Oral Evidence Session – All-Party Group on Coronavirus

10 August 2021

Layla Moran MP

Well, welcome everybody to this session of the All-Party Parliamentary Group on Coronavirus. Today we are looking at two very important topics, although I'm sure we will stray into others as well. We are starting with a 45 minute session looking specifically at vaccinations in children, although there'll be all sorts of other things that will come up I'm sure as part of that. And then in the second session we're going to be looking specifically at vaccine equity around the World and the UK booster vaccine programme. So in order to do this we are very, very grateful for our panellists who have come to help us make sense of everything that's going on. I'd like to start by introducing the first panel and then when we come to the second I'll get to those who are joining us for that. So I'll start by introducing Professor Sir Andrew Pollard, a friend of this group, I think this is the … Andrew is this the second or the third time that you've been with us, I think it's the third.

Professor Andrew Pollard

I think this is the third.

Layla Moran MP

Yes, so thank you very, very much, always a pleasure to have you with us and to have your knowledge allowing us to probe it. You're speaking very much in a personal capacity but in terms of your resumé Professor of Paediatric Infection and Immunity at the University of Oxford, Honorary Consultant Paediatrician at Oxford Children's Hospital and Andrew also chairs the Joint Committee on Vaccination and Immunisation and the European Medicines Agency Scientific Advisory Group on Vaccines, and is a member of the WHO Strategic Advisory Group of Experts. Have we missed anything out?

Professor Andrew Pollard

Just, I mean I don't chair the Covid Committee for JCVI and since Brexit, I no longer chair the EMA committee.

Layla Moran MP

Ah, apologies, apologies, so taking that out, but nevertheless lots of important knowledge and perspective that we can draw on so thank you so much, and you'll be staying with us for both sessions so thank you very much for all of your time. Another great friend of the All-Party Group is Devi Sridhar, thank you for joining us Devi. Professor at the University of Edinburgh where she holds a personal chair in global public health and is founding director of the Global Health Governance programme and holds a Wellcome Trust investigator award and Devi I think this is also your third time with us, so thank you as well for your time today. We also have Dr Paul Hunter who is the Professor in Medicine at the University of East Anglia, an expert in infectious diseases. He is a

member of two WHO committees advising on the global response to the pandemic. So thank you so much for joining us today Paul, really appreciate it.

Dr Paul Hunter

My pleasure.

Layla Moran MP

Thank you. And last but not least in the first panel we've got Dr Ruchi Sinha, a Consultant Paediatric Intensivist at Imperial Healthcare NHS Trust and a member of the RCPCH Expert Covid Group. She is co-lead for paediatric critical care network in North Thames and critical care lead for one of the four designated paediatric HCIDA, high consequence infection diseases airborne, based at St Mary's Hospital in collaboration with the Royal Free Hospital. I'm not gonna lie Ruchi, I didn't understand totally everything I just said there, but what it tells me is that you know a lot and I'm sure we'll gain a lot from your input so thank you ever so much.

So I thought we'd start today if possible, and perhaps Devi I can ask you for this, although if others want to feed in do, just to take stock of where we are now, so when we first planned this session what we were seeing was cases beginning to spike quite rapidly, they were going up and up and up and then they didn't, and then they started to fall and I think where we are now is they've sort of plateaued if not slightly going up again. Devi have we any sense of what actually happened?

Professor Devi Sridhar

Yes, so we're in a very complex system right now, we have incredibly high vaccine uptake and the ONS latest study on antibody prevalence showed over 93% in most of the nations, so pretty much if you look at it around the World one of the places with the highest vaccine coverage, we also have a new variant called Delta which is causing problems because it seems like you can still get infected and transmit Covid even while being fully vaccinated with Delta, which is a slightly different picture to some of the early results with the wild [ph 0:17:46.5] type. So obviously making it more complex to say that vaccinations stop transmission, though they seem to dampen it still. And we also have had at least in England but also in Scotland yesterday a move towards being called 'Beyond Zero' in England I guess so called 'Freedom Day' where the legal restrictions have lifted, people have not significantly changed their behaviour on the whole in terms of, so some of the model in my sense [ph 0:18:09.4] was thinking if legal restrictions lift that everything that people could do they would do, right and what we have seen is almost as if people have put themselves into their own lockdown to be cautious in what they choose to do and this is revealed in some of the behavioural studies of people saying will they go into gyms, will they go into restaurants, will they travel, what are they comfortable doing.

In terms of where we're going forward, I think there is, the World is becoming into two, we're having two pandemics, we're having the rich countries steam ahead, look at Europe, look at Britain, where personally I think the worst in terms of Covid is behind us, I think the vaccines barring a very, very difficult variant will hold up incredibly well and we are going to be looking at a health service overrun perhaps by other health issues that come back with a vengeance when people start to mix, and so still not an easy winter but one that is not yet Covid-focused exclusively but is bearing the brunt of a winter going ahead. The big issue here as we're going to discuss is around what to do with children and under-16s. We know 12-15s are a very controversial issue, there are experts with good motives and deep expertise across the World coming to very different conclusions on that age group. And

even in the United States yesterday the American Academy of Paediatrics writing to the FDA to expedite a vaccine for 5-11 year olds ahead of school return. So, at least for me the biggest issue now is schools and what we do with under-16s as we go forward in this World where adults are largely protected but children are less susceptible and are we ready for a large wave of infection in children, or are there any fears associated with that.

And then if we turn to poor countries I think we are seeing devastations, I mean it's absolutely horrific to look at Namibia, Peru, India, Nepal, the countries go on. More than 75 countries with less than 5% vaccine coverage, not enough supply, health systems overstretched and collapsing, but also no economic packages to allow people to stay home, so the choice is stay home and go hungry or go to work and get Covid. So I think that's where we are in a nutshell in terms of globally as well as what at least personally, I could be wrong, where we are in the UK. Thank you.

Layla Moran MP

Thank you, but the downturn in cases, some people have been postulating that that's because we've reached some level of herd immunity but others saying well that's just simply not true, I mean can you clarify that for us, how far away are we from this herd immunity point and actually what's the role of children that is going to play in getting us to that stage?

Professor Devi Sridhar

So yeah, so the herd immunity question, a lot of this comes back to how we deal with let's say measles, we have an MMR programme and if we vaccinate enough of the population, largely we start with children, then it no longer circulates because it can no longer find hosts that are I'll say susceptible that it can jump between, and part of the problem with Covid is we continually saw exponential growth because there were enough people for it to jump between because they didn't have some kind of in-built immunity. I don't think, again this is just my opinion looking at the situation, that we will reach one magical threshold of 95% and the virus disappears. I think what we are likely to see, as we do with measles, that it will find pockets of unvaccinated people who are susceptible and jump between them, and now even with Delta, and this is really challenging, what you are seeing is people transmitting and being infectious and even getting Covid, while being fully vaccinated. So I don't think that we are likely to reach a threshold, I think the vaccination targets now … and I'm very curious with the others on the panel who are very expert say about this, is that people get vaccinated to protect themselves and to protect their loved ones, it dampens transmission and we've seen this in terms of Israel, you see cases among unvaccinated going up through the roof, cases among vaccinated a steady climb but more linear, so the different between linear and exponential growth. So, I think right now when we look at children, it's less the question of are we vaccinating them for herd immunity, it's more are we vaccinating them because we prefer them to be vaccinated and protected from Covid and future variants versus Covid actually getting it for their health right now, and Long Covid comes into it. So that for me is the question less about than are we going to hit that magical number.

Of course more people have in-built immunity now, we don't know how long it lasts, the vaccines are absolutely transformative, but I don't think Covid is going to magically disappear over a certain threshold, it's still going to find pockets of people to jump between. Thank you.

Layla Moran MP

Thank you very much. Ruchi, would you like to come in on that?

Dr Ruchi Sinha

Yeah, I think there's a lot of great points there, thank you for that. So as I said I'm a Paediatric Critical Care Consultant so most of my experience is based on my day-to-day job and what we see and I think the question was whether we should be rolling out the vaccine to all children aged 12-16 or even younger like the American Academy of Paediatric Paediatricians has said, but I think as you said there's not going to be, probably not reach this herd immunity point where we're going to wipe out Covid as you've said and it's not, it may not necessarily reduce transmissibility, so what we're looking at is whether the vaccines are of any benefit towards children themselves and the way I look at it as an intensivist is is what we do with adults as well with the Covid waves was that what is the burden of in-patient hospitalisation on general paediatric acute wards and critical care areas like high dependency and paediatric intensive care units, PICUs, with children with either Covid-19 or the PIM-TS syndrome which was the post-inflammatory multi-system disorder that was associated with Covid, and actually what we've seen with PIM-TS is that there hasn't been as much with this Delta variant, we don't know why, as there was in previous waves but we are monitoring it, but also in the last four weeks I know from the PICANet data which is our paediatric critical care database that we've only had about 30 critical care admissions and we need to get more detail but from my own experience and anecdotally from my colleagues who look after these children in the intensive cares across the country, they tend to be the children who have got those comorbidities, severe neurological problems, obesity, all of that, and actually that is the current recommendation that those children should be considered for vaccination.

