HOUSE OF COMMONS

Health and Social Care Committee

Oral evidence: Prevention in health and social care, HC 965

Tuesday 18 April 2023

Ordered by the House of Commons to be published on 18 April 2023.

Watch the meeting

Members present: Steve Brine (Chair); Lucy Allan; Paul Blomfield; Paul Bristow; Chris Green; Mrs Paulette Hamilton; Dr Caroline Johnson; Rachael Maskell; James Morris; Taiwo Owatemi.

Questions 52 - 110

Witnesses

I: Rebecca Catterick, General Manager, Sanofi Vaccines UK and Ireland; Stuart Carroll, Director of Market Access and Policy Affairs, Moderna; and Ben Lucas, Board Member, Association of the British Pharmaceutical Industry.

II: Professor Dame Jenny Harries, Chief Executive, UK Health Security Agency; Dr Mary Ramsay, Director of Public Health Programmes, UK Health Security Agency; and Professor Sir Andrew Pollard, Chair, Joint Committee on Vaccination and Immunisation.

Examination of witnesses

Witnesses: Rebecca Catterick, Stuart Carroll and Ben Lucas.

Q52 **Chair:** Good morning. This is the Health and Social Care Select Committee. It is our first session post-Easter recess, and it is our second public evidence session in our prevention in health and social care inquiry.

To give some background for our guests and for those watching, this is part of our big—and I mean big—inquiry into prevention, and how we prevent ill health in this country. Very shortly, we are going to publish the different workstreams that will be in this inquiry. There will be about 10 of them, so it is a big piece of work. They do not exist in isolation. There is lots of overlap between them, for obvious reasons.

We received so many proposals in our original call for proposals. An awful lot of them related to today's session, which is on vaccination—one of our distinct workstreams. In this session we are going to look at the role of vaccination in preventive healthcare. We are going to look at the development and deployment of new vaccines and we will touch on declining rates of vaccination uptake and variations in uptake of them.

We have two panels today. We are going to take a short break between panels. The first panel is in place. Rebecca Catterick is the general manager at Sanofi Vaccines for the UK and Ireland, Stuart Carroll is director of market access and policy affairs at Moderna, and Ben Lucas is a board member at the Association of the British Pharmaceutical Industry. You are all very welcome. Thank you very much for giving up your time for the second session of this inquiry.

In the first session we heard from the chief medical officer, among others, to set the scene on the work that we want to do. We think this is a very important inquiry. There is certainly a huge amount of interest in it. We hope that you share our view as to its importance, and I am sure you share our view on the importance of vaccination within it.

As you know, the inquiry is all about preventing ill health, which many people, me included, think is key to the sustainability of the NHS going forward. As they say, prevention is better than cure. Nowhere is that more true than in vaccinations, which have been one of the, if not the, most effective public health interventions in all our lifetimes. Kicking off with each of you—starting with you, Rebecca—I want to understand how successful we are as a country in using vaccination as a tool in preventive healthcare. Do we sweat the asset of vaccination well enough?

Rebecca Catterick: Thank you for the question and the comments. The UK has traditionally had a world-leading role in vaccination, with one of the leading comprehensive national immunisation programmes globally. There is a lot to be very proud of. It is recognised that vaccination rates, which we will probably come on to talk about, have been declining over a number of years. It is really important to think about what we can do to help support the healthcare system in getting vaccination rates back up,

particularly in areas of inequality for example, and to make sure that we are prepared for the future. There is huge innovation coming in vaccination across life-course immunisation. It is not just in children but in very young babies and older adults. There is lots of exciting innovation as well, which will help the health service, as you say, keep people out of hospital, keep people out of general care and help with the whole capacity issue that there is overwhelmingly in the NHS right now. There are a lot of exciting things happening, but it is important that we keep our eye on how we keep our leadership position.

Chair: A quick interregnum, if I may. I should have kept my eye on my notes. There is so much to set the scene when you start a big new inquiry like this. I want to give my colleagues a chance to place any declarations of interest. Mine is that I was once the Public Health Minister, many moons ago, and had vaccines in my portfolio. Two of my colleagues have also served in office.

James Morris: I was responsible for vaccines when I was a Minister in the Department of Health last year.

Dr Johnson: I was also responsible for vaccines while a Minister in the Department of Health last year.

Q53 **Chair:** You have lots of interest among the Committee and some experience of it as well.

Rebecca Catterick: Indeed.

Q54 **Chair:** Mr Lucas, welcome and thanks for coming. From your point of view, how successful are we? Do we use vaccination well enough in this country?

Ben Lucas: I should say that I lead a company that has an interest and a strong legacy in research and developing vaccines, as well as representing industry peers today.

As with anything, when you look you can see some of the best practice that you would want to see from the UK system. You have expertise that is certainly world-leading. You have the potential and capabilities to be world-leading, but at the same stage what we see in our own programmes as well—we are large providers in the national immunisation programmes—is a declining rate of vaccine coverage, which ultimately means that we are not world-leading when it comes to the ability to implement. That is the piece I want to raise today.

We have all the pieces of the jigsaw to be able to be world-leading. We have the expertise and the aspiration, but our ability to implement is sometimes not where we would measure ourselves against peers. That continues to be an area that we work in across industry and we try to collaborate with the system to be able to pull through.

Q55 **Chair:** We are going to explore the uptake in more detail with colleagues when we move on. Finally, to give you an early feel of the ball, as they

say, Stuart, what is your view on how effective we are in this workstream and this particular part of our inquiry into prevention? Vaccination: are we getting it?

Stuart Carroll: Thank you very much, Committee, for the invitation to come here. From a Moderna point of view, as a biotechnology company pioneering MRNA, this is an area we are really interested in. As both my colleagues said, there are definitely a lot of successes. If we look at our legacy as a country, there are many things to be proud of, but, as you have heard, there are issues around declining vaccination coverage rates. That is also in specific communities and hard-to-reach and high-risk cohorts. It would be worth elaborating on that throughout the session.

We now need to look ahead to the future. If we want to stay in that top position, or certainly in the Champions League position—to use a footballing analogy—we need to invest. That means looking at the type of regulatory framework for the future, the value assessment and how much we are actually investing in the delivery of vaccination through the NHS.

Q56 **Chair:** Do you have frustrations with Governments? Ben just talked about all the pieces being on the table, but maybe they are not being put together. Do you have frustrations with decision taking by Ministers or Departments? I am trying to get a sense as to how good we are, how good Whitehall is, at gripping this. If you went out on the street and asked the public about how good we are at vaccinations, given what has happened in recent years, I presume the public would say that we are pretty damn good at it.

In our joint session with the Science and Technology Committee, in the follow-up to our covid inquiry, we heard about how we have possibly lost some of the advantage that Kate Bingham and her team created around the covid vaccine. Where are your frustrations?

Stuart Carroll: As someone who was part of the Vaccine Taskforce, I should declare an interest, in that I would largely align with what Kate was saying as to the legacy of the Vaccine Taskforce in terms of speed and efficiency. One of the big learnings we can take from that is that mission-based, purpose-based Government works. Of course, we are moving through a pandemic into an endemic world. As a consequence of that, one would not expect the same level of resource or Government commitment. None the less, there are principles that can be transferred in focus, objectives and decision making.

One of the things we need to take away from the pandemic is speed, particularly in procurement. Procurement can sometimes be too slow. We can get an MHRA licence, we can get through the JCVI, but then the procurement stage often takes too long. It is important to place that in context; the longer we wait, the longer we delay getting life-saving vaccines to the population as a whole. The aim always has to be on improving public health. We know that vaccines are one of the most effective and indeed cost-effective interventions. The pandemic has

proven that again emphatically. If we can improve that bit of the system, it will give us a significant advantage as the UK.

Q57 **Chair:** Do you want to add anything, Ben?

Ben Lucas: My observation is that it is cutting edge. Covid was a good example. We can both accelerate vaccines' assessment and implementation and, on the whole, ensure that they reach the people who can really benefit.

On your question, I was reflecting on whether we are sweating the asset. Are we doing as good a job as we could? I always feel that it is important to look to the most vulnerable and understand whether we are doing the job for them in order to ensure that we are protecting them. That is the biggest area of benefit for preventive strategies like vaccination. I do not think we are at this moment in time, because we see too many disparities.

At the front end, you will be able to see case studies of how we have got vaccines to people and accelerated them through. Perhaps they are the example of what we can do when we all put our minds to it and work across the system with the mission purpose that Stuart alluded to.

Chair: What we want—please bear this in mind as you are giving evidence—is to produce very practical recommendations through the different workstreams that will make up this overall inquiry. We want to look at how we can use vaccination to prevent pressure on the health service, in particular acute admissions. Think about that as you give evidence. What would you write if you were making recommendations for our report? We have asked you here. It is a very privileged position to give evidence, so don't be shy in coming forward and saying that. I am sure you won't; that is why we asked you.

Q58 **Mrs Hamilton:** Good morning. Thank you all for coming. Stuart, you made two interesting points that have made me change tack a little bit. You talked about hard-to-reach communities and said that procurement could be slow.

Why do you feel that procurement can be slow? Looking at me, I could be classed as someone from a hard-to-reach community. That word, in the politest way, irritates me. They are there; they are not going anywhere. Why is it that they are given this label, which sometimes means they are got to quite slowly. It means that misinformation starts to flow through that community. I want to ask you about those two points.

Stuart Carroll: Thank you. I think you are absolutely right. We should be taking an approach whereby we want to reach everybody in the population. Equality should be at the heart of absolutely everything we are doing in public health.

The challenges are multi-layered and multifaceted. When I was in government working on the Vaccine Taskforce, I actually did some work

specifically on the issue, looking at vaccine confidence. One of the challenges is that there are issues around trust in Government and institutions, so I think we have to work much harder at explaining. For example, we have an independent regulator. We have an independent recommendation body called the JCVI. It is scientifically-led.

