DÁIL ÉIREANN

AN COMHCHOISTE UM IOMPAR AGUS LÍONRAÍ CUMARSÁIDE

JOINT COMMITTEE ON TRANSPORT AND COMMUNICATIONS NETWORKS

Dé Máirt, 3 Samhain 2020

Tuesday, 3 November 2020

Tháinig an Comhchoiste le chéile ag 11 a.m.

The Joint Committee met at 11 a.m.

Comhaltaí a bhí i láthair/Members present:

Teachtaí Dála/Deputies	Seanadóirí/Senators
Joe Carey,	Timmy Dooley,
Cathal Crowe,	Ned O'Sullivan.
James O'Connor,	
Darren O'Rourke,	
Ruairí Ó Murchú,	
Duncan Smith.	

Teachta/Deputy Kieran O'Donnell sa Chathaoir/in the Chair.

Issues Affecting the Aviation Sector: Discussion (Resumed)

Chairman: Apologies have been received from Deputy Matthews and Senator Buttimer. I believe Senator Burke is substituting for Senator Buttimer.

I welcome Dr. Tony Holohan, Chief Medical Officer and chair of the National Public Health Emergency Team, NPHET; Mr. Liam Morris, principal officer, Department of Health; and Dr. Cillian De Gascun, director of the National Virus Reference Laboratory, NVRL, in UCD and chair of the Covid-19 expert advisory group under NPHET. I thank them for attending.

The witnesses should please note that they are protected by absolute privilege in respect of their presentations to the committee. This means that they have an absolute defence against any defamation action for anything they say at the meeting. However, they are expected not to abuse this privilege. It is my duty as Chair to ensure that it is not abused. All witnesses are reminded of the long-standing parliamentary practice to the effect that they should not criticise or make charges against any person or entity by name or in such a way as to make him, her or it identifiable or otherwise engage in speech that might be regarded as damaging to the good name of the person or entity. If the witnesses' statements are potentially defamatory, therefore, in respect of an identifiable person or entity, they will be directed to discontinue their remarks. It is imperative that they comply with all such directions.

Members are reminded of the long-standing parliamentary practice to the effect that they should not comment on, criticise or make charges against a person outside the Houses or an official either by name or in such a way as to make him or her identifiable.

I call Dr. Holohan to make his opening statement.

Dr. Tony Holohan: I thank the committee for the opportunity to discuss the public health implications of international travel. NPHET met last Thursday, October 29, and reviewed the latest epidemiological data. In the interests of time, I will just refer to the data rather than going through the details, given that they will have changed ever so slightly over the course of recent days. The data are set out in the first two pages of my submission.

Internationally speaking, our national epidemiological profile is occurring in the context of a widespread resurgence of this disease across Europe. We have seen reports and have shared concerns at the deteriorating situation globally, particularly in Europe and North America where governments are facing common challenges, which have required many countries to reintroduce restrictions of the kind we have in place. Some of the worst affected places at present are capitals and major cities in Europe and there is pressure on ICU capacity in several cities. The average seven-day incidence across EU and UK countries is 241 per 100,000 population, which compares with 169 in the previous seven-day period, indicating the deteriorating situation across Europe. Data reported by the European Centre for Disease Prevention and Control, ECDC, on 28 October rank Ireland 17th out of 31 countries in terms of 14-day incidence rates. In terms of the seven-day incidence rate, the epidemiological situation in Ireland compares more favourably with European counterparts. According to NPHET's figures from last week, there had been a 20% decline in the seven-day incidence rate in Ireland. Indeed, it has declined further in the intervening time. This at a time the majority of countries are experiencing an upward trend.

The most recent rapid risk assessment, which is the ECDC's instrument for setting out its assessment of the disease on an approximately monthly basis, is dated 23 October. It high-

lights that all EU-EEA countries and the UK have implemented various "non-pharmaceutical interventions", which is its term for social restrictions, but that these have not been fully successful in controlling transmission and the epidemiological situation is now rapidly deteriorating. Implementing stricter non-pharmaceutical interventions, which proved to be effective in controlling the epidemic in all EU-EEA countries and the UK during spring 2020, appears to be the only available strategy that may have a moderate, as opposed to high, impact on the disease for individuals and healthcare provision. This results in an overall assessment of the general population across Europe as being at high risk.

The landscape in respect of restrictive measures is rapidly evolving, with significantly more restrictive measures having been introduced or proposed in a number of European countries over the past week. This includes stay-at-home recommendations and overnight curfews, limits on numbers of individuals that may gather in indoor and outdoor settings as well as mixing of households, and restrictions or closure of the hospitality sector and other non-essential services. The WHO, for its part, in its weekly epidemiological update from 27 October stated that the number of new cases in Europe is increasing exponentially, with over 1.3 million new cases recorded during the most recent seven-day reporting period. Against this backdrop, there is a substantial risk associated with international travel at the current time.

Our focus, as a country, is now very much on suppressing the spread of the disease domestically. We have moved early in our efforts to break the transmission cycle. Many European counterparts are now following a similar path and we have seen daily reports on the reintroduction of restrictions by European governments, in some cases quite stringent measures such as curfews. Once we bring the disease back under control in this country, it will be necessary to manage very carefully the risks of importation, among other risks to that status. In circumstances of sustained low levels of domestic transmission, the relative impact of imported cases is all the greater, as was seen in this country at times during the summer when travel-related cases increased and accounted for up to approximately a quarter of cases on occasion.

International travel will represent a prominent area of risk as the disease comes under control nationally and we subsequently aim to maintain suppressed disease activity and low incidence rates. I am aware that agreement has been reached at EU level on a common approach to intra-EU travel and that the Government has decided on how these recommendations are to be implemented in Ireland. Senior officials from across Government, including from the Department of Health, are engaged actively in discussions on its implementation. Acknowledging the likely duration of the pandemic, countries are transitioning from emergency management of Covid to more sustainable strategies such as the EU agreement, and it represents an important step for that reason.

It is important that countries adopt approaches that facilitate travel, especially essential travel, while ensuring that those who need to travel are not posing an additional risk to wider populations. I stress that countries which have adopted PCR testing as part of their travel policies in those circumstances have tended to do so as part of a suite of measures applying to international travel, often including more restrictive measures than apply here such as travel bans, mandatory quarantines and border closures. Our experts and many of their counterparts internationally consider that, should testing of asymptomatic passengers be introduced, a five- to seven-day period of restricted movement, with a symptom check and test on day five, is the most efficient means of containing importation of the virus. This approach can still miss up to 15% of potentially imported cases.

At the request of NPHET, HIQA recently undertook a rapid health technology assessment

on the use of alternatives to laboratory-based PCR testing. HIQA found that these tests offer possibilities to enhance prevention and control, including expanding of testing capacity, reduced test turnaround times and improved access. These tests work best where there is high prevalence and incidence of the disease, particularly amongst symptomatic patients. HIQA's findings confirm the WHO advice which shows that the currently available rapid antigen detection tests are not suitable for use in screening asymptomatic populations with unknown levels of disease, such as would be the case with arriving passengers.

The HSE recently established an expert group to review the antigen tests currently available and how they might be deployed in clinical and non-clinical settings. Validation studies in respect of these with two rapid antigen tests are already under way in Ireland in connection with their potential use in vulnerable populations. I emphasise that, over the course of the pandemic, NPHET's advice to the Government has been informed by the latest scientific evidence. As evidence accrues and our understanding of the disease develops, our advice to Government develops alongside the evidence base.

It is essential that people who arrive in this country or who have returned from travel pay close attention to maintaining the basic public health measures of 2 m distancing, hand hygiene, wearing face coverings and avoiding crowded situations for a full 14 days, even if they are not asked to restrict their movements for that period.

In returning to the risks associated with international travel, while we recognise that long-term travel restrictions are, of course, difficult, we need only look to the travel policies of countries that have achieved sustained low rates of transmission, particularly countries in Asia, to see the importance that this has in helping to control importations. Our core national objectives are to maintain the safe reopening our education and health sectors, and to protect our vulnerable people in particular. Achieving these goals is predicated on maintaining low rates of community transmission and avoiding an ongoing reseeding of cases through whatever means, including travel.

Chairman: I thank Dr. Holohan for his opening statement. I will now call the members according to the rota we have agreed. Deputy Cathal Crowe has seven minutes.

Deputy Cathal Crowe: At the outset I should say that this is my first time meeting Dr. Holohan and Dr. De Gascun. I know Liam from a former life in University of Limerick, although I have not seen him for quite a while. It is good to see the three witnesses here and I thank them for all the work they have been doing over many difficult months.

I have a number of brief questions. I may interject when the witnesses are replying so I apologise in advance to Dr. Holohan but there are a few answers I would like to get . First, as Ireland's Chief Medical Officer, does Dr. Holohan see international travel as being safe and possible between now and Christmas and from Christmas to springtime? The aviation sector sees its season reopening around March, which is what it calls the summer season. Does Dr. Holohan believe international air travel could be considered safe and possible between now and then?

Dr. Tony Holohan: Next summer is a long way away. The situation at the moment is that international travel of a non-essential nature is not safe. Movement of populations around areas with a high experience of this disease, particularly in Europe and North America, in and out of this country is not safe.

Deputy Cathal Crowe: To date, what advice has Dr. Holohan and NPHET given to the Department of Transport, the Minister, Deputy Eamon Ryan, and his Cabinet colleagues in terms of rapid testing at points of departure at airports? I have in mind that this Sunday evening at a political level, and Dr. Holohan is dealing in the realm of health policy, the EU traffic light system comes into force. There will be green regions but for orange and red regions it becomes quite unworkable in that people will have to quarantine if they come here from those regions. What advice has NPHET been giving to the Government in the lead-up to Sunday evening?

Dr. Tony Holohan: We are part, as is our Department and other Departments, of the process of work that is under way led by the Department of the Taoiseach in place at present to enable implementation of the Government's decision in respect of that EU arrangement. We will continue to provide our advice as part of all of that.

Deputy Cathal Crowe: What has NPHET advised specifically with regard to testing?

Dr. Tony Holohan: We advised on what the science shows in respect of testing. We believe that testing is most appropriate for people and for populations where the risks, and the likelihood of disease, are greatest because we get a much better predictive value or reliability in regard to the test. That is what the evidence says. That is what the HIQA report says. That is the WHO advice so our advice in respect of testing is exactly in line with that.

