

**Oral Evidence Session – All-Party Parliamentary Group on Coronavirus**  
**Winter Plan – International Comparisons**

5 October 2021

**Layla Moran MP**

Well, good morning to all for this session of the All-Party Parliamentary Group on Coronavirus. Today we will be looking at the UK's winter plan, but we will also be looking at how we are doing compared to other countries. And so, we'll have two sessions, the first focusing primarily on the international comparators and then in the second session in 45 minutes' time we'll be diving a bit deeper into the UK specific response. So thank you all for being with us. I'll introduce our first panel and then when we get to the second I'll introduce whoever is joining us.

So we are really delighted to be welcomed today by Professor Neil Ferguson, Neil Ferguson is the Founding Director of MRC Centre for Global Infectious Disease Analysis at Imperial College London. He also heads the NIHR Health Protection Research Unit for Modelling and Health Economics, and the Jameel Institute for Disease and Emergency Analytics, J-IDEA. So welcome Neil, thank you so much for being with us. Next we have Professor Martin McKee, a good friend of this committee, thank you for joining us again Martin. He is Professor of European Public Health and London School of Hygiene and Tropical Medicine. He is also Research Director of the European Observatory on Health Systems and Policies, and in September 2021 he was elected as President of the British Medical Association. Congratulations on the new title and thank you so much Martin for being with us.

**Professor Martin McKee**

I'm actually President Elect, so I take over next year.

**Layla Moran MP**

Right, President Elect, thank you very, very much and congrats again. We also have Professor Antoine Flahault, Antoine is a Professor of Public Health at the Faculty of Medicine, University of Geneva, where he is the Founding Director of the Institute of Global Health, so thank you so much for being with us, vital to have those international comparators today.

**Professor Antoine Flahault**

Thank you very much.

**Layla Moran MP**

Thank you so much for joining us. And last but not least is Dr Jonathan Cylus, Jon is Head of the London Hubs of the European Observatory on Health System and Policies and a Senior Research Fellow at LSE Health. His main research is on health systems focusing primarily on health financing policy, health economics and health system performance. He's worked on these topics in a number of countries including Cyprus, Liberia, Finland, Malta, Mexico, Moldova, Slovenia and the US as well as with the

European Commission, OECD and the WHO. So thank you all for being with us today and I hope as I've made clear from the introductions we really will not have enough time in 45 minutes to download what we need to from your brains, so thank you in advance for your contributions. I'm going to start just ever so slightly off-piste because I think it would be really helpful to those listening if we could have a couple of sort of setting the scene questions and so I'm going to start by perhaps, sorry to throw you in in Martin but perhaps to come to you and just ask would you mind outlining how are we doing compared to other places, what is the picture right now globally and where do we sit in it?

### **Professor Martin McKee**

Well, maybe I could just focus on where we are in relation to our neighbours in Europe because of course there's such a spread and it's not just where we are at a particular point of time, it's where we are at different stages in the epidemic and clearly as we get beyond Europe and North America there are issues with the data. But in the European context we are really not doing well, so in terms of cases per million, per 100,000, whatever if we were a member of the European Union still we would be pretty close to the bottom in terms of how we're doing. So there are the three Baltic states are doing worse than us at the minute, Romania is doing worse in terms of cases per population but then we come after that and we are five, six times higher rates than many other countries. Now of course there are issues about ascertainment and so on, but even so we're not doing well.

In terms of daily or weekly deaths we're also not doing well, but we're not quite as bad because of course there are some countries like Bulgaria, Romania, Croatia where there are particularly weak health systems but we're still in the bottom third. In terms of vaccine uptake, well we were well in the lead at the beginning but we have now slipped considerably, so we are running at about 66% or so of the total population but that's well behind what we're seeing in Portugal with 85%, Spain about 78% off the top of my head. Ireland is ahead of us as well, France is catching up quickly, so in all of those measures we're not doing terribly well and even where we were doing well because we had that brief advantage with the vaccines, clearly we've lost the lead. A particular issue because we had the various delays in the decision to vaccinate teenagers, so compared to many other countries we're well behind the curve there. So, that's very broad.

### **Layla Moran MP**

That's very helpful, no thank you and we're diving into all of those issues I know in subsequent questions. My second question is to Neil, so Neil obviously everyone very early on was very focused on the models and what we know and what we don't know and we're entering a period of considerable uncertainty, I wondered if you could help us understand what are the parameters that we need to be really focused on and what can we not know at this point as well?

### **Professor Neil Ferguson**

So first of all I'd completely agree with Martin's summary, I think it was a good summary. The one other thing I would add to that is we need to be dependent in Europe on the AZ vaccine in terms of the proportion of doses given out and we know that it is, all the vaccines have suffered in terms of a loss of effectiveness against Delta, but the AZ vaccine has suffered more than Pfizer or Moderna and therefore the key determinant of what's going to happen in the next few months more than anything else, given that most countries have relaxed most social distancing is the level of population immunity traded off against the level of contact rates in the population.

So compared with, for the reasons Martin said and because of the mix of vaccines, compared with certainly Spain and Portugal and probably even France and the Netherlands we are behind in terms of population immunity. One interesting thing is that contact rates, as far as we can judge, contact rates in the population are things which can lead to transmission are still well below normal before pre-pandemic levels and they're actually in the Co-Mix [ph 0:07:58.8], contact rates study run by the London School of Hygiene and Tropical Medicine are actually probably lower than they were in August of last year still, despite schools being re-opened. And probably the best interpretation of that is that a lot, certainly a section of society is still being really quite cautious and that is helping.

So the key uncertainties going forward, and I don't think we're in a position where we can make reliable predictions of what the next few months will hold, the key uncertainties are what will happen to population immunity, we know that it wanes over time. What will happen to contact rates in the population and then laid on top of that the effect of seasonality in transmission due to climate which we still don't fully understand either. It's likely there's going to be upward pressure on the virus but whether we see a very, I personally think it's unlikely we'll see a very large wave comparable to what we saw in the kind of second wave last year, but we could still see quite a substantial wave of transmission and I suppose we'll come onto this but the real challenge will be the extent to which that stresses the NHS where capacity is limited.

So I mean I think one of the reasons we have a high incidence at the moment is these factors, is just the level of immunity in the population versus contact rates compared with our immediate comparator countries.

#### **Layla Moran MP**

Thank you very much. So if I may now go to Lord Russell for the first proper question if you like, thank you for both setting the scene so helpfully. Lord Russell.

#### **Lord Russell**

Thank you very much, yeah this will be directed to each of you in turn so in terms of Covid-19 what can we expect this winter and how do you think the UK will vary from other countries. Martin, could I start with you?

#### **Professor Martin McKee**

Yeah, well really I would defer very much to Neil as the modeller here, I think what the experience has taught me is not to predict the future as it's particularly difficult, because for all the reasons that we have said, you know we expected that after so-called "Freedom Day" there would be a much bigger upsurge but as Neil has said there was much less mixing than we expected, people were much more apprehensive and were holding back, and of course it was better weather and so on. So there are so many unknowns. The one thing I would say just to add to what both of us have already said is that of course we as a country are going into this in a way that we are much less prepared than many other countries and I don't know, I think some of you may have read the report of the Pan-European Commission chaired by Mario Monti that I wrote the evidence, or led the evidence review on and we looked at the reasons why some countries had done better than others. And of course we have a challenge in this country that our social fabric is really quite weak. We have lots of problems with multi-generational households, poor housing quality and so on. So all of those create a sort of backdrop against which everything else happens.

So, you know, for example in Scandinavia and Sweden, despite policies that I think are actually wrong, they have many more single person households, the housing quality is of a much higher level, you've got much more support, less role for the gig economy, so there's all of that, then there's the resilience of the health system and you know on any of the objective measures our capacity in the NHS is much lower than most European countries, four or five times less in terms of intensive care unit beds and so on. So, I think in terms of those issues we have a challenge. Now Kate Ardern will be talking later about the local testing and tracing and the capacity there and I think it's fair to say we published a systematic review of lessons from the first wave, we have not covered ourselves in glory in this country in putting a really effective system into place.

So for all of those reasons on top of whatever the virus might do and whatever we might do to encourage it with mixing, I think we've got a weakened social structure and social infrastructure. I think we've got problems with the capacity and resilience in our health system and I'm not sure that our public health response is as good as it might be, not helped by taking our public health agency and reorganising it in the middle of a pandemic, which is as some people might have said in the past a very courageous decision Minister.

