular vaccine was going to be regulated or not.

It is very difficult to forecast with certainty how much vaccine we will actually need for this year. Obviously, we have the spring boost campaign and an autumn boost campaign, and as Emily said, the JCVI will take a decision about the extent of those campaigns at different times in the year. What we seek to do is manage any excess, as we did starting last year in the summer; as we had excess, we were looking at dose donations. We also spend quite a lot of time trying to match delivery schedules to when we anticipate demand, so we will manage that as best we can.

However, looking last year at what the prospective need was for this year, we have clearly taken a reasonably conservative basis for procurement, because we are not at the point where in this market, we can just say, "Okay, we need some more vaccine" and go and buy some more vaccine at that point. There is some risk of wastage this year, but in trying to forecast what we actually need, we are obviously erring slightly on the side of caution, because to end up with too much is probably a better position than ending up with too little.

Q35 **Sir Geoffrey Clifton-Brown:** Others will come on to the question of wastage, but it would be terrible if these vaccines were literally just thrown into the tip. Could we be assured that if they are not wanted in the UK, you will use every effort to give them away or whatever to countries that really do need them?

Madelaine McTernan: Yes. The NAO Report sets out quite well in one of the diagrams how there was a very limited gap between inventory and deployment for most of last year. The Prime Minister obviously announced last June the target of donating 100 million vaccines by the end of this June. We had met the target of 30 million by December, and we are making good progress against those targets, so clearly that has been one of the key objectives for the VTF.

Q36 **Sir Geoffrey Clifton-Brown:** My final question is this: you scaled up your administration of these large numbers of vaccines with admirable speed and efficiency, but is that a system that is likely to remain, given that the NAO Report makes quite clear that the local doctor and local systems tend to be much more successful than other systems of administration, and the fact that the existing system relies quite heavily on volunteers? Is this a system that is likely to remain or, going forward on a more permanent basis, do you have other plans as to how this large number of vaccines that we have just been talking about—100 million a year or so—are to be deployed, if they need to continue to be deployed?

Dame Emily Lawson: That is quite a lot of different bits of questions, so I will do my best to make sure I have covered all of them.

The first thing is that you say GPs have been the most successful. Yes, GPs have been incredibly important, but they have been part of an overall system. I think saying that something is more or less successful is not really the point here. What we built from the beginning of the programme—we rapidly scaled up from 50 hospitals in the second week of December to over 1,400 sites at the end of January, which included GPs and community pharmacy and vaccination centres. We have always worked to make sure there is access where people need it. We have tried to design a system that works for the participants, not just something that is convenient for us.

What we now know, obviously—as you suggested in your last question—is a lot more about exactly where people want to go, what the most effective route is, and how that varies by cohort, both by ethnicity and different communities and by age. Figure 18 in the Report shows, for example, that even if you just look at cohorts 1 to 9, going down to those in the 50-to-55 group, more and more people were going to large-scale vaccination centres as you went down in age. We also noted, for example, that the 18 to 24s didn't really like booking; they liked showing up to an appointment, so we launched Grab a Jab so that you could see where any local site had free jabs, etc.

So, what we are trying to do, what we have written out to the system to do—we have spent the last month working with the 42 ICSs on their plans for this year—is to design, and encourage local systems to design, the right mix of sites, delivery mechanisms and, indeed, workforce models that work for them: for their communities, for their current level of uptake and for the projected uptake for the rest of the year. Systems that still have lower uptake than we would like have kept open more local sites—often, community pharmacy sites, which are particularly convenient—and systems where there is already very high uptake have scaled back accordingly. We have said everybody still needs to be able to access, but the access can be at a different level from what it has been at.

We have over 3,300 sites officially registered at the moment. About 2,900 are active in an average week. For a system that won't be delivering that many doses over the summer, that is obviously too complex; it doesn't make sense in terms of wastage or managing workforce. So we have encouraged systems to think about a fit-for-their-communities, fit-for-their-people model for the rest of the year—one that can scale up and scale down. That includes thinking about the workforce model, but I suggest I don't go into that detail now, although I can do if it's helpful.

Sir Geoffrey Clifton-Brown: That is a very helpful answer, actually. I think that's fine.

Q37 **Chair:** Just to be clear, if a sports centre worked in a particular area, that could be ramped up quickly.

Dame Emily Lawson: It could be, although in terms of value for money we have also asked people or we have suggested strongly that unused NHS estate should be used wherever possible, or other public services. But if systems have a particular site that is highly accessible and has very good uptake rates in particular communities, they can absolutely make a value-for-money case to maintain that.

Q38 **Sir Geoffrey Clifton-Brown:** What I found from my constituents was that early on in the pandemic, they were having to travel considerable distances—some of them to Bristol or Birmingham—from the Cotswolds, but when there came an option as to whether they waited a fortnight to have their jab locally or travelled to Birmingham or Bristol, they waited. I think that what this table proves on the whole is that when people can have their jabs locally, they much prefer to do that—probably in all cohorts.

Dame Emily Lawson: I think that is true, except for some of the younger cohorts, who actually made a day out of it in some cases. We saw fantastic turnout at Wembley and Twickenham, for example, in the summer. We have the brilliant example of the centre in Plymouth that stayed open till 2 am because they recognised that students would come after a night out and they wanted to make sure nobody was turned away.

Sir Geoffrey Clifton-Brown: Have a party and have your jab!

Dame Emily Lawson: Exactly. I think this is where there is that local subsidiarity to—obviously, within a framework—make sensible decisions about what works for your population that we can't possibly determine. The one thing just to be careful of on that chart—even though I have just cited it—is of course that we didn't have very many vaccination centres open until February and March, so the far left-hand side of that didn't really have opportunities for vaccination centres. In particular, we recognise that the older cohorts prefer to go to a GP. The level of trust, the convenience, etc. really make that make sense. But we have to make sure we maintain that while not overloading individual parts of the system, and we keep that in balance locally as well as nationally.

Q39 **Mr French:** This question is probably best answered by Dr Harries or Ms Pritchard, I assume. Looking at the headlines about the vaccine programme and comparing it with other programmes—obviously, it's quite clear from what we have heard already today that there was a huge national effort in terms of procurement and distribution of the vaccines across the country, but why do you think the vaccine programme itself was more successful compared with some of the other, more costly covid programmes, such as Test and Trace?

Shona Dunn: Actually, shall I have a go at this in the first instance? Obviously, as a Department, we have thought quite carefully and deeply about why the vaccines programme was and remains such a success, and I think that we have boiled it down to probably five things.

The first is that it really built from some strengths that already existed in our system. Our vaccines programmes over many years have been

successful and strong, and there has been a lot to learn from there and a lot we were able to take into this.

The second thing—a lot of this has already been referred to in some of the answers you have already received—was different organisations working together. This wasn't a standard case of having a single SRO and making everybody accountable to them. This was a lot of different component parts—not command and control—really making use of everybody's expertise.

The third thing—this is something that we have already taken into quite a lot of other things—was the range of skillsets that were brought to bear. Everything from the NHS to the military, to the science community, to the civil service were our operational partners, and there was a huge range of expertise that was brought together.

The fourth thing, as Emily has just been describing, was not having a rigid, national versus local model, but instead going with where the expertise was, and with those individuals who were able to determine what would deliver the best impact. There were lots of things about that—the procurement, the planning, the data, the storage—that really benefited from being done on a very nationalised and centralised level. However, other things, such as how to get to different communities, were done very much at the local level, and that was very important.

The fifth thing was that the programme had time to plan. It made some big calls right at the beginning, and some big bets, in terms of what would be available and what would work—if some of those had not played out we might be having quite a different conversation. It made some big calls at the beginning and then planned for success. I think that was a really important lesson. It was really clear in purpose and objective right from the start and did not waver from that. A lot of that is covered very clearly in the NAO's Report, but those are the reasons why it was so successful—other colleagues will want to add to that.