Deputy Cathal Crowe: This committee has strong demands from airports, airlines and all working in the aviation sector, including the Irish Aviation Authority, who say that the only way to see some semblance of normality return to the sector is to have testing, which would allow people book and travel in the knowledge that the passengers around them are Covid-19 free, insofar as that is possible. Has NPHET advised in any way that the testing everyone is demanding be delayed?

Dr. Tony Holohan: We have not advised that. The context in which any of these things ever arises is what the ambient risk is in terms of transmission. If that were to arise right now, right across Europe, including the UK and North America, and North America is not part of the EU arrangements, the vast majority of countries are red and getting redder. That is the current situation. That is the reason we are concerned about international travel. While there are various measures that can be put in place at points in time that enable us to ensure that, inasmuch as possible, we can make every form of activity, including travel, as safe as possible and allow us resume these activities inasmuch as we can, we can only do that by reference to the ambient risks of community transmission. The whole of Europe is experiencing a very significant resurgence of the disease. This country, and I will not start concluding on this at this point because we are only two weeks into the set of measures in terms of level 5, has seen a significant reduction in its seven-day and now 14-day incidence consequent on the measures that are in place here. The experience we have had in this country, in particular looking at seven-day incidence, and looking at it towards the end of last week and comparing our experience to those of Europe is that the level of disease transmission here is improving at a point when the vast majority of countries in Europe are disimproving. We simply have to take that into account in terms of our public health advice to people who are making plans around travel because many European countries, unfortunately for them, are in a situation where they are facing much higher levels of disease, and deteriorating levels of disease, where, at least in the two weeks so far, we have been experiencing a level of improvement that very few other countries are able to report. We need to hold on to that.

Deputy Cathal Crowe: One of the main points that has arisen at the committee's meetings

has been the regionalisation of both aviation and health policy. This is because the ECDC has been publishing a fortnightly map that is proving to restrictive to aviation. It looks as if virtually all of Europe is red at the moment.

Dr. Tony Holohan: Yes.

Deputy Cathal Crowe: What regionalisation does NPHET use in respect of health policy when it feeds into that data process? Does it consider the regions of Ireland to be provincial or is it done by county? How is Ireland regionalised in the context of public health policy?

Dr. Tony Holohan: We make all our data available to the ECDC, like every other European country. The ECDC publishes maps and, as the Deputy rightly noted, the vast majority of Europe is now red. Many countries are getting redder, although that is not what the maps provide for. The ECDC issues the maps according to the nomenclature of territorial units for statistics, NUTS, as I am sure the Deputy will be aware.

Deputy Cathal Crowe: What regionalisation does NPHET use?

Dr. Tony Holohan: When we consider disease, it is not just the issue of international travel and the international description. What is of much more interest to us is the more regionalised and fine level of detail. As we return to lower levels of transmission in this country - let us be optimistic for a moment that we will get back to that point - it will start to become more important to consider not just regions but counties, and not just counties but localities. When we get to low levels of transmission of the disease, the objective has to be to pick up cases and outbreaks when they occur as quickly as possible, and to contain them as outbreaks within a locality and to prevent community transmission. That is the reason we consider much finer detail than the NUTS regions in forming our perspective.

Deputy Cathal Crowe: In what way does Dr. Holohan foresee aviation and air travel returning to Ireland? How does he envisage the model?

Dr. Tony Holohan: I might first reflect on the circumstances, as I did earlier, of other countries with which we have travel relationships. Many countries are experiencing significant resurgences of the disease and have arrangements for their own populations. They are, effectively, discouraging people from all forms of travel within their countries and between countries. As we move, hopefully, to make progress in this country, let us hope the rest of Europe will move in the same way and that we can move back to a direction - like in early spring and into summer - where many countries are getting control of the disease at levels that they simply do not have at the moment.

Getting control, as a collection of countries, is the best means of ensuring that travel and any other form of activity within those countries will be as safe as possible. Everything we do in respect of this disease is a function of how safe it is in the context of its uncontrolled transmission, which is what is happening in Europe. Europe has uncontrolled transmission of the disease in place at the moment, disrupting every form of social and economic activity within the countries. The only means for us a community to restore and protect many of those functions and services, as well as the people living in those countries, is to intervene and stop this high level of community transmission. Our evidence suggests we are making progress on this, whereas many other European countries are not yet in the position to be able to report that.

Deputy Darren O'Rourke: Dr. Holohan stated that international travel is not safe at this point, but it is happening to a reasonable degree, if not compared with previous years. Is he

satisfied that the checks and controls at our ports and airports are sufficient to track and trace Covid-19 cases in Ireland?

Dr. Tony Holohan: The track and trace system does not necessarily operate at the ports and other points of entry to this country-----

Deputy Darren O'Rourke: I refer also to passenger locator forms.

Dr. Tony Holohan: Passenger locator forms are in place. There is a regulatory standard in respect of them and they can be policed. Those are the arrangements in place in this country. They differ from those in place in other countries.

Deputy Darren O'Rourke: In regard to track and trace, there is an 18% follow-up rate according to information provided to us about the passenger locator form, which has been moved online. Is that a decent standard, in Dr. Holohan's opinion? There is no testing of people coming into the country. Would it be an improvement on our current position if there was a testing regime for persons entering the country?

Dr. Tony Holohan: NPHET and I have to reflect on the current level of risk. At this point, the real issue from our point of view - I am not avoiding the Deputy's question - is the high level of domestic community transmission in this country. That is where all our attention and focus are right now. What I said in my opening statement, and I will say it again, is that as we move, I hope, and I am being optimistic about this, to curb, slow and ultimately re-establish full control over this disease, then the question of international travel, which has been on our agenda from the get-go - and the Deputy will, I am sure, be well familiar with the various recommendations we have made over the entire course of the pandemic - will begin to assume, relatively speaking, greater importance. If the risk of picking up the disease in this country is very low because we have managed to control community transmission, then the obvious additional source of infection is through international travel.

Deputy Darren O'Rourke: If we were to improve our ability - through the passenger locator form, for example - to trace people and to improve our testing of people coming into the country, would that improve our ability to manage the disease as it-----

Dr. Tony Holohan: I think some of those things will be important but they are not the full story. It is the same as with people living here who are not travelling. Full compliance with all the public health advice, rapid identification of cases when they occur, as well as reliability in that regard and an ability to follow up and then verify it, and quarantine and restriction of movement arrangements are all essential to the arrangements that have to operate. Many countries have those arrangements in place.

Deputy Darren O'Rourke: I note Finland's and Germany's proposed introduction of PCR testing, with a period of five to seven days of self-isolation and a test on the fifth day. However, 15% of cases are still missed. In Ireland we are missing 100% of cases, if one likes, so there is significant room for improvement there.

I have a question about the technologies that exist. I know that HIQA has done a comparative analysis. It acknowledges that there were severe limitations to its analysis because of the quality of information available. There is one systematic review of rapid antigen tests, for example. I have a kit insert here from the test being used in Rome. The committee heard from representatives from Rome airport last week. The test meets the WHO criteria in respect of sensitivity and specificity. Regarding the technologies that exist there, is it feasible that we

could introduce a testing regime at our ports and airports in the very near future that was either PCR or an alternative suitable comparator? It has been done elsewhere.

Dr. Tony Holohan: If I may, Chairman, I will invite Dr. De Gascun to comment on some of the technical details. He is more expert in these matters than I am.

Dr. Cillian De Gascun: Of the three main approaches to testing at this point in time, as Deputy O'Rourke said, the gold standard is PCR. It is important to highlight that at this point we have the best test available. It is the most sensitive and the most specific. There is a lot of interest in antigen testing on the basis of the facts. PCR, for clarity, identifies the genetic material of the virus, or the viral RNA. What antigen testing looks for are viral antigens, typically virus proteins. These proteins tend to be present in people in whom the virus is actively replicating. They tend to be less sensitive purely because there is not necessarily as much protein there as there might be viral RNA. The difficulty with the WHO criteria at this point is that they refer to a sensitivity of 80%. The WHO is speaking to the whole world, not just to developed countries that can afford to have a PCR testing system in place. The problem with a sensitivity of 80% is that, in essence, one in five cases will be missed, and that is not good enough. Therefore, in order to compensate for that lack of sensitivity, there are a couple of options. These tests can potentially be used in an outbreak setting, whereby one tests a large number of people who have symptoms and then the risk of getting lots of false negatives is significantly reduced. If, however, one does identify somebody who is part of that outbreak or cluster in whom the antigen test does not detect virus antigen, one needs to go on and do a PCR test to facilitate the contact tracing process after that. The other alternative approach to compensating for the lack of sensitivity is repeated testing, which is another area in which people have expressed an interest. The problem is we have no evidence at this point in time that antigens work in that setting. For example, if I take an antigen test today and it is not detected-----

Deputy Darren O'Rourke: I apologise for interrupting Dr. De Gascun but I have only limited time remaining and I would like to ask a particular question. When will the expert group review of the comparative analysis of the different technologies be completed? There is a great deal of interest in that review, particularly in the aviation sector, our airports and ports The review was referenced in Dr. Holohan's opening statement. When will it be completed?

Dr. Cillian De Gascun: I cannot give the Deputy an exact date. The validations are ongoing. It is worth highlighting that the first point of any of this is to demonstrate that the antigen test works in general - in other words, that it works off-the-shelf. We know from the HIQA report, which the Deputy alluded to, that typically the manufacturers claims have not necessarily been held up by independent verifications. We want to see large-scale independent assessments of these tests, with the results published in the peer review literature such that we can introduce them. There is a sense out there that I am against antigen testing; I am not. I need a good reason to move away from the best test that we have. The antigen test will need to be evaluated in each setting in which it is proposed to use it. For example, for it to be used in an airport, a nursing home or a school setting, a validation or a verification, at least, would be required in each of those settings.

Chairman: We are here to discuss the aviation sector. The question the public are asking relates to Christmas. We are in level 5 until 1 December. People tend to return home from 14 December for Christmas. Ryanair, Aer Lingus and other airlines have said that they will operate flights to facilitate Christmas travel. I refer to Dr. Holohan's presentation, in particular page 6, where it states:

> ...should testing of asymptomatic passengers be introduced, a 5-7-day period of restricted movement, with a symptom check and test on day 5, is the most efficient method to contain importation of the virus. This approach can still miss up to 15%...

The final paragraph on page 7 states: "It is essential that people who arrive in Ireland or who have returned from travel pay close attention to maintaining two metre distance, hand hygiene, wearing face covering and avoiding crowded situations for a full 14 days...". Dr. Holohan also referenced the following:

> ...EU level on a common approach to intra-EU travel and that the Government has decided on how these recommendations are to be implemented in Ireland. Senior Officials from across Government, including from the Department of Health, are engaged in discussions on implementation.