I also have to deal with the adult critical care cell as well, because they look after children over the age of 16 I suppose, 16-18 although there is a bit of overlap, and we are seeing a lot more unvaccinated, even children down to the age of 18 who are in ICUs or on ECMO [ph 0:24:20.6], so again I think it is right to roll out the vaccine to 16-18 year olds, but I think for blanket roll out for 12-16, I think it depends on whether we're seeing an increase in the hospitalisation rates and critical care rates. Having said that, we're under a lot of pressure at the moment in paediatric critical care and general paediatrics because of those other viruses as Professor Sridhar alluded to and the main one is RSV and certainly in the North-West of England, but even now all over the country, we've got an increased number in RSV which is respiratory syncytial virus that normally affects babies and toddlers 0-2 years, and that's causing considerable pressure on our PICUs. And the thing I want to say about that is that unlike adults, if you have, we have the same pinch point as adults, so if our paediatric critical cares get full we can't do essential elective cardiac surgery, essential cancer surgery, essential airways surgery, that is huge for children, just like it is for adults. But unlike adults where my own intensive care, we repurposed and we had to look after you know adults on ventilators with Covid in two waves, they won't be able to do the same for us with these children aged 0-2, so with about the 300 paediatric critical care beds that we've got in this country, it's all about capacity and flow and what we're finding is that that's been tested in the last month because the DGHs, the District General Hospitals are full of RSV, difficult to step them down to the community, but also there's quite a disproportionate number of children with significant mental health needs that are in acute in-patient beds awaiting specialist input, so you can't maintain that flow and capacity.

So, then if we move forward to school opening and see that there's an increase in Covid-19 or PIM-TS, then absolutely we need to re-evaluate how we, you know what do we do with vaccination again, but at the moment Covid-19 in itself and PIM-TS is not the problem.

Layla Moran MP

Thank you very much, that's a really helpful perspective. Paul.

Dr Paul Hunter

Hi yes, I agree with most of what's been said. A couple of key issues though, the first is about increased activities after the 19th of July, I think that it is conflicting at the moment. If you look at something like the Google mobility data it does actually show an important rise in visits to what's called non-essential purchasing and recreational visits, so there does seem to have been an increased visits based solely on basically where people's mobile phones go. And I suspect that's less likely to be biased by people who participate in the sorts of studies that Devi referred to, are likely to be people who might actually also not be typical of younger people who don't want to take part in such surveys and also tend to probably want to party, so I think there is some evidence that we have seen increasing activities.

This issue of herd immunity I think has been a dreadful thorn in the side of the management of Covid right from the start and I think part of the problem is that people mean different things when they talk about herd immunity. When I talk about herd immunity I'm sort of using the same phrases that the World Health Organisation use and the World Health Organisation refers to herd immunity as indirect protection of people who haven't been immunised normally, or presumably infected, and I think one of the things that we can say for certain now with Covid is that if you have not been vaccinated you will catch Covid, and if you've not already recovered from a previous disease you will suffer the same consequences as somebody who had caught Covid over a year ago, well before vaccines. So, I think the concept of herd immunity in the way that the WHO uses it and the way that I use it is unachievable because we know that the infection can spread in vaccinated populations. And the latest data from REACT-1 is suggesting that actually vaccinations, two doses of vaccine is probably only about 50% protective against infection, but the big thing about vaccines is that they are substantially more effective at protecting against severe disease than they are against infections. And that I think has been really important.

There was another point that … so herd immunity, yes and the other issue really is vaccinating of younger people and I think one of the difficulties here that we've not really considered is actually how many of those younger people are already immune from natural infection. We have very little data on children under 16, but 16 and 17 year olds are included in the ONS antibody survey and what we can see is that there is a very strong, very linear relationship between antibody presence and the total number, the cumulative number of cases of infections in the 15-19 year age groups in its relationship to antibody prevalence. Now, on the 18th of July, ONS estimated that about 60%, just under 60%, 59% of 17-year olds had already got antibodies, so they had already had the infection and recovered, because very few if any of that age group have had that. Now looking at the projections from that, that probably means that at the moment in that age group about 80-90% of 17-year olds, before we've rolled out any vaccine, have either already had the disease and have recovered from it, or are incubating the disease and have yet to develop antibodies, because it takes typically about ten days to develop antibodies after you've developed symptoms, for pretty much all infectious diseases.

So, in terms of about vaccinating 17-year olds, my concerns are why are we vaccinating an age group that the large majority of them have already had the infection and recovered, and that has two issues, one is is it necessary to vaccinate that age group, and two is do we know enough about potential side effects in teenagers who have already had the infection before they are vaccinated. Now we do know from other studies that if you have a natural infection and at least one dose of any of the vaccines you have a pretty strong robust immune response, so that certainly probably one vaccine will undoubtedly increase the robustness of the response. But again, what the impact is around adverse reactions in that age group, we know very little about children under 16 and their

antibody prevalence at the moment, but I suspect looking at the reported cases in younger teenagers that you know they are probably getting to the point where about 50% of them will have already had the infection and recovered.

Layla Moran MP

Thank you very much. And Andrew. Is there anything you'd like to add?

Professor Andrew Pollard

Yes, I was going to pick up on a similar point to Paul which is about this sort of mythical herd immunity and I absolutely agree with the points made that the problem is that this virus is not measles, if you had 95% of people vaccinated against measles the virus cannot transmit in the population. What we know very clearly with the coronavirus that this current variant, the Delta variant will still infect people who have been vaccinated and that does mean that anyone who is still unvaccinated at some point will meet the virus and you know that might not be this month or next month, it might be next year but at some point they will meet the virus. And we don't have anything which will stop that transmission to the other people. Now, the one thing the vaccines might do, just like wearing masks and so on, they may slow the process down a bit of that transmission and the bit of evidence there is that people who have been vaccinated seem to be shedding for a slightly shorter period of time and that means there's just a bit less opportunity for them to spread to someone else. So I think we are in a situation here with this current variant where herd immunity is not a possibility because it still infects vaccinated individuals. And I suspect that what the virus will throw up next is a variant which is perhaps even better at transmitting in vaccinated populations and so that's even more of a reason not to be making a vaccine programme around herd immunity.

And so when we come to thinking about children, one of the strongest arguments that has been made is to vaccinate children to protect adults, but there's two issues there, one is that vaccinating children is not going to completely block transmission, so it doesn't achieve that goal and then of course secondly we need to get our adults vaccinated and we've been doing pretty well at doing that here but of course as Devi said not elsewhere in the World. So, once you've got a highly vaccinated adult population even if children were a major vehicle of transmission that is not the issue because the adults are vaccinated and in fact mild infection in somebody who is vaccinated will boost their immunity, it will likely broaden the immunity to future variants as well as the current ones and it'll increase the amount of immunity they have. So as long as you're vaccinated and are fortunate to get mild infection then you are protected.

There's one other thing that we really need to recall here which is that vaccines aren't 100% effective and there's some people for reasons we don't know why, they don't get good protection from vaccination. But there are some groups where we know that they will have less optimal protection or maybe none and those are some of the immuno compromised individuals and for those people we have to focus on improvement the treatments in hospital, because as Covid becomes something we live with there are going to be people in the years ahead who still become seriously ill with the infection and so we need to make sure that the work … and it is happening to improve those treatments so that when people develop symptoms at the front door they can be managed well.

I think one other issue that we should bring up around children is this big burden on the education system and that there is, for the children that is, in missing school. And of course that is largely driven by the testing policies but if you test a lot of children and show that there's some cases and you end up sending their contacts or classes or even year groups, that has a huge impact. But given that children have relatively mild infection compared to adults, apart from the exceptions who are

largely going to be vaccinated in the current programme anyway, we probably should be moving to a situation where we're clinically driven, so if someone is unwell they should be tested but for those contacts in the classroom, if they're not unwell then it makes sense for them to be in school and be educated. And I think as we look to the adult population going forwards if we continue to chase community testing and worry about those results we're going to end up in a situation where we're constantly boosting to try and deal with something which is not manageable and over time we need to be moving to clinically driven testing as well. Where it's people who are unwell who get tested and treated and managed rather than lots of community testing of people who have very mild disease.

Layla Moran MP

Thank you very much. Very quickly Devi.

Professor Devi Sridhar

Yeah, just two quick reactions to that. Around children I think it's exactly right, the question is, is it better for them to get Covid or is it better for them to get vaccinated and what are the risks and benefits of each of those. Because simply in education and schools we can't keep large bubbles of kids on, the destruction is huge so the question then is how do we protect them to make sure they can stay in schools or do we say actually it's better for them just to get infected. And the two things I can't get my head around is first Long Covid, where there is such different data sets on this and very, today an article in the New York Times going through the US experience where it's a major concern, you know changes to children who become very ill and we don't understand it fully and it's not kids who will show up in hospital, it's kids who will suffer at home and I just think I haven't gotten my head around a good answer and it's very ideological as well which becomes difficult to get a handle on people truly believe in it, truly people don't believe in it and the data gets quite messy in between.

And the second thing is around what is happening in the United States, I'm from Florida so I follow it closely and paediatric admissions in Florida are going up quite strongly and Texas as well. Of course they have a different issue with their adults not being as vaccinated as we are, large hesitancy, but this just raises a little bit my concern level to say what is happening in the States, why are paediatric colleagues very worried there and saying that there is something different going on, whereas we look at here as Dr Sinha said, paediatric colleagues are saying actually we're not that worried about Covid, we're worried about RSV and all the other things that we need our beds free for, and so again I don't understand why we are seeing such a different picture across the Pond with the similar variant in a similar virus.

Layla Moran MP

Thank you very much. I've let the first question ramble slightly but you've been wonderful at not repeating what others have said, so please continue with that thank you, as I pass onto Baroness Finlay.

Baroness Finlay

Thank you very much indeed and I'm Ilora Finlay and I guess I should declare now that Andrew and I had a piece in the BMJ last week, so I will come to you last Andrew if that's alright with you. But the

thing I really want to ask you all is that SAGE and others have warned that it's almost inevitable variants will emerge that can evade the vaccines currently in use, how concerned should we be about vaccine escaping variants altogether? And perhaps I could start with Paul with your WHO hat and then I'd like to go to Devi and Ruchi and Andrew, thank you.