Amanda Pritchard: May I add one thing, Shona?

Shona Dunn: Of course.

Amanda Pritchard: Just before we make the comparison, as I am not in a position to comment on that, I would like to mention the extraordinary agility and professionalism of NHS staff, and the role that volunteers played. That was completely extraordinary and, for me, it is the other component to add.

Shona Dunn: Quite right. Does anyone else want to add to that?

Q40 **Chair:** Dr Harries, on Test and Trace?

Dr Harries: I will add something, because I think there is a comparison, and perhaps a false comparison, in some ways. Exactly as Shona has said, if, for example, we started to try and build a whole primary care system or a whole national health service from scratch it clearly would not have

worked. We are sitting on a gem with our NHS, and that is recognised internationally. Testing capacity was not there at the start of the programme—it was very limited. There is a differential in what has been built during the time period; that is my first point.

The second point is that, from a clinical intervention point of view, delivering a vaccine is vital. It is often a one-off clinical intervention, or it may be sequential, but you have a cohort—you are looking for a jab in arm. Sadly, as we know now from the data, people can become reinfected. They sometimes think they are infected, and they are not. They will keep taking tests. There is a very different model afoot in terms of the starting point, and then going forward.

The third point is that often how you evaluate a system depends on where you draw the parameters on how effective something is. The key component here, as has been said, is that there was extremely close working across different systems. In actual fact, one of the things about the vaccination programme here—again, it is internationally recognised—is that we have provided evidence for how that programme should develop as we go forward. A lot of that has come from our very varied and very rapid vaccine evaluation. We have been able to do that because we had such good community testing. That component was not captured in the success of the testing programme, but it is an integral part of why the vaccine programme was successful. That is because it allowed us to evaluate very early on, for example, with the sharp rise in Omicron, what responses we were getting from vaccinated individuals. That could then drive the next scientific and safe element of the vaccine programme. They overlap, but the one thing that is right across all of those components is the data. There is huge learning from the data, and we wouldn't have been able to do this if we did not have the speed and breadth of data. That is the critical learning, and it shows through all of the systems.

Q41 **Mr French:** Other colleagues will come on to the detail of how we adapt to other variants going forward. To finish this part, what are the main lessons that you are taking from the vaccine programme for the purpose of future emergency response planning? Is it cross-working, or an attitude to risk, particularly around the portfolio approach to vaccines? What are the main lessons that we are taking forward for future responses to emergencies?

Dr Harries: All the way through, the whole of the response to the pandemic has been led by scientific evidence, for safety in protecting our lives and keeping health services going. That means we all need to work together. We need very strong messaging and communications. That has been a key component, and has been a particular component of the vaccine programme, in engendering a mission among health service staff and volunteers and also in vaccinees—the people we are trying to vaccinate.

The work across the system and the work with the data is, for me, the most critical element, including the timeframe in which we get it. It allows

us to flex the programme. It allows us to see who is coming forward and who isn't, and we can adapt it as we go forward.

Madelaine McTernan: May I add a little on the supply side? There are a few other items that are probably slightly different.

Shona touched on the range of expertise that we have. Getting that group of people together from industry, the civil service and the science community was really critical.

You mentioned risk. We had a very clear strategy up front—"This is the objective—get vaccines as fast as we can." We had a strategy that was very clear to deliver that: investing in a portfolio of vaccines across a number of different vaccine platforms. But then, once we had done that, one of the things that was really critical for success on the VTF front was working with our suppliers in a very different way than we normally did. It was not placing a contract and then just waiting for the vaccines to turn up at the point that they had got them ready.

We worked so incredibly closely with those companies, sometimes daily—in daily meetings and workshops with those companies—in the run-up to the deployment, to basically treat it as a bit of a shared endeavour: what are the problems? How do we make this quicker? What are the challenges you are facing? How can we overcome those? What additional issues might come out of the woodwork and what contingencies do we put in place, whether that is border crossings closing or whatever it was? That was to make sure that we had that continued, relentless focus on how to get this ready to give to Emily and to deploy just as soon as we could. That way of working is quite interesting and an important lens to look through for the future, while recognising that we are not always working in a crisis.

Q42 **Chair:** Dr Harries, you compared Test and Trace and said it was a bit of a false comparison in some ways. Do you think that testing was, from the beginning, sort of set up to fail—it was never going to be able to ramp up in the timeframe needed ahead of a vaccine?

Dr Harries: I have just given an example of why it has been very successful. We would not have the evidence for the vaccine programme. Even now, as we are speaking, we are looking at BA.2 rates. We know from community testing and our evaluation of it that—

Q43 **Chair:** Yes, but testing wasn't just about the epidemiological understanding of what variants were out there. It was supposed to be stopping covid. The Prime Minister made a number of pledges and promises on this. If we separate those two, do you think it was successful on the first but failed on the second?

Dr Harries: I think it has very different purposes. It has a surveillance purpose, which is the one we have spoken about. It has a treatment purpose—we need to get people into the right treatment pathways—and that is something else going on.

It also, which is the arm you are referring to, has a testing process to drive you into a pathway to prevent onward transmission. In that sense, it is not a stand-alone intervention. It has to have a follow-on action. That relates to individual behaviours and population behaviours as much as the testing. It is quite difficult to, if you like, harness only to testing everybody's behaviour; it is the start point in, and we have evidence that says that people who test are more likely to isolate, so that is a positive area, but it is a different intervention to giving a vaccination, for example, when somebody has come forward and given consent and wishes to have that.

Q44 **Chair:** But you would acknowledge that there was a very high compliance rate with isolation, once people had tested, especially in those early days.

Dr Harries: Yes. Generally, the public have been absolutely fantastic. One of the interesting things as we go forward now, which relates to some of your earlier questioning, is that people now understand—they read the data. They can see rates going up and in many ways they adjust their own behaviours, so to some extent the testing then becomes less important again. But it is critical for other components, like the epidemiology and the access to treatments.

Q45 **Chair:** Except, after Friday, of course, we will not know what the rates are if the testing is not happening.

Dr Harries: We will know what the population prevalence is from the ONS survey.

Chair: That then has to be communicated to people, of course—on an app, I presume. Angela Richardson MP, over to you.

Q46 **Angela Richardson:** Thank you, Chair, and good afternoon to the panel. I will ask some questions on vaccine hesitancy. I will come on to particular groups in subsequent questions, but, as a general opening question, is there any evidence to suggest that your organisations' actions—including communication campaigns—have had a positive impact on public sentiment around vaccine hesitancy? I will start with Ms Dunn, if I may.

Shona Dunn: I am absolutely certain that Emily will want to come on to the detail of this, but I think it is fair to say that an extraordinary amount of thought has been put into how we communicate with the public, and with specific groups within the public. A lot of work has been done on understanding what would drive people to get vaccinated or hold people back. The qualitative and quantitative sources of evidence have been Government-commissioned polling, ONS research, reports from the frontline—from the fantastic people who have been rolling the vaccination campaign out—and lots of NHS uptake data.

As I said, I think Emily will come on to the detail of this, but certainly for the population overall, we definitely saw a shift in vaccine hesitancy and people feeling positive about the vaccine. With people from ethnic minority groups, we also saw a move. It definitely had all of that effort. That effort

was not just national; there was a lot of detailed effort working with stakeholders, and lots of community engagement. We had vaccine ambassadors and vaccine champions. A huge amount of effort was put into specific communities.

That is not to say, at all, that it was perfect. I know that there is still some distance that we would like to travel, and we will continue to think hard about how we move this further. However, I think that vaccine positivity—if you like—got to 91% in our black and ethnic minority groups as a result of the activity undertaken.