**Lord Russell**

Neil, could I ask you to give your view please?

**Professor Neil Ferguson**

Yes, so as I said in my introductory remarks, I think it is much harder to predict what will happen this year than it was this time last year, and this time last year we had very little immunity in the population, we were seeing a resurgent virus coming into the autumn, this was just before the second lockdown and obviously we know what happened next. We are in a very different position now, we have high levels of immunity even if it's not quite as high as some of our European partners and neighbours. I think we're starting, we wouldn't want to start from here, we're starting with quite a high incidence so we don't have very much headroom for increases, if we compare for instance incidence of Covid cases per day in France, Germany, Spain, Italy and Portugal, they are at a much lower level than us so they can afford to see something of a surge of transmission which they may well, without unduly stressing the health system. We are much closer to the limit of what the NHS can cope with and I mean we'll come onto Plan B and I think that is what is exercising Whitehall and policy makers is that limited headroom.

It is possible and the modelling suggests we could, and just highlights the level of unpredictability, we could see a continued flat incidence, even slow decline if we get boosters out quickly. So it's not guaranteed we will see a large winter surge by any means, but we can't afford to, at the current time, to have too much of a winter surge before really the NHS is very heavily stressed.

**Lord Russell**

Thank you very much, Antoine could I ask you to give your response?

**Professor Antoine Flahault**

Yes thank you for your invitation again. Yes, of course I am completely in line with what has been said. You know in Geneva, the University of Geneva we deliver forecasts for 209 countries and territories

and of course the UK and its nations individually, but we refrain to predict beyond seven days, so I will not be of help for long-term predictions and I completely agree with Neil, it's probably not possible today to predict much beyond a couple of weeks. So what is sure is that there are a couple of countries which are in much more favourable situations than the UK today and I will try to maybe mention one country we did not talk about which is Denmark. I think Denmark you know is very well-connected in the middle of Europe and is densely populated, it's close to the high level of income and close to the UK in a way and it's not easy to compare the UK and particularly England with, I would say with Finland for instance or with Iceland but to compare with Denmark is something possible and Denmark was highly agile and reactive during the pandemic. If you see the performing, how to say that, efficacy in terms of managing the pandemic I will use the mortality, a total accumulated mortality rate which is 45 per 100k population in Denmark, when it is above 200 in the UK. So, it's much more performant in Denmark and the key, they do not use any new tools or any new recommendations you did not use in the UK, but they used them much more quickly than in the UK or even in Italy or Spain or France. They really were the first country after Italy to lockdown in March 2020, they were the first country to have an extended use of the corona pass, you know this health vaccine passport plus immunity. And they were the first one to lift it, of course after the UK, I would agree on that but they lifted when they were in a very favourable shape.

So, they stuck with health indicators and agile to free the people and the population when it is no more needed and to reinstall it very, very soon in the process of the rebound of the pandemic. So I think that is one lesson we could learn from this European country.

#### **Lord Russell**

Thank you very much. And Jon please.

#### **Dr Jon Cylus**

Thank you. Actually I agree with Antoine, I was going to bring up Denmark as well as the poster child of Europe because if you look, you know I think looking at the, obviously I'm not even going to go out seven days in terms of a prediction of what's going to happen in the UK, but trying instead to reframe the question around if we look at peer countries, so similar to Antoine, so if we look at peer countries so countries that have similar levels of immunisation to the UK which would be the ones that have been mentioned, so Denmark, Finland, despite it being more rural, Spain, Portugal of course much higher, Italy, Ireland these countries all have, they are much later in terms of releasing restrictions. So Denmark as again the poster child, they locked down early, they had very good, the [inaudible 0:18:38.0] were very responsible in following mass mandates, they used the Covid pass, but also by the time that they've unlocked which was a bit, I guess about a month ago, you know their positivity rate is only half a per cent and here in the UK we're talking about 3.5%. So if we look across countries that are at a similar rate of vaccination as a share of total population to the UK, you know it's really hard to make a comparison because the UK's strategy is so much of an outlier, so you know opening up, "Freedom Day" on July 19<sup>th</sup>, a little more than half the population was vaccinated whereas if we look at these other countries, you know we look at Portugal which has still not fully lifted restrictions and they are targeting 85%. We look at Spain which is targeting 75%. Finland, sorry I had to look at my list to remember the numbers, Finland is targeting 80% of the eligible population over age 12 before lifting restrictions, so you know the UK's approach has really been, if you're going to compare to countries with similar levels of vaccination, so countries that are arguably in a similar position in terms of you know not including the natural immunity in the population, the UK is really in a much less risk averse position than the rest of Europe.

And if we wanted to look across the ocean of course the US where I'm originally from is not the greatest comparator, but if you look at the State of Vermont, so the highest vaccinated State in the US, similar rate of vaccination to the UK, also a very liberal place, very rural so you wouldn't necessarily expect a lot of contacts and a lot of transmission, but Vermont is facing some of the highest hospitalisation rates and the highest case rates it has throughout the whole pandemic. So, it's not to say that necessarily portends for the UK but I think that there are reasons to be concerned about the low level of risk aversion of the UK's approach.

**Lord Russell**

Thank you very much, Layla back to you.

**Layla Moran MP**

Thank you very much. Barbara Keeley.

**Barbara Keeley MP**

Thanks Layla. Well I think we've already started on the question that I wanted to ask but it's mainly back to Jon and Antoine. The question was what measures across country are Europe and beyond doing to prepare for winter in the pandemic and how does that compare to our plan, and you've already started answering that. Perhaps you could draw out you know, perhaps what other countries are doing on the point of the vaccination rates which have been accelerating and they seem to be making more of a success of that, and other interventions, you know like mask wearing, you know, so if you draw out that detail. Could we start with you Jon?

**Dr Jon Cylus**

Yes sure. So I think in terms of other countries, a lot of countries in Europe have started with vaccinating the over-12s earlier, so before school started, beginning August, some beginning in July. I think the mask wearing, it's basically the three things I think I would raise to this question are of course this point, vaccinating the over 12s, I would also raise the use of a green pass or a Covid pass, so this is a much more common approach, you know I think this idea of a winter plan comparison, so in the questions you know what is the winter plan of other countries, I think other countries don't necessarily have a formal winter plan, some have an action plan, Finland has an action plan, but most don't have necessarily a publicly available winter plan because they haven't as I mentioned lifted restrictions yet.

So the thing that I think I want to point out that are different from the UK's approach in terms of not necessarily their winter plan but their approach currently and for the foreseeable future are the vaccinating the over 12s, the use of masks, so the use is still mandated indoors in most settings in most of these countries and then in a lot of these countries there's been a shift away from cloth masks to requiring medical grade masks, requiring FFP2s, so in Germany for sure this is very common in addition to other places. And as I mentioned and the use of a Covid pass, so the idea that the so-called, the three Gs in Germany which in German would stand for vaccinated, healed or tested. So this is being used with much more frequency than in the UK, personally I have not seen any, been anywhere where this has been in use and I think this is really important because you know if we're going to limit super spreader events of course it doesn't mean that people are not going to go to these events and potentially be infectious, but they are less likely to pass it on in a super-spreader event to many people. So, again so yeah vaccinating children starting with that early, the really maintaining

these indoor mask mandates, especially non-cloth masks and the use of a Covid pass would be my three winter plan approaches that I would highlight.

**Barbara Keeley MP**

Thank you. And could I come to you Antoine.

**Professor Antoine Flahault**

Yes, thank you for this question. Of course completely in line also with what Jonathan said, so just to add a few things. Again, if we look at the champions in several countries around us you have some champions for specific things. For instance Portugal and Spain are the champions for vaccinating the elderly. I think vaccinating the elderly is quite, quite important. Of course the third dose for them, but the first two doses when it is not done and it is achieved by 98-99% of this age class in Portugal and Spain. And to try to achieve such level is very important, so do not just be satisfied with 90 or 95%, we should go very, very far to avoid any surge in hospitals during this winter. And also the third dose for the elderly seems to be highly important.

The second thing is regarding the Covid pass. I fully agree that the Covid pass probably played a leading role, particularly in France, in Denmark, in Italy to really contain the summer wave very, very effectively. But if you want to introduce that, I don't know about the legislation in the UK which needs to be prepared ahead of time, so I liked when France for instance decided to extend the potential for using it up to next July, of course they have presidential elections so maybe the parliament will be a bit frozen during the springtime, but anyway it's good to have the legal possibility to implement this Covid pass in the future.