Dr Paul Hunter

Yeah, well I think the first thing is I disagree with what SAGE said only on one word and they said it's almost inevitable, I think it's absolutely inevitable that we are going to get escape variants coming. And you don't need to know that much about Covid, you just need to look at the other human coronaviruses or sometimes they're called seasonal coronaviruses, to see that, and there are four of these, and all of these have been with us for decades, centuries probably, and we still see this emerging escape mutations and the technical term for it is genetic drift. With influenza we get genetic drift and genetic shift and the shift is the big change which generates pandemics. But with Covid we see this gradual change and what we see with the other coronaviruses and we are seeing it with Covid is that you do get, we are seeing this drift where mutations accumulate over time, but each step isn't enough to lead to complete escape. But if you follow the other coronaviruses for say about 20 years, a coronavirus now if you tested serum from 20 years ago one of the circulating human coronaviruses now would not be neutralised by that serum from 20 years ago, but it would be neutralised by serum from say five years ago, and there are these papers have been published.

So, yes they will occur, but providing that in the normal scope of things with the other coronaviruses, because ultimately you know with these other coronaviruses we get infected repeatedly throughout our lives, typically on average about every four years with each of these different coronaviruses. Now, if you realise that you think well actually what that means is that a quarter of the UK population on average will get infected every year and what that means is that on average about 45,000 people a day will be infected with these other coronaviruses. And so ultimately what happens with the other coronaviruses is that although you get a gradual escape because we are getting re-infected so frequently with these other coronaviruses we actually keep up and because the other thing is that that escape primarily is about the S-protein which is primarily not necessarily about the other antigens within the coronavirus, so the escape is primarily about mild infections and not severe infections and that's … so what we're seeing is that escapes are happening but you still get strong protection against severe disease and we've seen this already in Covid and we … but ultimately we will keep up to date but the issue is how do we get from where we are now to where we are with the other coronaviruses without substantial morbidity and mortality.

Baroness Finlay

Right, can I go to Devi and just ask briefly how concerned do you think we should then be about this drift and the speed of it that we're seeing?

Dr Paul Hunter

I think whether we're concerned or not it's going to happen and I think …

Baroness Finlay

Paul, I'd quite like to bring in Devi now and then move aside if I may, thank you.

Professor Devi Sridhar

Yeah, thanks for that. I mean I think we have seen already you know Alpha, Beta, Delta and we already know [inaudible 0:43:46.6] out there, I mean it's inevitable and I think the question is what can we do about it. And for me actually the three ways I see forward is first that vaccine effectiveness is not on/off switch, it works or it doesn't work, I've clumsily used that kind of language in the past but I think actually it's about how much it brings it down and the real focus being on severe infection and people getting quite ill, or prolonged illness, not to negate Long Covid in that issue that is a real issue for many people who are suffering with it. The second thing is that I think we need to be looking at layers of protection, of how we protect people from becoming severely ill, vaccines are one of them, we know that populations that are healthier tend to do better, we know if we can put in place other kind of testing regimes to stop people infecting others and keep you know transmission as low as possible, again that's a layer of protection. But I think the idea that it's vaccines alone is not going to be enough in this World, vaccines as a major pillar but one of many tools. And that comes to my last point which I think some of my worry around the language around 'Freedom Day' and the pandemic is over that you're seeing in the media is that we can get back to more living, we can get back to more mixing, we can do more things safely, we can have more regular educational experience for children, but the pandemic is far from over and how it affects people's lives, especially for those who are immuno compromised or who are in some position more vulnerable. And it's how do you actually communicate that to the public that it's going to be a bumpy winter, we are trying to address all those harms that have accrued, not just the Covid but the non kind of related Covid harms of you know unemployment, children's educational inequalities, domestic violence, all of those things that have accrued, but how do you get that messaging to the public that yes, go back to somewhat more normal, vaccines have transformed it but they haven't solved it. And I think that's the difficulty we're in right now with the variants going forward, it's about solutions, we know the problem, it's how do we actually move it forward.

Baroness Finlay

Ruchi, can I just ask you then in relation to that about children and factors like malnutrition, obesity and so on which we know are risk factors as well as those who've got developmental delay, but how concerned do you feel that we should be, not putting all our eggs in the vaccine basket.

Dr Ruchi Sinha

Well I think that you're right, those are the children that end up in critical care areas, especially we've seen a lot of obese children with Covid-19 that have ended up in intensive care, so I do think that we should be offering the vaccine to those children who are vulnerable and likely to suffer. But I think as you said vaccine escape is inevitable and I think that adds to the argument not to roll out blanket vaccinate children aged 12-15 or whatever it is, because I don't think that's going to help you minimise that, your risk of transmission is there and actually I think with children, I mean I'm not an immunologist or an epidemiologist and I think as a jobbing intensivist my risk benefit turns into with kids, they're not going to stop transmission, they're not going to stop escape variants, nothing is, so actually it's all about the risk to the child itself, or themselves, so actually yes, we should offer it, I think to vulnerable children but I don't think that currently the way it stands, vaccine roll out to all of them is the way forward. But I have also seen the reports from Florida and Texas and I think we need to see what the difference is between them and us, and we do know that in Texas the adults, I think

the adult vaccination rate is only 45%, much lower than here, and I don't know what the demographic or the phenotype of those children in Texas and Florida is, the ones that are getting critically ill, so I think we need more information.

Baroness Finlay

Andrew, have you got anything to add to that?

Professor Andrew Pollard

Yeah, I mean I think there's a really important point that's been raised about the uncertainty that we have and Devi mentioned Long Covid and also the situation in the US, we don't quite understand why this Delta wave, it appears that they're seeing more children in hospital than we are. And I think a critical bit to be aware of here is that the policy advice that comes from JCVI and I speak as Chair of JCVI but not involved in the Covid discussions, but the policy advice is not an ideological position about children, it is a scientific opinion based on today's evidence which will change if new evidence emerges and I think that's a critical point here, that it's not a political debate about whether children should be vaccinated or not, it's about trying to weigh up risks and benefits to make the best possible decisions for the benefit of the childhood population. And I think, you know, JCVI you know they might have different views when we have more evidence, or they might not, but I think it's important to support that approach of very careful thinking through of all of these different aspects which will include data coming from other countries as well.

Baroness Finlay

Thank you and I'll hand onto others, thank you.

Layla Moran MP

Thank you, Andrew just to follow on from that, because it links the two sessions in a way, on the one hand we're looking at you know vaccinating children, harm to the child, and thank you all for your comments because I think certainly my perspective is shifting on a lot of these issues, but you know the JCVI when it released its first scoping document made very clear that vaccinating the rest of the World and ensuring that we were trying to do this as best we could in parallel with elsewhere was very important. To what extent are JCVI's, or to your understanding because you're not involved in that group specifically, but to what extent is the recommendations coming out of JCVI balancing those two pinch points if you like? Just your perspective, are they taking into account what's happening elsewhere in the World or are they just looking at what's right for the UK population, full stop, in a bubble?

Professor Andrew Pollard

Well, I mean JCVI's obviously made up on members who are very aware of what's going on elsewhere in the World, including epidemiologists and scientists who advise WHO and are involved in that, so they're very much aware of those issues. But the terms of reference of JCVI is very much about the UK population and what's in the best interests of the UK and so the advice very much focuses on those questions rather than you know it's a different policy decision about what should be done about other countries that you know obviously comes from Government rather than from

JCVI and WHO provides that global perspective on where policy should sit for countries and obviously would like countries to be taking that global view into account.

Layla Moran MP

Thank you very much. If I can now pass to Baroness Masham.

Baroness Masham

Good afternoon everybody, I'm Sue. In your opinion, what vaccination strategy should the UK adopt to help prevent or at least delay vaccine resistant variants from emerging and have any already emerged? Who'd like to go first, perhaps Paul?

Dr Paul Hunter

Yeah, well I mean clearly vaccine resistant variants have emerged, or partially vaccine resistant variants have emerged and the Beta variant and the Gamma variant particularly are associated with reduced control by prior immunity. But I think there's a number of issues here and the first is that the biggest problems that we've had since the start of the epidemic was the emergence of a number of variants that have been more infectious rather than actually more resistant to immunity and the first one was the D416G I think, which came back in early Spring last year, then the Alpha variant to be replaced ultimately by the Delta variant. Those increased infectiousness variants is something that you see when a virus jumps host and you get a lot of very rapid evolution, but then at some point you achieve effectively the best fit and evolution in those viruses slows dramatically and it then shifts into this escape mutation which will happen.

Now, the first thing to say is that what we do in the UK will ultimately have a relatively minimal impact on the global risk of the emergence of new variants because you know, a new variant can arrive anywhere on the planet, it's more likely to arise in countries that have got a lot of infection at any one time, but it could still, it could, the next big escape mutation could arrive anywhere. So ultimately what we do in the UK will have some impact on the global emergence of new variants but probably not a great deal. What we can do in terms of, and where I think what we need to be aware of is making sure that we are aware if these variants are spreading rapidly within our own communities and then addressing that and working out how to deal with that. There have been a number of research papers on the issues around risks, around new variants and it must be said that I think there is no consensus as far as I can see, so I'm not sure I can answer the question that you've said in a way that gives you a good answer, sorry.

Baroness Masham

Well it is complicated. What about Andrew?

Professor Andrew Pollard

Thank you, well I mean I agree with Paul's comments, I don't think there's anything the UK can do to stop the emergence of new variants, they're going to happen. And if anything we need to focus now not on what might stop new variants because I don't think we have any facility to control that, we need to focus on thinking about how do we prevent people dying or going to hospital and I think this

is an enormously important thing to be thinking about today because during the course of this week there'll be about 65,000 deaths in the World, we have now over four billion doses deployed of the vaccines globally and that is now enough doses to have prevented almost all of those deaths and yet they are continuing. So, when you think about what the UK's strategy should be around variants, I don't think there is anything that we can do, but what we can do is play a more active role in the global imperative which is to stop people dying, that means making sure doses are going to the right people.

Baroness Masham

Is there a difference between the variants and the vaccines causing serious infection?