Dame Emily Lawson: We obviously have huge amounts of data here, but perhaps we can take a step back for a second. We had a mission statement, as a deployment programme, which helped us to make choices, every day, about what we prioritised and how we made decisions. That said that we were here to: "Deliver the maximum available doses of vaccine, with high uptake in priority groups, to minimise morbidity and mortality as quickly and as safely as possible." You can see that the focus on uptake was right there at the beginning.

As part of our design programme, therefore, we used the three C's identified in the 2014 SAGE report on vaccine hesitancy—convenience, confidence and complacency—which I think are mentioned in the report. We kept a close eye on data that indicated on all of those. That included working with the Cabinet Office and large-scale marketing campaigns, but also with polling and focus groups, as well as gathering feedback from sites about what people were telling us.

Before we started rolling out the vaccine in November, the polling said that 74% of adults would be either very likely or quite likely to accept a vaccine. Of course, we sit here with 84% of adults—that includes groups, such as 18-24s, which have lower uptake rates—having had two doses.

We saw a particular change over the course of December and January, as people's experiences of the programme were positive. They were called by their GP and, from mid-January, they were able to book a vaccine through the NBS. From the second week of January, we were reporting daily data, and people could see that climbing.

That built on the World Health Organisation's research, which said that the operational excellence of the programme itself is critical in building confidence in the vaccine. People associated a good programme and a good experience with a vaccine that is worth taking. Frequently, we were making decisions about whether we were ready to launch something, based on whether we were ready enough for it to be good. We did not launch the NBS until mid-January because it simply was not ready before that, and we didn't want people's experience to be that the appointment did not happen, or whatever.

We built in that overall approach, then, obviously—as you may want to come on to—the specific, tailored approaches to different communities once we had access to that kind of data, but we always made sure we

understood, as I said in answer to a previous question, what participants needed in order to feel confident coming forward for that vaccine, and we made sure that we kept iterating both our operational data and the external marketing data to make sure we were adjusting as we went along.

Q47 **Angela Richardson:** I will address my next question to you, Dr Lawson. I want to come on to why we have not managed to close the gap in vaccination uptake for groups such as pregnant women and some minority ethnic communities. We know that the JCVI vaccine advice was delayed for pregnant women. Are we always going to be behind with that cohort? On minority ethnic communities, what you said earlier was interesting in relation to previous bad experience with the health system playing a part, according to information that you have at the moment. Research by Healthwatch into vaccine hesitancy among BAME groups found that participants had more trust in people with real-world experience—for example, frontline NHS workers—than in the celebrity campaigns. It would be interesting to hear how you can square that circle.

Dame Emily Lawson: Fantastic. If I start with pregnant women, it is a different situation. You correctly identified that we started in a challenging position. We found that it has taken quite a lot of work to make up ground, but the work has paid off. By the end of October, which is when we had the last published data from UKHSA, we were at nearly 50% of women, which compares favourably with the number given in the Report and people having had the vaccination by the third trimester. That is across all three of the Cs that we have just mentioned. We make sure that, first of all, we try to encourage women to be vaccinated before they get pregnant. That relieves some of the concerns. Increasing uptake in younger age groups is very important. And we make it incredibly convenient.

We have worked with the Royal College of Midwives and the Royal College of Nursing to make sure that, wherever possible, vaccines are available either in maternity clinics or adjacent to maternity clinics. Or somebody can sit with the woman who is not vaccinated and make them an appointment so that we take some of the transaction cost away.

We have worked to make sure that trusted voices communicate the message about safety in pregnancy, so we have lots of social stories from people from a variety of backgrounds. We have worked to make sure that clinical voices also talk about their own experience with vaccination. It is a multifaceted approach, with feedback from midwives and GPs about their experiences and how we address it, but it will take ongoing work. Indeed, we saw the impact on the flu vaccine this year as well with lower uptake in pregnant women, so it is definitely something that needs an ongoing focus.

In terms of working with other groups to increase uptake, as I said, this is something that we designed in from the beginning. We found that trusted voices were incredibly important, as you have identified, so we engaged

with a wide range of celebrities, including Michael Caine on one end and Nadiya Hussain on another end, and then everybody in between in terms of age group, ethnicity and different backgrounds.

We also made sure we had trusted voices from frontline workers. These were usually organised by local systems. We had GPs such as Farzana Hussain, for example, holding drop-in webinars where people could come and ask questions. We had clinicians from a huge range of backgrounds talking about their experiences of vaccination and why they chose to be vaccinated. We worked with a group of young medics who were on TikTok. They made their own videos and answered questions. Dr Omon Imohi held several Q&As on TikTok. We tried to make sure we went where people were.

We translated leaflets, working with UKHSA, into more than 20 languages to make sure that people had information that felt familiar to them, including British Sign Language. We tried to find the right influences. A good example of that is working with the Bangladeshi community, who had very low uptake at the end of January. We were approached by the Bangladesh Caterers Association, which is a big employer in that sector. They really wanted to be active and partner with us. It was organised by a colleague in NHS England who is a part of that community. There was a campaign with restaurants setting up pop-ups so that they could jab people alongside people having dinner. We saw the uptake in the Bangladeshi community increase three and a half times during February 2020. We had imams across the country talking about vaccine support at Friday prayers. We had lots of activism from black African church leaders, who are a very powerful lever, and it was supported by many celebrities. I have such a long list; I should properly stop there.

I could give you more examples, if you like, but the key thing was not for us to determine—we had to give a framework and we provided funding to local systems so that they could do the outreach—but to ensure that people felt empowered to reach out and take a leadership role in their community, supported by us, to have the right kind of conversation. In one vaccine programme, we cannot overcome some of the experience issues that you have talked about, but we have certainly seen systems take the opportunity to provide other health interventions at the same time as vaccination to make the most of this, including in particular cardiovascular screening.

Q48 **Angela Richardson:** That was going to be my follow-up question, although I did not know whether it would be for you or for Ms Pritchard. What lessons can we learn from those bad experiences that people had in the health system? Will this programme have an impact on other health conditions?

I also have another follow-up question on pregnant women. As a constituency MP, I have heard some horrific cases of women who were not vaccinated, had their babies in hospital, had covid and were actually very ill. There is obviously an issue with bonding with baby, and attachment issues, and I want to know whether those women and babies

are being flagged in the system for interventions or follow-up that they might need because of that experience.

Amanda Pritchard: You are absolutely right. On pregnant women, the experience of the past two years has been difficult for lots of women having babies over that time. Maternity services have absolutely orientated around what support they can provide in this very unusual set of circumstances that we have been in, and certainly for those people who have unfortunately been very unwell and had those sorts of problems. That is absolutely front of mind, just as it is with people who have long covid, for example. We have whole programmes of work up and running now to provide clinics and ongoing support for people in that situation.

It is an important moment—given that we have just over 14,000 people in hospital with covid right now—to talk about the importance of continuing to recognise that the vaccine programme is still the way that people can best make sure that they do not end up being seriously unwell if they get covid, whether that is staying out of intensive care or hospital. Vaccination is still so important. On our journey back to normality, continuing to emphasise the importance of the vaccination programme is incredibly important. Sorry about taking the opportunity to say that.

On your point about how we build from this, as Emily knows, I am clear that this is one of the areas where we have the greatest opportunity to learn and build from our covid experience. All colleagues have described that combination, the partnership working at national level running through to that hyper-local partnership, where people who really know their populations can design services that meet the three Cs: they can give that convenience; they can overcome any risk of complacency; and they can give people confidence by using trusted voices.