This includes the witnesses. As the virus is being brought under control in Ireland, does Dr. Holohan foresee the introduction of pre-departure PCR testing as distinct from antigen testing in respect of travel from countries in the orange and red zones, such that people can return home by flight for Christmas? The return of the diaspora at Christmas time is a traditional and important aspect of what it is to be Irish.

Dr. Tony Holohan: Our approach to it will be twofold. We are currently giving consideration to all of these issues, as we mentioned.

Chairman: I am not expecting this now.

Dr. Tony Holohan: That is understood.

Chairman: I raise it in the context of 8 November approaching. I am seeking Dr. Holohan's views on pre-departure testing in respect of travel from orange and red zones, in particular red zones in respect of which people would be required to undergo a pre-departure test, quarantine for five days and then undergo a further test. Is there support for this? Will we reach a point whereby people can return home at Christmas?

Dr. Tony Holohan: We are working through the process to enable the implementation of the decision the Government has made and how we are going to adopt this European-wide arrangement. Ultimately, the way in which we operate it will address the question of the risks that pertain to travel at any point in time. We are working through what exactly the testing arrangements might be in respect of orange and red zones to the extent that we can rely on the arrangements that are in place in terms of quarantine, which at the moment is essentially a recommendation to an individual to quarantine.

Chairman: For 14 days.

Dr. Tony Holohan: Will that give us enough assurance with regard to the risk of travel that arrives at a point in time? It will also then be a function of where other countries are in terms of the disease, and if it is in a European context, what colour they are at a point in time. If I were to guess, I believe there simply will not be many countries on green by the time we are talking about Christmas flights

Chairman: We are really talking about orange and red.

Dr. Tony Holohan: We are and it will be difficult for many countries to be anything other than red at that point looking at the situation in the European context-----

Chairman: In a European and an American context.

Dr. Tony Holohan: -----and in a North American context. These are obviously the parts of the world where-----

Chairman: It is the practical measures. Assuming we get control over the virus and assuming there is some control at European and world level, how can we get to a point where NPHET will give the green light to Government to inform its decision so people will be able to book flights on Ryanair, Aer Lingus and other airlines to fly home at Christmas?

Dr. Tony Holohan: We will continue to assess the evidence and provide our advice. I am not avoiding the question by saying that.

Chairman: Dr. Holohan is not ruling it out.

Dr. Tony Holohan: I am not ruling anything out. I know where we are at the moment and what progress must be made. Obviously, today is not the day in which people will be advised but our advice will be in two directions. We will advise Government at a point in time based on our assessment of the disease both in this country and internationally and the risks that might arise in terms of travel and the extent to which-----

Chairman: When will that be?

Dr. Tony Holohan: This is work we are doing at the moment and we will continue to do that. I have said publicly before that the more progress we make in this country, the better. We all hope we continue to see progress of the kind we have seen in the past ten days.

Chairman: Has Dr. Holohan given advice to the Government with regard to the impending 8 November implementation of the new traffic light system?

Dr. Tony Holohan: Colleagues of mine or are actively involved in that process on an ongoing basis with a number of other Departments to enable that implementation for 8 November. That is all part and parcel of the work the Department of Health is doing at the moment.

Chairman: What does Dr. Holohan want to see next to get to a point where he will give his qualified approval to allow flights from orange and red countries with pre-departure testing, that is, polymerase chain reaction, PCR, rapid testing in place so people can fly home at Christmas or to allow the aviation sector to get back? I want the practicalities here.

Dr. Tony Holohan: Again, our advice will be predicated on assessments we make at a point in time of whatever we think are the risks attached to any form of activity. In this case, we are obviously talking about international travel. We could well be in a situation whereby the risk of travel into this country in relative terms from red countries is much greater coming up to Christmas than it is at the moment. That arises in a situation whereby Ireland, in effect, has been red for a period. There is reason to believe that if we make progress we will change that status. We could change that status significantly if we make the progress we intend to make.

Chairman: I am asking if Dr. Holohan will allow-----

Dr. Tony Holohan: The risk then becomes much greater than it is at the moment and has

been in recent times.

Chairman: Will Dr. Holohan allow people with pre-departure testing and, let us say, the test after five days' quarantine here, particularly, with orange countries and with red countries to travel? Will he allow that to take place?

Dr. Tony Holohan: Again, I am not avoiding the question by saying this. It is not up to us to adopt-----

Chairman: I believe Dr. Holohan is.

Dr. Tony Holohan: Of course, I am not. We advise. It is not up to us to allow. The decisions will ultimately be made by Government based on the advice. I can tell the Chairman what the advice will factor in. I cannot tell you at a point in time what the advice will be because it will be the product of whatever information we have.

Chairman: It will be metrics Dr. Holohan looks at.

Dr. Tony Holohan: Yes, of course.

Chairman: What, for instance, will be the bottom-line metrics for Dr. Holohan? Will he allow a country with a higher rate, let us say, that is no longer a red country and which has a higher rate than Ireland? Will he allow people to return to Ireland with pre-departure testing in place?

Dr. Tony Holohan: All of this will depend on where we are at a point in time. Having said that, the context then will be what is the nature of that testing. Do we have verification of it? How do we have, let us say, confidence and trust in the nature of the testing that is being presented by individuals? These are all questions we will have to address and these are all being worked-----

Chairman: In summary, Dr. Holohan is not ruling it out based on-----

Dr. Tony Holohan: We never rule things in or out. We make advice available at a point in time based on what we believe are the risks and the best means of reducing those risks. If we believe at a point in time the best means of reducing the risk is to say travel into the country from another jurisdiction is simply unsafe and should not happen then we will make that advice available.

Chairman: The Government will announce the implementation of the traffic light system on 8 November. What is Dr. Holohan's advice, with that in mind? We are now only a couple of days out from that announcement. Has NPHET given advice to the Government?

Dr. Tony Holohan: That is happening at the moment. There is an ongoing process involving colleagues from across Government Departments, led by the Department of the Taoiseach, to consider all the practical arrangements that must be in place to enable the implementation of the Government's decision. Our advice has been reflected in that process.

Chairman: What is the advice of NPHET?

Dr. Tony Holohan: Our advice, as I have said already, is reflective of the current position in terms of antigen testing and disease transmission across Europe in the here and now. It is reflective of all the other evidence that we think is important, such as quarantine periods, control

periods, intervals between testing and so on.

Chairman: When will we reach a point that, with certain conditions and controls in place around testing, NPHET will state that we can proceed to allow people to fly home for Christmas?

Dr. Tony Holohan: The Department of Health, as one of the constituent Departments, is obviously making its advice available into the overall process. That advice will reflect what NPHET has stated and what we have shared with the committee relating to testing in our HIQA process and what the international organisations, the WHO and the European Centre for Disease Control, ECDC, have said about the effectiveness of testing. That will continue to be our advice and position.

Chairman: Dr. Holohan is not telling us what has been NPHET's advice to Government. He is giving us broad strokes. What was the specific advice? NPHET's role is to advise the Government. We are here, as a committee, because the aviation sector is in severe trouble. People wish to fly home for Christmas and we want to include controls to facilitate that. What is NPHET's advice? Dr. Holohan is saying it is a moveable feast.

Dr. Tony Holohan: I am not quite saying that. It is still a hypothetical question because the Chairman is asking me about advice that will pertain to travel in the second half of December.

Chairman: Yes.

Dr. Tony Holohan: That advice will relate to a whole lot of factors that are simply unknowable now. I am setting out the various different things that have to be balanced.

Chairman: When does Dr. Holohan expect to be able to give that advice to the Government?

Dr. Tony Holohan: We are in a different situation now as regards the disease in this country than we were two or four weeks ago. I hope we are on a trajectory we can maintain. The Chairman is asking me to look forward a period of six weeks and it is simply not possible to do that. I do not say this in any critical sense, but it is a hypothetical situation. We can only make that assessment at a point in time and then make our advice available for whatever period we think is reasonable. We are talking about travel over a two-week period.

I completely understand the sensitivities that will exist for families and people who are thinking about these kinds of arrangements and wishing to come back together, probably family members who have not seen each other for many months. I understand all the implications for the airline industry. We are simply trying to, in as dispassionate and as evidence-based a way as possible, advise on what we think the risks are and how best to ameliorate and address them. We are seeking assurance that if we make the progress that we think we can make over the course of the coming weeks, we will not inadvertently put that at risk through the arrangements we put in place over the course of December that may lead to significant importation of the disease that we are unable to detect and prevent.

Senator Timmy Dooley: I welcome Dr. Holohan, Dr. De Gascun and Mr. Morris and thank them for their ongoing work on behalf of the Irish people. I am going to put a few things to our guests that we have heard from others who know more about the aviation sector than I do. Mr. Eddie Wilson of Ryanair was recently before the committee. He sought to paint Ireland's approach to the movement of people in a rather dark shadow or cloud. He suggested that our

restrictions on foreign travel are completely out of line with the rest of Europe. I put that to our guests and ask them to respond, if they would.

Dr. Holohan has talked about the incidence rate in other countries. Are there ongoing conversations with people of his standing and at his level in Europe? I know some conversations happen through the ECDC and WHO but is there any specific sharing of data or peer review of actions that are taken, etc.?

Dr. Tony Holohan: In terms of controls, there are differences between countries. The arrangements in place in this country are not as stringent as many that have existed in other European countries over the period and I might ask Mr. Morris to comment on that. Work has been done at the European level to survey countries in comparison with one another in relation to the measures that are in place, the extent to which countries are running testing regimes, the nature of such regimes, the nature of quarantine arrangements, the nature of oversight of those arrangements and so on. We have some factual information.

Senator Timmy Dooley: It would be useful if Dr. Holohan provided that to us in written form at a later stage.

Dr. Tony Holohan: Mr. Morris will speak to that, if that is okay. What was the second question?

Senator Timmy Dooley: Have any peer-reviewed studies been done on the work NPHET does and what is done in other countries?

Dr. Tony Holohan: The Senator is right to say the formal engagement is through the ECDC and there is a scientific and governing group in which we have a seat. We participate and are recipients of the benefit of all the number-crunching analysis and evidence assessment that happens at a European level. We also have informal engagements that we try to maintain. On the island, we have close working relations with our counterparts in Northern Ireland for good and obvious reasons. We have some engagements across these islands from time to time with similar individuals in the UK jurisdictions and Ireland. It is less formal at a European level but we are trying and we have a process of engagement through our embassies and through some direct contact between our Department and departments in other jurisdictions to try to get more of the soft understanding, if one likes, of exactly where other countries are in relation to the kinds of advice that is provided by people like us within the systems so we can see the impact ultimately in other countries and understand the nature of advice that has been provided. We do all of those things to try to understand as much as we can. Perhaps Mr. Morris will speak to that, if I may use the Senator's time.