Professor Andrew Pollard

Do you mean are some variants causing more severe disease than others?

Baroness Masham

Yes more … yes, more variants escaping from certain vaccines?

Professor Andrew Pollard

We don't have any evidence that that's the case, I mean we've got some dominant variants that are in different parts of the World at this moment, but I don't think there's any evidence that you know they have emerged in the context of vaccination, in fact most of them we were aware of before vaccines had been deployed, and so far we don't have a new variant that's emerged en masse in populations where there's a high level of vaccination because of course that's something that has only happened relatively recently. But I suspect that we will see many new variants during the course of the next six months and at some point Delta will become no longer the dominant one, something else will be the dominant one.

Baroness Masham

Thank you.

Layla Moran MP

Sorry to interrupt, we are approaching the point where we were meant to be passing onto the next panel, we've got a number of questions left, so if I could just implore that you know please add additions if absolutely necessary, but there are some really important questions I'm very keen we address, thank you in advance to the next panel for your patience, I'm just going to borrow a little bit of time from that session and so I'll ask the Secretariat to ask if we can carry on for five or ten minutes at the end to make sure we get all of those questions covered, they'll contact you. So back to you Baroness Masham.

Baroness Masham

And has Devi anything to add?

Professor Devi Sridhar

The only thing I would add is I think we need to, it's been a really rough 18 months in rich countries like Britain and the United States and it's been very inwards looking during that time because if your house is on fire you're trying to put out the fire and right now is the time actually if we are worried about other variants and humanity as a whole to look elsewhere and I don't think the issue is do we vaccinate kids here, or do we vaccinate abroad or do we need to give more doses abroad. The issue is about manufacturing capacity, it's about regional hubs, tech transfer, emergency IP legislation, those are the core issues so regions can be self-sufficient and produce the doses they need, given this is an on-going challenge, and less about United States is giving five million doses here or there, it's a drop in the bucket and so I think that's kind of where I see right now where the Covid discussion needs to go, less focused inwards as our issues start to get handled, it's more about now we can finally engage because there's bandwidth. Thank you.

Baroness Masham

Thank you so much. And Ruchi have you anything to add?

Dr Ruchi Sinha

Yeah, as I said I'm not an epidemiologist or an immunologist and I don't think vaccinating children is the answer to escape variants if that's the question.

Layla Moran MP

Thank you very much. Caroline Lucas.

Caroline Lucas MP

Thank you very much Layla. I have three short questions, much has already been covered of what I was going to ask, but if I can just tease out a little bit more. The first was on Long Covid which Devi has already mentioned but I wondered if any of the other witnesses had anything to say in terms of whether that should be affecting our view on vaccinating children. We know that some young people can be very affected by Long Covid and sometimes that's advanced as a reason for vaccinating young people, so I wondered how you would respond to that. Secondly on the side effects of vaccinating young people, if it does happen how worried should we be about that? And then finally picking up both Layla's point and actually what Devi just said about this is there or isn't there this kind of trade-off between vaccinating children here versus sending vaccines overseas, and I hear what you say Devi about the fact that I completely understand the TRIPS waiver is really important and building up manufacturing capacity in developing countries is vital, but both of those sound like they're quite long-term solutions and what I don't really understand is whether or not there's a cupboard somewhere, a kind of mythical cupboard with lots of vaccines in it right now in the UK that we could physically be deciding are we using them here in the UK or are we sending them to Peru or Nepal or something. That sounds a very simplistic question but I don't really

understand that trade-off between children here if there is one and vaccinating overseas. So maybe I could come to Andrew first because I know you've written about this.

Professor Andrew Pollard

Yes, so taking up the point about waivers, I agree with what you've just said Caroline that the problem with the waivers and the manufacturing capacity is that this is a huge undertaking which if you can get through the legal battles of the waiver you then have to do the tech transfer and we're talking six months to a year to get to that point and as we've discussed with this group before, the companies which have done that started a year ago, which is why we've got this global manufacturing at this point. So it is important to do but it doesn't solve the deaths that we're going to see in the next six months of this year.

And as far as the cupboard with doses in, you know I mean the point was made by Devi that five million doses is a drop in the bucket but actually there are quite a few countries where that's the whole adult population who today are unvaccinated, and in fact there will be many countries where half a million doses would cover the whole adult population, so I think we shouldn't belittle the value of even a relatively small donation of doses to people who are at risk of dying over the next few months. So I would say there are very good arguments for directing doses from rich countries where most of the adults are now vaccinated to be donated elsewhere, but clearly what we need is further increases in manufacturing capacity. COVAX at the moment has delivered about 190 million doses of vaccines in total, and their supply at the moment is still relatively slow, although I think we can all be optimistic that that's going to improve dramatically in the second half of this year. So I think things are improving, but every dose makes a difference if it's given to people whose lives might be lost this year.

Caroline Lucas MP

Thank you, can I come to Paul next?

Dr Paul Hunter

Yeah I don't think I've really got anything to add to what Andrew has just said. I agree totally with everything that he said and I think he covered it perfectly.

Caroline Lucas MP

Anything on the Covid or the side effects, sorry the Long Covid or the side effects?

Dr Paul Hunter

Yeah, I mean I think one of the things, I think when people are talking about Long Covid they're sort of assuming it's a single disease entity with a single pathogenesis and a single pathology and I think that is extremely unlikely to be the case and I think we are going to see all sorts of long-term effects from Covid, many of them physical, many of them psychological, many of them a mixture of the two, and I think at the moment it's very difficult to get a handle even on how common this is in children, and the ONS study that is done is a self-reported prevalence study and those studies they're often very instructive but they are very prone to bias in terms of both under and possibly over-estimating

disease prevalence. So I think we need to be funding a lot more work on the issue about Long Covid, what are the pathologies that are going on and actually try to get an even better handle than we have at the moment on even how common it is, which I think is still very uncertain and there is a difference between the reports from the paper from the Zoe app people and the ONS study, but the ONS study doesn't … as they said, you know it can't imply causation and so we need better studies than we've got even with the ONS study to actually get a better handle on how prevalent it is, and also understand what's causing it and it's probably not one thing that's causing it.

Caroline Lucas MP

Thank you, and to Devi.

Professor Devi Sridhar

Yeah I'll just come in on the vaccinating kids versus vaccinating the World because I always find this a false debate because we can't use the main supply in the UK, which is AstraZeneca, in children anyways. The only two vaccines that are approved in the younger age group are Moderna and Pfizer, so in a way you know if we have ample supply of AstraZeneca for over-40s, of course we should be giving those abroad if we don't need them here and even the talk of boosters, it's not about AstraZeneca boosters, it's about Pfizer boosters currently. So I think actually the real issue is not about vaccinating kids versus the World it's what do we do about boosters as being discussed in rich countries, because those are the doses that could be going abroad, it's less about actually the issue of children because luckily due to the efforts of Sir Andrew Pollard and others we have a very effective vaccine in AstraZeneca that can be used for the World that's not going to solve our children issue here. Thank you.

Caroline Lucas MP

That could get us into a very interesting debate on boosters but I daren't go there right now with the shortage of time, so I'll just come to Ruchi, and I know that we haven't yet talked about the side effects, I don't know if that's something that you're able to say anything about?

Dr Ruchi Sinha

Again, I'm not an expert on the side effects of vaccines but I have read the papers that as Devi said about the, that we'll only be using Pfizer really and a lot of the data that's come out of the USA certainly is about Pfizer saying it's more safe. I think the worry is about the myocarditis symptoms in the age 12-30 year old predominantly male group, but I think that none of them died and none of them seemed to have lasting long-term effects but actually I don't really know enough about it and for me it would just come right back to the point about the risk benefit of vaccinating that child for their hospital admission ICU risk of death and PIM-TS, as for Long Covid or Neuro Covid I, again I agree with Paul and Devi and Andrew, I don't think we know enough about it to say at the moment.

Caroline Lucas MP

Thank you. Layla do we have time just to explore that thing about boosters? No we don't, OK.

Layla Moran MP

Sorry, that's my fault I lost my screen. So if I can now go to Barbara Keeley, thank you.

Barbara Keeley MP

Thank you, just a quick follow up question to you Ruchi, you've given us a picture of the current situation re hospital admissions and about the pressure on paediatric intensive care from respiratory virus and the impact of that pressure on things like cardiac surgery and the fact that there are children with mental health needs in acute beds. I'd just like to ask you what could be the picture when schools open and as we head into autumn and winter, do you feel the system is going to cope?

Dr Ruchi Sinha

Well I am worried about it, it has been very busy these last two months. Normally when we have an RSV surge it's in winter and there are sort of packages in place if you like for NHS Trusts for winter surge which have not been so easily mobilised for paediatrics lately, partly because it's summer and it's out of season, so I'm hoping that those safeguards kick in again. This time unlike other winters because we have an RSV mini-pandemic year on year, but this time because of everything that's happened with Covid in adults I think it's being taken a bit more seriously actually, there's a bit more planning thinking about surge capacity plans, mutual aid, so I'm hoping that we will be better prepared, although I am worried about … because at the moment I say respiratory viruses but there's no flu and there will be flu, so there'll be flu, there's RSV, there's the other viruses and I don't know what's going to happen when schools open with Covid, so there's that as well. So I think it's really important that our surveillance systems are intact, that we have good processes for maintaining capacity and flow and like I said what I do know is that paediatric critical care is a very precious resource and you can't just surge into adult areas like the adults did with us, so it's absolutely vital that we protect our paediatric critical care capacity and paediatric space as much as possible.

Barbara Keeley MP

Is there likely to be an impact, you mentioned the impact on things like cardiac surgery, if with the surges that you've talked about what is likely to happen to other conditions?