Where next? The NHS gives a range of immunisations and vaccinations beyond covid and flu, as we have touched on. Clearly, applying the same sort of approach to those is an obvious next step. The data, as Emily said, is now coming together to help us do screening, which is another obvious area. Some of the same groups of people who are reluctant to take up the offers of screening—for lots of reasons—are the same people whom we have now found much more effective ways of being able to work with through the covid vaccination programme.

Where would you go beyond that? Again, Emily touched on it: making every contact count. Some of those prevention interventions—whether on cardiovascular disease or some of the other big killers—are areas in which we have already proven through the vaccination programme that we can reach people in a different way. I am extremely committed to making sure that that is firmly front of mind as we go forward from the programme, and something I am definitely looking to make sure is a longer-time legacy.

Q49 **Chair:** I want to chip in there and get some very quick answers from Ms Pritchard and Ms Dunn. Great things happened, lessons were learned, and that could mean that we get much better reach in communities that

need it. Ms Dunn, are you setting the NHS targets on how to bridge the divides between certain groups in terms of healthcare? This is one of the things that led to the hesitancy in the first place.

Shona Dunn: You will know that, more generally, the Department is working on health disparities. It is an incredibly important agenda for our Ministers, who are very focused on how we close those disparities. We will talk to the NHS about many things—

Q50 **Chair:** Are you trying to lay out what success will look like in this respect?

Shona Dunn: We will lay out with the NHS what success looks like in a number of different areas. I cannot tell you specifically whether we will have a target for closing this particular gap, but there will be a number of areas as we move forward into—

Q51 **Chair:** It is good to talk about it, and it is great that certain good things have happened. My worry is that unless we see results where fewer people who are black, Bangladeshi or whatever die of things than their white counterparts, we are not going to make the progress—

Shona Dunn: There are, of course, lots of different ways of measuring that, and that will be one of the conversations that we will be having with the NHS as we go forward, absolutely. But I have not got a specific answer for you on what targets Ministers will set.

Q52 **Chair:** Okay. But you are having that conversation and you might put advice up to Ministers about how to make sure—

Shona Dunn: As part of the wider conversation about health disparities, yes.

Chair: Thank you. We will keep a close eye on that.

Q53 **Angela Richardson:** Can I move on to the booster programme rollout? We seem to have lost momentum in the vaccine programme with booster uptake lower than for the first and second doses and with the booster rollout slowing down in recent months. We know that take-up of the booster was higher among those who are white British than in some ethnic minority groups that we have talked about. What are you doing to speed that up?

Dame Emily Lawson: It is important to note that, first of all, we are no longer in the same state of emergency that we were from January to April 2020, so we must expect that, for some people, this is lower down the agenda than it was previously. On that basis, I think Amanda's earlier message is incredibly important: this is not over and the vaccine is still incredibly important. We recognise that the sense of urgency and immediacy is not there. What we are focused on is ensuring that the vaccine is available for everybody, whatever dose they happen to be eligible for, and that they can access that easily, reducing any barriers in terms of confidence, complacency and convenience.

If you think about the spring booster, for example, we started last Monday, on 21 March, exactly six months after we started the booster

campaign in the autumn, and JCVI has advised people that they should have the spring booster approximately six months after they had their first booster, so we are on track with the timing, in line with the clinical guidance that we get from JCVI. We are working to ensure that those clear messages about the importance of vaccination continue to go in particular into areas where uptake is lower. We continue to ensure that we have the right voices speaking to communities, and we continue to engage with those key local leaders. That is part of why we wrote to systems about the planning for 2022-23 and said, "You tell us what you need for the communities that you still need to vaccinate." That could be people still coming forward for first and second doses. On average, at least 10,000 first and second doses are happening every day, which is really valuable, as well as the boosters of whatever genre people are receiving at the moment.

We will keep up the marketing, but we will do so as specific outreach with the right trusted voices in local communities, because that broadcast marketing message is not going to work given where we are at now and given how people are feeling about the pandemic. Our focus in on ensuring that, when you are called for the vaccine, it is easy for you to receive it as locally as possible and your experience of receiving it is a really good one, whatever cohort you happen to be from.

Q54 **Angela Richardson:** I want to follow up on people coming forward for their first doses. I think we heard evidence that just 3,400 did so last Thursday and that 3.4 million people still have not come forward for their first dose. What will the strategy be now that people are losing interest in getting vaccinated? Is there a risk that, as requirements for other areas of public health for covid such as testing and border controls are being dropped, many will not want to get their vaccine dose at all and will wait it out until internationally there are no requirements for vaccines to travel anywhere? What message would you give to those people?

Dr Harries: The public health message is really clear. People should come forward. I am sure Emily will say this, but every time there is a push to give another booster or whatever it is, it becomes quite a complex message for the public. We are intentionally being driven by the science. We are protecting those who are most at risk, but of course the timetable gets more complicated as we go forward. I think that is unlikely to change for a little while. It will be quite complex messaging, but the basic message is: come forward. Every time there is a change to a booster programme or a new variant, there is always the message out there saying, "If you haven't come forward for a vaccine at all yet, it is not too late."

I know there was particular action taken in local areas. We have not mentioned directors of public health, but they have also worked with local teams and are really encouraging them. I know from local feedback that in some areas, people felt almost embarrassed at certain points that they had not come forward for their first dose, so there have been programmes to welcome them in to have it. We have mentioned pregnant women, but we did not talk about the data with that group. Inevitably, as you go

forward with that particular group, more data accrues. It is very difficult to proactively do a trial, but the data is now strengthening. Of pregnant women in hospital with symptomatic infection, 95% are unvaccinated. That is a very strong message, and there are more statistics that will, I think, move people to want to come forward if they have not had a dose already.

Dame Emily Lawson: We will always work with local systems to make sure the sites are accessible and the messages clear locally. We know that if you take the unvaccinated population you referenced—the 3.4 million—the vast majority are young and in cities. When we last did an assessment of this, which would have been in December, five cities explained a quarter of the number. We know where the messages need to go, and we know that, as Jenny said, there are specific concerns—embarrassment and so on—that local systems are best placed to address. We had an experience during the Omicron push, where one of the directors of public health did personal visits to a whole block of flats, and 119 people came forward for a first dose. We need to make sure that local systems feel encouraged and supported to do such things. We obviously share the national data about where people are.

Equally, I referenced several times the planning for 2022-23. We used a tool called SHAPE, which can link a proportion of particular cohorts that are vaccinated and unvaccinated to the location of sites. Systems have been able to ensure they maintain sites that are close to or attractive to under-vaccinated communities, so we make it increasingly easier—or enable it to continue to be easy—for those who are unvaccinated to come forward, while legitimately simplifying some of the rest of the network.

We have to recognise that some of those 3.4 million people really do not want to be vaccinated. It is a personal choice. We have maintained that throughout, and that is exactly right. We have to make it as easy as possible for participants to get a vaccine when they are ready to get it. We particularly feel that having worked with local government, public health and community leaders, that message continues to be out there. The clearer the benefits of vaccination, the better those numbers will be.

Q55 **Angela Richardson:** There might be some questions to mop up later on, but moving forward I have two questions, though they are not necessarily related. How will the programme have to adapt to meet the challenges of vaccinating five to 11-year-olds?

I also want to ask a specific question about needle phobia and what you are able to do to overcome that. A Mencap report showed that those who have a learning disability are particularly hesitant. We also know that they need greater one-to-one personal care with their carers. That has always been the case through covid. What plans do you have to tackle this?