Senator Timmy Dooley: That is okay. Fire ahead.

Mr. Liam Morris: At the EU level, there is the integrated political crisis response mechanism. That meets in a steady pattern of about twice a week at the moment to discuss all these measures. There were discussions on the responses that countries have introduced combining testing with quarantine. It was shown that, regarding where Ireland sits in terms of flexibility and openness to travel, compared with other countries we have quite a permissive regime in place. Other countries have mandatory quarantine requirements and stringent penal provisions. That came through in the discussions.

Senator Timmy Dooley: It would be helpful to get that message out because a charge is made, one which does not reflect well on either the witnesses or us, that Ireland has the strictest

regime in place and we are largely responsible for locking down aviation across Europe. The numbers from EUROCONTROL clearly negate those statements so it would be helpful to get that message out there.

Perhaps Dr. Holohan will specifically address the view held in some quarters that testing and tracing is almost a cure for Covid and if we had rapid antigen testing at the airports, we could ultimately have a free-for-all. The argument is also made on the aviation side that air travel is safe. That is presented on the basis of evidence of people contracting the virus while in the aircraft with no reference to what happens at either end. It is no different from the example we have here at the moment, when we are not supposed to be outside a 5 km radius, and some suggest it is safe to drive. It is okay to travel in the car but what one does on the other end is the issue. Will Dr. Holohan speak to those two points?

Dr. Tony Holohan: The Senator is right. It is not just the intrinsic risks around travel. In many ways, the travel experience on a plane can be a controlled environment. In such an environment, one can manage the risks. We have seen this in schools where we have managed to put control systems in place very well. These have helped in terms of transmission and allowed us to turn on and maintain an important public service around schools. As the Senator rightly says, the issue is the movement of people. People come into contact with each other and the greater the extent of mixing among populations, the greater are the conditions for transmission of the virus. Unfortunately, the very purpose of international travel is to facilitate the free movement and mixing of people, which is wonderful except it facilitates the spread of this particular disease. There is no doubt that in the course of the summer, international travel played a significant role in the re-importation and re-seeding of this infection in this country.

There is also an issue in this country around travel. In Europe, they look at travel, including international travel. They do not just focus on air travel. There is sea travel in this country because we are an island. In many other European countries they look at road, rail, train and air but it is a relatively small proportion whereas we have an enormous dependency on it in this country. It is true to say, as Mr. Morris has said, that the arrangements that exist in this country would not be as stringent as those that exist at border level in many other European countries.

Senator Timmy Dooley: I am out of time. I would appreciate if Dr. Holohan could provide us with the information so we can reflect it in our report.

Dr. Tony Holohan: We can send that on afterwards.

Senator Timmy Dooley: The information would be helpful in addressing, to some extent, the public concern about us being out of kilter.

Deputy Ruairí Ó Murchú: I wish to add my voice to the thanks expressed to Dr. Holohan, Dr. De Gascun and Mr. Morris. It is easy for me to say that they will be busy for some time to come.

My first questions concern the summer period. It has been mentioned that a quarter of outbreaks were imported. Can I have the details? Were any learnings made at that stage?

Testing and tracing are a major part in communities, ports and airports. We will need a framework for same into the future. We have all heard the story about the guy who was a super spreader and gave the virus to 56 people. Most people have followed the general restrictions but one must make allowances for those who do not and how that can have a huge impact. What learnings have been made and where do we go from here?

Dr. Tony Holohan: The principle learning from that is that when we get to low levels of transmission then everything that we do that increases that risk is something we have to look very closely at. In the context in which we are in at the moment, we hope we will make progress and get us back to low level transmission of the kind that we saw over the course of the summer. When that happens it allows us to recommend the easing of measures and do a range of other things that are currently not possible. The extent to which that increases, if we do too much of it, can facilitate transmission but then there are specific risks that arise in this country. In particular, because this is an island, if we get to those low levels of transmission then international travel becomes a relatively more important potential source of new infection both in absolute and proportional terms. Particularly then, if we are talking about a situation where we are seeking, perhaps as a European community, to try to facilitate an additional European level of travel, then that would have the effect of increasing the absolute risk as well as the proportional risk of the importation of infection.

The second one is the strength of our public health capacity to respond. To pick up on the story that has been talked about, that particular case that ultimately was the super spreading event that led to 59 additional cases, we now know, as an international community, the faster we are able to pick these up and intervene at super spreading events, clusters and outbreaks at local level, the greater the chance we have to stop this disease becoming established as widespread community transmission. In other words, it is wild out in the community but we do not know who has or has not got it, which is the situation we faced in late September and into October that caused us to recommend the measures that are in place at this point.

Deputy Ruairí Ó Murchú: That is it. We accept that travel at this point in time, for non-essential reasons, does not make any sense given the conditions, particularly across Europe. However, I accept that the aviation sector requires a framework so that it knows how to operate into the future while accepting that we do not know exactly what the community situation will be at that stage. People will still travel so I back what was said by my colleague in that we probably need something better than what is happening with the passenger locator form, and some form of operational testing. I would like Dr. Holohan to go into the ins and outs regarding validations. I accept that he talked about specific settings. To a degree, some of these do not seem to be something NPHET would propose from the point of view of air travel.

Dr. Tony Holohan: We have been talking about testing. One of the messages I wanted to give is that it is the testing in the context of all of the other arrangements that might exist at a point in time. I am not just talking about borders. Testing just does not sit on its own as a response to the control of the disease. It has to be part of a set of arrangements that exist, the purpose of which is to limit transmission and increase control. I might ask Dr. De Gascun to comment further on validation but, essentially, what we are trying to do is show how well the test is actually working in the setting in which we would seek to use it.

Deputy Ruairí Ó Murchú: It does not sound as if air travel is going to be one of those settings.

Dr. Tony Holohan: No. We do not anticipate recommending its use in that particular environment at this point in time, and we are not out of step with what the WHO and the ECDC are recommending.

On the Deputy's earlier point on movement of populations, I know air travel does not only exist in a European context. However, if we look at it in a European context, if every country could make the same level of progress in terms of disease control at the same time, of course,

that is going to make the most important contribution possible to reducing the risks associated with international travel. The scenario that I am concerned about is one in which we make progress and other colleagues at a European level, unfortunately, are not in a position to make the same level of progress. Notwithstanding whatever arrangements we put in place to try to limit transmission, if there is a lot of disease in Europe and not very much here, and we have people travelling, that is going to increase the risk of transmission.

Deputy Ruairí Ó Murchú: Therefore, we are going to need some sort of protective shield, for want of a better term. If that also suits a framework that will work for aviation into the future, that would be a positive thing.

Dr. Tony Holohan: Yes, but I think the analogy holds. We have said this on many occasions. When we have had widespread community transmission in this country, it is a risk to everything that goes on in this country, whether that is education, nursing homes, the operation of the hospitality sector or whatever. We now have widespread community transmission throughout Europe and it would be very hard for us to protect Ireland from that disease. If we continue to see widespread transmission around Europe and a low level of transmission in this country, we will not be able to keep the disease out. This is a small, open economy, with very close cultural, legal, business and economic relationships with the whole of the European Union. It is not New Zealand, so it is not going to be possible for us to keep the disease out. That is why we think international travel, particularly around Europe, will have to be a continuing source of tension from our point of view.

Deputy Ruairí Ó Murchú: Okay. Can I get some sort of detail on the validation process?

Dr. Cillian De Gascun: First, I do not want to give the impression that there has not been engagement with the DAA in regard to its demands. The HSE has been heavily involved in trying to identify what that future might look like whereby travel becomes safe again.

In the context of validation, in essence, what we do is to take the gold standard, which at the moment is PCR, and then go into a setting, wherever that setting may be. For the new test that we want to verify or validate, which might be antigen testing, LAMP testing or a different PCR assay, we would take two samples from a population. One sample goes through the gold standard test, which we know is PCR, and the other sample goes through the comparator test, whether that is an antigen, LAMP or otherwise. We would need significant numbers. In essence, what we are doing with that comparison is trying to identify the sensitivity and specificity and the real-world performance of the new test.

We know PCR works very well. The HSE and the Department of Health have put a huge amount of infrastructure in place over the last eight months to ensure we can now do somewhere in the region of 120,000 tests a week. That system is working well. If we are going to change it or add something new to it, we need to make sure that whatever that is continues to work as effectively, and we need to make sure that all of those data feed into our test and trace system.

The last point to highlight is that testing is just one component. An Australian virologist has put out a very nice graphic around the Swiss cheese model of pandemic defence against respiratory virus. Every slice has holes in it, so testing has holes in it and tracing has holes in it, but if we have the physical distancing, the contact tracing, the hand hygiene, the face masks and all of those things, and we put all of those slices together, then we can get through this.

From the validation perspective, there is a logistics component to it and it is not as straight-

forward as just buying a kit off the shelf and then going out to a local community and validating it. We need to identify the cohort we want to test it in, and we need to know what the numbers are going to be and how many negatives or positives we want. Equally, who is going to do the swabbing? We have worked with the HSE to identify community sampling hubs within the community, where we can look at the likes of saliva and antigen testing. From an NVRL perspective, we are not best placed to do antigen testing because antigen testing is typically near-patient; it is done at the point of care. There are hospitals involved in doing the antigen comparison between PCR and antigen testing. One of the other elements that is difficult is that the same specimen that goes through the antigen testing cannot go through PCR, so multiple samples are required. All of those things-----

Deputy Ruairí Ó Murchú: That was a comprehensive answer.

Dr. Cillian De Gascun: As I said, we are very interested in working with whichever partners want to look at these new testing modalities, purely because we want people to be able to return to activities as safely as possible.

Chairman: Dr. Holohan mentioned "sustainable low levels of domestic transmission" in his opening statement. What is that? Can he define it in terms of metrics, and what is it that he will be looking for in this regard? Will we come out of lockdown on 1 December 2020 and if so, what level of restrictions will we move to? I am of the view that the public are entitled to have an idea of what exactly is happening. Everyone agrees that the virus has been spreading and we need to bring it under control but there must be a pathway out. Is the policy one of lockdown, release and containment, or is it that we live with the virus?