And maybe also you probably in the UK have a very good example, you are a model for school testing, so continuing the testing in schools is very important, assessing it also academically, I mean scientifically. I don't know about your investments in ventilation, my thinking is that since it's an aerosolised disease we need to focus a lot and to invest a lot in ventilation of closed, how to say that, poorly ventilated and crowded areas where you spend a couple of hours. So typically school classrooms, canteens and also in enterprise, in companies.

**Barbara Keeley MP**

And could you say Antoine if other countries are definitely doing a better job on that, can you point to a country that's doing well on that?

**Professor Antoine Flahault**

I think Ireland is doing good work on that and this is one country which is really dedicated to that. Germany, Chancellor Merkel said that she wanted to invest, I'm not completely sure they have achieved that but they wanted to invest a lot in ventilation. But yes, CO2 sensors implemented in classrooms particularly are important. Yes, and the masks but it has been said. Securing the border, I think you did a good job in the UK in comparison with many other European countries, it's probably easier with the fact that you are an island, but you have done it. Sometimes a bit erratically in terms not always driven by science, but at least this is something which is, securing the border is something which is of high importance when we see the champion countries also in the World.

**Barbara Keeley MP**

OK, thank you. Thanks for your answer. Back to you Chair.

**Layla Moran MP**

Thank you very much. If I could now go to Baroness Brinton.

**Baroness Brinton**

Thank you very much Layla. Are other countries taking a prevention or a mitigation approach to this next phase of the pandemic and I wonder Martin if I could start with you, could you just explain the difference please for those who may not understand it.

**Professor Martin McKee**

Yeah, well I suppose prevention is really about trying to drive down the cases and mitigation is about preventing the adverse consequences and particularly hospitalisation and so on. I mean I think that most other countries, I think the UK is unusual in being at least in some quarters being, appearing to be relatively unconcerned about the number of cases and there's a narrative that is developing which is as long as the NHS is not being overwhelmed then we should not worry so much. Now that of course goes back right to the beginning and it goes back to this point about the NHS is at greater risk of being overwhelmed than most other countries because we have much less capacity than many of them. So from that point of view you can sort of understand where we're coming from. But I think, and it's difficult to say about them all, but generally my sense is, and Jon and Antoine can help me with this, my sense is that as I'm discussing it with colleagues and with Jon many of the same colleagues, there is a sense that the UK is somewhat sanguine about the level of transmission that is going on at the minute and the way in which it is moving towards this argument about it doesn't matter so much. And this is a particular issue in schools at the minute. I think there is a great deal of concern among my colleagues about the very high levels of transmission, and also the way in which there is a sense to which, and we saw this with the JCVI statement and other things, there is a sense that people do not want to talk about Long Covid, Long Covid is an inconvenience, it's something that it would be much better if it, you know if we didn't actually talk about it, we minimise it, we find ways of measuring it that make it look much less of a problem than it is, but you know we can get into an endless debate about the methodology and the definitions and so on, but it is a problem. But to come out with reports that don't even mention it, I think is problematic.

So I think that we're seeing this focus very much on deaths and hospitalisations here that is a little bit different from elsewhere. And we have the line that we have broken the link between cases and hospitalisations or cases and deaths, well we haven't broken the link, what we have done is we have reduced the ratio of ... I mean this is much more Neil's area than mine but we have reduced the ratio of deaths or hospitalisations to cases, of course we have because of the vaccination but there is still a correlation.

**Baroness Brinton**

Thank you very much. We'll come onto Antoine next please.

**Professor Antoine Flahault**

Yes, in fact we use an English word for prevention which is suppression, suppression means that we do not accept a high level of circulation of the virus in the territory and Denmark, Norway, Finland were ahead in these policies and of course Japan and South Korea also. If you see there epidemic trends, when they go to the top of the hill of the wave it is usually values we would consider in the UK or in France or in Italy as low tide. So they do not tolerate high level of circulation of the virus, so what do they do, they act very, very early in the process of the rebound of the wave. So when you have good indicators telling you that you are in the process of an increase you suppress it very, very early. And you do not accept this plateau you have in the UK if you are in a suppression policy country, you do not. You try to really reduce dramatically, so you reinstall the past, you reinstall measures which allow you to go very, very low tide and when you are at low tide it's much easier to control things to free the society, to free the population from any measures which are not needed.

So to be agile needs to be very early in implementing measures, even strong measures, but very early also to lift them when they are not completely needed.

**Baroness Brinton**

Thank you, and Jon.

**Dr Jon Cylus**

Thanks, so I think this will to a certain extent repeat some things I've said, but just to make the point a bit clearer. In terms of are other countries taking a prevention or mitigation strategy, you know I think that basically everyone outside of the UK, well not everyone but the majority in Europe who are at similar levels of vaccination are taking similar approaches, which is that they are waiting until a much higher percentage of the population is vaccinated and then they are very gradually lifting restrictions and they are keeping many things in place, like Covid passes, like masks, with the exception of countries like Denmark who arguably have earned their "Freedom Day" by having such low case rates and by locking down so early. So I mean I think rather than focus on the terminology and whether you know is it a mitigation, is it a suppression, I think the way that I would think about this is that most of the rest of Europe that's at similar levels of vaccination is taking, most of those countries are taking similar approaches, they're opening much more slowly, they are maintaining a lot of restrictions in place and it sort of enables them I think to put those measures, more strict measures back in place if there happens to be a spike in cases. Whereas in the UK it does seem like there's not so much of a strategy to keep case rates down, that there's sort of an acceptance and sort of a wait and see type of approach which I would say is more in line with the US than it is with much of Europe.

**Baroness Brinton**

Thank you. Neil did you want to add anything?

**Professor Neil Ferguson**

Not particularly, the Government clearly has said, I mean it's not really science here it's just a political judgement that they want to live with Covid and so we'll come onto it in the next session that their primary criterion for acting is additional pressure [inaudible 0:34:45.2] quite how much, but on the NHS, but beyond that I mean I think my colleagues did a good summary of the situation.

**Baroness Brinton**

Thank you very much, back to you Layla.

**Layla Moran MP**

Thank you very much. Caroline Lucas.

**Caroline Lucas MP**

Thank you, Layla. I wanted to change direction slightly and I'm just wondering if any of you can help me with my question about global vaccination, because in the UK's winter plan they do have a section on helping to vaccinate the World, and they say for example that the UK has donated around 10.3 million doses to Covax and that they are planning to reach 30 million doses by the end of the year. I wonder if anybody could tell me how that compares to what other countries are doing in terms of their donations, whether we think it is anywhere near enough given that maybe only 2% of people in some of the low income countries have received even a single vaccination, and also if there is any concern then about a booster programme for the whole of Europe that looks as if it's not just prioritising those who are vulnerable but basically is being rolled out in a more blanket way. I don't know who to come to but if anyone could wave if they think they could help to answer that. Thank you Martin, that would be great.

**Professor Martin McKee**

Yeah, now if I'd know you were going to ask I would have looked at the numbers as you can imagine, you are working on Covid as well as many other things, there are so many numbers to try to keep in mind but you know I think the way in which we reframe this, we do actually look in the report for the Pan-European Commission I wrote in the chapter, there is a section on a new global vaccine policy and you might want to look at that and that was a sort of collective view of the Commissioners who include for example Jim O'Neill who many of you know. And so there I think what we are saying is that it's not an either/or and we maybe need to move away from this argument, we just need a lot more vaccine and we need a lot more vaccine to be distributed and what we don't want are gifts of vaccine that are given to a country a month before they are due to go out of validity, that doesn't really help anybody, particularly when you are giving them to countries that are struggling with their health systems anyway. And I think there's a lot to be learnt from what the Global Fund has done, just I should declare I am a member of the Advisory Board for the Friends of the Global Fund Europe and we've been discussing that in that forum, where I think the Global Fund has developed a lot of expertise in getting medicines to different parts of the World and to making sure not that they just get to a national airport but they get to the people that need them. So there's all of that.

Now that really comes down to looking at issues of patent waivers and as important what are called 'trade secrets' which are the knowhow, the manufacturing capacity and an investment in the manufacturing capacity in low and middle income countries. So you know we almost need a step change and what worries me a little bit is the debate about should we give boosters to older people in the UK or to children or whoever, versus giving it to Africa. It should not be an either/or, we just need ...

**Caroline Lucas MP**

But it is, isn't it though Martin, right now.