Dame Emily Lawson: The rollout for the not-at-risk five to 11-year-olds starts next week. We have been working with local systems to make the most of their entrepreneurship to design systems that make the centres

appropriate for five to 11-year-olds. That includes training for people who have not previously vaccinated this age group, particularly for community pharmacies, which are critical in terms of access but do not usually offer injectable vaccinations in this group. We have seen brilliant examples from sites. In Derby, they have designed a vaccination town, where the whole building has been redesigned and painted to make it welcoming for children. Sites have purchased things like fidget toys for distraction. We have increased the length of the appointments on the national booking service to ensure that children and their parents have the right amount of time to sit and make the decision and children do not feel rushed.

There are three parts: learning from what we have done already for the at-risk 5 to 11s who have been being vaccinated since the end of January; making sure people have time to prepare for the visits—there are pre-screening calls if people need them; and making sure that the visit is designed as in some of the examples I used and that on the day that experience is a stress-free as possible. Again, we have used focus groups and polling to understand what parents are concerned about and what they are less concerned about. We have had some incredibly helpful feedback about what would make people feel comfortable when they bring their children forward.

Bearing in mind some of the lessons learned from other groups where we have been concerned about uptake, such as giving people time, we recognise that this will not be a quick vaccination of a cohort in a short amount of time. We will need to give people the chance to come forward when they are ready, which means these sites need to be prepared to vaccinate through the spring.

Q56 **Angela Richardson:** And on needle phobia?

Dame Emily Lawson: On needle phobia, we have lots of good local examples of people reaching out to clinicians and specialist clinics, sometimes in hospitals and sometimes with GPs, offering a tailored environment to people with needle phobia, and working with third sector organisations for people with autism to understand what is needed. We have lots of examples of working with local groups to adjust the conditions in a vaccination centre, having learning disability days so the people feel comfortable coming forward in a less busy and quieter environment than on some of the other days. Again, it is not one where we have specifically mandated an approach, but where local systems have worked to adapt, and we have supported them in sharing that knowledge across the country.

Q57 **Angela Richardson:** I am conscious of time, Chair, so I think we need quick answers. How confident are you that you can make a success of the future vaccine programme when you have a tired and burnt-out workforce and an historic NHS backlog to deal with?

Dame Emily Lawson: Do you want to start?

Amanda Pritchard: You start with the vaccination programme.

Chair: Short answers, please.

Dame Emily Lawson: That is very difficult for me, I apologise. What we have done throughout the programme is to make sure the workforce is in the right place at the right time. We have had the benefit of huge community interest, to the extent that we have done, as of this morning, 2.47 million hours of volunteer time in the programme. We have been able to recruit tens of thousands of people to be trained anew in vaccination, and 11,000 of those people who came in through either a lead employer or through a campaign with NHS Professionals are now retraining to take on other roles in the NHS because they find the experience of engaging in the vaccination programme so positive.

We have worked throughout the programme to extend the workforce to make sure the existing workforce have what they need to participate where they want to, and to make sure everybody who feels able to volunteer or to get trained is able to contribute. We are now working to retain those people, either for future vaccination programmes—not just covid—or for other roles in the health service, including over 100 people who are working in other parts of the social care system. We have tried to build the capacity as we go along. Now, we are working to maintain it. Again, local systems and their understanding and relationships will be critical to maintain that.

Amanda Pritchard: To pick up your question about workforce, there is no doubt that the last two years have placed a completely unpredictable and unprecedented demand on the NHS workforce. We have all paid tribute to the incredible job they have done on vaccination and to that important partnership, as you have all said, with volunteers.

For the elective recovery, which is an area that is obviously of huge importance to the public, to us and to you, we have published our elective recovery plan. We have specifically worked through the workforce implications for that. Longer term, it will be absolutely crucial that we have our longer term plans in place, which we are working on at the moment with Health Education England and across Government, and that we have the investment behind that.

In the short term, the critical thing for us is to support our workforce so that we retain the skills of the people we have and to recognise that people's experiences of the last two years have been very different and that some people really need quite a lot of additional support, while others just need to get on with their jobs and be allowed to do so.

Equally, we are absolutely clear that there is a huge focus on recruitment, and that includes real flexibility, with things such as the NHS reservist scheme and international recruitment. To pick up on what Emily said, I am delighted that we now know that 11,278 people who joined the vaccination programme have chosen to stay with the NHS in other capacities.

So there are ways into the workforce that we have been able to retain and grow. Retention, recruitment, support and longer term planning are the things that we are really focusing on around workforce.

Q58 **Angela Richardson:** What do you expect to happen with the uptake of non-covid-19 vaccines in 2022? You touched on immunisation programmes earlier when talking about particular cohorts. What will happen with other vaccines?

Chair: I suppose the point is whether you can run both at the same time.

Dr Harries: I am just trying to translate the question; I was actually about to translate it into a broader public health context, which is that I think there is a window of opportunity here because the whole population are much more used to vaccinations. We have seen some slippage back; in primary childhood immunisations, for example, there has been some slippage back while people have tended to stay at home and have not come forward. From a public health perspective, we are working with NHSE colleagues to promote that as we go forward. I am sure that it will be one of the key priorities for the Health Security Agency going forward.

Of course, because everybody is now much more used to having vaccination, and aware of its importance, this is a golden opportunity to review all our programmes and make sure that we take that forward. I think there was health service element to that question.

Chair: I think it was partly about capacity.

Amanda Pritchard: I touched on it earlier. As Jenny said, this is an area where we are keen to make sure that, as an absolute first step, we are deploying all of the learning from the covid vaccination programme into how we approach the delivery of vaccination.

As Jenny rightly said, there are some areas where we are playing catch-up. That is true of some of the screening services, for example, which were disrupted by what we have seen over the last two years. On the other hand, we now have a very informed public who understand what vaccination can offer and the value of some of those interventions, and we have some tools that we can use, I hope, to do not just what we were doing before, but a lot more.

Q59 **Sir Geoffrey Clifton-Brown:** Ms McTernan, to go back to the subject of procuring vaccines, what are you doing to strengthen the UK's future negotiating position for procuring covid-19 vaccines? We touched on that earlier, but perhaps you could expand on it.

Madelaine McTernan: I think it is quite an interesting landscape if you look at the market for what has come through, what is yet to come through, and how the market is developing. It is certainly still a developing market rather than a mature market. That will obviously give us more leverage to secure more standard terms across the vaccine contracts.

Clearly, for future procurements—as for the procurements we have made for this year and next—there is a whole range of factors that we need to think about in making those procurements, particularly some of the uncertainties about the evolution of the virus, and as we learn more about the different vaccines and how they work. One of the things that you will notice is that we have not gone to a single supplier.

Q60 **Sir Geoffrey Clifton-Brown:** You have gone mainly to two. You have anticipated a question that was coming up, but let us deal with it now. You still have a very narrow base of suppliers.

Madelaine McTernan: We do have a narrow base of suppliers, but we have done a few things that have helped to inform the current direction of travel on which suppliers we have gone to. One of the things that we did last year was fund some research. The COV-Boost study, which I am sure you saw published last year, looked at the impact of using different vaccines to boost against a primary course of AstraZeneca or Pfizer, which was the data that JCVI looked at as they were considering what to recommend for deployment in the autumn.

Another thing that is interesting, as we think about the continuing challenge of the virus, is that RNA is a good platform to be able to adapt. One of the things that we have done with these latest procurement contracts is ensure that we get access to new variant vaccine, if that is what the companies produce. As you probably know, Pfizer and Moderna are both conducting clinical trials on updated vaccines at the moment, so that they can compare those to see if they will be more effective or offer advantage over the current vaccines.

So I think continued assessment of data, and continued understanding of what challenges we are facing still with this virus, are helping to inform that forward procurement policy.

Sir Geoffrey Clifton-Brown: I will open some of that, if I may. I refer you to an article in today's *Guardian* by Danny Altmann, which points to the present situation.

Chair: Perhaps you should explain who Danny Altmann is for those watching who may not be aware of his name.