The other thing we need to do is realise that although Government, and indeed the industry, have a big role to play, we need to take it further. We need to take it into the community and we need to utilise community groups, religious groups and sporting groups. We know from the available analogues and evidence that a lot of health discussions happen with peers. They do not happen just with healthcare professionals, going on to the NHS website or looking at public health guidance, as important as that is. There are different ways in which people get their information, and we have to work much harder at utilising the value of all of our society and all of our communities to make sure that the right conversations are being had and the right information is getting to people.

There is a challenge for all of us. It would be really interesting to see a joint plan put forward as to how we could further that objective. The other thing I would quickly like to mention on that point—it relates to clinical trials, which we will touch on later perhaps—is that we need to address the health inequality in clinical trials. As a company, Moderna has a mission statement which makes it clear that inequality is unacceptable. We have a team of people who work purely on clinical trial diversity. We actually paused our seminal covid study to enhance the number of people from ethnic minorities going into the clinical trial. That was up to 37% across our trials. We are running at about 37% across our 50 assets, and it is as high as 62% in some trials.

Why is that important? It is important because if we are asking people to take a vaccine, they need to have confidence that it has been tested safely, effectively and with high quality on all of the population. That is another factor.

On procurement, there is sometimes a bit of a delay between the JCVI step and when it moves to the procurement step. There are reasons and factors for that, but enhancing the horizon-scanning framework, particularly with the big pipelines that we are now seeing come through, would help with that co-ordination activity.

Q59 **Mrs Hamilton:** Fantastic. My last point is on vaccination, particularly in children. That has moved to all of our population where quite hip mothers, both middle-class and upper working-class, and the unemployed do not want to give children vaccinations. I am going to direct that point to Ben and Rebecca.

What do you think we can do to improve that process? At the moment people have gone into surgery saying absolutely, "My child is not having that vaccination." What work can be done to change the way people are

thinking at the moment, when certain diseases that had been eradicated when I was a child have now been introduced back into our society?

Rebecca Catterick: That is a very good point, Paulette. Covid has obviously had its impact. We know that covid has also impacted on vaccination coverage rates, which may be a bit counterintuitive. You would expect people to see the value of vaccination and want to come forward, but that is not what has happened at all. As you mention, there has been an upswell again of the anti-vaccination movement, which is really disappointing when we have all talked about vaccination being one of the most cost-effective means of protecting health and saving lives.

As you rightly say, it cuts across all the different classes, which is perhaps surprising. A recent report by Policy Exchange recommends having a group as part of our overall governance structures within our policy to tackle anti-vaccination and having direct action—that might be communication campaigns—across society in tackling that. We would support that as well, to help get those important vaccinations back up.

Q60 **Mrs Hamilton:** Do you have anything to add, Ben?

Ben Lucas: I have a couple of thoughts. First, we have a range of programmes that go across the life course of vaccinations. One thing we see is that the reasons why people might have a fear of vaccinations are actually quite different. I believe it is important to acknowledge that anti-vax sentiment is not always the same when you talk about different people taking different vaccinations.

I would point to the NICE guidance that was recently published, in the last year or so. That undertook a large amount of work, and there was pretty much alignment at the end, with some very sensible suggestions around what we can do collectively to try to tackle the challenge of lack of confidence and to increase vaccine coverage rates. When I read that NICE guidance, I see it falling into three buckets. The first, and probably the most important, is about trust in the system. We see that in terms of people being able to believe the information they are provided with or, actually, just being able to trust the system that is there to treat them at some stage or provide prevention. The next bit is about awareness and having the right information, which you talked about. On Rebecca's point, we believe that having a dedicated group to tackle misinformation would be really important.

The third thing is grouped around accessibility. We continue to need to see the way in which implementation takes into account the fact that, actually, the current structures are probably not close enough to being able to allow people to access the services and ensure that we can get to those who find it more challenging or cannot access the system as they would normally. I strongly recommend that the NICE guidance is there. We have the GP contract which allows us to leverage some of the incentives and to be able to try to deliver.

We have NHS England's vaccination strategy coming up. I am sure that my colleagues can talk to it as well. We truly believe that putting a wraparound national service behind immunisation that can help the accountable providers in the system, where they are in the localities, would be a very practicable move to bring the expertise together to tackle some of the challenges and ensure that there was consistency across some of the programmes.

Q61 **Taiwo Owatemi:** Good morning. I want to focus, first, on the point that Ben made about accessibility. During the pandemic we saw that a range of healthcare professionals were able to deliver vaccinations. That really helped with uptake, but it also helped in terms of the patient being able to have access to professionals they could speak to—people they could trust and develop a relationship with. Could you expand a bit on the importance of investing in delivery via the NHS, particularly in some of the roles that other healthcare professionals, like pharmacists, played in being able to deliver vaccines? I am a pharmacist, which is why I am particularly interested in that.

Stuart Carroll: The point you raise is really important. I am pleased to say that pharmacists need to play a critical role in delivery of vaccines. One of the points that Ben was making a few moments ago around access is important. We know that, for certain people, access can be a barrier; for example, if you live and work in London it is sometimes difficult to get to a GP surgery to get a vaccine. That is where pharmacy can provide a real solution. You can walk in and out, and it is a more flexible model.

Q62 **Taiwo Owatemi:** Would you say, for example, that we need a change in the current model to allow vaccines to be more accessible at community level? Currently, for example, for child immunisation you have to book a GP appointment. The reality is that we all know that is very difficult to get in some circumstances. Would you say there is a benefit in making other healthcare professionals more accessible to be able to deliver that?

Stuart Carroll: I think it needs to be looked at. Of course, we have pharmacist delivery in significant numbers of vaccines already, which is great. It is a case of looking at how we can potentially expand that and increase flexibility and agility. Rebecca made reference to the Policy Exchange report, which I encourage all the Committee members to look at. It makes some good, solid recommendations on the focus that is needed on immunisation and vaccination across the NHS and that delivery model. For sure, we need to have a delivery model which utilises the best of all healthcare professionals. Pharmacy is distinctly placed to do that because it is at the forefront of dealing with the public and patients, day in, day out.

Q63 **Taiwo Owatemi:** I want to ask about the regulatory framework. Earlier, you said that there needed to be a change in the regulatory framework. Can you elaborate on that and explain what you would like to see in that change?

Stuart Carroll: It is more looking to the future. As we look at the types of innovation and types of product coming forward, we are beginning to move towards a more personalised healthcare model. That is extremely exciting. Hopefully, in the next couple of years, we will be able to bring forward personalised cancer vaccines and other types of therapies. In order to do that the MHRA, as our regulator, which is world-leading and has some fantastic capabilities, will need to work through with the industry how we regulate a product that is specific to an individual. That is an exciting challenge, but it is a challenge we need to embrace. We need to be proactive in that endeavour.

Of course, there is another element. We need to make sure that the NHS itself is ready to deliver that type of healthcare product. To give you an example, should that type of innovation come through, we need to be in a position where we could do the diagnostic quickly in the healthcare setting—the biopsy; the pathology—and send it to the manufacturer who can then sequence the genetic code of that virus, that cancer or that disease, and then the manufacturer can quickly, almost Amazon style, in real time, with safety first always in mind of course, return it to the physician so that it can be administered to the patient. That is a very different model that we are going to need to embrace and look at.

It is exciting. It is why Moderna has invested in a 10-year strategic partnership with the Government. It is why we see that the UK has a great opportunity, but to maximise and optimise that opportunity we need to start thinking about the blueprint.

Taiwo Owatemi: Thank you. I look forward to seeing that in reality.

Q64 **Rachael Maskell:** Thank you for coming along today. At the joint session of the Science and Technology Committee with this Committee, Kate Bingham was quite scathing about the dismantling of the infrastructure around being able to deliver a vaccine programme. Obviously, we understand the need to scale up at times of crisis such as a pandemic and scale down at other times, but could you set out for the Committee what infrastructure needs to be in place consistently to be able to deliver a vaccine programme?

Rebecca Catterick: Thank you for the question. I am sure we will come on to utilising the learnings. There were so many positive examples and learnings from the covid example. The important thing is to make sure that we learn them, capture them and implement them now. There are a number of things that we would recommend—for example, a national vaccination strategy that has a single ministerial oversight.

It is a very complex system to work through, with the tripartite of the UK Health Security Agency, NHS England and the Department of Health and Social Care. It is a very complex structure to work through. It needs clear decision making and accountability and clear timings, which I think we have touched on already, in terms of the time it takes from the regulatory process, through important processes like the health

technology assessment and cost-effectiveness appraisals, and making sure that those are adequately resourced and funded and that there is continued strong engagement—again, there was a strong positive from the covid example— alongside things like workforce planning and supply resilience. They are all really important themes. If we can continue to learn and capture those, and make sure that they are the things that we take forward, it will help us get back to, or support, our leadership position as it continues.

Q65 **Rachael Maskell:** Thank you. Can I turn to you, Stuart?

Stuart Carroll: To build on what Rebecca said, one of the things that will be important is to look at the current framework of government in this space. We have the UK Health Security Agency. It will be very important for that agency to be invested in and supported. The policy around vaccination that largely sits within that agency should be understood and furthered across government for the purposes of public health.

It is also important now that we understand more about how the new Department for science is going to work as part of this ecosystem. At Moderna we called for a department for science, so we are very pleased to see it because we think it is needed for leadership reasons. It is needed to pull through on the Prime Minister's excellent vision in saying that the UK should be a life sciences powerhouse. We need to understand a bit more how that is going to work with the Department of Health and Social Care.

The JCVI, by all standards, did an excellent job in the pandemic. Again, there are opportunities to see evolutions of the JCVI in terms of process, transparency, interaction with the industry and communication, and ensuring that the JCVI is appropriately resourced. It has a very small secretariat that does a very good job, but it does not have the resources of NICE, SMC or other HEA bodies. It is important that we appropriately resource those aspects of the system because they are very important to the evidence-based decision making we want.