**Professor Martin McKee**

Yes, I know but the problem is by framing it in that way then we don't address these more fundamental problems which are that we just need an awful lot more of it everywhere, because the reality of it is that even if we took all of the vaccines that are being given as boosters in the UK and give them to Nigeria, you know with whatever the population of Nigeria is at the minute, it's a lot of million, hundreds of millions of people. It would really be a drop in the ocean, so I think that way of framing it is problematic and we just need to get a lot more of it.

**Caroline Lucas MP**

Thank you, does anyone else have any evidence about how other countries are doing in terms of donations for the global ...

**Professor Neil Ferguson**

Yeah, I mean so I'll just build in on that. I mean the UK actually was quite generous in giving financial donations at the start of Covax and I think is the third largest national donor to Covax. I tend to agree with Martin that giving unused stocks of vaccines late in the day is not necessarily the optimal, particularly if they only have relatively limited shelf-life, not necessarily the optimal donation. I'm not aware that there is, well I haven't seen a table of donations of unused doses. I think the biggest problem Covax has suffered this year is that it was very dependent on manufacturing capacity in India which basically I mean stopped, I mean the Indians understandably given their wave of Delta infection prioritised vaccinating their own population, but that had an enormous impact on the number of doses available through Covax.

So, I mean I don't think, I think lots of countries could have done more, I wouldn't particularly single out the UK as being, we've probably been better than most high income countries but clearly there is enormous inequity globally and in access to vaccines.

The last thing I would say, I mean the Continent which has the lowest coverage is sub-Saharan Africa clearly, it also has the lowest limited local manufacturing capacity for vaccines. But also many countries have suffered from the difficulty in putting in place logistics for delivering population wide vaccination at scale. I mean, high income countries have invested almost as much in that infrastructure as in the vaccines themselves and in the absence of well-developed say primary care and healthcare systems a lot of countries have really struggled. I mean they've been able to vaccinate urban populations but getting out into rural areas has been much harder. There are exceptions but that has been part of the challenge.

**Caroline Lucas MP**

Thank you very much. Unless Antoine or Jon want to say anything I'll pass back to you Layla.

**Layla Moran MP**

Thank you very much. Lord Strasburger.

**Lord Strasburger**

Thank you, good afternoon. It's clear that some countries have a markedly higher burden of Covid mortality than others, perhaps the biggest global difference has been the approach taken to timing and intensity of restrictions, testing and social distancing. Is the UK Government taking too much of an inward looking approach to Covid, are we learning from the experience of other countries? Neil would you like to go first on that?

**Professor Neil Ferguson**

Sure, I mean I think Antoine and Martin referred to it, I mean historically looking back on the pandemic, the principal determinant of mortality has been the timing of interventions relative to the stage of the epidemic reached in a particular country and that explains a certainly nearly all the variation I've seen across Europe in the first wave of transmission, I think a lot of countries frankly were much to slow in acting in the autumn of last year, we can pick out the UK uniquely, clearly there are some countries like Denmark and others who acted promptly but a lot of the big nations in Europe acted rather slowly. We were unfortunate let's say in then being the home of Alpha where Alpha originated and so our autumn to winter wave accelerated a lot faster, well faster is the wrong word, earlier than seen in the rest of Europe where we were exporting cases. And so whilst by December of last year going into the January lockdown we did act to contain spread, I think other European countries saw what was happening and acted again earlier in their Alpha wave in the spring of this year. Almost similarly with Delta, we were the worst affected European country with Delta, it was seeded earlier into this country at a higher level than any other European country and that's why we saw ... so some of these things are misfortune let's say and I think I'm being much more content with the timeliness of interventions let's say since about December of last year than previously. But still, it all comes down to timing.

**Lord Strasburger**

Thank you. Jon, have you got anything to say on this, I would say I've got one more question but we are running out of time.

**Dr Jon Cylus**

I'll be very brief just to reinforce what Neil was saying. You know we've looked across Europe as well, not so much the calendar date of when lockdowns were imposed but how many cases and how many deaths and obviously there are differences across countries in testing but you can take that into consideration this is where a country thought it was in the beginning of the pandemic when it decided to lockdown and if you plot these on a scatter plot against each other, the UK is all the way out here, especially England, there were about two deaths per 100,000 population at the time in England when first lockdown was announced and in many of these countries, Ireland, Denmark, Norway there were no deaths yet, they were just under ten cases per 100,000. So I think the timeliness really, if we look across countries at the date of where we were in terms of cases and deaths on the dates of lockdowns, the UK is far out. My short answer.

**Lord Strasburger**

Thank you very much. The other two panellists, do you want to contribute?

**Professor Martin McKee**

We don't have much time but I think this is actually something that would merit an entire discussion session on its own. There is a real problem with our ability to get information from elsewhere. Now obviously many of us wearing our academic hats do have individual contacts but we've had I think too many cases of where communication has broken down and I might use as the example, whenever the UK put France on the amber-plus list and that was a puzzle to many of us and I immediately dropped an email to Antoine and we worked out together that in fact this was a mistake. It was a mistake of how the data were read because the individuals involved, we deduced, I mean we can't be absolutely clear but it seems very likely that they were unfamiliar with the way the data were being presented and so, but the problem about it was that in earlier days somebody here below Ministerial level would have had a contact in the other country and been able to talk to them and as Lord Ricketts has described as well in this, he's been very concerned about this too, former Ambassador to France of course. We've lost those contacts and we've seen that in so many different areas when we're out of step with the rest of Europe, but there isn't a mechanism for getting on the phone or whatever to talk to somebody or meeting them in the corridors, even on Zoom or having the mobile phone numbers of their counterparts. And of course there are many individuals, and I'm sure Neil has many contacts and other people have personal links to Christian Drosten and other people like that across Europe, but that doesn't seem to be happening at official level and partly that's because I am told, and others will no doubt be able to give you evidence, there is a view that contacts for political reasons should be largely at Ministerial level.

**Lord Strasburger**

Thank you, and Antoine do you mind if you give us a quick answer or hold until I've asked the next question.

**Professor Antoine Flahault**

Yes, very quickly just to say if you want to learn one lesson is not to hope too much on vaccines, it seems for me that in the UK you are relying on vaccines which is quite excellent, you have an excellent vaccine production, you have an excellent coverage but maybe not relying only on vaccines, so those countries like Singapore with 80+ per cent of coverage are experiencing a wave, even with a surge in hospital beds and even with mortality, so it may happen this winter that we may need to combine measures and not only to rely on vaccine for lifting measures.

**Lord Strasburger**

Thank you very much and my last question is about daily case numbers and we talked about it a bit already, but we can't escape the fact that Britain is pretty well top of the league for daily cases, new cases per million of population and something like five times the level of the EU, so how have we got there, what have we done, what's the main thing that we've done wrong to get to the top of that rather unwanted league? And does it matter? Martin, would you like to go first?

**Professor Martin McKee**

Yeah I think I've maybe already answered that, I think it does matter, I wrote a piece for the BMJ recently where I said "have we given up" and it wasn't just about this it was about relaxing our rules on putting untreated sewage into the water supply and it was about relaxing the rules on testing for HGV drivers and other things where many of the public health measures that have been put in over time we've sort of been, we've retreated from, so I personally think it does matter and I think part of the problem, as I think we've already said, is that there's been a focus on the mitigating, protecting the NHS and not worrying so much about cases.

**Lord Strasburger**

Thank you, and Jon.

**Dr Jon Cylus**

Yes, so I think the answer to your question about why we've gotten here, I think it has everything to do with the fact that we lifted all restrictions at around 50% of the population vaccinated and really no one else in Europe has been doing this. In terms of does it matter, you know I think if you're looking at 30,000 cases a day and about what one in 30 of them end up as a hospitalisation, you know it may not matter so much now for the NHS but I think it probably will in the winter, I mean thinking back to prior years pre-Covid the NHS really struggled with regular, with seasonal flu and so I think it doesn't take very many additional cases, even if you have weakened the relationship between cases and severity, if one in every 30 or one in every 40 cases is being hospitalised and you're getting above 30,000 cases, 35,000 cases a day and people also they're not going to hospital for a day, they are being admitted and they are staying and they are on oxygen for many days, so I think yeah, I think it matters, I think that eventually there will be a lot more pressure on the NHS than there is.

**Lord Strasburger**

I think you're saying this is not a good way to start the winter.

**Dr Jon Cylus**

It's not a good way to start it, and it's risky I think you know having opened in mid-July, we're I guess a couple of months ahead of some of our peer country so I think we are the canary in the coalmine, as opposed to some other countries.