Q61 **Sir Geoffrey Clifton-Brown:** He is a professor of immunology at Imperial College London. He points out in the article how the successive variants of covid "have managed to mutate almost every amino acid residue targeted by protective antibodies, escaping protection." He points out that we now have "300,000 new cases a day, as of late last week, and a continuing case load of more than 3 million". This rather goes to your point about how your future procurement works with needing probably reformulated vaccines. How do you begin to predict what that should be?

Madelaine McTernan: I think this comes to close working with our suppliers as they think through what the different options are. I will just caveat that by saying I am not a scientist—we have others who are—but I

think there are different possibilities as to what would provide better protection against a broader range of variants and a good, enduring vaccine. If you look at what Moderna are doing at the moment, they are trialling an omicron-specific variant vaccine but also a bivalent vaccine. That is a trial that is actually being conducted in the UK. What they are trying to do—Pfizer are doing something very similar—is look at how they develop these vaccines to give broader protection. Hopefully, this will eventually move to a more stable, regular and predictable vaccination programme. I am picking out those two companies because they are the ones that we have contracted with recently for this year and next. I am quite sure that all the companies are looking at similar.

Q62 **Sir Geoffrey Clifton-Brown:** Anybody can answer this question. Is this based on the existing RNA vaccines, or is it moving towards your traditional vaccines of a broader base—the Valneva-type vaccines?

Madelaine McTernan: These are the RNA vaccines, which support the rapid ability to develop for new variants, and have that potentially bivalent, or beyond, capacity.

Q63 **Sir Geoffrey Clifton-Brown:** We have an awful lot to cover. We have run through the list of your contracted vaccine supplies so far. How far does that protect the UK against rising prices? Are these contracts in fixed prices? How do they work?

Madelaine McTernan: You will obviously appreciate that it is very difficult for me to get into the precise details of individual contracts, because they are all very sensitive and we are subject to confidentiality provisions. But generally we are looking more at fixed prices than scalable prices.

Q64 **Sir Geoffrey Clifton-Brown:** So we can take it that in this very tight world supply situation, which would naturally drive prices up, the UK will be protected from some of those price rises through what your excellent work has done.

Madelaine McTernan: Yes.

Q65 **Sir Geoffrey Clifton-Brown:** Thank you. In this very difficult scenario of knowing what to purchase, I am not really being critical, but the NAO Report does make it clear that there was a 4.5% wastage, and 1.9 million doses of AstraZeneca were thrown away. I appreciate it is very difficult, but how do you strive to keep that wastage as low as possible, and if it is not possible to keep it as low as possible—going back to the earlier question—how do you give those doses away to countries in the world that need them?

Madelaine McTernan: I will start with what we have done in the VTF, and then I will hand over to Emily to talk a little bit about what measures they have taken operationally.

Particularly the first batches of vaccines we were getting all had relatively short shelf lives, so of course at the beginning of the programme all the

focus was on, "How do we get more vaccine in so we can get more vaccine deployed as fast as possible?"

What we have done through the programme through last year is, as I said, really try to manage supply and predicted demand as much as we possibly can. We have not been taking supply at particular points in the year when we thought we had low demand, and we have been doing things like the swap deal that we did with Australia last year. We had a little bit of additional capacity that we could swap with Australia to meet their needs, which came back to us.

From a VTF supply perspective, as excess has been identified as things that are beyond the needs of the domestic programme, we have of course been looking at those international donations that I talked about a little bit earlier. We have been trying to marry up on that side as much as we can to be as efficient as we possibly can. If I go to Emily, I think she can mirror that on the NHS side.

Dame Emily Lawson: We start from the 4.48% that you mentioned and the Report provides. I think it is important to put that in context: if you look at global vaccination programmes, the WHO has been working with Gavi over the last 15 years to try and reduce wastage from the 50% that was reported in 2005, trying to get countries to set targets of 15% to 25%, so under 5% is historically low. That does not mean it is okay; we would always strive to keep it as low as possible.

Maddie has talked about the upstream part of the supply chain—bringing the vaccine into the country. We were then responsible for the vaccine after it left the Public Health England warehouse and went either directly to a site or via our supply chain providers, and then into primary care. We have considered how to balance four challenges that make wastage part of everyday life, but absolutely something we should minimise.

The first is handling. The MRNA vaccines, in particular, are quite fragile and require different kinds of handling. As Maddie has just mentioned, when we were first transporting Pfizer in December 2020, we did not know until we got it that we would actually be able to transport it at fridge temperature. We planned for a minus 70° transport system, and then once it was defrosted, people only had 120 hours to use the entire box. We started off thinking that was 975 doses, but that was rapidly adapted to six doses per vial instead of five doses per vial, so 1,175 doses.

This is a testament, particularly, to GPs. At the beginning of that week of 14-15 December, those first 100 GPs were incredibly nervous about how they were going to make the most of this, and feeling that personal responsibility for wastage. Largely, there was almost none; there was a tray that went to the wrong place, for example, and one vial was dropped, which was reported. People were incredibly careful about minimising that kind of wastage. Of course, as we have gone on, some of those handling conditions have relaxed somewhat. We can now keep Pfizer in the fridge for a month and so on, but that handling has been critical, and I think you will see—particularly from talking to GPs, but also all the support from the

pharmaceutical associations—that the teams have done an extraordinary job with that.

The second aspect that makes that challenging is stock management and matching the stock to the demand at any one time. We have had sites and systems be very creative about that. We saw "do not attend" rates rise gradually through the autumn, hitting a particular high in that last week of December and going into January, in 2021-22, and what sites did after operational review by us was increase the overbooking to try and make up for a DNA rate that sometimes hit 30%. However, as we get to this part of a vaccination programme, where we no longer have supply constraint and we have some limits on demand—as we have discussed previously—we have to expect that wastage will increase, as is seen in any other programme. We need to keep that careful balance, which we look at every day, between access and ensuring access, which means more complexity, which can mean more wastage, and matching that to demand. So we spend time on that constantly, trying to get that balance right.

Q66 **Sir Geoffrey Clifton-Brown:** Just as a comment on that question, I think the Committee would agree with you that the level of wastage was low. Nevertheless, any wastage is wastage. If there is a preference, rather than throwing it away, we would rather see it given away to other countries through COVAX. Perhaps by slightly improved monitoring of stocks and distribution and so on, it might be possible to do that. Do you want to make a short point on that?

Dame Emily Lawson: Once it has left the UKHSA warehouse, it cannot then be donated. That is why the joint work between the deployment programme and the VTF is critical, because we need to ensure that the stock is kept in very limited conditions in UKHSA rather than coming to us at all.

Sir Geoffrey Clifton-Brown: So you almost have to decide in advance where it is going to go.

Dame Emily Lawson: Yes, exactly.

Q67 **Sir Geoffrey Clifton-Brown:** I get that, okay. I mentioned the BA.2 variant. What variants are you looking at with these new vaccines? That might be a question for you, Dame Emily, or for Ms McTernan. How do you plan which vaccines you are going to procure? Perhaps you could also say whether we are, for the foreseeable future, into at least an annual vaccine programme, or is there a way we can work our way out of this?

Madelaine McTernan: Well, that is a particularly difficult question to answer. Jenny might want to come in on the evolution of the virus.

Dr Harries: One thing is certain: we are in very uncertain times. The pandemic is not over, so the next 18 months to two years will be a settling down period. There are a couple of issues about when we might get a new variant. We cannot predict that with any certainty. We saw omicron take off; it was the fastest wave we have seen. There was a lot of anxiety at

the start of that, until we were able to evaluate the effectiveness of the current vaccine programme.