Dr Ruchi Sinha

Well we saw in the first two adult surges, I don't know in the very first surge seven of our paediatric critical care units repurposed fully, mine included, into adult critical care, so we looked after adults with Covid which meant that all children were diverted elsewhere which meant that some elective procedures had to stop or they were classified as what's called P1 and P2 surgery, so that's the most immediate needs to be done within a day or two days, which meant that everything else had to wait. If you're a child with, you know awaiting airway surgery heading into winter, being exposed to a virus that could really be quite an impact on your life and your family's life, same with critical cardiac surgery, so actually I don't think now we've done it now twice, after the first wave we said we wouldn't do it and we did it again in the second wave and I think it's absolutely vital that we don't do this again because actually those children really will suffer and as I said we don't have the luxury of

surging into adult spaces like they did with us because it's much more nuanced, it's a different skill set and I don't think, and we know that most of the children affected by these viruses tend to be in a 0-2 year old age group, you can't ask an adult intensive care team to look after a three month old baby, whereas you can probably ask a paediatric intensive care team to look after a 20-year old, that's different. So I think that's got to be recognised and these resources need to be protected.

Barbara Keeley MP

Thank you.

Layla Moran MP

Thank you very much and to round us off if I can pass to Lord Strasburger please.

Lord Strasburger

Thank you Layla, it's Paul by the way, good afternoon. Just looking at the bigger picture the UK is running at about 25,000 infections a day and the best part of 100 people dying a day, how satisfied should we be with those numbers and how do they compare with other countries, and what would be your key message to the Government. Shall I start with Devi?

Professor Devi Sridhar

This is a really difficult question, I'll try to put a very long thought into a small snippet which is you know the idea of lockdowns and of even zero Covid and of max suppression as we saw in East Asia and in Australia and New Zealand was to buy time for a scientific solution, for science to deliver a therapeutic or a vaccine or something that would break through, time was the currency that mattered for science and now we've gotten to the point where we have incredibly high uptake, extraordinarily high in the UK, the US trying to get there as well, and where Australia and New Zealand and East Asia are trying to get to is where we are, they're actually trying to get their uptake to 80-90% and at that point they can open up and start resuming and get out of kind of these lockdown to the World restrictions within their borders. And so, we're in a very difficult position in the UK and in some ways I am sympathetic to the Government because once you've doubly vaccinated a large percentage of the population and we can look at kids and boosters, once you have ample testing, once you've put in place as many precautions, you know in Scotland at least we still have face coverings indoors, we look out for vulnerable people, you know once we do these measures what more can we do at this point in terms of moving forward. So I think actually this is where a lot of countries are now looking to, what is next beyond everything we've done before and we can have slightly more effective vaccines, we can have boosters, we can have better treatments, but kind of we're at the point we were waiting for with science and so I think in some ways what more can we do now is kind of the way I'm looking at beyond advising people about this virus that science is trying to stay ahead of it and there could be better therapeutics and their personal management of how we deal with kind of cases in your community. So it's a bit of a depressing answer but the important thing is if you look on a positive note at the difference between cases going up and hospitalisations largely staying flat and deaths staying extremely low, we seem to have weakened the link between cases and hospitalisations and deaths which is a really positive thing and what we ultimately hope to try to do through a vaccine or a treatment. Thank you.

Lord Strasburger

Thank you very much, who would like to go next if anyone?

Dr Paul Hunter

Shall I go next? I think what Devi said is absolutely correct and I think I totally agree with that. I think the one message that I would say though is that I think as we change from an epidemic to endemic status I think we need to be looking at how we analyse that, I think at the moment we're reporting all cases of infection and as we become, as the disease becomes more and more endemic what we will see is that a diminishing proportion of those infections will actually be related to clinical illness so I think, and we do this quite often during epidemics where we change case definitions as we need and I think we need to start moving away from just reporting infections, just reporting positive cases admitted to hospital, to actually start reporting the number of people who are ill because of Covid, those positives that are symptomatic and we need to be moving towards reporting hospital admissions that are admitted because of Covid, not because of they just happened to be positive and they're being admitted for something else. And sometimes that distinction is not easy to make even for the admitting clinician and you know has this person got a heart attack because they actually got Covid or was the heart attack totally unrelated and that often even when it is your patient that might not be an easy decision to make. But I think we've got to start moving to that, otherwise as we become, as this disease, infection becomes endemic we are going to be frightening ourselves with very high numbers that actually don't transmit, translate into disease burden. Over.

Lord Strasburger

Thank you that's a very interesting point. Do either of our other panellists have anything fresh to add?

Professor Andrew Pollard

Perhaps I could just make one point that I mean there remains some uncertainty of what happens next over the next six months and you know I think most people think there will be some bumpiness in transmission in the community, but I think that six month period is going to be one of increasing confidence about where we are and exactly as Paul said, part of that now needs to be working out how do we learn to live, what does learn to live with Covid mean, what does that mean in terms of the surveillance that we're doing, the testing that we're doing and also how we should manage patients in hospital or even before hospital in their treatment to try and stop them getting into hospital. So I think this next six months is a really important consolidation phase in that shift from the epidemic to the endemic which is the living with Covid, and that doesn't mean that we live with it and put up with it, we still have to manage those cases in patients who become unwell with it.

Lord Strasburger

OK thank you and Ruchi do you want to add to that or has it all been said?

Dr Ruchi Sinha

I think it's all been said thank you.

Lord Strasburger

OK thank you very much, there's some very interesting answers there.

Layla Moran MP

Absolutely, well thank you so much which reflects why I've borrowed a lot of time out of the next session but thank you so much all of you. Andrew stays with us, but to Ruchi, Devi and Paul thank you ever so much for your time, you're very welcome to stay and listen to the others, but you're very busy people so if you need to rush off that's also OK and thank you for your incredible insight, certainly it's given us lots of food for thought and I really, really appreciate your time. Thank you very, very much.

So we're now going to rush to the next session, the likes of Zoom you don't have to rush very far but I want to say a particular thank you to Dr Gregg Gonsalves who is speaking to us I believe from Yale and so it's very, very, very early in the morning, so thank you so much Gregg for joining us, really appreciate it. Gregg is the Association Professor for Epidemiology at Yale University, he is an expert in policy modelling on infectious disease and substance use as well as the intersection of public policy and health equity. His research focuses on the use of quantitative models from proving the response to epidemic diseases. And we are also joined by Dr Ayoade Alakija, co-chair of the Africa Union, Africa vaccine delivery alliance for Covid-19 and Nigeria's former Chief Humanitarian Coordinator. She is a published researcher and in collaboration with the WHO and UNICEF has led multi-country behavioural health surveys across several nations in the Pacific Region. Dr Alakija serves on the Global Advisory Board of Women's Lived Health and is the Chief Strategist at Convince Africa. So thank you so much both of you for joining us and thank you Andrew for staying with us.

So my first question, and as we've learned from the last session if we can try and keep answers as short as possible because we really want to get through everybody, please let us know if there's a problem with staying just perhaps a little beyond the time, but I'll try not to keep everyone too much longer. But in your view are countries taking a global enough view of this pandemic? Perhaps I could start with Gregg.

Dr Gregg Gonsalves

So the short answer is no. It has, as the previous speakers have discussed, we've merely turned inward over the past year and a half or so, worried about people at home. As we know the global vaccination coverage, if you take Africa versus North America or Europe it's just under ten per … it's an order of magnitude smaller in terms of vaccination coverage between the global north and the global south. So, we have not taken it seriously, we have not done all we can do, we can talk more about what we can do but we really have basically engaged in a vaccine nationalism in which recorded doses for ourselves, we're talking about boosters and children, when you know 75-year-olds in South Africa are still vastly under-covered.

Layla Moran MP

Thank you very much. And perhaps Ayoade do you want to add anything to that?

Dr Ayoade Alakija

Please call me Yodi, it's much easier.

Layla Moran MP

Thank you.

Dr Ayoade Alakija

Thank you very much for having me here, it's a delight to be with you all. I will agree with Gregg, the short answer to that is absolutely not, no, but to expand from the perspective of one who is from a low/middle income country of the World who actually sits in the global south, I always tell people to forgive me, my voice comes from the hills of Malvern and boarding school but my heritage is purely African. There hasn't been enough done and I think there is a mixed message around the World at the moment where we're talking about vaccine nationalism, we're talking about boosters and yet we're worried about variants, there was a question earlier I believe from Baroness Masham I think it was about … Masham, apologies ma'am … about are we going to get variants you know that evade the vaccine, we're worried about variants within the UK when the real worry should be about the variants that are coming from outside of these shores, the variants that are coming from the countries where we have not shared vaccines, where we have not vaccinated people. You know the key word coming out of many of the conversations listening to Sir Andrew speak earlier and listing to Devi talking about the uncertainty or saying we don't fully understand yet what's going on with the virus, if we don't understand here where we have all these amazing data and the scientists, how much less do we understand of what is going on in Africa? You know there are countries in Africa where there is almost no testing, so I mean I say regularly that the variants in Africa must have grandchildren by now, I have conversations with my diplomatic colleagues, you know the Ambassador to the US, Ambassador to the UK, in which we discuss what exactly is going on in those countries, a country like Nigeria where it yesterday reported just 422 cases in a country of over 211 million people. Last week there was zero cases. So no, the countries are not taking enough of a global view. Even from an enlightened self-interest perspective, you know if you don't care what happens in those countries then we must care what happens when those variants hit our shores, because the borders are not closed and even if they were you know the UK cannot operate as an island, it is an island but in this localised world that we're in, the UK or the US, nobody can operate as an island as we've seen so far with the Delta variant. I'll leave it there for now.

Layla Moran MP

Thank you. Andrew, anything to add at this stage?