**Lord Strasburger**

Thank you.

**Professor Neil Ferguson**

Can I just add something to that? It might give a slightly different view. Case numbers started accelerating really in May into early June, before we lifted all measures and it was entirely down to

Delta. If we wanted to reduce the case numbers and in the Euros as well that was again before we had “Freedom Day”, I mean the response at that time of the Government was to delay the final relaxation of measures by a month, but it wasn’t really ... and this is more politics than science, I mean it wasn’t really on the agenda to go into reverse to suppress case numbers. So we were unfortunate in getting Delta early and it took longer to seed into other countries, but I agree fundamentally we’ve ended up here because ... basically a policy to live with Covid. In terms of hospitalisation I do think it is a key metric, it’s more like a one in 50 ratio now in terms of cases translating into hospitalisations, also the protection against death is much higher and protection against admission to an ICU is considerably higher provided by vaccines and seems to be sustained, so those ratios in terms of cases to hospitalisations are larger if you talk about the more severe endpoints of ICU admission or death. And so there is less stress at that level. People also appear to be staying in hospitals for less time if they are hospitalised than they used to be. So it’s a complex picture.

**Lord Strasburger**

Thank you. And Antoine.

**Professor Antoine Flahault**

No, I have nothing to add, I think all of the things have been said.

**Lord Strasburger**

Thank you very much. Back to you Layla.

**Layla Moran MP**

Thank you very much. Baroness Brady.

**Baroness Brady**

Good afternoon and thank you for your time and candour today. What I would like to ask please is what do you think is the most important thing the UK Government can do now to ensure the pandemic is brought to an end as soon as possible and I’d like to start with Neil please.

**Professor Neil Ferguson**

So, I’m not sure if you can easily, first of all I mean this is a slightly semantic point, I’m not sure it’s easy to define the end of the pandemic and we’re moving into a time where Covid is becoming endemic in all countries of the World. I think the key issue is what does one do to try and reduce the health impacts of infection. So, coming to the European example, I completely agree with Jonathan and others that I mean they are wanting, they have demanded a higher threshold level of vaccination coverage in their population before lifting all measures than we have. But nevertheless, if we talk about going into next year or whatever there will be continued Covid transmission across Europe and at some timepoint we are going to stop relying on social distancing measures completely.

So I think if we're talking about the end of the pandemic of being when can we move out of the emergency situation in relying on non-pharmaceutical interventions and socially distancing, on test and trace to achieve control to entirely relying on vaccination, then the number one thing the Government can do is increase vaccination coverage, increase booster coverage, put two doses into teenagers rather than just one. And ensure population immunity is as high as possible. I personally think for the next few years we are going to see seasonal surges of Covid transmission which will challenge the health system on top of flu and everything else. Healthcare capacity probably will need to be, well we know that anyhow, healthcare capacity will need to be expanded to better cope with seasonal surges, whether we need for some years to come to rely on some degree of mitigation beyond just vaccination remains to be seen.

So, it's a long-winded answer, there isn't a simple answer to that question.

**Baroness Brady**

Thank you for trying though. Martin.

**Professor Martin McKee**

Well, I'm very tempted to quote the Prime Minister and say if you will pardon the expression "prenez un grip" because I think having a really well worked out strategy which was clear and had, I mean we will be maybe coming onto talk about this later with health, you know there is, I think it's wrong to think there's a magic bullet, I would just throw in ventilation in its broadest sense, ventilation, filtration and all the other things on top of other things, I think that's the one thing where we're really lagging behind at the minute.

**Baroness Brady**

Antoine.

**Professor Antoine Flahault**

I would say if we want to end the pandemic we need to think globally and not only locally. So, the UK has done, is probably one of the countries which has done the most regarding the vaccine covoyage, it's a global vaccine covoyage when you, and at least I would say the University of Oxford and AstraZeneca dealt with the Institute of Serum of India which is a major, the biggest producers of vaccines in the World and with this competent deal they are able to produce a lot of vaccine for humanity. Unfortunately they had experienced this wave of the Delta variant in their country and they stopped export to Africa. But our duty now, and maybe the UK maybe a major country to push this duty, is to implement facilities, factories everywhere in the World, I mean in each continent at least, in each WHO region I would say. We need Africa to be self-sufficient with regard to its production of vaccines, of treatments, of diagnosis which is not the case today as it has been mentioned. So, maybe you know it's not a new issue, there are in fact the Covid-19 has helped a lot to speed the process before the Covid era it took often ten years before a vaccine was distributed in the north countries, in the rich countries and after to the low income countries. So now it is not ten years, it will be probably one year before the coverage is sufficient in Africa if we are optimistic. But one year is much better than ten, but nowadays we may think about, I don't know, global public goods at least of essential drugs, vaccines, diagnoses which needs to be produced without any patent or

maybe with affordable prices in each continent and the UK can play a leading role in the international and multilateral organisations for promoting that.

**Baroness Brady**

Thank you Antoine and Jon.

**Dr Jon Cylus**

Thanks, so very quickly to echo Neil, I agree I think that increasing the per cent of the population that is vaccinated is crucial and focusing attention on the 12-15 year olds as well as boosters is very important. I think also it's probably worthwhile to try and change the narrative a little bit, so moving not from what Antoine was talking about a more global perspective but a more local UK perspective. I think prepping the population for the eventual possibility of a shift from Plan A to Plan B is probably worthwhile. Plan B looks a lot like Plan A in the rest of Europe and I don't think that there's a lot in Plan B that's so dramatic, it's much more just you know mass mandates and you know it's not the same level of lockdown that we had much earlier on. So I think you know really improving this communication at this stage that the pandemic is not over, is probably will help to soften the blow if we do invariably move to Plan B at some point in the winter.

**Baroness Brady**

Thank you all very much. Back to you Layla.

**Layla Moran MP**

Thank you very much. Well thank you all. I have run considerably over time in this first session and I thank in particular Jon and Antoine for staying with us and apologies to Kate who now joins us for being a bit late, I'm sorry Kate. Jon and Antoine you are very welcome to stay, if you don't wish to you don't have to but you are of course very welcome, and Martin has already indicated in advance that he may have to drop off at some stage, so just let us know Martin when that moment comes and we are always grateful for your time so just let us know how long you've got.

So I'll move now to session two and introduce Professor Kate Arden, Kate is Lead Director of Public Health for the Greater Manchester Combined Authority for Health Protection and Emergency Planning and Response and that's in addition to her substantive post as Director of Public Health for Wigan, so thank you so much for joining us Kate, really appreciate it and as I said thank you so much for your patience as we came to you, but I hope you can see a lot of it was weaving very I think neatly in to what we're going to be focusing on now which is that UK specific response, and at points I know that we've all been sort of itching to ask and answer those questions, so let's get into it.

So Kate, I'll ask you a question that I think others have kind of already started to answer before, which is in terms of Covid-19 in this country, what's your expectation of what we can expect this winter.

**Professor Kate Arden**

I think it's going to be a very challenging winter ahead for a number of reasons. Obviously in places like Greater Manchester we have areas of enduring transmission and high underlying prevalence, so

for example the case rates at the moment range from just over 500 in Stockport to over 300 in our borough, so that's very high if you think about you know cases per 100,000. And if you add onto that the backlog in terms of non-Covid ill health, particularly related to long-term conditions in areas like Greater Manchester where there is a high level of underlying health problems, you know respiratory, cardiovascular in particular, you then add on the potential for a bad flu season and we are still you know unclear as to how bad flu will be, clearly we're watching the patterns from India as opposed to Australia and New Zealand where we normally look to for the predictions for our winter, but yes that's potentially very challenging. We are already seeing outbreaks of respiratory syncytial virus, particularly amongst the sort of older end of children, and of course we have norovirus as well which is highly unpredictable. So, I guess you know listening to Neil, to Martin, I think it's very, you know I think it's very sort of unclear as to what winter will be like, but we are planning very extensively for outbreaks of flu in care homes and clearly the rates of Covid will be very problematic if they tip the system over when it's trying to recover from the backlog of other conditions.

So, yes a very challenging few months ahead I think for us, particularly in places like Greater Manchester who've experienced I have to say four pandemic waves, not three, and it's very important to stress that, that there are parts of England that have actually had considerably worse experience of Covid to date than some other areas.

#### **Layla Moran MP**

Kate, just as an aside, here in Oxfordshire I know we are essentially preparing for the NHS to become overwhelmed in fact it's already happened a couple of times albeit very briefly. Are you taking the same approach, the likelihood is it's going to happen it's a matter of when, not if.