Q66 **Rachael Maskell:** Ben, do you have any comments?

Ben Lucas: Building on those comments, there are probably two parts I see. One is the early part we have talked about, which is the innovation pathway. How are we going to be able to accelerate innovative vaccines coming through the pipeline, to be able to get access to them in some way? The second part is probably implementation.

My colleagues have talked around the innovation pathway and the importance of having a system that really works. I have responsibility for the vaccines part of my business and the medicines part of my business, but I see significant differences in the work that has been undertaken to ensure that innovative medicines are accelerated through the system and that there is governance and maturity in the way that the system engages with industry, to ensure that we all get what we need from that,

and that the outcome is a better service and better outcomes for patients in the end. This is a time to look at the terms of reference of JCVI and the resourcing, and to take the fantastic opportunity we have now to make a future-proof system that will be able to accept and readily accelerate the innovations coming through.

On the implementation side, we have talked about the complexity of the tripartite and every party trying their best. We welcome the work that Jenny Harries from UKHSA will talk to, I am sure, around trying to ensure that we come together and collaborate. I believe there is a role for industry to partner in communities, working with different healthcare professionals and system providers to be able to change and offer our support and expertise. I will briefly give you a case study or just a small example of that. In my own team, working in the HPV space—human papillomavirus implementation—we have seen declining rates of vaccination. In fact, sitting round this table, you would aim for 90% vaccination coverage rate, or VCR, across the board. You range somewhere between 73 to just one over 90. We know that outside they are as low as 50%. We have really tried to invest to try to rectify that situation and to help the system back.

We have brought our expertise together with local implementation teams to identify how we can create campaigns and target those campaigns to the areas that most need them, where there are the highest disparities. We are putting advertising on school buses and in areas where you can see that the people who are most vulnerable will be able to see and become aware of the opportunities, and then we are putting accessible services in place. In Kent, there has been a 10% increase in absolute VCRs just by that sort of intervention. That gives you an example of the way that I believe industry can support the implementation piece, alongside, as you say, some of the different healthcare professionals who can support the implementation.

Q67 **Rachael Maskell:** I have a second question around structures. One of the weaknesses, when dealing with a pandemic, is that clearly you can see mutations occurring anywhere in the world. One of the frustrations here was around the patents, the ability to build and scale internationally and the barriers that were placed during the covid crisis. What would you do to change that—this is particularly to Rebecca and Stuart—to enable global roll-out? Clearly, public health cannot just be limited to these shores.

Stuart Carroll: It was a critical point during the pandemic. Moderna took a decision to try to be as open as we possibly could in terms of our technology and how we were seeking to apply MRNA to covid. One of the important things is that we have resilience across different countries. We have, of course, made the decision to invest in the UK, with the 10-year strategic partnership. We also recently, just a couple of weeks ago, announced that we were going to do the same deal with the Kenyan Government, with a resilience manufacturing and R&D plant there.

It is important that we have that global remit. One of the things that needs to be learnt from the pandemic is the role of the WHO and how that can be enhanced and better codified to ensure that there is more global cohesion and global co-ordination when it comes not just to the development of vaccines but to the roll-out. As you rightly say, there is work to be done there, but I am pleased to see in some areas across the board, certainly from the industry side, commitments to make investments in different parts of the world and a commitment to look at what more we can do to ensure that we have global equity.

Rebecca Catterick: The only thing I would add would be to have good planning, making sure that we are ready and planning on a macro level, not just across Europe but globally. Of course, it ultimately comes down to making decisions about where doses go, for example. There should be good planning and as much foresight as possible.

Rachael Maskell: Especially on the manufacturing side, it seemed like protection of interests when we were trying to seek greater advance. Of course, with health we cannot do that.

Q68 **Chair:** It is interesting, Stuart, that you mentioned the WHO and the pre-pandemic treaty changes to international health regulations that were going on. There was a debate in the House yesterday on the subject. I am sure all three of you were aware of it. Have you been involved in that at all through the UK team that is working at the WHO? Have you been asked to be involved at all in that?

Stuart Carroll: No. We have not had any direct involvement in that.

Chair: Interesting.

Stuart Carroll: But we would welcome it.

Q69 **Chair:** I am sure. The NHS vaccination strategy has been mentioned a few times. Rebecca, I am sure you know what is coming. Sanofi said that "development of a UK vaccination strategy has currently stalled, and clear leadership on this issue is lacking from Government." Has it un-stalled since you said that?

Rebecca Catterick: Not that I am aware of, but perhaps it has. There are a couple of different things happening, if I may elaborate. NHS England is looking at the vaccination strategy. Our point is that it needs to be bigger than just NHS England. It needs to be at a policy level, which brings in some of the points that I was making earlier around leadership with oversight and governance. That will help some of the things and issues that we have been touching on, whether it is VCRs, access to under-served communities or whatever it might be.

There are lots of positive things in NHS England, which are very much around implementation and looking at those communities. We are very supportive of the focus through the ICS boards to look at VCRs and have

local tailored plans. We are very supportive of that. Actually, what we would like to see as a recommendation is a national vaccination strategy.

You may be aware that the Welsh Government recently published an immunisation strategy. One of the recommendations in that was something similar, which was for a national immunisation board. That has a lot of merit. It has the leadership, the structure and the governance in place, which then helps with some of the other things we were talking about around timely decision making, monitoring and surveillance, funding and improved engagement. All of those sorts of things would be strengthened by that type of approach. I think it is worth considering.

Chair: That is a good point, and it is on the record.

Q70 **Paul Blomfield:** I want to explore a little bit about the clinical research environment. You have differently acknowledged that we have the expertise in this country. It is a cliché, and it is overused, that it is world-leading. But we are underperforming. Stuart, Moderna has said that a critical barrier from your point of view is the need to reform the clinical trials system. Can you explain why and how?

Stuart Carroll: I agree with your preface. The UK has many strengths and advantages; hence why we have made a very big investment as part of the strategic partnership. That should be recognised and acknowledged.

However, there are things we need to see unlocked and barriers that need to be removed. If we take clinical trials as an example, that is a really important area. There are three big things that we need to focus on, but, first, may I also say that we must remember that clinical trials are not just about research, science, the economy and the ecosystem. All of that is very important, but for some people a clinical trial is their last hope. This can be a life and death matter. We want tens of thousands of patients entering clinical trials, as we are aiming to do for the strategic partnership.

The first focus is around the regulator and the MHRA. The MHRA has great expertise, but it has some capacity problems. It is great to see that the Government increased the budget of the MHRA in the recent announcement, but that cannot just be a one-off payment. We need to keep investing in the MHRA. Since the pandemic, we have seen a stimulus of enormous proportions in the pipelines of all companies. We are now beginning to see some very exciting innovations—the personalised innovations I mentioned a few moments ago. We need a regulator with the capacity to handle those, of course with safety first but also efficiently. There is a need to look at the capability of the MHRA. The MHRA has world-leading experts, but as we move into a more personalised healthcare space we will need to add to that pool of expertise to ensure that we can approach that regulatory model in the best possible way.

The second area is more practical, but no less important, and relates to contracting with the NHS. At the moment, it is rather difficult to contract and implement clinical trials. One of the advantages of the NHS is that it is a centralised system, but of course we have many different parts of the NHS—trusts, integrated care systems and the like—and they all use different templates and different contracts. That makes it difficult for a manufacturer or a principal investigator to do things efficiently and effectively.

We think that a national framework is needed where we could have some uniformity in that regard. I note that James O'Shaughnessy is doing a review on this for the Government and reporting very soon. We have made representations to Lord O'Shaughnessy. I am very encouraged by his thinking in this area. I encourage people to look at his report once it is published. I hope the Government will certainly take many of those recommendations forward. That is an area we need to look at.

The final thing is that we need to look at where we can digitalise. There are great opportunities to use digitalisation safely—we must always be safe in these matters. We talked earlier about access. A lot of people who wish to enter a clinical trial are restricted because the clinical trial site is a long way away. We also need to look at access and where we are doing clinical trials.

Some aspects of clinical trials, like blood testing and routine monitoring, which is vital to a clinical trial, could be done remotely. They could be done through safe digital techniques. That is another area we need to explore. It must be safety first, but it is an area where we think the NHS could do better. We also have to remember that the NHS is in a crisis at the moment. Clinical trials must not be seen as a nice to have. They are an imperative, but the NHS needs support to do them.

Q71 **Paul Blomfield:** Thank you. I want to explore one part of that. Some of the points you made were very clear about what needs to be done. In terms of capability of the MHRA, because they have a great reputation, what are the areas in which capability needs to be expanded? How do they achieve that?

Stuart Carroll: You are absolutely right: the MHRA is world-leading and has great capability. As we move more into this area, linking to the academic sector and some of the other parts of the research sector, because of the nature of personalised healthcare, it is going to be important to ensure that the MHRA has the resources to do that. It is partly about recruitment, but it is also about collaborations and interactions.

Q72 **Paul Blomfield:** There is expertise elsewhere in the world at the moment. Are we not winning the talent here?

Stuart Carroll: We have a lot of talent, but we also have to look at the MHRA—we have made this representation to the Government—in terms

of things like the civil service pay scale. We need to understand that in this area you are talking about very high science and a very high level and calibre of individual. We have made representation recently to say that that may need to be relaxed. We understand, of course, that you cannot necessarily pay the private sector rate, but there needs to be some consideration of that in a cost of living crisis.

Q73 **Paul Blomfield:** Ben, you were nodding through most of that. I know that the ABPI has pointed out that big pharma is increasingly placing clinical trials in other countries. It highlighted Australia and Spain. Is that because of the reasons that Stuart has outlined, or are there other factors that we ought to be aware of?

Ben Lucas: It would be fair to say that there are multiple factors. The first is that if the UK is to continue to maintain the No. 1, world-leading status that we are talking about, it is important that we take action to ensure that we have an operating environment that means it is a logical decision to come to the UK first and to invest in clinical trials and—

Q74 **Paul Blomfield:** I am sorry to interrupt, but what, for example, are Australia and Spain doing right that we are not?