I want to link those issues to the aviation sector. Dr. Holohan made reference to the fact that no matter how well we do here, his decision will also take account of how other countries are doing. What is the sustainable level that Dr. Holohan wants these other countries to have in place? There is no testing at airports at the moment. If pre-departure tests were brought in, that would reduce the risk of travel, the risk to people in Ireland, and the risk to passengers on flights. The Minister for Health said that the rate of transmission in air travel is 1%, yet Dr. Holohan is saying that last summer it accounted for almost a quarter of all cases. Everything is relative. If the rate of transmission is very low domestically, then while the rate of transmission in travel might also be very low, relative to the domestic rate, it might be much higher, so everything is relative.

All those questions are interlinked and I ask Dr. Holohan to respond. What does he regard as the sustainable low level of domestic transmission? Will we come out of lockdown on 1 December 2020, and what level will we go to? What type of policy is the national policy now? Is it a policy of lockdown, release and containment, living with the virus, or a defer and vaccine policy? Linking that to international travel, what will be the components of the policy? Dr. Holohan made reference to us getting to a certain level. Is he saying that regardless of how well we do here, if the incidence in other countries is not coming down at the same rate, then there should be no international travel? These are the questions that the public are asking.

Dr. Tony Holohan: A set of eight or ten metrics on a single page was set out in the Goverment's plan that was published in the summer. These are the kinds of metrics that we look at, and they cover everything from the positivity rate to incidence rates, to the arrangements in place in terms of contact tracing and so on. We look across-----

Chairman: Key metrics, obviously. The R rate is-----

Dr. Tony Holohan: The R rate is one of them.

Chairman: So, for the ordinary person looking at them, they can see the progress we are making. This virus has been very difficult for people, particularly the elderly.

Dr. Tony Holohan: It has.

Chairman: They must see light at the end of the tunnel.

Dr. Tony Holohan: Yes.

Chairman: They need to understand the metrics on which Dr. Holohan makes judgments: the values, the R rate, the number of cases, and the seven and 14-day incidence rates. The ordinary person is now becoming familiar with those metrics. I ask Dr. Holohan to elaborate on that.

Dr. Tony Holohan: Those are exactly the metrics that we look at. We said that at the beginning, in terms of the advice and explaining the advice given to the public, that when we were making recommendations to Government, most recently around level 5 restrictions, we were at something between 1,100 and 1,200 cases per day, on the five-day average. We thought at that time of having an R rate - if we could get there - of 0.5. We do know if we will get there. At the moment we are down to 1.0 based on our estimate last week. We will have a new estimate on Thursday of this week and see what progress has been made on that. If we follow that track we will get down to probably having in the order of fewer than 100 or so cases per day. There are all the other associated metrics that go with that which express themselves in the 14-day and seven-day incidence rates, hospitalisation rates and all those kinds of things. We look at all those metrics. We have seen a significant reduction in some of those already but we still have a long way to go. The Chairman has heard us say that and we reiterated that this morning.

Chairman: Will we come out of lockdown on 1 December?

Dr. Tony Holohan: I am not picking up on that word but it is a phrase we never use.

Chairman: The ordinary person is using it.

Dr. Tony Holohan: Of course. In the context of the arrangements in place in Europe, that phase is being used across Europe but it means different things in different countries. We have a strong and significant set of restrictions in place-----

Chairman: Under level 5.

Dr. Tony Holohan: -----which, in effect, advise people to stay at home except for essential reasons. That is effectively what we are saying to people.

Chairman: Will we come out of level 5 restrictions on 1 December?

Dr. Tony Holohan: We anticipate we should be in a position to change that on 1 December but it will depend on the progress.

Chairman: On 1 December.

Dr. Tony Holohan: The date, 1 December, marks the end of the six-week period that the Government-----

Chairman: Does Dr. Holohan anticipate there will be a change?

Dr. Tony Holohan: We are optimistic that we will find ourselves in a situation where we will able to recommend a change in the measures that are in place at that point in time but it will depend on the level of the disease. We will make those assessments right the way up to the very last minute before the Government sits to make whatever decisions it will have to make.

Chairman: What is the national policy on the virus? It is a lockdown-release model?

Dr. Tony Holohan: It is set out in the Government plan.

Chairman: What is Dr. Holohan's view as the Chief Medical Officer and chair of NPHET? What is the policy and what should it be?

Dr. Tony Holohan: The policy was agreed and published by Government in the summer time. That is the policy and it is what we are pursuing. We make advice and guidance available based on our assessment on public health grounds. The Government considers that along with all the other considerations it must take account of in respect of economic, social and other impacts of the virus, any potential measures that have to be put in place to address the virus and then it makes a decision based on those. The framework for that decision-making is what the Government plan is and it has been published.

Chairman: Is the policy a lockdown-release, waiting and containment model?

Dr. Tony Holohan: I know things are described in those kinds of terms but the plan does not describe it in those terms. What we simply do is if we think further measures are necessary at a point in time because we need to intervene in the transmission of the virus, then we think we are obligated to make that advice available.

Chairman: On international travel, if we get the R rate down to 0.5 and the virus is at a sustainable level, what will be the criteria Dr. Holohan will judge in the context of other countries to allow people to fly home for Christmas?

Dr. Tony Holohan: We think we will have to have arrangements in place that can make that as safe as possible. That goes in two directions. One is in respect of the arrangements the Government has implemented by virtue of its implementation of the European arrangements. That is work that is happening at the moment. The other is advice we give to people who are intending travellers. At the moment that advice is that if one is thinking about non-essential travel, do not do it. That is very clear. We are advising against non-essential travel on public health grounds. If we think that can change, we will make that advice available. If people are travelling - there are people who travel for essential purposes - there is advice and guidance we can give them about how they can minimise their risks and how they should seek to understand and comply with the public health advice that is in place at any point in time in whatever country they find themselves in, whether it is Irish people travelling abroad for essential reasons and then having to come back or people who are travelling here for essential reasons to provide essential services in this country. That is happening and people are providing us with essential goods and services that we can only have by means of people continuing to provide those from outside of this country. We give advice on all those things and we will continue to do so.

Chairman: Thank you. I call Deputy Smith.

Deputy Duncan Smith: I thank Dr. Holohan, Dr. De Gascun and Mr. Morris for all their

work in trying to keep people safe and alive. I also thank Dr. Glynn for his work in his capacity as acting Chief Medical Officer during the period Dr. Holohan took a step back from the role.

Dr. Holohan mentioned the need for NPHET to make point-in-time assessments. That is totally understandable and when needing to move between levels such assessments must be made. As mentioned, we have had representatives of the aviation industry before the committee. They are seeking to make decisions for spring and summer 2021 which are not point-in-time assessments.

There is a belief that NPHET has been the barrier to allowing them to put in place the structures for a testing regime that would be part of a multi-layered framework. It is very understandable that NPHET has to make point-in-time assessments and it is equally understandable that the aviation industry has to make decisions that will involve a time lag. As the representatives from the DAA mentioned, it will have to make planning applications for testing regimes to local authorities and it will take time to get personnel involved. All of this will take time. As difficult as level 5 is, it provides a breathing space to do this. Is there an appreciation of the two competing decision-making timelines between NPHET and the aviation industry when it comes to this? How is NPHET negotiating this difference?

Dr. Tony Holohan: Of course there is an appreciation of it. Insofar as we can give a longer-range view, it is simply with regard to the extent that we can get through the phase we are in at present as well as we possibly can and hit an R rate of 0.5, although we do not know whether we will do so and there is no absolute number or one magic target, and get down to low levels of transmission of the type we saw in the summer, whereby we think we have capacity and that we have the virus back under control. We speak about living with the virus. It means having low levels of transmission, a low risk of transmission and a good chance of picking up instances where the disease starts to spread again and picking up outbreaks as early as possible and controlling them. These are the basic requirements we have.

We are confident that we can get back to this situation by the beginning of December if, as the Deputy has probably heard me say before, we can maintain the high level of compliance there is on the part of the public with the public health advice. The vast majority of people are practising much of the public health advice. Over the course of the summer, our reproductive number was up at approximately 1.4 but that is a very suppressed level of disease transmission in the population. If we were doing nothing to control the spread in the population, we would have a reproductive number of approximately 4 or 5. A figure of 1.4 is very good.

Getting the number down to where we need it will not require much more in terms of action on the part of the public, but it would have a big effect. The reason I stress this is because if, optimistically, when we get to 1 December, we are in a position to make recommendations and the Government mandates a change in the arrangements that are in place, the extent we can from that point forward collectively keep the R number low, ideally at or below 1, will push out as far as possible the chance of any further resurgence. The greater we all understand, comply with and align ourselves collectively against the ongoing transmission risks and minimise them, including any risk that comes from travel, the more we can push out as much as possible into the future. The reality for international travel is that the more we have control on an international basis as a shared experience across countries the better position we will be in to see a resumption of this type of activity.

Deputy Duncan Smith: My concern, and the concern of many committee members, is that a couple of weeks ago on Leaders' Questions, the Taoiseach said he hoped we would come out

of level 5 so that we will have December and Christmas and that we may need to go back to level 5 again in January or February, and that this may be a pattern. This is very concerning for all of us and we hope it does not happen. To use the DAA as an example, it has a plan to get testing capacity up and running from its own resources. There will be natural restrictions on travel because events and concerts are not happening and people are fearful of travelling. There are also economic reasons because people have lost their jobs and do not have the money to travel. All of these factors will naturally suppress travel. Does Dr. Holohan think there could be a window? To use Dr. De Gascun's phrase, it is still just a slice of Swiss cheese in this whole approach. Can we do something now and allow the airports to get something off the ground, at least in terms of structures? We could end up not doing anything now and after December we could be at level 5 again in January. Suddenly it will be the spring and the airports will have lost all of this time. Could they even get the basics and the physical infrastructure in place for a testing regime? Is there no fear about the implications of this for jobs and the economy?

Dr. Tony Holohan: We are sensitive to this but I would paint a slightly different picture. I do not think the Taoiseach was expressing a level 5 lockdown in January as a certainty.

Deputy Duncan Smith: I agree that he was not.