#### **Professor Kate Ardern**

Yes, I think one thing that's very good about our system in Greater Manchester is that the ten boroughs and the health and care system, of course we have a degree of health and care devolution in Greater Manchester which is unique to Greater Manchester in the English context, and that enables us to operate all of our hospitals as a single system. So there is mutual aid going on across all of the Trusts in Greater Manchester and that's around the ICU capacity but ordinary bed capacity as well. So that does enable us to have some flex and some support within the system and it creates a much more resilient system, so in spite of some of the challenges we've had and clearly North West Ambulance Service like another of our ambulance services across the country have experienced significant challenges, what we've been able to do is to mitigate quite a bit of those challenges in terms of the health and care system through our excellent mutual aid arrangements. And you know I think I would also echo the points that we've seen that the vaccination programme has certainly reduced the severity of ill health within the Covid admissions, so we've seen Covid admissions go right down and length of stay for Covid go down. But also we have also seen a dramatic drop in mortality since the vaccination programme was undertaken.

However, what we have seen since May/June is our admission rates plateau at a high level, so it would not take much in terms of increases in Covid cases over the next few weeks and months, for the system to tip. So yes, that's what we have to plan for and of course we have to recognise that we do have a high prevalence of these other conditions that put challenges on our system.

#### **Layla Moran MP**

Thank you very much. Baroness Masham.

**Baroness Masham**

In your view, does the Government's winter plan allow for the speed and intensity required to prevent the NHS being overwhelmed should that be the case, and I would like to add have we enough NHS trained staff and if not what should we do? Could we have Kate please?

**Professor Kate Ardern**

Well perhaps Baroness Masham, obviously I work for a Local Authority not the NHS so I'm probably not the right person to ask that particular question to, but I would sort of add that just perhaps to give a slightly different context, response to Covid is a whole-societal, whole-system response, it's not just about the NHS capacity, it's very much around social care capacity as well and the ability for us to provide support from local public health systems. So this is where my role as a Director of Public Health and the ability of my team to respond very rapidly to control outbreaks and clusters and to bring transmission rates down is absolutely critical. So, we support of course our NHS colleagues in terms of the roll out and implementation for vaccination programme and indeed without Local Government it would be difficult to do things like mass vaccination because you know we provide sort of the logistical support to that. So for me the winter plan needs to actually allow folks like me to get ahead of the curve, recognise when outbreaks and clusters are happening and be able to deploy full mitigation measures, be that be masks, testing, contact tracing. All of those kind of measures are really important, and also to help us target the roll out of the vaccination programme.

So that for me, it's another bit of the system that tends to get hidden, but actually without that, without those preventative measures then that's going to tip over into admissions and pressure on the health and care system. So you also need plenty of contact tracers and local public health teams as well as NHS trained staff.

**Baroness Masham**

Working together must be essential, could we have whoever is left please, is Neil still here?

**Professor Neil Ferguson**

Yes I am, so I mean again I'm not, I don't work for the NHS but taking the first bit of the question, so I think the winter plan is a template, it doesn't specify exactly when different escalation of measures will take place. I should say there is a lot of work underway in Government at the moment involving academic groups such as my own and many others in terms of putting some more flesh on the bones in terms of answering directly those questions, how quickly will we need to act. I think lessons have been learnt. At the moment we are running at about 600 hospital admissions a day in the UK due to Covid. I think if we saw that double then that would be the sort of level where we would need to be thinking about moving to Plan B. And it's really the trend, the lesson we have learned is that if you start seeing an upward trend and that's sustained for a period of time, then you need to get ahead of it because any action you put in place will take two to three weeks to have any impact on hospital admissions.

So those are the things being discussed at the moment. And we should also say we don't, it's not a precise science in predicting what the impact for instance encouraging working from home again would be or mask mandates or vaccine mandates or passports for particular venues, and so it is an imperfect thing. The general thing we can conclude though if we see a sudden and rapid upsurge we

will need to respond more intensely than if we see a gradual increase and I strongly suspect that therefore measures would be adapted to the circumstance we found ourselves in. The worst case of course would be, which we can't rule out, it's difficult to even judge the probability would be the rise of a new variant which is substantially escaped vaccine induced immunity and the protection from vaccines. We can't say, I think personally it's unlikely but beyond that it's difficult to say. But clearly if we saw and I think the winter plan states this, if we saw that happen then measures would almost certainly need to be more intense than if we saw a gradual slow but sustained increase in case numbers.

**Baroness Masham**

Thank you so much, who else have we?

**Layla Moran MP**

Martin?

**Professor Martin McKee**

Yeah, I'm not sure I can really add to that to be perfectly honest I think that was pretty comprehensive.

**Layla Moran MP**

Fair enough. OK thank you very much. Can I go to Barbara Keeley?

**Barbara Keeley MP**

Thanks, well I think more questions around the point that Neil has just been talking about with the winter plan, he's just described that it doesn't specify when escalation will take place, so it's a question really about the triggers that we've got and I'm particularly interested Kate in your perspective because you described to us that you've got cases at 300 in your borough and 500 in other parts of Greater Manchester and that it sounded to me as if you needed some local triggers if you like so that you could move into preventative measures. Now, the winter plan, well it seems sketchy doesn't it but it's presumably around cases, hospitalisations and deaths, but we've heard that we're behind other countries with dropping mask wearing, behind on ventilation, so to Kate first, what can be done in a situation where we've got uncertain triggers and you need, it sounds like you're going to say you need local triggers or a local way of doing things. I mean I'm sure we wouldn't want to get back into local lockdowns but what would you want from public health?

**Professor Kate Ardern**

I think I'm going to refer to the excellent work that we've done in Greater Manchester on schools escalation and indeed we have developed a schools escalation plan which goes from basic measures through to what we would do when we've got multiple outbreaks. So I'll give you an example from my own borough at the moment, we're dealing with an outbreak in one of our high schools, so I've brought back in face mask wearing, not just in communal areas but also in classrooms. And you know we're looking at, we've done PCR testing of over 600 students in that school, found another 16 positive

cases, re-instituted and advised on lateral flow tests for sibling contacts for example. Things that break the chain of transmission are really important and the reason I picked that example is if you have, you know high rates of transmission amongst our 15-19 year olds which is particularly the challenge at the moment in Greater Manchester, then what you actually do is put, unfortunately, a delay in those individuals being offered the vaccine, because if you test positive for coronavirus then unfortunately there is a 28-day delay before you can receive your vaccine. So there is a disruption with a school based vaccination programme, that actually puts a delay in offering and rolling out the vaccine. So, you know it's very laudable that there is a national target that the programme for 12-15 year olds needs to be completed by half-term, but with the high transmission rates going on in that age group then that pushes a real delay in that programme being delivered. So there's an unforeseen consequence and a knock-on consequence of course on school nursing services who are delivering it and the school rooms provided. So that's why you know being able to put in place mitigation measures to actually bring the transmission rates down would actually assist us getting really, sort of getting that vaccination programme rolled out as quickly as possible. So that's why we need that sort of local flexibility to be able to do that both in settings like schools but also where we've got you know potential high transmission rates across broader cohorts of the community. So it might be a demographic as opposed to a geographic set of measures.

**Barbara Keeley MP**

Thank you, thanks Kate. Neil or Martin have you got anything you wanted to add to that, I know we're running short on time but you know the national perspective isn't enough in its own is it, how do we get ...

**Professor Neil Ferguson**

I think again, I mean the Government has said that it's not going to move to locally adapted measures, that's a political judgement. I mean I think there are pluses and minuses of doing so. I think coming back to the issue of what are the thresholds and what are the key metrics, I mean the winter plan, it is clear that the number one metric is NHS demand, particularly our hospital demand. And I think that is sensible for the reasons I've stated earlier that, I mean the protection against death, protection of you ending up on a ventilator offered by vaccines is higher than the protection just against hospitalisation, so hospitalisations and overall hospital occupancy is going to be the key stress point going forward.

I think yeah, I am hoping, I am even, say optimistic that lessons have been learned from last year in terms of the need to act promptly if we start seeing sustained increase in hospitalisations.

**Barbara Keeley MP**

Thank you.