Ben Lucas: You quote Spain as an example. For Spain it is about turnaround times and having legislation in place that allows and ensures your ability to execute a programme once you start it. I think there is a mandated 60 days by which they have to get through the administrative processes to be able to work through. That is a very specific example of what can help.

Here, we have problems that are two or threefold. First, we are opening sites and those sites then take a large amount of administration to be able to open. It takes time, and that is slow. Global clinical trials are a competitive recruitment process. What you find is that by the time you have got to the end of that process the clinical trial is closing down, because others are more efficient than you.

As Stuart highlighted, we have made representations to June Raine and the MHRA around taking the money that has been allocated in the budget, which was really important to support the MHRA, less to help them, I believe, on capabilities, but more on capacity to help deliver on what is currently a backlog of work in progress that is slowing us down. All of that goes to the fact that it makes the UK less competitive. When the UK is less competitive and you are in a trials position, where time is hugely important, it does not really matter about our academic prowess or the ability for the world-leading potential. If we are just missing out, people will go elsewhere. I think that is what you are seeing. That is why the UK has been slipping down the ranks, from fourth to 10th in the last few years, with regards to phase 3 commercial clinical trial investment here, which you have seen in the ONS metrics.

Q75 **Paul Blomfield:** I have one final question. I am leading a debate this

afternoon in Westminster Hall on R&D in a much wider context. I have been interested by the number of medical sector stakeholders who have contacted me to talk about the importance of the Government successfully securing their ambition of association with Horizon Europe. Is that a factor that you would each concur with?

Ben Lucas: Maybe I can make the comment from my side. Talking on behalf of the ABPI, we believe that Horizon Europe is important. There will be those who see that it is principle-based. There will be those who see pragmatic reasons as to why it is the case, but certainly it was an area that was causing some tension and to a certain extent incoherence when we come to looking at our global boardrooms. That is something I often share with Ministers when I talk to them and others. It is sometimes the incoherence of policy in the UK that is difficult to navigate.

On one side you feel that everything is pointing to the plus side of the balance; on the other side, there is something that comes down and inhibits in some way. Horizon Europe will be positive for us, we believe. Hopefully, we can continue. The Government's life science vision and commitment to R&D investment is hugely important. I go back to my point before. We have to pull through on the implementation to show that we are globally competitive, to be able to realise that in the future.

Chair: The slip from fourth to 10th does not sound great, if I'm honest. You have been clear in your explanation to Mr Blomfield.

Q76 **Chris Green:** Ms Catterick, in terms of clinical trials why does it matter so much who participates in them?

Rebecca Catterick: That is a good question. You tend to place your clinical trials where you ultimately expect to see them used. Obviously, in the UK we would very much like to see innovative medicines or vaccines used, and used early. I think it is a strategic question. A lot of it also comes down to pieces that we have just been talking about. It matters a lot. It is a medicines overall statistic, but a drop of 41% in clinical trials in the UK is hugely worrying. That is probably something that, when we are all invested in healthcare, we would like to see differently.

Q77 **Chris Green:** In terms of where the business locates, it is in a sense at that higher level. Mr Carroll, there is the other end as well in terms of the people who participate in clinical trials and therefore people having more comfort if you have more awareness of the vaccines and wider medicines and the contribution they can make, perhaps because part of your community has been involved in the clinical trials. How important is that?

Stuart Carroll: It is exceptionally important. To build on what Rebecca said, we want to have clinical trials in countries where we have a strong regulatory framework, so that we know we have safe, efficacious and high-quality products coming through. The MHRA is world-leading in that regard. It has a great capability and track record.

On diversity in clinical trials, it is absolutely essential, because representation matters. We know that is the case in terms of different communities having confidence that, when we say a product has this safety profile, it has this efficacy profile or it has this quality profile, it is relevant to all parts of our community. This is an area we have to focus on hard and collectively. It is not acceptable to have a situation where we have, frankly, inequality, inequity, in clinical trials. It is why, at Moderna, we have placed this at the heart of our mission. It is something that we take incredibly seriously. We have to work harder, and that will also be of benefit in dealing with broader health inequalities. If we can ensure that we are getting the treatments of the future to those who most need them, it will help us not just in the clinical trial bit but in the real world bit.

Q78 **Chris Green:** So much of the UK life science sector is located in the golden triangle. Does that matter, or does it restrict clinical trials more to those areas? Can there still be reach-out to the rest of the country just as easily?

Stuart Carroll: It does not restrict it at all. One of the main pillars in our strategic partnership is clinical trials. We are looking to partner with universities and hospital trusts all across the country. We see that as imperative for a UK-wide approach. Also, within that, we have to work hard with Government and with other stakeholders. As I was saying earlier, that involves community groups, religious groups, sporting groups and all sorts of groups to ensure that we can get appropriate representation and get the equality agenda right at the front.

Q79 **Chris Green:** Mr Lucas, the national health service is going through a bit of a restructure with the integrated care systems. We have 42 right across the United Kingdom. One of the opportunities that presents is a closer relationship between health, the public health side of things and local government. It may be early to get a strong indication at the moment, but do you see any signs that this new structure is enabling people to participate and get involved? Will there be more opportunities with the ability to reach into communities, with that engagement increasing over time?

Ben Lucas: I would honestly say, seeing the output at the other end of this change, that I do not think we are seeing those on a scale that is relevant at this moment in time. Inevitably, with most of the NHS changes, to be perfectly honest, you see system leaders who will utilise the new structures in a way that will help those communities to benefit from the advantages you talk about.

However, at the same stage, as with any other change, there will be those who are left behind. I think that is a concern. It is the ability for the NHS local structures to get through their change curve and then start implementing to a high level. We cannot afford to wait on that basis. That is why we call for things around the NHS England national service. Yes,

there is accountability at a local level, but it is about being able to aid that and to ensure that prevention is happening now.

As you said, Chair, the preventive strategies are going to support the NHS and allow it to be able to deliver its job in the future. These sorts of services wrap around local accountable teams, but carry a national level of consistency and bring a data flow that allows people to take action. Those are the important pieces that I see coming together from this change.

Maybe I could say one other thing, which is about the joined-up opportunity that we have. We have seen Scotland take a recent transition to move responsibilities to health boards to take vaccinations forward. That is interesting and it is a pioneering move there. We can see whether that is having a preferential effect for the Scottish population and whether it is delivering on that change. I think that will be interesting for ICSs to look into.

Q80 **Chair:** In closing, Rebecca, you said you tend to place clinical trials where you would wish to see them used, but that doesn't mean that they cannot be used in areas where they have not been trialled.

Rebecca Catterick: Not in terms of geography, no, not at all. My point was that we have talked about how important they are to the UK, and to the economy and the life science ecosystem, and that is why it is strategically important. Companies will place their studies where they see opportunity for rapid uptake. It is an important thing to bear in mind. I am talking more generally about medicines in that scenario.

Chair: That is very helpful; thank you very much. Rebecca Catterick, Stuart Carroll and Ben Lucas, thank you for giving evidence.

Examination of witnesses

Witnesses: Professor Dame Jenny Harries, Dr Ramsay and Professor Sir Andrew Pollard.

Chair: This is the second session of our prevention inquiry. We are doing a workstream on vaccination. We have just heard from Sanofi, Moderna and the ABPI in our first panel. We have a stellar cast in our second panel as well: Professor Dame Jenny Harries, chief executive of the UK Health Security Agency; Dr Mary Ramsay, director of public health programmes at the UKHSA; and, all the way from New Zealand, Professor Sir Andrew Pollard, chair of the JCVI, the Joint Committee on Vaccinations and Immunisation. We are particularly grateful to him for joining us late in the evening there.

I should say that I was once the Public Health Minister. I have worked and interacted with all of you at some point. I left office in early 2019. Do any other colleagues wish to make a similar declaration?

James Morris: I was responsible for vaccines as a Minister in the

Department of Health last year.

Paul Bristow: I refer Members to my entry in the register of interests. I excused myself from the last session, mainly because Moderna is a client of my wife's communications company. I have known Mr Carroll for a number of years, and he is also a friend.

Q81 **Chair:** Thank you for joining us. You obviously heard the first session. Certainly, Jenny and Mary heard it. I told the first panel that what we are trying to get at are practical things that we can recommend to you and to Ministers about how vaccination can help us improve and prevent ill health, and therefore ease pressure on the national health service.

I want to ask you the same question that I asked the first panel, Jenny, if I may start with you. How well are we using vaccination? Are we maxing out on using vaccination to prevent ill health, or are we punching way below our weight?

Professor Dame Jenny Harries: You will find that my answers are very similar to those of colleagues in the industry. You have probably already picked up that we have a developing, properly governanced and close relationship, which is a new development as we come out of the covid pandemic.

The answer is that we have a very strong history of using vaccination programmes, but we are definitely not maxing out on them at the moment. There is huge opportunity, and I hope from contributing to this meeting that you will see very visibly that UKHSA, as a new health protection organisation, is keen to put itself right at the forefront of driving that agenda forward.

It is very unusual in public sector life to find that you can have win-win win wins. There is usually a downside. I think this is one of those areas where there are benefits for Government, benefits for industry, benefits for the NHS and benefits for the economy. Most of all, there are huge benefits in protecting the health of our most vulnerable populations, which is really why I came into public health in the first place. It is very positive. There is lots of good stuff, but still lots more to do.

Q82 **Chair:** When you say that we are not maxing out on it at the moment, could you give me some very practical clinical examples of where we are seeing presentations at the acute sector that we do not need to see because we are not doing as well on vaccination as we might?

Professor Dame Jenny Harries: I would like to caveat some of my statements. I have realised, just looking at Andy on the screen, that I should also do my own confessions of my past life, so to speak. I have been a director of public health working with communities who are less confident in coming forward for vaccination directly, both in England and in a devolved Administration. I was also a member of JCVI between around 2010 and 2019, before I came into a senior Government role. That gives me quite a unique perspective on how different parts of the system are functioning.