Dr. Tony Holohan: If we found ourselves in a situation of having to recommend something because we had lost control of the disease then we would have to do that but that is not an inevitability. If we can maintain the high level of practice, as I said, then we can push out the risk of that into the future. To be optimistic for a second - and again we cannot give certainty on this - we are increasingly seeing a sense that the position with vaccines may change in 2021 and offer some level of hope. We have been dealing with a virus for which we have no vaccine, no natural immunity in the population and no effective drugs targeted against it. That has been the reality. Consequently the measures open to us to control the disease are simply to stop spreading it in the first instance. If a vaccine is added to our armoury that will change things very substantially. Potentially, if other countries find themselves in a similar situation that may change the picture substantially in 2021. It is not necessarily inevitable that we will find ourselves in a situation-----

Deputy Duncan Smith: I did not mean to put that across but it was put out there and it is part of the conversation. We do have emerging examples though. Istanbul Airport has a big testing regime. We spoke to representatives from Rome Airport last week and there are a number of other airports as well. There is a growing body of examples for us to look at. I will conclude with this as I have only ten seconds. My concern is that if we do not have anything in place then restriction fatigue will creep in and as we move into 2021 people will just start making bookings. They will go onto *ryanair.com* and *aerlingus.com*, and demand flights to Europe, America or wherever because they will be saying: "Flip this, I have had a year plus of a tough time and I need to get away." If that happens - because the airlines will take the bookings, as will the hotels on the far side - and we do not have a testing regime in place then we are potentially going to be in a really poor situation.

Dr. Tony Holohan: I counsel the Deputy that testing on its own, even if we believed we had an antigen test capable of performing at the level at which it would have to - and we have expressed our reservations about that and its use already, it would only be a part-----

Deputy Duncan Smith: As in the Swiss cheese analogy.

Dr. Tony Holohan: Exactly.

Chairman: Does Dr. Holohan see a place for the likes of the DAA doing advanced work to put testing structures in place? They would not operate straight away but the authority could at least do advanced planning even for PCR testing at the airport. Deputy Smith asked that question. Will Dr. Holohan respond on that particular point because that is really the key to the question? Does Dr. Holohan see a place for DAA, along with Shannon and Cork Airports to at least do the preparatory work so they are up and running and when we get to a sustainable level they then can properly operate pre-departure testing?

Dr. Tony Holohan: The committee will not be surprised to hear me say that it is not for us to direct the DAA from where we are. The Department of Transport and a range of other Departments are all engaged in the efforts which have to be made by Government to implement the arrangements that it has decided upon recently about the European arrangements. Whatever has to be put in place in terms of the DAA will all, I am sure, form part of the Department of Transport's considerations in all of this. Our preparations - and there will of course be a lot of work happening on this across the health service - will be on all the practical arrangements we have to put in place. These will include continued assurance around the operation of our public health system and preparations of the kind we want to get into making around the delivery of vaccines and all of those kind of things for 2021.

Deputy James O'Connor: I thank Dr. Holohan and Dr. De Gascun for all the work they are doing. They have an incredibly difficult task. No elected representative envies the decisions they have made and what is ahead of them and yet to come.

My first question is for both doctors. It is very relevant to all sectors in transport, particularly aviation, and to people's lives as well. How long do the NPHET representatives see us being in a situation where we are in this cycle of moving into and out of restrictions? Dr. Holohan might answer that question first.

Dr. Tony Holohan: Certainly until we get an effective vaccine we, as societies, are likely to have to take measures to control the disease that go beyond the focus on identification of cases and controls. I will come back to what I mean by that. A vaccine would change the situation entirely if we had one that was effective. We do not plan, nor are in a position to plan, on the basis of that certainty. We have to plan for two scenarios right now. The first is where we have an effective vaccine. Work is happening in that regard. The second is where we do not have a vaccine. We simply cannot fall into the trap of planning based on the certainty of a vaccine. Therefore, all our work must be to ensure, inasmuch as possible, that we identify cases as early as possible when they occur, put arrangements in place to try to control the spread from any individual, through his or her contracts, into the wider community, and verify as much as we can the establishment of that control. That is the rationale for the policy.

Deputy James O'Connor: I understand that.

Dr. Tony Holohan: Until we get another modality, there is no way around that. If countries such as Ireland find themselves in circumstances whereby their efforts to identify cases, trace contacts and verify the process do not contain the virus to the extent that it needs to be contained and it becomes more widespread-----

Deputy James O'Connor: I accept that. I apologise for interrupting as my time is limited and I have a few more questions.

Dr. Tony Holohan: -----they will be forced to make recommendations on restrictions of the

kind we and many other countries now have in place. Particularly given what happened across Europe over the past two weeks, it would be a brave person indeed who would say we will not need to do so again in the near future.

Deputy James O'Connor: We fully accept that. The vast majority of reasonable people will do so. We are now at a much more advanced stage regarding the virus. We have been living with it for almost a year and a number of vaccination trials internationally have been making great progress. From the witnesses' understanding, could they indicate when a vaccine might be available to the public? How is the testing going? The virologist in the room, Dr. De Gascun, might have some information on that.

Dr. Cillian De Gascun: The short answer is that, from a vaccine perspective, there have been some very positive soundings that data from the phase 3 clinical trials will be available for analysis at the end of November. Until we see those data, we will not know how well the vaccine performs. In the context of the virus, we have had four seasonal human coronaviruses in recent decades. All crossed the species barrier and have become endemic in the human population. The original severe acute respiratory syndrome, SARS, of 2002 did not manage to become established and is no longer in circulation. The Middle East respiratory syndrome, MERS, coronavirus of 2012 still causes occasional cases but it did not manage to adapt sufficiently to acquire the ability to transmit effectively between people. SARS-CoV-2 has now done that. Viruses do not just disappear; they tend not to just go away. The only virus we have managed to eradicate through vaccination was smallpox. We are getting close with measles, rubella and polio but it is a long way off. Unfortunately, therefore, we cannot pin our hopes on a vaccine. The chances of its being 100% effective and taken up by the whole population and of eradicating the virus in the near future are very small. This virus is likely to become endemic in the population. The non-pharmaceutical interventions Dr. Holohan has spoken about today will remain incredibly important. Therefore, we have to get transmission down to a low level and change our behaviour to keep the virus suppressed to a low level in the community. The virus, over the coming years and decades, may become milder but it is very unlikely to just disappear, even with a vaccine.

Deputy James O'Connor: I thank Dr. De Gascun for that. On foot of that, he will accept that with regard to adapting to living with the virus, it is important that we continue to investigate actively the possibly of rapid-testing infrastructure and advancing technologies in that area. I accept that there are still underlying concerns about antigen testing and the lack of a comprehensive study on it. Have the witnesses knowledge of any concluded or ongoing studies internationally on antigen testing? The aviation sector wants antigen testing in place because it is rapid but I have some concerns about it. Are there any ongoing large-scale studies?

Dr. Cillian De Gascun: The Deputy has identified one of the challenges. We are very fortunate that HIQA has done a huge amount of work in this area and examined what is happening in other countries and in the literature. Unfortunately, the evidence base is not in the literature regarding the performance of antigen tests in the real-world setting. We have a very good test in the polymerase chain reaction, PCR, test at this point and we would need a good reason to move away from it. What we often see as new tests are developed and new pathogens emerge is that the first generation of tests is imperfect but the second and third generation tests evolve, become more refined and get better. It is completely possible that the second generation of antigen testing will become more easy to use, sensitive and more specific. The specificity of antigen testing is not too bad at this point in time which should be acknowledged. It is really a question of the sensitivity and the concern that we will miss cases. That is why testing in what-

ever setting has to be taken in conjunction with restriction of movements in a travel setting and with a period of quarantine, purely because no test is perfect. A test only gives an indication of a point in time. For example, I could have had a test outside here this morning where the virus was not detected. I could well be infectious now regardless of what the test said purely because of the way that the virus replicates over time, the virus load increases, and therefore becomes more easy to detect. It is a point in time test and we need to be careful about not inferring too much on the basis of a single result.

Deputy James O'Connor: In the limited time left to me I ask the Chair to indulge me with one more question. I know that our witnesses were asked about the infrastructure at airports. The whole area of working with elected representatives and Ministers on this issue is quite important. From my engagement with very senior members of the Government there is a degree of hesitation on their part until public health advice is given to them to put in any infrastructure that may be required. I wish to make the point to both our witnesses that the Ministers are very anxious to ensure that there is advice coming from both, and Dr. Holohan as the CMO, on putting in infrastructure at airports for any style of pre-departure testing or any testing facilities, if that becomes an advisable thing to do in the course of time, and when our witnesses will have more facts and data available to them to back such a decision up. I encourage the witnesses to ensure that they are reaching out to the Department of Transport. From what our witnesses have said to the committee, there is a bit of to-ing and fro-ing, in the sense that the Ministers are unsure of the public health advice and that our witnesses are saying that they cannot advise the Ministers but that they would have to go to the experts for advice on this issue. Do our witnesses have anything to say on that point?

Dr. Tony Holohan: On the point of the "to-ing and fro-ing", there is ongoing engagement happening between Government Departments on the practical implementation of the decisions that the Government makes. That is the normal part of the implementation of any Government decision. The work that is happening across Departments involves the Department of Transport, the Department of Health and others and reflects the advice that we have given but also reflects all of the other considerations that Government has to have including the positions and perspectives of all of the other Government Departments. That is all being worked through in the current process of implementation. We will continue as a Department to make our advice available in the context of all of that. Ultimately it will be for the Government to decide based on that advice, having reflected all of the other perspectives that need to be taken into account. That, to my mind, is a normal part of public administration.

Chairman: I have a number of quick follow-on question for Dr. de Gascun. He said that this virus would become endemic within the Irish population. When does Dr. de Gascun expect the vaccine will be in place? How effective will it be and when do we reach a point when the coronavirus becomes like the common flu?

Dr. Cillian De Gascun: I should clarify that if we look to other human coronaviruses that have crossed the species barrier and become endemic, four of them have managed to do that. SARS Cov-2 has certainly at this point in time achieved its aspiration of becoming readily transmissible from person-to-person. It establishes itself in a new host, it adapts to that new host and there is no reason to believe, in the absence of a significant intervention, whether that is a vaccine, a treatment or some other event, that it will not manage to become endemic. From the point of view as to how it will evolve from a severity perspective over the coming years and decades, it would be foolish of me to try to predict that. We do not know when the other seasonal coronaviruses crossed the species barrier so we do not know what sort of diseases they

caused when they first crossed over and whether that has changed over time. Obviously they now cause a mild illness.

Chairman: When will we have a vaccine in place?

Dr. Cillian De Gascun: The data from phase 3 clinical trials will be available at the end of November. A couple of companies have been quite bullish that they will be going to the Food and Drug Administration, FDA, at the end of November or the start of December to seek emergency use authorisation or early approval. It is very important for us to see what those data tell us about how the vaccine performs. Safety is paramount with any new vaccine. Efficacy is also important.