**Professor Martin McKee**

I might just add one very brief comment because I will have to go now but one of the things I think is important that we don't do is to look at the NHS in isolation. Because we know that we have a very complex society in which so many things depend on one another, and if we are going to have fuel shortages, if we are in this situation where ambulance drivers are being written to to ask them if they would reorientate to become HGV or fuel tanker drivers, if we are in a situation where care home

workers are being poached to work in the retail industry or elsewhere, all of these things can unravel very rapidly as we saw in the last week and I would hope that whoever is in charge of contingency planning is looking at these networks and these inter-relationships because the whole nature of a complex system, as Neil knows very well, is that your starting conditions are important, you have non-linear relationships and you've got feedback loops positive and negative and that means that you can't, you know a challenge in one area that may seem unrelated can very rapidly cause considerable problems. With that I will ...

**Barbara Keeley MP**

Thank you Martin and we, of course we do have potentially losing 40,000 care staff and as Kate said it's not just about the NHS it's about social care as well because the staff who are not vaccinated. OK thank you. Back to you Chair.

**Layla Moran MP**

Thank you very much. Well thank you very much Martin if this is the point that you're leaving us, really appreciate your time as ever and thank you so much for spending extra time with us in the second session as well. If I could now please come to Baroness Brinton.

**Baroness Brinton**

Thank you very much. What impact will the UK's third dose and booster programme have on case levels and will this be enough to prevent further non-pharmaceutical interventions this winter, and I ask this especially in light of the advice to the clinically extremely vulnerable who are formally shielding given that all the advice to them has been scrapped and even the HSE advice to employers has been scrapped so that anyone who is clinically extremely vulnerable can and indeed have been asked to return to work in an open-plan office with no ventilation.

**Professor Neil Ferguson**

Shall I have an initial stab at that one? So the data is, we have two sources of data, one is immunological where there is a lot of data on what booster doses do to antibody levels and that looks very promising, irrespective of the first two doses of vaccine you've received, which they were, if you get a third dose of say Moderna or Pfizer you go up to antibody levels which are considerably higher than even achieved immediately after the second dose. And that would suggest a very high level of protection even against Delta. In terms of the direct evidence of the effectiveness of booster doses, there's really only data from Israel at the moment. Quite a nice study, but it's [inaudible 1:18:52.1] indicated that after the third dose of Pfizer comparing people who got a third dose of Pfizer with people who haven't and have been vaccinated some months ago, they saw a ten-fold reduction in the risk of mild disease. And so that's encouraging. I mean so that would include probably asymptomatic infections and just people who are mildly ill, probably an even bigger reduction in the risk of hospitalisation.

So, that would, I mean there are some caveats, you talked about the clinically extremely vulnerable population, we know some of those groups respond less well to vaccines so you might not see quite the level of protection in those groups as you would see in the general population booster, but undoubtedly a booster will almost certainly boost whatever level of protection they have.

As to what impact it will have on case numbers and therefore transmission is much harder to say. I mean the strategy we, I mean the vaccine strategy here has been quite cautious in recent months as other people on the panel have said and we are only rolling out booster doses to those over 50 basically in exactly the same order as we did the first two doses, so we are starting from the oldest in society and the clinically extremely vulnerable and nobody will get a booster dose sooner than six months after their second dose. What that's going to mean is most of the booster doses are going to be coming out from late this month through till about January/February of next year, so they will have an impact and they will have a bigger impact on transmission as more and more people get them, but our modelling will suggest it will be somewhat limited. What it should do though is more directly reduce healthcare demand to some degree. We know that about half, a bit more than half of people being admitted with Covid into hospital at the moment have had two vaccine doses now, much smaller proportion of those dying but they're still getting admitted, so it will reduce that demand. Of course it can't help with the people who haven't been vaccinated at all, but it will still nevertheless have an effect.

**Baroness Brinton**

Thank you. Kate.

**Professor Kate Ardern**

Thank you. Obviously I'm not going to add to Neil's excellent scientific evidence about the booster dose but the couple of points I would like to make is that whilst we are rolling out boosters and that's very important to do so, I would point out for example in Greater Manchester, 27.9% of adults have yet to receive two doses, so we're still rolling out the primary programme and there's significant inequalities and variation in that, so for example that range from 32% of adults not fully vaccinated in Manchester through to 13% in Stockport, so one of our wealthier boroughs. And what we are seeing is the highest case rates correlating with the populations and the communities with the lowest vaccination uptake. So absolutely concur with Neil that it's critical to get the vaccination programme out to reduce the risk of admissions and of course where you've got people who are clinically extremely vulnerable, you know in contact potentially with the unvaccinated population, that clearly increases the risk. So, it's perhaps just a little reminder that we haven't actually got the primary course of the two doses of the vaccine fully out to all of our adult population.

And if I give you just my own local range of this, you know if I look at the clinically extremely vulnerable who are vaccinated in my borough, that's 94% so that's fantastic, you know that is WHO herd immunity. 97% for the over-70s, but that drops right down to 54%, and this is good actually, in the 16-17 year olds and 70% in the 18-29 year olds. So as you go down the age ranges you've got lower uptake at the moment of vaccination and clearly, you know if you put that together with limited restrictions in terms of face coverings, ventilation which I agree with Martin is incredibly important, and social distancing then clearly there is the risk for asymptomatic transmission to more vulnerable individuals.

**Baroness Brinton**

Thank you very much, thank you Neil as well.

**Layla Moran MP**

Thank you very much. Baroness Brady.

**Professor Neil Ferguson**

Can I just cut in and say I really only have five minutes at this point?

**Baroness Brady**

I'd like to ask an opinion before I ask my question, when I asked you all on the one thing the Government could do I think you all agreed it was vaccinate more people and we've heard evidence that being vaccinated dramatically drops the rate of mortality, the severity and admissions and yet we keep hearing, Kate was just telling us how few young people are having the vaccine. What in your opinion can we do to encourage more young people to have it and why do you think there's a reluctance? Kate. Maybe Neil because Kate ...

**Professor Kate Ardern**

Sorry, I'm back on. Thank you for that, I think there's a number of things, interestingly obviously we're only just starting with the 12-15 roll out. I think clearly there is a lot of vaccine hesitancy information, anti-vax information out there which clearly needs to be robustly addressed, but people's concerns addressed as well, so you know it's getting people who have influence with young people as opposed to necessarily you know older middle aged professionals like me doing it. One of the things we do in Greater Manchester is actually a lot of insight work, so we work directly with the communities themselves and we produce, and it's publicly available, monthly insight data, so it's going in and actually talking to those communities. Who are the influencers? Using young people themselves being the influencers of uptake is really important. One of the things we've seen with our 16-17 year olds locally is they actually bring their parents along, so sometimes it's actually the teenagers who are pulling the parents in, so there's a mix, you know I think it's using all sort of good forms of communication, not just posters and leaflets or old-fashioned things but it's good old-fashioned word of mouth and trusted relationships are incredibly important.

One of the things we've found you know over the last 12 months and I've been operating a highly integrated contact tracing system across Greater Manchester, what we get back from that is local voices, people they trust who they know who have that ability to communicate in the language that people understand, so it's really important to ditch some of the professional language if you like, or the techy language and actually relate and communicate in one to one type of engagement. Now that's incredibly labour intensive but it's the way my colleagues in Bolton for example, when they were doing surge testing also addressed vaccine hesitancy through that and it was that one to one engagement that actually makes the big difference. So let's sort of, I guess it's reminding that locally relevant messaging using locally relevant individuals who have the influence are really important.

**Baroness Brady**

Thank you Kate. Neil, I don't know if you have anything to add on that?

**Professor Neil Ferguson**

Not on that one, no.

**Baroness Brady**

Because I know you're leaving have you got anything you want to leave us with?

**Professor Neil Ferguson**

No, I mean I think, I mean the points just made about the challenges of increasing coverage I think are entirely valid. I'd also just add that it couples to other levels of inequity in society, we see greater vaccine hesitancy in ethnic minorities than in white British people. And greater hesitancy in frankly poorer income quantiles than richer ones. In terms of thoughts to be left with, I do think we need to prioritise, at the moment for instance 17 and 18 year olds have only had one dose and we need to I think be a little less cautious in accelerating vaccine roll out in particularly second dose roll out in teenagers where possible because we know that one dose of these vaccines against Delta has a really minor impact on transmission, it's only after two doses that we start seeing a significant impact and whilst I think I'm of the view that data supports that vaccines do benefit young people directly in reducing their very low risk of infection and that benefit outweighs the very rare side effects which have been reported on, partly because Covid probably causes those same conditions itself and all young people will get infected with Covid if they're not vaccinated. But we need to accelerate those second doses coming into the population, I'd like to see us be a little bit more probably aggressive in rolling out booster doses as well because the sooner we can, the sooner we will reap the benefits of that and I think the data supports that not just after six months, probably after four months after the second dose you will still get a very big effect of booster doses.