The other point, which gives Maddy her headaches, is what it is we are trying to procure. The science is also uncertain. There are different fields of thought around whether we should look for individualised variant responses—say, an omicron vaccine—or a multi-variant vaccine. Perhaps the most dominant thought is whether we are building a broad immunity. The data in general suggest that people who, for example, had an infection with the original Wuhan virus, then had a different vaccination programme, may have become infected, are building up a really strong natural immunity.

Despite the very large number of cases of BA.2 currently, which I absolutely acknowledge, and despite the undoubted pressure on the NHS, we are not seeing an increase in mortality. We are obviously watching that carefully. UKHSA carries out regular vaccine evaluations at the Porton Down site regularly for any new variant, and looks at the community evaluation, as we have just said. Those evaluations show that our current vaccines are doing very well in maintaining defences against serious illness, hospitalisations and, principally, death. Our key predominant features have been that we want to protect lives and the health service.

Q68 **Sir Geoffrey Clifton-Brown:** Dr Harries, it appears from that answer—correct me if I am wrong—that what you are actually looking for in procuring future vaccinations is a vaccination that will top up people's general immunity to a range of different variants. If so, how long do you think the existing protection lasts? How soon do you need to top up people's general immunity?

Dr Harries: There are two points. I would not like to be pinned to the fact that we are looking for general immunity. I am saying that we are observing some generalised immunity. What we seek in future is still unknown; the science is still under discussion. The critical point, which Maddy and colleagues made earlier, is that we retain really good working relationships, on a frequent basis, with industry, our research and academic colleagues, and our evaluation side of things to ensure that those conversations continue during this period of uncertainty so that, if possible, we could reach the ambition of going from variant to vaccine in 100 days going forward.

On where we are now, we have reasonable evidence that a strength of immunity is building up, and in fact vaccine-induced or naturally induced antibodies can be found in about 99% of the English population at the moment. We are seeing that come through. The vaccine is our armour.

On waning, again there are lots of debates, frequently in the media, about three months or six months. The JCVI will look at all the data coming through, including the testing and evaluation data. For example, with the spring booster we are seeing that, broadly, six months after most people will retain a response for the current variant. All those things of course

need evaluating every time a significant new variant comes forward, so we retain the skill and capacity to do that in future.

Q69 **Sir Geoffrey Clifton-Brown:** So the answer to the final question was that, for the foreseeable future anyway, we will be in for either a six-month or a 12-month updated vaccine.

Dr Harries: For relevant groups, as per the evidence we have. So the spring booster campaign is for those who are over 75, care home residents and those who are immunocompromised. I am confident that, as we go forward, we will end up being able to hone those programmes—in the same way as we are with treatment—to those people who most need them and are most able to benefit from them.

Q70 **Sir Geoffrey Clifton-Brown:** That is very helpful. Thank you. For the record, I am assuming the Chair, because the Chair has to go to a debate in the House, as she said.

[Sir Geoffrey Clifton-Brown *took the Chair*]

Q71 **Shaun Bailey:** Ms Dunn, looking at funding, in the 2020-21 spending review, the Department was allocated £9.6 billion for covid programmes and, I believe, £429 million for developing and maintaining manufacturing capacity. Will you clarify your methodologies going forward? Clearly, we are now in a situation in which prices are rising and the cost of materials is rising, so how does the Department account for that in future spending? I appreciate that discussions with the Treasury about allocating that £9.6 billion are ongoing. How are you stress-testing this, and what are the conversations with the Treasury looking at in the light of the pressures we are under?

Shona Dunn: Mr Bailey, you are completely right. That is not just true of the £9.6 billion; it is true across Government and of all budgets. We are used to dealing with uncertainty and new issues arising—areas where we understand pressures arise—and, on a budget as large as the one that we manage, inevitably, we are constantly looking to see how we balance and we are making choices within that.

Within the £9.6 billion, which you rightly identify as allocated for the spending review period, over the three years there is an awful lot that we do not know yet—about the course of the pandemic and about some of the things that we have been talking about, such as what we will need to help support populations and to treat people. On all those things, we are in constant dialogue with the Treasury, and I anticipate that we will be throughout the spending review period. Inflation, of course, is a particular issue that we will all have to deal with. We are not unusual in that respect.

Q72 **Shaun Bailey:** Right here, right now, are you confident that the £9.6 billion over the three-year period will be enough to meet the ambitions that you have for the covid programme?

Shona Dunn: The £9.6 billion is what we have determined for the spending review period. To return to my point, Mr Bailey, it is extremely difficult, but that is absolutely the budget that I will be working with. It is

extremely difficult to say exactly how we will use it or precisely how it will add up to £9.6 billion, given the uncertainty and the number of moving parts in this. We recognise our responsibility to make sure that we live within our budgets, and we recognise the responsibility to protect the funding.

Q73 **Shaun Bailey:** It is not unreasonable to think that you might have to go to the Treasury at some point and ask for more, if we carry on seeing the inflationary rises that we are seeing, because clearly that will impact the covid programme as well.

Shona Dunn: It is always the case, particularly with a budget as large as ours, that we are in constant dialogue with the Treasury. Things change all the time, and there will be times when we have to talk to them about spending money on things we didn't anticipate spending money on, and vice versa. That is absolutely true.

Q74 **Shaun Bailey:** I know that, to mitigate the impact, one thing that the programme has done is to have a big focus on onshoring of production, in particular. Again, mindful of cost pressures, where are we with onshoring and, in your estimation, how is that going to perhaps alleviate some of the pressures, going forward, around vaccination?

Shona Dunn: I will ask Ms McTernan to comment on the detail of the onshoring work.

Madelaine McTernan: Sure. One of the great things that we have seen over the last couple of years is a lot of private sector investment in the sector here, which has been really good and really positive. We do have a budget to look at some further onshoring over the spending review period, and I think that where that will be focused is, clearly, manufacturing and supply chain. But it is important to recognise that actually the vaccine market is very global; the supply chains are very global, and we will not be seeking to or be able to fully ring-fence ourselves from other markets.

Q75 **Shaun Bailey:** Do you have any sort of mitigation target, in terms of a cushion that you could develop through onshoring, particularly given, as I say, the acute problems that we have now with inflationary price rises? Are you working to any sort of targets—the metrics of improvement that might have in terms of the pressures on the supply chain?

Madelaine McTernan: No, I have to say we are not really—this is a relatively early stage, because this is a budget for the next SR period, so certainly we will need to factor in those sorts of considerations as we think about what the granular targets might be for that programme.

Shaun Bailey: And—

Q76 **Chair:** Sorry to interrupt, Mr Bailey, but may I just come in on this onshoring business? I understood that this sort of budget originally was designed to help boost UK capacity. Is that still the case? It must surely make sense in an inflationary period that at least if the vaccines are produced in the UK, we have a more sustainable model and, what is more, we might be able to encourage those firms based in the UK to sell

them around the world.

Madelaine McTernan: Yes, absolutely. We would absolutely be wanting to look at those interventions to increase manufacturing capacity, as well as potentially some supply-chain interventions.

Chair: Thank you. Sorry, Mr Bailey.

Q77 **Shaun Bailey:** No problem, Chair. Obviously, one key element of the vaccination programme is innovation. Are you confident that, within the metrics of the settlement that you have received from the Treasury, you can still be as innovative as required, particularly in the light of any potential changes? Obviously, we have had SAGE's guidance, which came out with four worst-case scenarios. What flexibility does that settlement give you to be as innovative as you need to be to react to those unknowns that are there?

Shona Dunn: You are quite right. We referred to it earlier and I should refer to it again: innovation has been absolutely central to the success of this programme, on all sorts of levels—on data, on vaccine development and so on. And innovation is inevitably going to be essential going forward. I don't see a problem with maintaining that. In fact, I think it is absolutely essential to maintain it in order to be able to deliver value for money for the taxpayer over the long term. Of course, inevitably, you would all expect every Government Department and every programme to cut its cloth according to what the taxpayer can afford. But absolutely, if we lose the innovation that will become harder, not easier.