Professor Andrew Pollard

Perhaps just a very brief comment that I agree of course with both speakers that globally we are not doing enough and absolutely the place where we're doing the least is in Africa, so I think absolutely

right to focus there. I think that there is this self-interest issue which was just discussed about the importance of vaccinating elsewhere in the World, that has both a health security issue which is to try to contain the virus to some extent elsewhere, although as we discussed in the last session that's more challenging with the variants which can still spread in vaccinated populations. But there's also an important economic component to this in that we trade with countries all round the World, low and middle income countries as well as rich countries and if they're shut down, their health systems are overwhelmed and we're not allowing that trade to happen, or it can't because of the economic impact, that affects us. So I think there's plenty of good self interest reasons but for me the main one is the important moral imperative of thinking about people in other countries.

Layla Moran MP

Thank you very much. Caroline Lucas.

Caroline Lucas MP

Thanks Layla. Just really following on from that and if I can come back to Yodi in particular, I just wonder if you could offer any reflections on the UK vaccination programme, obviously it's been hugely successful in its own terms but how is it looked at could you tell us maybe from the perspective of middle or low income countries, what is their perspective?

Dr Ayoade Alakija

Absolutely admiration, I mean I can't say enough about how wonderful I think people like Sir Andrew are and Dame Sarah and those behind the AstraZeneca and also the British Government and the incredible NHS for rolling it out, I mean but I will talk to the disparities as well, so I think it's viewed very positively. I mean my husband is half Welsh and so his family in Wales and his 18, 19 year old nephews and nieces got vaccinated way before their 50-something year old Uncle who is living in Africa, because there were no vaccines available. You know those are the disparities, our daughter who is a lawyer in the United Kingdom was vaccinated before her grandmother who is still not vaccinated in a village in South-West Nigeria. So I mean the UK roll out has been incredible. UK's handling of Covid per se I would say not so much in that we all view with horror across the World, and when we talk about variants and we talk about is the latest variant likely to come out of the UK, I think we need to remember that the initial Kent variant, actually because of, to my mind and this is my opinion, some poor management, and I think global management as a whole at the beginning of this pandemic starting with the former President of the United States, bad behaviour is catching and so starting with that behaviour and not taking this virus seriously enough we allowed it to go on, we have, I have said this, I spoke at Stanford the other day and I said that to my mind we have extended this pandemic, well we've now made it endemic, but we've extended this pandemic by a couple of years due to bad behaviour.

So, the original Kent variant that emerged out of the UK, all of that notwithstanding the response from the NHS, the response from scientists within the UK has been just, I mean par none [ph 1:24:24.0] it's been incredible, so I congratulate the UK for that. But now it is time to take global leadership in this year of chairing the G7, it is time to put on the big boy pants as it were and to lead and to realise that you know until, as we all say until we are all safe nobody is safe and the UK has a role to play in that, the UK has a role in global political leadership, this is not a health crisis, we deal with it as a health crisis, it's not a health crisis, it's an economic crisis as Sir Andrew just said, it's a food crisis in many parts of the World, a hunger crisis. It's a crisis of gender where young girls have stopped going to school in most of Africa, parts of the Pacific, young girls are getting pregnant,

female genital mutilation is on the increase, so it's a crisis from that perspective and it is a global humanitarian crisis, in parts of India, in parts of Africa and we need to start addressing it as such. We all around this table, largely are medical affiliated, I'm a medical doctor out of the University of London, London School of Hygiene and Tropical Medicine, you know but we need to take off our medical hats and we need to bring the social scientists in the room, so congratulations to the UK, now do more please.

Caroline Lucas MP

Can I just … that's really powerful thank you, but just to kind of really clarify what you mean in terms of the UK showing global leadership, clearly it's got a role on the World stage with the G7 and so forth in terms of urging other countries to give more to COVAX and so forth, but what does it really look like do you think, does it mean making decisions about how many more vaccines we use here in the UK versus how many go to the global south, does it mean for example coming in behind the TRIPS waiver which the UK currently hasn't been supporting, does it mean massively stepping up contributions to COVAX, can you just spell out just slightly more on that?

Dr Ayoade Alakija

Absolutely, I mean I think we can walk and chew gum at the same time, I don't think it's either/or, I really do. I think that supporting the TRIPS waiver is critical, Sir Andrew has said very clearly and I totally agree with him that that is a medium-term solution and it's not today. We need to share more doses, we need to share them immediately. You know the UK announced on the 31st of August [sic] that there were some doses to be shared largely to African countries, but you know what is behind the headlines that people are not seeing is the poor decision making that got us to that point. Those doses yes there's a big announcement, the PR and the ops are great, however those doses have not yet arrived in countries and yet they expire in about a month. I know for a fact as of this morning, I checked with the Head of UNICEF in about five African countries those doses have not arrived and they're not expected for at least another week or two weeks. So by the time they are cleared, by the time they have gone through the logistics loop and hurdles etc, we will be in September. Those doses expire in September. Sir Andrew can tell you more about the efficacy or not sort of close to a past expiry date, I don't know, those are AstraZeneca vaccines. So we need to share doses and we need to do it in an honest and transparent manner. We need to drop the vaccine nationalism. We need to not just share, give more money to COVAX, but we need to coordinate better with COVAX. COVAX in itself has its own problems to my mind, it's brilliant and what the World needs but we need to share the power structure, it is the inequity, it is the imbalances in power that has led us to where we are today. And now I'm hogging the mic.

Caroline Lucas MP

Thank you, no thank you so much. Just very quickly do Gregg or Professor Pollard have anything to add?

Dr Gregg Gonsalves

So I really want, if there's anything you hear from me we need to make the great pivot right now, right? Every country in the World that is sitting on doses needs to get them on a plane and get them to the places that need them now. Second of all, you know while there may be delay in manufacturing capacity, at the current moment Zoltan Kis from Imperial College in the Chemical

Engineering department in collaboration with public [inaudible 1:28:21.1] and an NGO here in the United States said "by spring 2022 we could have eight billion doses of mRNA vaccines if we invoke the TRIPS waiver" but not only that, start the tech transfer and the support to the regional hubs that WHO has called for, right? The South African hub is sitting there without any real ability except [inaudible 1:28:41.1]. There is adequate capacity in the World today if we put our minds to it and put resources of the UK, of the European Union, of the United States, Canada, Australia to build up manufacturing capacity across the World. This is not business as usual, we do not have to leave it in the hands of Moderna and Pfizer, right? You know, we know … and in the context of the United States there's a letter going out to President Biden today saying he should invoke the defence production act in our other domestic laws and regulations which allow us to take the intellectual property which we own as American citizens to contract organisation to produce Modern and Pfizer vaccines here in the United States for export. We can do much, much more, we are basically letting business as usual constrain our thinking.

Caroline Lucas MP

Can I just ask you then, does that mean if you say get doses on the plane now, does that mean that Pfizer doses that could be there to do boosters for the UK let's say, should instead be on the planes going to countries in the global south?

Dr Gregg Gonsalves

It was pretty clear from the previous panel that you have reached a point of … you've vaccinated most people in the UK, that need …

Caroline Lucas MP

But boosters, I mean specifically, which is slightly different, a different question.

Dr Gregg Gonsalves

The point is is that if we're gonna boost people in the UK or the United States where this discussion is happening before the rest of the World has had even a single dose and we have to ask really what we're doing and whom we're doing it for. I have two doses of the Pfizer vaccine right now, I feel like I'll be protected against serious disease and death, I don't need another booster, the data shows that I am adequately protected against serious disease and hospitalisation. So let's get the doses on the plane, let's move them quickly. You know COVAX has said that it could cover maybe 25-30% of low and middle income countries by the end of the year, if you had said that anywhere in the European Union or in the UK or in North America people would be rioting in the streets. Our vision for global vaccination right now is underwhelming to say the least and we really have to do more. And as Professor Pollard has said, this is an economic crisis, it's a political crisis, it's a security crisis and a humanitarian crisis and we're either gonna act now or we're gonna tell our grandchildren that we didn't do this when we could have and we had the resources to do so.

Caroline Lucas MP

Thank you. Professor Pollard.

Professor Andrew Pollard

I think just to pull up on that last point, I mean I think history will look back on this year and they'll see a lot of the mistakes that both you know in science, but also the politicians have made and one of those is around messaging and we've seen a lot across Europe that's undermined confidence both in Europe and also in other countries and I know particularly in Africa where I have many friends and colleagues that that has. This moment is a moment for political leadership, we're not really talking about a health question around you know what we should do with these doses, it's about a political leadership, how will history look back on the politicians today who act and those who don't act, and I think we'll see … we have the opportunity for humanitarian leadership, for moral leadership at this moment, that moment disappears with every day, with every 10,000 people who die today and tomorrow and the next day, that potential opportunity for leadership is being lost and it isn't just the UK, I mean obviously this is a UK discussion but it really is a G7, a G20 discussion, how do we bring global leadership together and to make sure that we look out for our fellow man and woman elsewhere in the World.

Caroline Lucas MP

Thank you so much for your clarity on that and apologies to Baroness Masham whose question I think I have kind of strayed into a little bit, I apologise and back to Layla.

Layla Moran MP

Thank you very much. Before we move onto Sue, Andrew could you just shed some light on the expiry date issue?

Professor Andrew Pollard

Well, so all vaccines have an expiry date set which is based on testing to show that it's stable over that period and it has to be approved by regulators. I know that most companies are working on trying to find extended expiry dates and provide the data to do that. And obviously when you've only just started a programme with a new vaccine you need time for that time to pass and show to the regulators that your vaccine is still stable over time. So there is … we know with the viral vector vaccines that they are extremely stable and there shouldn't be any problem, but you still quite rightly have to generate the data to show that and expiry dates are set because we know that things are potent up until that point. And as I say, I think that will change in time but you need time and this has all happened so quickly so we're not there yet.

Layla Moran MP

Thank you. Sue.