I will come back to the practicalities of how we could improve it, but if we look not so much negatively as at the opportunities going forward, which I know some of the industry colleagues sitting behind me would recognise, there is a huge amount of work already, for example, on RSV vaccination. There are new opportunities on the very near-term horizon. We have children and older adults using health services. Services are clearly on most public health professionals' agenda, and there is a lot of work on this already. It is not forgotten or not recognised.

Some of the connecting parts of the system are making the journey through from opportunities, recognising the burden of disease in the population, highlighting that and working upstream with industry so that we all work cost and human resource-efficiently through a process, linking with MHRA and using learning from the pandemic to make that streamlined process as quick and as efficient as possible. That is where we could go further.

Q83 **Chair:** That is good going forward, but I want to press you again. What would clinicians probably say to you—it is like that game show—"We are seeing a rise in blank because we have not done as well on vaccination in blank as we might." What are the blanks?

Professor Dame Jenny Harries: I will probably let Mary join in the conversation. The obvious ones would be things like polio, particularly around London. These are really serious diseases where we have seen internationally cases of acute flaccid paralysis that we are completely unused to. We have not seen it since the 1950s and 1960s.

Q84 **Chair:** What would clinicians in hospitals say to us that they are seeing that they should not be seeing?

Dr Ramsay: A lot of our programmes have been very successful. We have been very early adopters in the main, I would say, but there are some existing vaccines, not just new vaccines, that we are not using as well as we should be. Obviously, we have allowed coverage to decline over many years, at a very slow rate, but we are now not reaching the levels that we had previously. That will affect things. Measles is the first to come back. We have not had much measles, luckily, because of the disruption to travel and lockdowns around covid, but we are expecting measles to come back.

There is the polio example. Seeing the polio virus circulating in London without any cases was disturbing. That now seems to have gone away, but we are keeping a very close eye on it. There are vaccines we are still not using as much as we should. We have not yet rolled out the full childhood flu programme to the whole school age, for example. We have not yet adopted the varicella vaccine in this country. It is something that we have been looking at for a while.

Unfortunately, the focus on covid, although very good for covid, probably put us back a little while in looking at some of the existing programmes.

Obviously now, we have the opportunity, with newer vaccines coming online and new technology, to do more. We can always do more.

Q85 **Chair:** Finally from me, let me bring in Professor Pollard. In these opening exchanges and the questions that I have just asked Professor Harries and Dr Ramsay, how well are we doing? Where would you see us on the score card in using the tools that we already have, let alone procuring new vaccines?

Professor Sir Andrew Pollard: It is important to say that when you look overall at the programme we are one of the top-ranked, but the point that everyone is making is that there is still a gap between where we are and where we could be. A lot of that comes back to the discussion you had in the previous panel about how we get higher coverage. There is the threat of measles coming back, which we think is very real. There is potential threat from polio transmission. We have seen some outbreaks of diphtheria. All of those are potentially preventable by having higher coverage rates. That comes back to the communities that do not access immunisation.

We perhaps need a taskforce around access to drive that forward to make sure that those individuals are covered. When you have just come out of a pandemic, when those same groups were those who found it the hardest to access immunisation, it is a stark reminder that for peacetime, if we fix this problem, we will be much better prepared in a future pandemic for accessing communities where there is a problem of trust and so on.

Of course, at the moment we run our health systems in the way that works for the majority of the population, but for those where it does not work we need to think about what could be done differently. We have identified the problem, but I do not think we have all the solutions at the moment. That example in London is an important one, where in the same communities where polio vaccination rates are low, the rates for all other vaccinations are low.

Chair: It is very interesting. There is so much more we can, and will, discuss with you. I will bring in colleagues who are eager to speak with you, starting with our own doctor, Dr Caroline Johnson.

Q86 **Dr Johnson:** I want to start with a question that goes back to what you said about measles and polio and the emergence of diseases which we have vaccinated against for a long time and which we thought had gone away in the UK. One such example is diphtheria, where we started a vaccination programme in the 1940s that largely eradicated the condition. We would see single figures of cases each year. Then, suddenly last year, there were 50 reported cases of diphtheria and very serious infection. These were mostly in the migrant population. What is UKHSA doing to make sure that that is contained, that those people are appropriately treated and that the disease does not spread further?

Professor Dame Jenny Harries: I will start and Mary might want to add to that. We are working directly with the Home Office. We actually have a vulnerable populations group. We have expertise there in migrant workers. For example, we have produced a booklet to help services that are receiving migrants to look after them and ensure that not just the diphtheria vaccination but, of course, all of their other healthcare needs are identified and then managed.

There was particular advice, and people will be very aware, I am sure, of the Manston centre and the other work early on, when there was concern about overcrowding. We worked directly with the Home Office. The south-east health protection team—UKHSA's health protection team—worked directly with them to provide information on how they can safely manage not just the occupants of those settings, which is usually for a relatively short period of time, but things like safe travel out to other areas of the UK.

There is not actually an NHS-provided vaccination programme in those centres. It is Home Office contracted private provision. We nevertheless ensure that all the right information on vaccination is provided to the centres and the Home Office. There has been a lot of work on that, which has helped not just for vaccination but in wider areas as well.

We also work with directors of public health, so I hear from both directions—what is proposed and what actually happens on the ground. One of the unique features of UKHSA for the UK, in comparison to other countries, is that we have a public health system, with scientists and laboratories, but also with reach directly from the Secretary of State through policy right down to a director of public health out to every community. It is a challenging environment and work is still ongoing, but through that means we try to help control it. Mary might want to comment on background vaccination rates in non-migrant populations.

Dr Ramsay: Our diphtheria vaccination rates, although they have fallen a small percentage over the last 10 years, remain very high. Almost all of the cases we have seen have been in asylum seekers who have recently arrived. They have not acquired the infection in the UK. The key thing is to protect that population as early as possible, which of course has been very challenging because when they come in they are vulnerable, having just come off a boat or whatever. They may be cold. Getting appropriate services to them is challenging. Then they move quite quickly.

We have been working very closely with the Home Office to try to make sure people can get both antibiotics and vaccines early on. When they move into the general community, they should be picked up through the routine health services and given all their vaccines, and other things as well. I think the risk to the UK population is very low. The risk is absolutely to that population, and it is a challenging group to protect, but that is where all the cases have been—recent arrivals.

Q87 **Dr Johnson:** There are obviously members of staff from the Home

Office, Border Force and health services, and other people, working with this group of people. How long do the vaccines that they have been given as children last and how long are they effective for? Is there any evidence that we need to provide boosters to immunity, either for the staff working with this population or to the people living in the surrounding areas?

Dr Ramsay: Generally, childhood vaccination will give you lifelong protection to some degree. It may not be a complete protection, but it will certainly be a protection against more severe disease. The diphtheria vaccine is one of the most effective vaccines we have.

We have not had any cases in staff or staff members. All the cases have been in asylum seekers themselves, perhaps because they have come from countries where their vaccination services were disrupted, so they may have had no vaccine at all. I do not believe there is a significant risk to staff working in those areas, both because of the level of contact they have with that population and because of their background health status and immunisation status. As you say, they should have been vaccinated as children and we would expect them to have virtually lifelong protection. We give boosters to people who have specific exposures in the household, for example, or who are travelling to work in countries where they are going to be for a long time and may not be able to access services, but we do not believe that people in the UK need that protection.

Q88 **Dr Johnson:** That is really helpful. The other condition for which we have had a period of additional vaccination is monkeypox, or mpox as I think we now call it. Has that been effective?

Dr Ramsay: The mpox cases have dramatically declined since the beginning of this year. How much of that is due to the vaccination programme is difficult to attribute because there were other changes going on; both raised awareness and increased diagnosis changed behaviour to reduce the risk of spread. We think that we have now vaccinated a reasonable proportion of the highest risk group. The disease was circulating in a very high-risk group with a large number of sexual contacts. We believe we have good coverage in that group. That will protect us against the infection perhaps coming back in from overseas, but at the moment the rates remain very low. We have had only a handful of cases this year. It is looking like the whole process that we put in has protected that population. A component of that is obviously the vaccination.

Q89 **Dr Johnson:** That is great to hear; thank you very much. My other question is for Sir Andrew Pollard about the vaccination programme and the JCVI in relation to children's covid vaccines. Could you tell us, if you know, how many children have received the covid vaccine in the UK? How many children were admitted, not just with covid but because of covid, to hospital? How many children died due to covid? What proportion of those patients were vaccinated?

Professor Sir Andrew Pollard: I have to defer the questions on covid vaccination to Dr Ramsay. The reason for that is that I was involved in development of the Oxford AstraZeneca vaccine. I have not been involved in the JCVI covid committee. I chair the committee for all other vaccines, but not the covid vaccine.

Dr Ramsay: There is no doubt that in the early part of the covid epidemic, we were seeing serious cases in children. There were two types of cases. It was mainly in children with underlying vulnerabilities. Children with neuro disabilities were getting very severe infection very early in the pandemic. We were seeing another condition called PIMS, which as you know is an inflammatory condition that seems to affect healthy children but is quite rare. Overall, children were at much lower risk than older people.

As the pandemic evolved, obviously we moved into omicron, which seems to have a much milder presentation. Also, a larger proportion of the population has been immunised, either by having a vaccine, which has had a very high uptake in adults, or by natural infection, which has been very common in children as well. Now, we see very few severe cases in children. That reflects the fact that the JCVI policy on who should be vaccinated against covid in childhood has moved from a universal programme, which was the original recommendation for fives and up, to now being a selective programme targeting only children at very high risk. That is a very small number of children.