Q78 **Shaun Bailey:** In terms of catching that flexibility, therefore, would it be fair to say that you are trying to operate it within the extremes of what SAGE has said—from the extreme of a new variant that may come and that we don't have prior immunity to, or things like that, through to the least worst case scenario? Are you trying to fit it within those metrics? How are you scoping innovation in order, obviously, to keep it within the settlement that you have had?

Dr Harries: I realise this is mostly a resource question, but there are two things that I would comment on. One is that some investment has been made in allowing us to go forward. I say that from my own organisational perspective in the Health Security Agency. There has been investment in Porton Down, Dr Bassam Hallis's team, in terms of evaluation. So it has been boosted ready. That is one thing. The second thing is that not all the innovation costs money.

The one thing that we have not mentioned and I think we perhaps should have done, on reflection, about what we have learned is the excellent work of MHRA—the medical and healthcare regulation authority. But it does come back to conversations about vaccine confidence as well. The whole safety process has happened, but much more quickly. So where we have got a new product, it has been authorised much more quickly, but no corners have been cut; it has gone through the full process. These things are about working jointly together, again, across the system and doing

things that we did not do previously, using a different way to deliver a better outcome.

Q79 **Shaun Bailey:** That is really helpful. I turn to logistics. Ms Pritchard, on the point you made about the retention of 11,278 volunteer responders, I note that the NAO Report talks about the risk, as the economy has returned to normal, of people being taken out of the system. We also know about the staffing pressures that NHS England is under more generally. How is that balanced with your existing staffing pressures and the retention of those 11,278 volunteers? Is there still a gap to be plugged?

Amanda Pritchard: To clarify, the 11,278 people were not just volunteers; they are a combination of people who came forward to support the vaccine programme but who have stayed on as part of other roles in the NHS. Overall, of course, workforce is hugely challenged in the NHS, so anything that we can do to better support our staff to stay—that is the retention point—and encourage people to join us, whether flexibly through things like the reservists or seeing careers through the vaccination programme as a route into different long-term roles in the NHS, or indeed investment in new training places, are all crucial components in responding to what we all recognise are significant workforce pressures for the NHS. We have 350 different roles, so there is something for everyone.

Q80 **Shaun Bailey:** That is positive to hear, but are you confident that as we build the vaccination programme in particular into a longer-term, sustainable programme, you have got the capacity to be as flexible as you need to be? Is the flexibility there? Clearly, there may come a point when we need to ramp that back up again. How are you making sure that the workforce is as flexible as it can be without adding to the existing pressures in electives and other areas?

Amanda Pritchard: That goes back to what Emily was describing earlier: the combination of different ways in which the vaccination programme has been provided and some of the learning from that. Certainly, key components of that flexibility will include, for example, the continued use of community pharmacy, which has played a hugely important role in the programme, as well as some of the other things that we have talked about. We are planning to go forward by building on that staffing model and everything that has been learned in the last year to 18 months.

Q81 **Shaun Bailey:** I seek reassurance from you on the community pharmacy point, because I know that in Sandwell we had a very real problem with getting community pharmacies online to provide vaccines. Have you streamlined the process for them? I certainly had a lot of community pharmacies that wanted to get involved but could not or there was some reticence in allowing them to. How are you making sure that they can carry on as part of that?

Dame Emily Lawson: We have worked extensively with community pharmacy associations to try to respond to all that feedback. As I have said throughout the programme, we recognise that we do not get everything right first time, but we try to get better. We scaled up

community pharmacy gradually in January because there were various restrictions on what they could do at the time, given the nature of the vaccines, the space and the requirement for 15-minute waits and so on. However, that rapidly scaled during the autumn and, as of December, we had 1,500 pharmacies operating. To add my point to Amanda's, one of the big things that we saw in a two-week period in the omicron booster campaign was community pharmacy doubling the number of doses that they could deliver in a week due to extended opening hours and lots of community outreach. So we are extremely keen to support it.

It comes back to the point that I made earlier about balance of wastage. We need to make decisions about the complexity of the network. Community pharmacy generally does not do a huge volume, although some extraordinary contributions are being made, so we need to ensure that, when we put in new community pharmacy sites, they are in communities that will respond to them being there. But we are absolutely supporting community pharmacy to do more. With reference to training, we have encouraged and paid for them to do the five to 11s as well, so there is definitely a role going forward, but we need to continue the dialogue about the right sites for the right communities.

Q82 **Shaun Bailey:** Finally, on mass vaccination sites—in my constituency we had Tipton Sports Academy—there has been a gradual process of standing them down. What dialogue is being had to manage that process? I know that it is still 50/50 as to whether my own site will carry on as a mass vacc site. Clearly, in some areas it is not going to be sustainable. How are you trying to not just stand those sites down, but also deal with the pressure that will be added to the existing network as a result of them not being there? How is that being mitigated as well? You are going to potentially add a large number of people into the system as a result of those mass vacc sites standing down.

Dame Emily Lawson: To give a bit of dimension before we dive into the detail of the question, I mentioned earlier the 3,300 sites currently registered, of which 2,900 operate in an average week, some of which do very few doses. We have provided that data along with the SHAPE tool to local systems, so that they can try to match remaining sites. Some sites, as you said, are not available. Some sites are not value for money. We do not have large volumes going through them, and we mostly won't through to the end of the summer at least. We are asking every ICS to have that dialogue locally, and with local government in particular, to make the most of the existing public sector estate, which is not always being used fully.

As I said at the beginning, some sites have a particular outreach to the local community. I can give you the example of the site that has been set up in Birmingham New Street, for example. It has fantastic footfall and is right in the centre, where lots of people go through every day. That is not a public sector site. That is the kind of site I would expect the system to look at and come back and say, "We should keep this site for the following reasons, and this is the trade-off on value for money."

Value for money looks at access and equity as well as straight efficiency. We really want that dialogue locally. That is why we have asked systems, to say, "If you are going to do cohorts one to six, what capacity and what sites do you need? If you are going to do the whole population, how would you then scale it?", in order to make sure we have the appropriate value for money discussion while also trying to mitigate any additional load on primary care in an emergency, and making sure we have made the right trade-offs there.

Shaun Bailey: That is great. Thanks.

Q83 **Chair:** I have one final question to you, Dr Harries, and you prompted it by raising the MHRA. You are quite right that they were the great heroes in all this. They licensed the first vaccine before anybody else in the world and they did it in nine months, when it can take up to 10 or more years. That prompts a further question. Are you aware of any other vaccines currently at the later stages of licensing that might come to Ms McTernan's aid in knowing what to procure in the future?

Dr Harries: I suspect Maddy will be ahead of that, in the sense that the conversations with industry, which are ongoing, mean that we get information from the pure science side, and actually coming to myself now in the Health Security Agency frequently, but also through the procurement side as well. There are commercial sensitivities, so we wouldn't go into the detail, but one of the points I was going to raise about the question of needle phobia is that there are different companies looking at different delivery systems. They need to be backed by different data, but it may well be that in due course we will have non-needle vaccinations.

Chair: Nasal sprays and so on.

Dr Harries: Yes. The assurance I would like to give is that the right conversations are happening, and the science is being continuously reviewed. That is how we intend to go forward.

Chair: I thank all of you. You are a very high-powered witness panel. You have answered our questions with utmost patience, and your answers have been highly informative. The transcript will be available uncorrected in the next few days. Thereafter, our Report will be published. We have a long list of Reports to publish, but it will be well after Easter, I suspect. Thank you all very much indeed.