Baroness Masham

It was reported this week that the UK is set to have 467 million doses of vaccine by the end of 2021 in order to vaccinate children and young people as well as offer booster jabs. Should we be

prioritising booster vaccinations and which vaccines should be used for boosting? Could we first have Sir Andrew?

Professor Andrew Pollard

Well I think first of all is decisions to boost or not should be scientifically driven and that is not really a question of whether we see some transmission in the community as we've already discussed, you know actually having cases and living with Covid is something which is the future. The time to which we would need to boost is if we saw evidence that there was an increase in hospitalisation or the next stage after that which would be people dying, amongst those who are vaccinated. And that is not something that we're seeing at the moment, we do have an opportunity with very good surveillance to watch now the data. But we have to also have an understanding scientifically about how the vaccines work and they're providing very high levels of protection against that severe end of the spectrum, but also even as the levels of immunity start to drop that we can measure in the blood our immune system still remembers that we were vaccinated and will be remembering decades from now that we had those two doses of vaccine. So there isn't any reason at this moment to panic, we're not seeing a problem with breakthrough severe disease and we have this sort of understanding of the biology that puts us in a good place to know that even if we started to see some waning of protection that would not be as we discussed in the last panel, a complete switch off of protection. We're not going to get to the end of September and suddenly find the pandemic starts again. If there was any fall off in protection it's something which will happen gradually and it'll happen at a point where we can pick it up and be able to respond. And for that reason I think we come back to this, at this moment those doses that are available that could be used for boosting or for childhood programmes are much better deployed for people who will die over the next six months, rather than that very unlikely scenario of a sudden collapse in the programmes in countries that are highly vaccinated.

So I think to me this is the key issue, is around if indeed we do have 467 million doses and I don't know whether that's true or not, but if there is a stockpile of doses then they really need to go where they can have the greatest impact.

Baroness Masham

And what about the children?

Professor Andrew Pollard

Well I think the last panel really covered this, that children are relatively unaffected by Covid, there's an on-going review of data and we talked about both the safety, we talked about Long Covid, all of that is being looked at by JCVI to inform decision making and the current position based on the evidence today is as it is set and of course that could change depending on new data emerging. What's absolutely clear if you were to look across the African continent today, also children are unaffected by Covid, or relatively unaffected by Covid, but across the African continent we have seen a disruption of health systems which means that children are not being vaccinated against the other diseases and the consequence of Covid is an increase in diseases which we could prevent through vaccination. There are measles outbreaks in several countries in Africa at the moment and that really threatens us as well. Outbreaks of any of these infectious diseases elsewhere in the World in children can be a threat to other countries. So it's absolutely critical to come back to the point to

make sure that people are vaccinated to defend health systems in other countries because that strengthens them, protects their children but it also has benefit for us.

Baroness Masham

And Ayoade have you something to add?

Dr Ayoade Alakija

Thank you, I completely agree with everything Sir Andrew has said, I think the previous panel also dealt with this. Really prioritising booster vaccinations at this point in this pandemic I don't think is what the World should be thinking about. We need to ensure that those who have had no vaccines get at least one dose where health workers, we haven't even spoken about the fact that the health workers and the elderly in many of the countries of the World, let's even just vaccinate them first, you know but the global north has vaccinated everybody sort of 18 and up and the US I believe 16 and now 12 and up or are vaccinating. But health workers, Zambia about two, three, four weeks ago lost about I believe it was about 15 doctors and nurses within a two-week period, the other place that I call home which is the other side of the World, the Fiji Islands who are actually getting quite a few vaccines now had a bilateral agreement with Australia, are losing pretty much a couple of health workers a week. Yesterday lost 28 people died from Covid, mostly the elderly. We need to save lives first before we talk about improving levels of immunity. And again we don't know yet what T-cells are doing, we don't know yet what the long-term effect of these vaccines or prior immunity and prior infection is going to be for many of our population, so I completely agree with Sir Andrew, I would not prioritise boosters for now.

Baroness Masham

So World communication is so important. So has Gregg got something to tell us about the USA and us?

Dr Gregg Gonsalves

Well … we're having many of the same debates here about boosters and about children and actually the CDC's Committee is gonna probably talk about children over the next couple of months. We also don't have a national healthcare system so it's the old Pall Mall [ph 1:40:24.2] here and people rush to get whatever is the latest health intervention regardless of whether it works or not, so to give a much more organised healthcare system than we do in the US, but that being said the UK and the US have not provided leadership on global vaccine access, I mean we can't get off this call without realising that things have not appreciably changed over the past three to four months in the global vaccine access. I talk to my colleagues in South Africa almost on a daily basis, and there are large swathes of the country richest on the continent that have no access to vaccines whatsoever, including in the healthcare sector, among the elderly and particularly in the townships and the urban areas like Cape Town and Johannesburg. So we really need to exert national leadership, both in the UK parliament and the US congress, from your Prime Minister and from our President to say to the World that this is a priority.

The other thing to think about is that if we need new doses of vaccine for a variant that emerges a year from now or a new virus that emerges three or four years from now, setting up a world wide manufacturing capacity for mRNA vaccines that the WHO has suggested is in our best interests, that

means we can turn up the dial on the doses we need for whatever we need, but right now we are under the thumb of these companies who refuse to share their technology, under the thumb of the international patent regime which basically has solidified their monopolies on these vaccines and people are dying because, so we need political leadership from the parliament, from the US congress to basically pivot right now, to make sure that we can scale up vaccines to the people who need them, billions of them around the World. There's a UK study that said perhaps a fifth of the World's population has the underlying conditions that predispose them to severe complications of Covid. A billion or more people are at serious risk of death and we can do something about it, we can do something about it right now.

Caroline Lucas MP

Thank you very much all. If I can now pass to Barbara Keeley.

Barbara Keeley MP

Thanks, my question is perhaps coming back to what you said earlier Yodi about COVAX, could you expand on what you said about COVAX's delivery of vaccines and how it's impacting on the roll out in low and middle income countries, and we heard from Gregg about the target of COVAX only achieving 25-30% coverage by the end of the year, so I guess I'm asking what is the current delivery of vaccine and what is going wrong with that and what could be done to get the coverage higher than that admittedly very low forecast, is it just the wrong forecast, are they just getting it all wrong?

Dr Ayoade Alakija

Thank you. COVAX is, I want to say at the outset that COVAX has fallen short on forecast, it was brilliant in concept, it's been very flawed in its execution but for the sake of humanity we must all work together to ensure that COVAX succeeds. I have been critical of COVAX very vocally so in the past because I believe that constructive criticism is important for things to shift and to change and I also want to put on the record that I believe they're beginning to take on board some of the critique and some of the comments. They're not happy but they're beginning to take it on board. And now COVAX in terms of how do they fall short, really it goes back to what Sir Andrew has said, what Gregg has said about political leadership because COVAX was not going to work in a vacuum it was going to support if supported by the G7. You know I think for instance the honourable Prime Minister of the UK missed a moment at the G7 summit in the UK, he missed, I mean it was such a huge miss because if that was, to my mind and I've said this publicly, his Churchillian moment as it were where he could have taken global leadership and helped push the vaccine donations towards COVAX to ensure that COVAX is able to get vaccines onto planes as has been said and to people as quickly as possible. So COVAX can only supply what they actually have in hand, the stock that they have.

So they have fallen short. I mean Gregg speaks to 25-30%, I can tell you that as of today COVAX has delivered less than 2% of the vaccines needed in Africa. The majority of the vaccinations you will hear that Africa has vaccinated about 40 million, 50 million people I forget what it is on any particular … this, today it's sort of in the 50 million plus range today, but the reality is the majority of those vaccines are from China, the majority of those vaccines are bilateral deals between Morocco, Zimbabwe, for Sinopharm, for Sinovax and that is missed out in the mainstream media when that messaging is pushed across. COVAX was supposed to, there is two things wrong with COVAX, there is

lack of inclusion and lack of coordination and a lack of inclusion. It was very much a charity model which the world has moved beyond charity, it was very much a I will give you something, I'm going to give you 20% of what you need as opposed to coming and having discussions at the highest level of leadership with Africa to say look, what does this look like, we don't understand this animal yet, we don't understand this virus, but look we think that we could potentially supplement your supplies with 20% because that is what we have funding for right now. COVAX came down very heavily, top down, there were a lot of discussion you know from Gavi and otherwise saying that you know this is what Africa is going to need, we're going to give 20%. African leadership is also not left out of this, there was irresponsibility to my mind, there was a lack of understanding and this is why I said earlier the bad behaviour begets bad behaviour, you know it was thought from the US and at some point from the UK that while this virus is not that serious, so our leadership did not take the proper positioning that they should have and the proper … they did not elevate it to the highest level of political discussion which I believe is what should have been done. That is what is wrong with COVAX. COVAX needs to be … you know I know the IPPR, the independent panel on pandemic preparedness recommendations were for a heads of state level council to look into Covid and to look into the post-Covid world. I would rather look a bit further than that, I was fortunate enough to be one of the high level experts on the G20 panel this year for the Rome meeting in May and one of my calls to that was that we need, we almost need a UN aids type structure which would take in COVAX but would recognise the multi-sectoral nature of this threat that we're facing as a globe. It is not a WHO problem, it is not a world health assembly problem and unfortunately our health ministers around the world are often the lowest on the totem pole sadly, in most of their cabinets and their governments. You know, the finance ministers have the power, the foreign affairs ministers have the power, we have delegated this to health and it is not a health issue.

So COVAX has fallen short because there hasn't been enough political leadership, there hasn't been enough inclusion and countries have not shared enough doses, that is in summary what I would say, but COVAX must succeed, we need it for humanity to succeed.

Barbara Keeley MP

Thank you. Gregg do you have anything you want to add?