Chairman: Are we looking at a late 2021 before we have a vaccine in place?

Dr. Cillian De Gascun: It is difficult for me to give certainty around that. The drug companies suggest that they are already manufacturing their vaccine. They are manufacturing their product on the basis that they believe it will be effective. This comes back to the importance of the scientific process and the data being published and made available so that we can all review them and see which groups were vaccinated and how well the vaccine worked in those settings. Again, we believe the data from phase 3 clinical trials will be available towards the end of November and we look forward to seeing what they tell us.

Dr. Tony Holohan: The licensing or authorisation of those vaccines will happen at a European level on behalf of all of the member states of the European Union, through the European Medicines Agency, EMA. As a country we are part of the joint procurement arrangements that will kick in for the provision of that vaccine to all of the member states of the EU that are part of that joint procurement process. If a vaccine becomes available earlier than the time period indicated, that is, the end of 2021, we would have access to that through the joint recurrent arrangements now in place.

Deputy Joe Carey: I thank Dr. Holohan and Dr. De Gascun for all of their work. It is really valued. I thank them for keeping us safe and informed and working with the population.

We have had a series of meetings on this topic. We have been very slow to move on it. Germany, Italy and Austria have moved on international air travel. As the witnesses will appreciate, aviation is an economic driver in our country. I am from County Clare and Shannon Airport is very important to business and tourism in the region. We need to get the balance right. There are 80 aviation-related companies in the Shannon area, all of which are dependent on aviation.

The EU moved to try to reopen international travel in the summer. We lost a lot at that point in that we did not introduce rapid testing at our airports. As the witnesses will be aware, the DAA and Shannon Airport have put a proposal to the Department of Transport on the introduction of a testing regime. Has NPHET considered that? If so, what is its view on it?

Dr. Tony Holohan: I will ask Mr. Morris to address some of the specifics in the Deputy's comments. The testing arrangements in some countries are not isolated arrangements. The arrangements that exist in Germany are not arrangements in regard to testing alone. Our advice is still reflective of the evidence that we talked about today and the guidance of the WHO and ECDC, namely, that we do not recommend rapid antigen testing for use as part of broader screening. If we are to have measures that incorporate testing, it will be in the way we described earlier and will be part of a suite of measures designed to ensure we can minimise the risk of transmission between countries.

Mr. Liam Morris: On the latter point, there have been ongoing discussions between the Departments of Health, Transport, the Taoiseach and others on these issues. A detailed specific proposal from the DAA, through the Department of Transport, has been alluded to but I have not seen the specific details shared by the Department of Health.

Deputy Joe Carey: On international travel, the witnesses have commented that they are anxious about importing the virus. What evidence do they have in respect of cases in Ireland? In their opening statement they said that during the summer up to a quarter of cases were imported. Is there more recent evidence on international travel in terms of cases?

Dr. Tony Holohan: We look at transmission status. The work done by contact tracing and public health teams tries to establish, insofar as they can, where an individual may pick up an infection. That is where we get this information from. Over the course of the summer, those teams indicated that, in relative terms, the proportion of cases from travel increased. That was partly because of the significant progress made by Irish people in driving down the levels of transmission to low numbers. On some days, fewer than ten cases in total were reported. In that context, a small number of imported cases would have a proportionately large effect. When we got to a point in the summer where we had, for all intents and purposes, eliminated community transmission, the major source of infection was from outside the country. Therefore, its importance increased.

Of late, however, it is fair to say that we have not been as focused on international travel as a source because the risk to people in this country is not arising from the numbers coming through Dublin Airport, but through everything that is happening in this country - socialisation, parties, getting together indoors and outdoors and workplaces. I could go on. Our concern for the past two months in particular has been consumed, and rightly so, by the risk of transmission in this country. Correctly, we were much less focused on the immediate risks posed by international travel, given that it was only adding a small proportion to the total amount of activity. We had a great deal of disease transmission that was Irish, if I could put it that way, and very little international travel in relative terms. If that set of circumstances changes, our considerations will obviously have to change. In other words, if we manage to drive down community transmission to where it was in the summer or if we see things happening that lead to a significant increase in the quantity of international travel, we will have to give some consideration to what we believe the risks arising from that will be and give advice based on our assessment.

Dr. Cillian De Gascun: I might add to that, albeit my point is not specifically about air travel. Recently, a paper has been highlighted - people have probably seen it mentioned in the media - discussing a novel variant of the virus from Spain that has travelled around Europe. From a virological perspective, it highlights how interconnected we all are. Fortunately, there is no evidence that the virus is necessarily more transmissible or virulent, but it demonstrates nicely that the virus will spread readily if given the opportunity. Obviously, travel facilitates that.

Deputy Joe Carey: If there was a uniform system across Europe like the traffic light system, one that involved pre-departure tests two hours before someone travelled, it would not eliminate the risk, but it would reduce it. Dr. Holohan referred to a risk of 15% of imported cases not being identified, but surely such a system should be welcomed and endorsed by NPHET. We cannot remain in this situation forever. We need to move on, especially where an important industry like aviation is concerned.

Dr. Tony Holohan: We will move on when it is safe to do so. Our job is to point out the

risks and safety issues. I understand and am sensitive to the implications that it has for others, but our primary responsibility is to make as dispassionately as we can an evidence-based assessment of what works, what does not work and what our experience is or is not, and base our advice on that.

Chairman: There is no element of NPHET's remit that involves balancing that with consideration of the devastating impact on the economy. It is purely a public health-----

Dr. Tony Holohan: I would not put it in those terms. On a purely public health basis, NPHET could tell the Government that the best thing to do would be to close all workplaces, close all airports, close everything. That would have a substantial effect. However, we have not made that advice available. We are constantly balancing what we believe is a proportionate assessment of what is an appropriate risk and a proportionate response to the level of transmission. Although we now have in place very significant recommendations, ones that are mandated by the Government, they are proportionate. One need only look across Europe. Many countries waited until much later than us. I am not being critical of any individual country. Based on their assessments-----

Chairman: I suspect Dr. Holohan is.

Dr. Tony Holohan: Not directly, although the Chairman might infer that. Many countries did not intervene as at early a point as we did. In many countries, we can see a very substantial challenge in the maintenance of essential public services and economic activity, which they intended to maintain-----

Chairman: There are commentators who would say that our rate was decreasing before we went to level 5.

Dr. Tony Holohan: I will address that point because it is an important one. Of course, I do not agree with it.

Chairman: But it has to be put.

Dr. Tony Holohan: That is fair. Across many of those countries, there are substantial challenges in providing health services. Countries are literally seeking to buy ICU capacity from other countries. Desperate measures are being taken in many developed European countries and capitals. I will not make a bold statement that we will avoid that here but the trajectory of the disease we have managed to establish over the course of the past couple of weeks, gives us some reason to believe we might get there.

The reason I am simply disagreeing is that a couple of things happened. First, we know we have had anticipatory behaviour. The population has been getting more concerned. Individuals, and rightly so, and we have been advising it, have taken decisions themselves to avoid risks and to start to cut down their contacts and cut down their socialisation to avoid the kinds of circumstances that would lead to transmission. That has been going on for some time. Second, we have evidence in places where level 3 recommendations have been in place for longer than in other parts of the country, in particular, in Dublin, where we have not seen a suppressing effect in disease transmission. All the evidence we have available gives us the judgment that level 3-type restrictions in this country seem to be able to hold the virus, broadly speaking, at a given level of transmission, in other words, hold what you have as oppose to reducing. Our analysis, I think, correctly, is we have to absolutely drive down the rate of transmission, and that is why the level 5 measures were recommended by NPHET. The public in many respects may have gotten

ahead of us in many parts of the country and begun that because we are seeing a suppression of the disease even if we still have some way to go.

Deputy Joe Carey: I thank Dr. Holohan for his engagement with the committee.

Chairman: I call Deputies O'Rourke and Ó Murchú.

Deputy Cathal Crowe: Is there a Fianna Fáil slot now?

Chairman: No. It is a Sinn Féin one.

Deputy Cathal Crowe: Apologies.

Chairman: In fact, they were gracious to Deputy Carey. I was doing my bit for across the border.

Deputy Darren O'Rourke: I am struck by the equivocation on testing and I am wondering if Dr. Holohan is worried that people will have a false sense of security if they were tested on their way into the country. In the context of the information he has given, we were at low levels during the summer months, with 25% of cases associated with foreign travel, yet people could come in from red zone countries, essentially go about their business freely and there was no testing at our ports or airports. If every individual since March had a PCR test coming into the country, we would have been in a better position to manage our Covid-19 threat but Dr. Holohan is not saying that today. I wonder why.

Dr. Tony Holohan: Part of it is because, ultimately, even if those individuals had a PCR test, it would be down to them to choose for themselves whether they would comply with the advice or not. We are ultimately dependent in the measures that are in place on individuals saying, "I am going to submit myself to quarantine."

Deputy Darren O'Rourke: I appreciate that but, in terms of the suite of measures that Dr. Holohan has at his disposal, I would have thought of such use of a PCR test. For example, why do we test at all? Is not partly to identify the virus? We are not doing that at our airports at the minute.

Dr. Tony Holohan: If we had a single-point-in-time test, the danger is that a portion of people will test negative who, in fact, are incubating the virus and then will falsely believe that they do not need to subject themselves.

Deputy Darren O'Rourke: Would we not still be better off than where we are at the minute?

Dr. Tony Holohan: If we thought we would be better off, we would be giving different advice. That is the reason we have not given that advice.

Chairman: Surely having a test at the airport is better than no test. That is a reasonable point that Deputy O'Rourke made. There is no testing at airports at present.

Dr. Tony Holohan: There is not testing in the airport at the moment. There are two points that I am making on that. One is the false information that for some people it would give them false assurance. People who are motivated to have a test and want to do the right thing actually feel that they now have licence to no longer follow. That would be a risk.

Chairman: I appreciate that.

Dr. Tony Holohan: The second - I have lost my train of thought-----

Chairman: Dr. Holohan said there were two and, effectively, no test-----

Dr. Tony Holohan: I recall what I was going to say. Ultimately, an individual's engagement with any of the measures that we have in place is a voluntary engagement.

Deputy Darren O'Rourke: That was specifically my question. I refer to the false sense of security. It strikes me as surprising that Dr. Holohan is not being explicit in terms of a recommendation on the testing, which is an important component of the framework in terms of our identifying, tracking, tracing and dealing with Covid-19 but it seems to be a blind spot in terms of ports and airports. At the same time, we are saying that 25% of cases are associated with foreign travel and that, in the best-case scenario, we would lower the transmission on the island of Ireland but it will be an increasing risk for importing it from abroad and still we will have no testing in place.