We have not seen very good uptake in that group. Reflecting knowledge about the severity of covid, parents have chosen, for whatever reason, not to have their child vaccinated. In that universal group we have very low levels; probably 10% or so is our covid vaccine coverage. That reflects the change in what we have seen with the epidemiology over the pandemic. Now, we are saying that vaccinating healthy children is probably not a priority.

Q90 **James Morris:** Obviously, covid presented particular challenges. Something new emerged; we learnt about it; and then Government, working with industry, rapidly provided a vaccine solution.

Professor Harries, you said that a new model is emerging in peacetime, if that is the right way of describing it. What lessons do you think we can learn from how we responded to covid for that new model in peacetime for responding to new and emerging threats or existing immunisation challenges?

Professor Dame Jenny Harries: I welcome the question. I am going to try to set out what we have in mind in UKHSA, obviously discussing working with what is a really important JCVI in the UK.

Interestingly, covid was what I would call quite a clean example of vaccine usage. You had everybody focused on a single mission. You had resource entirely focused on that because it was the top priority for the

country. Industry, scientists and the NHS—the whole system—were also focused on it. That is not how we will need to work in peacetime. It is a much more complex system. In fact, even with the covid vaccine now, as we start to utilise and benefit from the very new vaccine platforms and developments, it is a very muddy picture in immunology terms, in the sense of which vaccines individuals have had and the need to continuously monitor and refresh.

Going to your critical point, we heard from industry colleagues that one of the difficulties is for industry to identify the end-to-end system where they can contribute efficiently and effectively to the benefit of industry, and we can also run in parallel alongside them. It was the culture of close working together for a single mission that was really important. What we have done in UKHSA—still very early days—is to set up a vaccine development and evaluation centre, which is what I describe as the front door for industry. If it is a confusing picture beyond the front door, we will sort it out, but that is the way you can come into the system.

UKHSA Porton Down already has numerous examples of work with industry, or with CEPI and various others, on phase 1 to phase 3 clinical trials. There is a very high quality of work which is recognised by industry. There is a front door. We have absorbed the Vaccine Taskforce into UKHSA, but it is still very separate. It is a much smaller group, but it is now the covid vaccine unit. That then aligns with our vaccine development and evaluation centre. What you will see is that we are gradually trying to incorporate the learning about the culture, the flexibility and the end-to-end working, if you like, right through that long chain.

At the other end, the part that often is not recognised is the continuous need for evaluation, which includes the need for important and timely data flows, which we might come back to, and then we are co-locating with MHRA from July.

Q91 **James Morris:** That is very helpful. One of the panellists in the previous session talked about the dangers of the tripartite system, where you have industry working with you and the JCVI. Isn't there a danger in that tripartite system of things getting lost, particularly when you are talking about data flows and so on? It has the potential to be a slightly fragmented structure, especially if new and emerging threats suddenly come out of the clear blue sky. Professor Pollard might want to chip in.

Professor Sir Andrew Pollard: It is important to understand how the relationship works between those parties. UKHSA supports the activities of JCVI, providing surveillance data and intelligence. There is also their own scientific advice and various proposals about how immunisation might move forward.

Our sub-committees meet with industry, so industry is feeding in directly, as well as there being the relationship with UKHSA to share data, as you heard from Jenny Harries. That bit of the system is quite well joined up,

but it is important that the main JCVI committee remains independent from industry. They do not come to the main sessions. We do not want commercial direction driving the scientific advice that we give the Department of Health. I think independence is preserved through that process, and we still have input from industry.

I see comments in some of the discussions about the transparency of the process. In JCVI we publish our minutes within six weeks of every meeting, so that all of the decision making and the data that lies behind it is present. The process is transparent, with the exception of commercially sensitive information that our pharma colleagues have asked not to be put in the public domain. That is the only bit that would not be transparent. I am not quite sure I completely understand the comments about transparency because I think it is a very open process and obviously follows the guidelines, both from the Treasury Green Book around cost-effectiveness as well as the process in the JCVI and the terms of reference, which are publicly available.

Q92 **Rachael Maskell:** Through this period we have had quite a lot of reorganisation of agencies, as well as the whole of the NHS. Clearly, if we are looking at delivery, it is important that those agencies can work very closely together. If you have the national focus, which we have clearly heard is really important, where should the delivery strategy be? I certainly know, from looking at York during the pandemic, that there was real frustration locally that there was not as much scope to innovate as the community, DPH and so on, would have wanted, whether around child vaccination delivered from another body determined by NHS England or around community vaccination. Of course, some of that is all changing through the funding, the focus or the infrastructure. Where is it best delivered, and how?

Professor Dame Jenny Harries: Mary will have some good points to make around primary care delivery. Perhaps I can give an overview at national level.

What this country has predominantly had is an NHS delivery model, and it has served us very well. Mary will flag why that is really important in some areas of vaccination. I think now that there is an opportunity. We have seen behaviour in residents change during the pandemic. People are happy to receive a test and send things back. There are opportunities for us to think much more widely about how we can deliver vaccination. For some groups it will be important that that remains in primary care.

We have a behavioural insights team in UKHSA. That is a scientific team, just the same as laboratory scientists or our immunologists. They provide regular information back. We know that, despite the mis- and disinformation comment, which we might come back to, actually around 90% or above of families with young children engaging in an online survey for that are very positive about vaccination processes.

When we talk about a national vaccination strategy and the NHS vaccination strategy, what has happened is that the conversation has focused on the huge complexity, rightly, of the issues you are raising about what I would call the implementation end. That is the focus of the discussion now. We heard earlier about ICSs, and that is still an untapped potential area where we are trying actively to engage.

There is an interesting thing, although sad for me, looking at the Hewitt review which has just been published, in that it does not mention anything about UKHSA or prevention and vaccination in frontline systems. We work directly with public health directors. We improved the data flow to them, which is critical for them to be able to identify communities that they can support and encourage. I think there is still work to do across the system. The infrastructure for absolutely timely data is a critical point as well. I think Mary will want to comment on families particularly.

Dr Ramsay: I have been in immunisation for 30 years. Every time the NHS restructures, my heart sinks because we have to reinvent the wheel. The lesson from covid is that strong national co-ordination and a national vertical programme can deliver, but obviously you have to be able to have local delivery as well, and locally tailored delivery. I think a campaign is very different from the routine programmes. With the routine programmes we are protecting people for life, and it is about having a sustainable, consistent offer and following up. All of those things work better in a joined-up system.

Fragmentation of the public health system, in particular after 2012, was one of the weaknesses that we were trying to put back together. A lot of the workload fell purely on to general practice. I believe that general practice does a brilliant job. Practice nurses are trusted and are experts in immunisation. They can deliver very effectively to the bulk of the population. General practice has a registered population they can reach out to, but obviously there are particular populations who do not form part of that. They are not registered or they may consult their general practitioner less regularly, or whatever. They may be more marginalised.

You need a combined approach. You need strong national co-ordination and consistency, but you also need local ownership and local listening to communities about why they are not accessing vaccines. It may not be that they have hesitancy about the vaccination. It may be practical things like someone has to look after the kids while they are getting vaccinated. With big families that is a classic message we get from some populations that tend to have larger families. Those sorts of things need to be tailored locally. It is about allowing providers and public health teams to work locally to tailor services to reach out to the last 10% that we are not getting to through the routine programmes.

You need both things. It is important that we do not throw away the baby with the bathwater. We know that general practice does a brilliant job.

We know they have a group of people that is their population and that they serve, but we need to work together at local level. Hopefully, ICSs will see that as a new opportunity. We also need it even more locally. ICSs are still quite big. We need more people who know their local communities and what the issues are.

Q93 **Rachael Maskell:** I want to pick up on the issue around hesitancy and where people sit on that. Clearly, we know there is a greater propensity in areas of deprivation of people who are unvaccinated. I often listen very carefully to the national messaging, which is very positive for all the right reasons, but I do not often hear it absorbing some of the questions so well and then responding to that. What is the thinking around taking people on that journey now, especially with the risk of increased silos created in social media and so on, as opposed to the "This is good for you" approach?

Dr Ramsay: This is a challenging and constantly changing area. I think the evidence is clear that the best way to approach people is with the positive and not to spend a lot of time addressing the negativity. That actually raises the profile of negativity and can cause even more concern.

As I said before, I think with the vast majority of people who do not get vaccinated it is not because they have genuine issues. It is more to do with access and outreach. Our approach culturally is to normalise and promote the positive. A big push is not necessarily helpful. That can sometimes reinforce conspiracy. There are very small numbers of people who are completely anti-vaccine.

Q94 **Rachael Maskell:** Small and vocal.

Dr Ramsay: They are very vocal, yes. Andy may have views on this as well because he obviously does some work in this area. It is about emphasising the positive and the normalisation of good practice to get vaccinated.

Professor Sir Andrew Pollard: Yes, I agree with Mary's comments. The chief issue, if you want to increase coverage, is to work out with local communities what the particular issues are around access. That has the potential to have the biggest impact on vaccine coverage. The individuals who refuse vaccination are a relatively small proportion, and it can be much more difficult to have an impact there, but addressing access and having information from trusted sources for those who are somewhat hesitant, so that they have an opportunity for discussion, can change the coverage figures to where we would all like them to be.

I certainly agree that the evidence is very much in favour of not reinforcing negative messages. If you go out and do battle, whether it is a scandal in business or around anti-vaccine sentiment, you have the impact of reinforcing the negative and making people more aware of it, rather than providing the correct information about the huge impact that vaccines have for human health.

Professor Dame Jenny Harries: Could I add to that? I support it completely. UKHSA has just been to the World Vaccine Congress in the US. I was sitting on a panel where we were responding to that. I absolutely endorse what has been said. The amplification and the polarisation of the debate appears to be linked to a very strong decline in US vaccination rates, so we need to be really cautious about that in the UK going forward.

I disagree with very little of what the previous panel said, but there are two areas where I have some caution. One is in trying to mount a direct response. As Andy and Mary said, the actual proportion of anti-vaxxers is very small. We need to get positive and helpful information out to them.