**Layla Moran MP**

Thank you very much Neil for joining us today, really massively appreciated, thank you so much. And just to round us off with just Kate but Kate's immense knowledge so absolutely worth doing is Lord Russell.

**Lord Russell**

Yes Kate, you've said a lot about the importance of sort of local knowledge, local networks, local infrastructure and the flexibility that brings but do you feel you and your teams have the data you need to make the right decision and will you feel as on top of the UK Government seems to feel it will be, in trying to see whether we are going to need to move from Plan A to Plan B.

**Professor Kate Ardern**

I think in answer to your question about data, I fought that battle 12 months ago particularly around contact tracing data and access to patient identifiable data, the sort of data that I have access to for other communicable diseases and I think if there's one reflection I would give you, we've tended to treat Covid as though it's different to other communicable diseases and in fact it isn't. The same kind of public health measures, the same approach to outbreak management and control that we do for other communicable diseases is just as applicable to Covid. So, I do now have the intelligence and

indeed as we had to fight long and hard for that, but we now have that through our [inaudible 1:30:58.5] systems and if we couple the kind of statistical intelligence we get from national sources and there is no reason that granular data that's available to national stakeholders should not be available to stakeholders in the local system like me. You know we are well used to handling confidential information and doing it, using it very successfully. But what we have to also couple that with is our local knowledge, our qualitative knowledge of communities. So one of the things that's really important to understand is how people travel about, who they link in with, that social and physical geography and how infrastructure is organised. So you know from my own borough we don't tend to socialise with people on the eastern side of Greater Manchester in places like Rochdale and Tameside, Wiganers tend to socialise with people from Warrington, St Helen's and the south part of Lancashire. The rugby league boroughs as I call them because that's where traditionally people went for, you know go for their sporting tradition and their social communities. And it's been interesting throughout the course of the pandemic to watch my boroughs' figures mirror those of the boroughs that communities actually socialise and have family ties to. So that kind of local intelligence doesn't appear in national statistics, but it's the kind of intelligence people like me gather in a very systematic way to help us make those decisions. And that reflects in things like the weekly tracker we share with my population and also the kind of updates I give on my fortnightly live Facebook Q&A sessions.

So, it's a mix of national intelligence and national data sources through the JBC, the Joint Biosecurity Centre, but that has to be set aside, set alongside the excellent local knowledge of the demographics, the traditions, the heritage and the social contacts that we have in the local system. It's not an either/or, you've got to have both parts to put the jigsaw together.

#### **Lord Russell**

And Kate, so the local knowledge that you have, I mean you've managed to extract painfully national data, is there a reciprocal flow of the type of rich local data you're talking back to the centre and is that working?

#### **Professor Kate Ardern**

Yes, I think it is working much better now. It wasn't working so well you know when things started off, but certainly in terms of you know regular, we regularly meet DPHs, regularly meet with the Chief Medical Officer on a fortnightly basis. We meet with our colleagues from Contain and also now we started in Greater Manchester meeting with our national test and trace colleagues at a national level on a regular basis and that's very important, I think often again a reflection the knowledge, expertise and experience in the local system, I mean I've got more than 30 years' experience of managing outbreaks for example and the way in which the local systems operates in a multi-agency approach through local resilience forums and you know we haven't mentioned those today but the approach to emergency planning and response for a big kind of enduring incident like a pandemic, really requires that kind of multi-agency LRF strategic coordinating group response to coordinate all sections of society, be in the Police and Trading Standards to help us with compliance, but also the support around businesses, so working with our business sectors to get out good advice and support.

It's not just health and care or a public health response and I guess that's really important to understand that expertise in that local system and also, you know it's very difficult I guess sitting remotely to understand a borough like Wigan, unless you live in it or a system like Greater Manchester unless you are there and you're experienced in it. So it needs to be a sort of joint decision as opposed to an imposed top down solution, it doesn't work. So you need that freedom and flexibility to adapt within a national framework the measures and the if you like the approaches that best fit our communities. So, it's not an either/or, you have to have both.

**Lord Russell**

Thank you very much Kate.

**Layla Moran MP**

Can I just come back to Baroness Brady who I do apologise, I skipped her question but actually it's a very important question in the context of what you're saying. Baroness Brady.

**Baroness Brady**

Yes, the Government has highlighted the importance of test, trace and isolate on their plan, how do you think it's working, could there be any improvements?

**Professor Kate Ardern**

Well, I've been operating an integrated contact tracing system across Greater Manchester since June 2020 and we set that up with the now UK Health Security Agency, obviously Public Health England, with all ten boroughs in Greater Manchester and our Greater Manchester Health and Social Care Partnerships, so it was NHS, PHE and Local Government. And we have operated in a way that has performed at a 93% success rate. The other thing we've done very importantly, and I think a reflection on perhaps the way the national system was set up, separate programmes for testing and tracing and actually you have to have testing, tracing, isolation and support and of course vaccination all working together, rather than separate silo programmes. So I think perhaps a criticism of the national approach was setting up separate very siloed systems that didn't really interact with each other, whereas on a local level we've been operating as a single integrated approach.

So for example in terms of contact tracing we've successfully completed over 4,400 complex settings in that period and 2,000 index cases and traced over 300 VOCs and VUIs, now in setting up that kind of approach what we've been able to do is also mutually aid each ten borough, for each of the ten boroughs, support the local contact tracing teams, have single approaches in terms of what we do in educational settings, businesses and workplaces, train a lot of ... so we've actually created quite a few jobs through doing this to have surge capacity in our contact tracers who are now being trained actually to do flu risk assessment as well and broader infection prevention control. So what we've got is the beginnings of a local health protection system that can be taken forward into the future, because I guess again one of the things we should be doing is not building a response just for Covid, but thinking about what does the health protection system look like for the future that can respond to future challenges and I guess very big expensive programmes are not going to be the solution to that, having resilience in the local system and a contact tracing hub just to give you the cost, costs us £1.5 million for 12 months to operate. So in terms of sort of you know effective use of resources and being able to spread that workforce across other challenges you can then flex it back into Covid response should you need it. That's the kind of investment we need to see I think rolling out across the system. People who can multi-task across a number of different areas but can support Covid response, it might be TB response, it might be flu response all the way through a local health protection system.

So that for me is the prize if you like to take the lessons from Covid and actually build back a much better, more resilient system so we're not in the situation where we were perhaps at the beginning of this pandemic where we had not enough boots on the ground to actually do the job.

**Layla Moran MP**

Thank you very much Kate. My final question is more for you, it's a wish list. What would you like Boris Johnson in his speech tomorrow to announce that would palpably make your life easier now, or would help you sleep better because you know they are on the right track. You get three, pick them wisely, what would they be?

**Professor Kate Ardern**

OK, number one is I think confirmation that we are going to get continued investment in our local health protection systems beyond March of next year, because the Covid money runs out next March, so everything I've described in terms of what we've put in place to successfully respond to Covid in Greater Manchester is a high-performing system would not be able to operate unless we have the resources to do that, so very important to see that recognised, particularly in the spending review.

I think secondly I would echo the point about maximum flexibility in the vaccination programme, we need to get that out as fast as possible and therefore we need to remove things that potentially deflect from that roll out, so really important to have multi-arrangements in terms of the delivery of the vaccination programme, so make sure we've got as much access to that as possible. I would also agree with the point about giving a second dose to teenagers, I think that is also important but obviously I defer to SAGE's and JCVI knowledge on that.

And thirdly for me I think a recognition of the importance of not doing things purely in a top down fashion. I think for me linking in Covid response and the lessons from Covid into things like the National Resilience Review of LRFs and building back a really strong flexible and for ability to be rapidly deployed health protection response is going to be key going forward. So, UKSAR is great but it's on its own can't deliver that, it's got to have the, if you like the deployment of the multi-agency response around it to respond to these kind of challenges. This is my third pandemic so you know, we're not, Covid will not be the last and I guess we need to really build back a more resilient system which will actually cost us less as well.

**Layla Moran MP**

Well, thank you so much Kate. Thank you to all of our Parliamentarians and everyone watching, I do apologise having gone over but it was such a knowledge-rich session, I do hope everyone forgives me for doing so. So thank you all, have a wonderful afternoon and stay safe everyone. Thank you so much for all of your time. Take care, bye-bye.