Dr. Tony Holohan: I still hold to the view that testing on its own as a single point test, with no other controls in place other than an individual's willingness to comply with the recommendations that have been made to them-----

Deputy Darren O'Rourke: I take that point, but does testing have an important role to play in the suite of measures we are taking, including-----

Dr. Tony Holohan: Of course it does.

Deputy Darren O'Rourke: -----at ports and airports?

Dr. Tony Holohan: Potentially, but it is all down to how testing is used.

Deputy Darren O'Rourke: If Dr. Holohan were to prescribe to our airport authorities a suite of checks and controls that would help him in his work in identifying, tracking and tracing Covid-19 on the island of Ireland, what would he prescribe?

Dr. Tony Holohan: It will be no different in broad terms to what we would say with regard to testing generally of people who are either symptomatic or asymptomatic. A single point test of people who are asymptomatic leads to false assurance. Seen on its own, a test does not prevent anything. It has to be part of a suite of control measures to inform control measures. It is not the only measure to put in place and placing undue reliance - and I am not suggesting the Deputy is doing that - on the value of testing at the expense of other things will create a false sense of security and actually increase the risks.

Chairman: Does testing at airports add to the reduction of risk overall?

Dr. Tony Holohan: I will ask Dr. De Gascun to add to some of what I have been saying.

Dr. Cillian De Gascun: In the case of pre-departure testing with a PCR test, it is probably useful in identifying people who are infected at that point in time and stopping them travelling. That is what one can do. The incubation period of the virus is 14 days so probably from day four to day five today - day ten to day 12 - they are the people we are stopping travelling. The problem is that we have got people in the first four days of the four to five days of their infection so we will miss them. It is not that they will have a false sense of security. They will have been given an RNA detected test so it is human to think, "I'm fine today"-----

Deputy Darren O'Rourke: We are already missing them. We have been missing them-----

Dr. Cillian De Gascun: -----but we also know-----

Deputy Darren O'Rourke: -----for the past six months.

Dr. Cillian De Gascun: That is why the public health measures are so important. We know that people can transmit before the onset of symptoms and we know that the vast majority of people will become symptomatic. If people follow the public health guidance we can capture most of those individuals. We could stop people who have an RNA detected test at the point of testing from getting on the plane. That is certainly a useful component but the other element of this is that we are using diagnostic tests that are intended to be used in symptomatic people in a way in which they were not originally intended so the performance will be sub-optimal. We will generate inaccurate results also because we know that, in terms of the sensitivity of the test, no test is perfect. Depending on where the people involved are in their illness and on where the virus is in their respiratory tract, and we have heard of cases in hospital where the first couple of tests-----

Chairman: Even with PCR testing.

Dr. Cillian De Gascun: Even with PCR testing. People have been admitted to their hospital. Their initial test did not detect the virus and a couple of days later their condition deteriorated either on the wards or in intensive care and then their subsequent test identified the virus because of a different specimen type from lower down the respiratory tract. Testing may have a role to play but it is certainly not going to-----

Chairman: I want to get as many people in as possible so I will limit members to two minutes each. I call Deputy Ó Murchú who will be followed by Deputy Cathal Crowe, Senator Dooley and, hopefully, Deputy Duncan Smith.

Deputy Ruairí Ó Murchú: To follow up on that, the traffic light system will only work as a framework if it is combined with a testing facility. All of us can work out what the witnesses are not going to propose but at this point, the Department should be putting together something that can fit into a framework and part of that would need to be testing. The witnesses have had those discussions. At this stage, I imagine that any proposal they are talking about is PCR, probably double testing and a couple of scenarios like that. Is Dr. Holohan willing to go into any detail about this? Is there even a timeline for when the proposal will go forward?

Dr. Tony Holohan: We have talked about the limitations of different testing technologies, about PCR being superior, about the risks of tests at a single point in time, and about the risks that attach to arrangements that, ultimately, depend on the goodwill of individuals to comply with the public health advice or advice about self-isolation and quarantine. It stands to reason that our advice and guidance will be reflective of that.

Deputy Ruairí Ó Murchú: As for the all-Ireland response or lack thereof, is there anything NPHET would need to facilitate it in doing its work with greater co-operation?

Dr. Tony Holohan: We have a very extensive level of co-operation, as I am sure the Deputy will be aware, that goes from the top of the Government all the way down through the executive agencies, and presumably across the Government. From the health sector point of view, my office has formal engagements once a week with my counterparts-----

Deputy Ruairí Ó Murchú: Is Dr. Holohan reasonably happy in that respect with regard to tracing and so on?

Dr. Tony Holohan: Yes, there has been very good co-operation and there have been examples of that. On the island, we have ended up in circumstances where we are not in control, so those kinds of tracing systems and so on do not work as effectively as they do when there are lower levels of transmission. There are many examples of good co-operation across the Border where sharing of information has led to proper detection, control and so on. In fact, the first case that occurred on the island was in Northern Ireland and involved detailed contact tracing and co-operation between transport and other agencies across the Border, and it worked very well.

Deputy Cathal Crowe: Beyond its religious connotations, Christmas is a celebration of families. Can families expect Christmas to be normal? Can those who have a son or daughter in England or beyond expect their child to fly home and to be with them on Christmas Day?

Dr. Tony Holohan: I am not reflecting just on Christmas when I say life will not be normal while there is extensive transmission of this disease in the country. Even if we move past 1 December and get to the level we hope to get to, we will still be dealing with restrictions in this country in the same way as every other country. In that sense, circumstances will not be normal. We are sensitive to the particular challenge that exists in the context of Christmas, with people getting together, socialisation and so on. Our general view is that to the extent that we can make progress and reduce transmission as much as possible, we will be able to manage through that season and beyond for as long as possible. We will give ongoing consideration to these issues as we get closer to the time, and I spoke earlier about-----

Deputy Cathal Crowe: Would someone coming home to his or her family be considered essential travel?

Dr. Tony Holohan: Christmas is six weeks away and we will give it ongoing consideration. We will not recategorise travel in terms of the advice we will give. We will give advice in respect of what we think-----

Deputy Cathal Crowe: I turn to the issue of high-efficiency particulate air, HEPA, filters on aeroplanes. We have heard that 40% of the air is filtered, while the rest is clean air from the atmosphere outside. Is it safe to be on an aeroplane if the person has been tested and is Covid free when getting on? The person may have taken a test at Charles de Gaulle Airport or wherever. Is an aeroplane a safe environment insofar as Covid transmission is concerned? Dr. De Gascun might be better placed to respond. Is it safe to be in that shell of the fuselage of an aeroplane for two hours?

Dr. Cillian De Gascun: There have been a number of reports of transmission in the context of air travel but I do not think it is the primary risk. The risk relates to the activities, as discussed earlier, on either side of the journey. That is where the ultimate risk lies. Even if people are tested prior to travel, it is not a guarantee that they are not incubating infection. Having a single point of testing, therefore, has significant limitations. It is certainly a good way of keeping off the plane people with an RNA-detected result, but the problem is the 30% to 35% of individuals who, in that first few days of their infection, do not believe they are infected and will be assured by the result of the test. They will then come to whichever country, whether Ireland or another, and will not restrict their movements because they will believe they are not a risk. That is the concern. I do not believe an aeroplane to be a high-risk environment at all but,

unfortunately, that is not what we are trying to address. It is about people moving from red or orange countries to what will, hopefully, be lower risk countries by December.

Senator Timmy Dooley: A certain cohort of the population has come to the view that Covid will not affect it, and this obviously influences the behaviour of people in that group. Do the witnesses see any value in publishing the ages of those who have passed and the ages of those in ICUs?

Dr. Tony Holohan: Does the Senator mean at the individual level?

Senator Timmy Dooley: Yes.

Dr. Tony Holohan: At the moment we publish-----

Deputy Timmy Dooley: The mean age. Yes, I know.

Dr. Tony Holohan: -----the mean age, and what it shows very clearly, as I am sure the Senator knows, is that the cases are young, the ICU admissions are not so young and the deaths are-----

Deputy Timmy Dooley: Beyond young.

Dr. Tony Holohan: -----obviously older. We have been focused on trying to get the message to the groups that give us greatest concern as far as transmission is concerned, who over recent weeks have been the 19 to 24-year-olds. The incidence among them went up to 450 per 100,000 two weeks ago but has dropped back to fewer than 300 per 100,000. We also have data on contact behaviour across the age ranges and we have good reason to believe that 19 to 24-year-olds are changing their behaviour and listening to the message. Young people are taking the message on board, taking responsibility and avoiding the kinds of circumstances that lead to transmission of the virus. What we are now seeing, unfortunately, is that the age groups in which the incidence is increasing are the older age groups that will be represented among the hospitalisations and deaths.

Deputy Duncan Smith: Our contact tracing system fell apart a couple of weeks ago. It is to be hoped it is back on track. Do we need to do more as far as retrospective contact tracing is concerned, particularly in the context of Dr. Holohan's comment earlier that it would be great to drive the virus back by county, town and local area? Will the witnesses comment on retrospective tracing and what needs to be done to resource it?

Dr. Tony Holohan: Greater ability to investigate in real time and look back on all the factors that have led to transmission would be an important adjunct to our collective understanding. The more we can understand this and the earlier we can intervene on these things at local level the better. Our contact tracing system has worked well, to be fair to the HSE on this occasion. The system ran into a challenge when we had very high levels of widespread community transmission. Show me a country in Europe where that has not happened. Widespread community transmission challenges every part of the response to this, including contact tracing.

Deputy Duncan Smith: I should not have set the question up like that. It was just about retrospective contact tracing. To what extent should we prioritise that in the next few months?

Dr. Tony Holohan: It is very important. It will be a very important function of an optimised and idealised public health system of the kind the WHO has been recommending, which consists of testing, referral, tracing, investigation and control measures, verification of those

control measures and then surveillance around that. That is the package we must have in place to maximise our chance of keeping control. As Deputy Smith says, retrospective investigation of contacts is a very important part of all that.

Chairman: It is very important that with the CMO present we keep within the time allotted to the meeting. With that, I thank Dr. Holohan, Mr. Morris and Dr. De Gascun for attending today's engagement with the committee. I hope this will be the start of many engagements. We may not always agree but we are all working for a common purpose.

Dr. Tony Holohan: That is great. I thank the Chairman.

The joint committee adjourned at 12.58 p.m. until 12.30 p.m. on Wednesday, 4 November 2020.