The other area is in direct pharma work in local communities. My anxiety is that if you look in other areas pharma is not trusted. We want to work with the industry. I am sure that is very evident and clear. That direct work-across with local communities, who still need to become confident, could be quite detrimental in the interim, so we need to be very careful.

Chair: I am going to bring in Paul Blomfield in a minute, but before that I will bring in Paul Bristow, who has joined this session.

Q95 **Paul Bristow:** Thank you, Chair. I want to continue the questioning around this. I was going to ask something else, but I was very interested in your answer. Do you feel that there has been adequate research into the effectiveness of vaccine communication to particular communities? There are schools of thought. You are right that there is a very small number of anti-vaxxers, but I fear that their reach is wide, and they are very vocal. I have seen it particularly in very vulnerable communities that do not speak English as a first language, and the impact that anti-vaxxers have had on those communities. Do you think there is enough research into what you have said? By not taking the anti-vax message head-on and just being positive, has that had a wider impact? What research has been done into that?

Professor Dame Jenny Harries: As I say, we have a behavioural science unit. There is a lot of research. I am very confident that we could do more and understand it better, along with a positive approach. We, in UKHSA, translate and have a whole series of obvious communication things to try to land messages safely. They are mostly branded with the NHS, which is a trusted brand. They are designed for different populations, with easy-read or braille for different groups. Those are the practical things.

Going back to the earlier conversation, one of the important things is to find the trusted leader. I think that is a learning point. It is working with mosques, for example, and finding the leader. We have a group of ethnic minority health leaders. Surprisingly, there is low uptake in some health leaders. If you are coming in as a member of the public and you are not sure, and you find that your own doctor is not vaccinated, that is quite a challenging situation. We should test ourselves on whether we are able to

give the right information to our clinical colleagues, primarily, because we know that message will be amplified.

The Powell discussion was very interesting because Australia similarly shares the view that it is not a good idea to amplify the anti-vax message, but there are still opportunities for us to learn more about how we can contribute positively.

Q96 **Paul Bristow:** That is very helpful. I can emphasise the point you made about community leaders and how that has worked. It worked incredibly well in Peterborough, for example, which is a very diverse city.

You talked a little bit earlier about diphtheria, polio and measles. What is the risk in your mind that the emergence of other diseases will occur as vaccination rates lower?

Dr Ramsay: The only reason we have good control of those diseases is vaccination. It is very variable. It depends on which vaccine you are talking about, and how long it might take before you get an emergence. We always talk about measles as the canary because you need very high uptake to keep measles out. Measles will be the first we get back at scale. If someone as an individual does not get a vaccine, they remain at risk if they travel to a country where the disease is more common, or if they are unlucky enough to come into contact with it, maybe through working in healthcare. They could get the disease.

We can always have diseases coming back, but we have strong herd immunity for a lot of our diseases. Although we have had a decline, we should not panic too quickly. We have time to get it back. The key thing for vaccines that work for life is that you do not give up. You do not say, "Well, they are five now, so we're not going to give them a chance to get vaccinated again." It is important to have all those opportunities to catch people up as they age. We are not as good at getting people back in and vaccinated once they are over school age. Young adults may be under-vaccinated for measles because they did not have the vaccine in 2000 when there was concern about MMR, for example. We need to use opportunities to get those people back.

Q97 **Paul Bristow:** Do you feel there is adequate understanding around the challenges of declining vaccination rates among public health decision makers, or do you think that we are overplaying it?

Dr Ramsay: It is difficult. It is much easier to make that argument once you have an epidemic, but I prefer to do it beforehand. It is a challenge to try to sell it. We have to get ahead of the curve. It is that classic thing. We have to do it beforehand. I don't want to wait until I have had an epidemic of measles before I say, "Let's get vaccinated."

It is always a challenge getting leaders and the health service to prioritise, catching up with MMR, for example. We have been working with the NHS for some time. They are doing a lot of work now in MMR. Hopefully, in London this year they will be doing a little bit more on polio

and MMR to try to catch up on what we have lost out over the last five or 10 years in London, where there is a particular gap. It is challenging in the absence of disease. It is easier once you see that the disease has come back, but because of that complacency we have to keep pedalling away, I guess, at that message.

Q98 **Paul Bristow:** Do you think that our political leaders and masters appreciate that challenge?

Professor Dame Jenny Harries: It is interesting. Obviously, we are just coming out of—we are still in—a pandemic. It is very clear that everybody, including politicians, has been focused. The one thing that was really differential in our very high continued success rates for uptake and boosters in the UK, if you compare it, is that there has been complete cross-government and political support for the vaccination programme. I think that is really important. The public look to both political support and professional and scientific support. It has been just about unanimous across the UK. That is a really important point to take forward.

It is always difficult with any prevention or health protection programme, in that the minute you start moving away from the perceived reality of the risk, rates drop off. There is a wider issue about longer-term education. I am very sure that public health professionals understand it, but the translation of it is perhaps something we need to look at going forward.

Chair: As trailed, Paul Blomfield.

Q99 **Paul Blomfield:** Fairly briefly, because I think some of the ground I was intending to cover has been covered, there is this area of recurrence and how we assess risk before problems emerge. We have talked about polio and measles. What about TB, for example? We stopped systematically vaccinating against TB almost 20 years ago. How do we assess long term the impact of that and make decisions about whether there is a need to review those sorts of decisions?

Professor Dame Jenny Harries: I will start at the national level and then Mary will explain what happens, because there is a programme sitting behind all of this. One of the things that is interesting is how widely what goes on a lot of the time is understood.

The new thing we are trying to do in UKHSA is to build a picture, which we share with industry and continuously talk through, about what diseases are out there, what the health burden is for the country and what the preventable risks might be. I don't think that was done in a systematic way prior to the pandemic. It is done for individual diseases, but we have not had an organisation that has taken responsibility for looking through it. That is a piece of work we have kicked off.

The idea will be that we share that work with industry, so that rather than going to them and saying, "What vaccines do you have on offer in

the next five years?", we can say, "These are the conditions and diseases that we are worried about. In a systematic way, can we work to align production in the disease so that we get the most effective vaccination programme?"

Picking up your example of TB and others, Mary will tell you about the work that the secretariat is doing.

Dr Ramsay: All of UKHSA has sections that look at specific diseases of various types. They all do what we call surveillance; we monitor rates of disease and uptake of various interventions. We monitor prevalence of infection, sometimes through carriage studies or seroprevalence studies. All of that work is ongoing for each disease area.

The example of TB may not be the best when it comes to purely vaccine, because the current vaccine plays a relatively small role in the control of TB. There are other aspects of the control that are more important. We had a TB strategy that was very successful, and our TB rates were declining, until very recently. During covid—I would have to check precisely where we are—it has perhaps stabilised and not carried on going up as much. I do not think vaccine is a huge component of that. The vaccine is still offered to people, and babies, at particularly high risk, but it is not that brilliant a vaccine.

There has been work on trying to develop a better vaccine that may have a bigger role to play in controlling TB, but that has not been as successful as we might have hoped. It is something that we might see in the next few years. Vaccination is not the only control measure. Detecting cases, treating cases and following up contacts is part of the health protection role that the whole agency is involved in at local and national level.

Q100 **Paul Blomfield:** I guess a lot of the covid stuff in Test and Trace was the forerunner of that, with some of the work being done around TB.

Dr Ramsay: With TB you have a bit longer. That is the big advantage. All that sort of case-by-case follow-up is really important in TB.

Q101 **Paul Blomfield:** Jenny has helpfully explained the approach. What is the role of JCVI in this? There is some suggestion from industry voices in the evidence we have received that you are not sufficiently resourced or do not necessarily have the structures in place to do that adequately.

Professor Sir Andrew Pollard: A major component of what JCVI does is to review all immunisation programmes on a cycle. The information, for example, that Mary has just spoken about regarding TB has been reviewed relatively recently, with the latest surveillance data and a review of the programme, but for a slightly different reason, around individuals who are more at risk of TB. There is a regular review across all immunisation programmes to look at how they are performing and what the potential threats are.

As far as your point about resilience is concerned, there has been an increase in support for JCVI during the pandemic, and that has been very welcome. Obviously, there was a huge amount of additional work to support the covid committee, but we are now starting to see the benefits of that across other programmes.

To be honest, I think we found it very difficult over the last years, before the pandemic, to make rapid progress because of inadequate resource. That is partly for the secretariat, but perhaps the primary problem—as the Chair may remember—is around the modelling capacity, which is to look at the impacts that a new vaccine programme might have in the NHS, where we have to provide the cost-effectiveness data that will be needed for the Department of Health and subsequently for the Treasury. To do that very complex mathematical modelling takes a lot of resource, and it has not been adequate in the last decade. That is a major area where we could speed up decision making if it was much better resourced. Whether it sits in academia or in UKHSA, there needs to be much better resource.

As for looking at what is coming—Mary mentioned the potential TB vaccines—the secretariat reaches out to all commercial producers of vaccines, as well as academic groups and biotechs, every year. We have a very good view of what is coming down the pipeline. That information is not put into the public domain because industry considers much of that information commercially sensitive. On the point about horizon scanning, I think we do that rather well. We have a very good view of what is happening, but we cannot put all of that out publicly, unfortunately, because of the commercial sensitivities around what is in early stages in the many industry plans.

Chair: Very interesting.

Q102 **Dr Johnson:** I have a quick question about the TB vaccine in children. If we go back to when I was a child, we were all offered the TB vaccine. It is now only children whose parents or grandparents are from, or reside in, particular nations where TB is higher, or those who live where prevalence is particularly high, such as London.

How effective is that as a strategy? Are we putting people who do not fall into those categories at a higher level of risk? What awareness is there among parents, particularly if they were to move when a baby was a few months old from a low prevalence area to a higher prevalence area, or to a different country? If dad or mum start a job in a different country, what work is done to ensure that the family get the vaccine catch-up, as it were, or is there not that effort?