Professor Andrew Pollard

Perhaps I'll just to add that I mean my view is that philosophically COVAX is exactly the right vehicle for where we are in the World at the moment and the problem is supply and as Yodi says, a lot of the difficulties with supply around political leadership, but it's also manufacturing capacity that's part of the issue there. But I do think that's going to improve in the second half of this year, but in the short-term the only way we can improve COVAX's supply is by donating doses from rich countries to COVAX that have already been made. The supply questions still need more doses to be made and that will take a bit more time.

Layla Moran MP

Great thank you very much unless there's anything anyone wants to add and just to sort of plug for the work of the All-Party Group so far, we have several times written to the Government suggesting that they should vaccine match at the very least and I think those endeavours will continue and supporting the TRIPS waiver and technology transfer. Again, we've been banging this drum for some

time. I'm glad to hear your optimism Andrew, I'm not sure I totally share it but we will continue to do so. If I can now pass to Ilora.

Baroness Finlay

Thank you and it's only for Ayoade and I think you in large part answered the question which was about how important programmes such as COVAX are to African countries and what nations like the UK can do to help, but I just wonder, I'd like to go therefore a little bit wider and ask you what you feel the impact has been on the reputation of a country like the UK given its scientific achievements in vaccine production, creation and production, but also the attitude perhaps of not sharing as much as you're clearly advocating should happen. And a little bit linked to that I want to pick up again on Andrew's comments about expiry dates and whether you think that as the data accrues that these vaccines are stable for a longer period that there will be retrospective granting of an extension up to the so-called expiry date, so that we don't have any wastage, because we all know that it's simply that the data hasn't been collected, it's not that the vaccine suddenly ceases to be active on a particular day. So if I could go to Ayoade first.

Dr Ayoade Alakija

Thank you. To answer your question about the reputation, the damage potentially done to the reputation, I think we all really sort of subconsciously know the answer to that, I think the reputational damage is done. The UK has in the past been you know known to be incredible, I mean the respect for the scientists and for the science and for the Sir Andrews and the Dame Sarahs and the, you know Oxford and the institutions within, the NHS, those have stood firm and we all literally you know look in awe and respect. But I think in terms of from a political perspective I think that there has been and diplomatically for sure because I also deal at a diplomatic level quite frequently, I think there has been significant reputational damage done to the UK. I mean there's really no other way of putting it. I hesitate because as I disclosed earlier on half of my family are also from the UK but we need to call a spade a spade and it is what it is. Retrieving that I think will require the UK to come to the table in a significant way from a political level, I mean this G7 year is a magnificent opportunity, I've had an opportunity speak with the Ambassador Barbara Woodward, Ambassador UN-UK who sough audience the other day and we had a meeting to discuss what could potentially be done at the UN General Assembly, how the UK could take leadership in this role. I think the UK to my mind has ceded some leadership, in the sort of global scientific arena with this crisis. President Biden has done an admiral job and he sort of tried to pick up the reins of that global leadership again with his donation of the 500 million doses, the announcement, and also announced the amazing roll out and Nigeria received four million vaccines of Moderna the other day, South Africa received 5.7 million, I mean they are rushing them out into countries, that is what we need to see from a country like the UK.

And as for the expiry dates I will touch on it very quickly before I hand over to Sir Andrew I think, but I think the messaging has been flawed, Africans and other low middle income countries of the World are not going to accept that people come back and say well, oh well we've changed our mind, the expiry date is … you know it's like going to Marks and Spencer's and you know you sort of go to buy sandwiches and suddenly somebody has scratched off the date and has written another date on them, you're obviously going to look at them and go oh, I'm not so sure about that BLT sandwich, I might opt for another one, it's just human nature. Over. Thank you ma'am.

Professor Andrew Pollard

Yeah, I mean I think I agree with all the points that Yodi has made. I think in terms of the UK contribution there is no doubt that the UK has put a lot of money into COVAX and has been a supporter of the principle, so I think that is there, but I certainly agree that there is a lot more to do and particularly as we look forward to the months ahead with this talk of boosters and wider use of doses. That's where there's a critical moment for leadership. And the optics of going for a major booster programme in the UK is a really difficult one, both what we're talking about in terms of the, what would be a moral failure with no doses in many parts of the World and three doses here, so there's that aspect. There's also the messaging because that says to other countries, well if the UK needs three doses we need three doses and so that has a huge implication for sucking even more doses out of the system. And I think this is something which really concerns me at the moment, coming back to the earlier point I made about the messaging from Europe has had a huge impact on vaccine confidence. So I think that's something we have to take account of. I don't really have any more to say about the expiry date issue, it's actually a regulatory issue and I don't think that there is an easy solution to it, you need to label new doses exactly as Yodi says that have the right expiry date on but for the reasons that she says it's actually pretty difficult to deal with expired doses of any drug and that's an important protection that we have for medicines that we can rely that things have been tested properly, so I wouldn't expect countries to start using doses in that way.

Layla Moran MP

Thank you very much, Gregg is there anything you want to add at this point before I pass onto Paul?

Dr Gregg Gonsalves

Yeah, I mean I think we have to be very serious about the reputational hit that the G7 and the major industrialised countries have taken, the phrase vaccine apartheid has been bandied about by the People's Vaccine movement and others and we really are creating a medical apartheid. You know I work in HIV Aids, I remember 20 years ago when we said Africans couldn't tell time and antiretrovirals couldn't be done on the ground in Africa. Why are we back at this moment again? We're basically saying there's two sets of people in the World, those who will survive this pandemic and those that are going to be consigned to death even though we have the tools to stop it. And so the reputational hit is pretty severe and we have a chance to stop it now, but we cannot do business as usual, we have to confront the supply issues. I do not think that we have put the accelerator down far enough in terms of ramping up global capacity, in terms of the resources of the EU, the UK and the United States to get this done. So we have a small window of time to stop a sort of collapse in the reputation of our countries in the context of this pandemic.

Layla Moran MP

Thank you very much. Paul.

Lord Strasburger

Thank you Layla. It looks to me as if our panel have already worked out for themselves that if we're to expect moral and political leadership from the current British Government then we might as well

dream on. Having said that with that health warning my question is what would be your key message to the British Government, and perhaps in the case of Gregg the American Government.

Dr Gregg Gonsalves

So, I haven't written off the current Prime Minister of the UK, President Bush who I did not vote for in the United States established the largest programme for antiretroviral drugs in the World, right and so I think there are people who you don't expect to do the right thing who can step up in a moment of crisis and I do think the Prime Minister may be that person, there's no reason he can't do it, so I've not given up on the British Government, I've not given up on the British people, the British parliament, I have not given up on my own people, my own Congress or my own President. We have a once in a century mandate right now to do the right thing. I think it is incumbent on us to press as hard as we can on our political leaders to step up no matter what party or affiliation they may hold.

Lord Strasburger

Thank you. Ayoade.

Dr Ayoade Alakija

Thank you. I would say that the key message to the UK Government and to all governments of the World quite frankly is that we need to step up the political side of this crisis, we need to step up the engagement of political level, we need to stop, and so it is wonderful to be speaking to the All-Party Parliamentary Group because clearly this is a very important you know sort of grouping of people and influencers within your Government. I think I would say to the UK Government to engage with the other World leaders and perhaps that is as Gregg was saying, that is where leadership could be shown in this moment and perhaps there is a moment for the honourable Prime Minister to still have his Churchillian day, is to call the G7 and to engage with the leaders of the low middle income countries of the World to take up the IPP, the independent panel on pandemic preparedness recommendation for a heads of state level council to deal with this threat because Covid is a threat to our global peace and security and I don't think we're beginning to understand that yet. We are in a race between this virus, the variants and the vaccine. Unfortunately right now in many parts of the World the variants are winning, there are deaths, you know we don't have time for anecdotal evidence but there are deaths that I hear of every day, I have lost in the last two weeks at least a dozen friends, it's like HIV Aids all over again, in Fiji, in Africa, a 12-year old girl died in a boarding school in Nigeria three days ago, nobody has reported it and yet you know the school is open and carrying on with business as usual. You know these things are happening all over the World, it is time for the World to step up, we need a UN Aids type, potentially not [inaudible 2:00:06.3] but a multi-sectoral body that deals with not just the immediate effects of Covid, but it encompasses COVAX but also that deals with the effects that we're going to be feeling for ten, 15, 20 years to come. This thing is not over and we count on all of your leadership to help save the lives of millions around the World. Thank you.

Lord Strasburger

Thank you, and Andrew.

Professor Andrew Pollard

Well while we've been talking, about 600 people died in the World from Covid and I think you know I'm just a children's doctor and a vaccine scientist and that doesn't give me an insight into what politicians should do, but I think this group actually does have a really important role at the end of this two-hour session which is to try to ensure that there is some political action, that's not our job as scientists, we need some political action now to try to stop the deaths that will happen between now and the end of the year. We're expecting about a million more deaths by the end of the year by some of the projections. If that happens that will be an enormous moral failure, a failure of leadership politically and also one I think most of those in the world that I work in will actually feel as if it's a huge failure to humanity.

Lord Strasburger

Well Andrew, from my part I accept that challenge as I'm sure the whole committee does and Gregg, I admire your optimism and I hope you're right and I'm wrong.

Layla Moran MP

Thank you very much Paul. And indeed Andrew, I think our Committee will certainly accept that challenge and we've never shied away from saying the difficult things. But thank you to you all because the basis of this Committee has always been that we act on the evidence that we hear and I think the evidence that we've heard from this panel and also from the first panel has been pretty aligned actually, it's been very clear what we now need to do. But thank you all for your time, your extended time, sorry due to poor chairing we have gone way over and I take full responsibility for that. But my excuse was that everything that was being said was so important that I felt it was important that it was said in this forum. So Yodi and Gregg and Andrew, thank you so much for joining us today, thank you to all our Parliamentarians, to everyone who is watching and indeed the previous panel. We'll see you all in a couple of weeks for our next session and this Group continues its work no matter what, so thank you very much everybody. Take care.