Dr Ramsay: This is quite complicated. The vaccine works better when you give it at a younger age. The best time to get it, if you are eligible, is as a baby. We have now moved, as you said, to a selective programme where it is given neonatally to people at particularly high risk. A relatively small number of areas in the UK now qualify. It is mainly based on

people's heritage, coming from countries where there is a high risk. That is a very difficult metric to monitor. We are now getting some data through, suggesting that coverage rates are higher. We have had different models of delivery, with some people doing it in hospitals and some people doing it in the community. Again, we have been working very closely with NHS England to try to make it a more consistent offer, so that people who move between areas are offered it at the same age. That data is flowing. All of those factors are improving.

Do you mean that if people are moving abroad they are able to access it as a travel vaccine? Is that what you were thinking of, or is it people who move in?

Q103 **Dr Johnson:** It is more the fact that people's risk profile appears to be done on something that can change. Thinking about my constituents, they mostly will not be offered this vaccine because they are not in an area that qualifies and the majority of them are not from a country, or do not have relatives from a country, that would qualify. Are my constituents at a higher risk as a result because, if they were to get a vaccine later, it would be less effective as they would no longer be babies and the prevalence of TB is increasing? If it increases further and they suddenly find themselves in an area, would they be offered a less effective vaccine?

Dr Ramsay: The basic underpinning of all of our programmes is that we have surveillance in place to pick up that they are working effectively. As I said, until very recently the rates were falling, and we were doing very well. The risk was declining in the UK population. The really high-risk population was confined to people who have a heritage where they are potentially exposed from families and relatives overseas, or they were infected themselves as children and then developed reactivation in later life. That is what the epidemiology told us, and that is why the programme matched that.

Clearly, our surveillance is vital. We never stop surveillance. As I said, we have seen a stabilisation of rates over covid, which may be what you are referring to. It may well be that we begin to see an increase again. Obviously, then the policy would be reviewed as part of our process in UKHSA, in how we work locally and what the local systems are to control TB, which is not just vaccine. It would also go to JCVI for discussion if it seemed that the programme was not achieving the aims that it was designed for.

Q104 **Dr Johnson:** If one of my constituents has a baby today, they are not offered the vaccine. Next year, when the baby is one, if they are offered a move to a high-prevalence area of the country, would there be any mechanism in place for saying to them, "Your vaccine is not going to work as well as it might have done if we had given it to you last year, but we will give you it now," or do those people just get lost?

Dr Ramsay: The period of highest risk is neonatal. They are partly past that period of higher risk, but there are some catch-up opportunities. If they moved at a slightly younger age, they would be able to get the vaccine in the new area. The number of areas where we offer it to every child is declining quite quickly. There are only five or six areas in London that are still above the level. The idea is that, overall, the country's risk is declining, and therefore the risk for an individual moving in the future is going to be lower even in the area they go to. Their age also protects them to some extent. As I said, the highest risk is the neonatal period, so that is why the programme focuses on those individuals. There are other mechanisms that we would use to control TB in older individuals.

Q105 **Dr Johnson:** You are happy that it is effective.

Dr Ramsay: At the moment, I am. Obviously, we never take our eye off the ball. We are constantly monitoring it.

Chair: Our expert closer is Paulette Hamilton.

Q106 **Mrs Hamilton:** I don't know about that. Please take this as me being devil's advocate. It is going to be quite challenging.

Earlier, Professor Jenny, you talked about the NHS being a trusted brand. When you look at large numbers of ethnic minority groups, moving on from what Paul said, many women feel that they are ignored during the stages of childbirth. One in four black women might actually die.

People coming from abroad do not understand what the NHS is about. During covid, you had more fear in the communities than anything else. If you are looking at prevention and what is happening in midwifery, health visiting, public health and all the services that normally work quite closely together, at the moment they are quite disjointed. They do not have the staffing levels. Input is not being made into the service.

Looking at national level at the JCVI, they are not being paid for what they are doing, so I am struggling to understand. This is where your involvement, Andrew, is important. I do not really understand how much input you really have into what is happening locally.

The bigger picture for me—using your words—is that you talk about the NHS being a "trusted brand". If we are going to improve vaccination levels, surely we need to ensure that some of the broken pieces in the NHS at the moment are joined up. We may think—I may think—that the NHS is a trusted brand, but there are many different groups, not just ethnic groups, that are frightened of us.

Professor Dame Jenny Harries: That seems like an appropriately challenging question, which I welcome. I will decline answering Andrew's pay request for the JCVI. Throughout the vaccination programmes there are huge numbers of public health professionals and academic research leads who have put in hours and hours. They want to see rises in coverage, and the protection of the population is their primary aim. That

is why the system is set up in an unbiased way to try to generate trust in the outputs.

My statement was a general one. As a general point, the NHS is a trusted brand. It certainly has been until very recently. I recognise some of the reports. There is the report into maternity services, and that the NHS is going through a particularly difficult time at the moment. I recognise that, but we do not just do that. To use as an example the mpox vaccination programme, which was raised, the majority of the vaccination programme was not branded either UKHSA or NHS. The messaging was delivered through the various advocacy groups for MSM populations, because we know that those are trusted. A message coming straight from Government is highly unlikely to reach those individuals effectively.

I would not like you to think that we just put "NHS" on something and say, "That's it." It is not. My very first role as a director of public health in south Wales around vaccination—to use it as an example—was in the ex-mining communities. If the grandmother was in favour of vaccination, all of the children in that street were vaccinated. I knew that that was the person I had to reach, and that was where I needed to challenge and get feedback.

As we have said, for much of this it is about knowing local communities. It is about working through directors of public health. We increasingly do that. One of the areas I would like to flag is that we had a stellar dashboard for covid in a way that had not been achieved for timeliness previously for other vaccination programmes. If we can move ourselves forward to that, it gives industry opportunities for better informed data or more timely data. It is not better informed; it is robust quality. It also gives local leaders and directors of public health the opportunity to work with their local communities. We accept the challenge because we are absolutely there.

Finally, UKHSA is very new. We have been spending our first year reacting and responding on the health protection side. We have a new equity strategy coming out. We are scientifically based, but we take with it our public health responsibility on reducing inequalities in health outcomes.

Q107 **Mrs Hamilton:** Dr Mary Ramsay, do you want to say anything?

Dr Ramsay: Vaccination is only one element of the outreach work in primary care prevention at local level. Obviously, we are talking about vaccination, but all of those principles probably need to be applied across the board in promoting health and promoting prevention in the communities that are less well served at the moment. I completely agree with Jenny that we need to get the public health system working together. That is what happened so effectively in covid. We need to reinvent that, or re-energise it, so that we can hopefully get more trust but also build trust as a partnership with those communities.

Q108 **Mrs Hamilton:** Andrew, you have the final word. It is more about resources. I think you do a fantastic job, but you have no funding or anything. You have nothing to do that work.

Professor Sir Andrew Pollard: The members of JCVI are independent experts, mostly from universities or the NHS. I think everyone feels that it is part of their mission in life to support the scientific advice that is given to Government around vaccines. I do not think the funding specifically of the members is the critical issue. It is much more around the support that there is to provide the information, the data, to write the minutes and to do some of the scientific work that is required; for example, I was making the point about cost-effectiveness modelling.

The other point in your question was about how aware we are of the issues at local level. I think the answer is that we are very aware of that, but the delivery end is something that falls within the NHS rather than the JCVI. We are extremely worried about the issues you have raised on coverage. Access, particularly in certain groups, is something where certainly there has been research to show the problem, but we still have a lot more work to do to fully understand what the best solutions are to improve access. Where primary care at the moment has not been able to reach those communities, what would be a good alternative?

I live in Oxfordshire, and 25 years ago there used to be a community team. If there was a hard to reach group, they would go round to those communities. They were very trusted, and they would deliver immunisation. They were even in the family home in that community when there was a particular problem. There just is not the resource in the NHS to have that sort of set-up today. The same capacity issues that we see in hospitals are in primary care, health visiting and the midwifery services.

Perhaps the one answer to this is that there is a capacity problem in the system. Whatever reorganising we do does not solve it if you do not have enough capacity in the system at the delivery end. I am not sure, from a JCVI perspective, that the delivery bit is something we can influence. That has to come from resourcing locally, which is where the issues are.

Mrs Hamilton: Thank you for that.

Q109 **Chair:** Finally, we have mentioned covid and flu today. Is the combined vaccine a thing at the moment, or is it still in development? I presume that is a bit of a holy grail.

Dr Ramsay: Yes, although it may be that in the future the two programmes do not align as closely as they do now. Obviously, our colleagues in the previous panel are all working on that. I believe that they are looking at combined vaccines. One of the problems with bringing vaccines together is that they may not work as effectively as they do separately. That is a challenge. We do not want to undermine the effectiveness of one programme by lumping it in with another, necessarily.

Q110 **Chair:** On shingles, am I right in saying that there is now a vaccine for the over-50s that is being rolled out? Is that true? What is the efficacy of it? What impact could that have on primary care appointments, for instance?

Dr Ramsay: We already have a shingles vaccine which has been used successfully in the over-70s. We are moving to a programme with a newer vaccine later this year, which is a slightly different vaccine and more effective. We believe it probably lasts for longer than the older vaccine.

Shingles is no doubt a major cause of hospital admission, GP consultation, pain and suffering. We estimate that for every 1,000 vaccines that we give, we prevent an admission to hospital. It is a very good bang for your buck, so to speak. We want that programme to be rolled out effectively later this year. Coverage has fallen during the pandemic, partly because it was in the same population. We were also doing flu and covid too, but we definitely need to address shingles over the next few years.

Chair: Interesting; thank you very much. That concludes our second panel in this morning's session. Professor Sir Andrew Pollard, thank you very much for joining us—time for bed. Dr Mary Ramsay and Professor Dame Jenny Harries from UKHSA, thank you so much for joining us.