OFFICIAL REPORT
AITHISG OIFIGEIL

COVID-19 Recovery Committee

Thursday 4 November 2021

Session 6

The Scottish Parliament
Pàrlamaid na h-Alba

Thursday 4 November 2021

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COVID-19 RECOVERY COMMITTEE

9th Meeting 2021, Session 6

CONVENER

*Siobhian Brown (Ayr) (SNP)

DEPUTY CONVENER

*Murdo Fraser (Mid Scotland and Fife) (Con)

COMMITTEE MEMBERS

*Jim Fairlie (Perthshire South and Kinross-shire) (SNP)
*John Mason (Glasgow Shettleston) (SNP)
*Alex Rowley (Mid Scotland and Fife) (Lab)
*Brian Whittle (South Scotland) (Con)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Dr Hywel Davies (Chartered Institution of Building Services Engineers)
Dr Shaun Fitzgerald (University of Cambridge)
Professor Jason Leitch (Scottish Government)
Professor Catherine Noakes (University of Leeds)
Professor Tim Sharpe (University of Strathclyde)
Graham Simpson (Central Scotland) (Con)
John Swinney (Deputy First Minister and Cabinet Secretary for Covid Recovery)

CLERK TO THE COMMITTEE

Sigrid Robinson

LOCATION

The David Livingstone Room (CR6)

Scottish Parliament

COVID-19 Recovery Committee

Thursday 4 November 2021

[The Convener opened the meeting at 09:01]

Decision on Taking Business in Private

The Convener (Siobhian Brown): Good morning, and welcome to the ninth meeting in 2021 of the COVID-19 Recovery Committee. I give a warm welcome to Graham Simpson MSP, who is joining the committee this morning.

The first agenda item is a decision on whether to take in private agenda item 5 and all future consideration of the evidence that we will hear in future meetings. Do members agree to take those items in private?

Members *indicated agreement.*

Ministerial Statement and Subordinate Legislation

Health Protection (Coronavirus, Restrictions) (Directions by Local Authorities) (Scotland) Amendment Regulations 2021 (SSI 2021/329)

Health Protection (Coronavirus) (Requirements) (Scotland) Amendment (No 2) Regulations 2021 (SSI 2021/349)

09:01

The Convener: Under agenda item 2, the committee will take evidence on the ministerial statement on Covid-19, subordinate legislation and the other matters that are noted on the agenda. I welcome to the meeting our witnesses from the Scottish Government: John Swinney, the Deputy First Minister and Cabinet Secretary for Covid Recovery; Professor Jason Leitch, who is the national clinical director; Elizabeth Sadler, who is deputy director for Covid ready society; and Graham Fisher, who is deputy director in the legal directorate. I thank the witnesses for attending the meeting.

Deputy First Minister, would you like to make any remarks before we move to questions?

The Deputy First Minister and Cabinet Secretary for Covid Recovery (John Swinney): I am grateful to the committee for the opportunity to discuss a number of matters, including the Covid update to Parliament from the Cabinet Secretary for Health and Social Care on Tuesday and the Covid recovery strategy.

As set out in the update to Parliament, we continue to work closely with health boards as they deal with pressures in the run-up to winter. We announced an additional package of winter support, backed by a further £10 million, for a range of measures to support accident and emergency systems and to ensure that patients have access to the correct care as quickly as possible.

We have implemented an approach that is intended to maintain the pace of the vaccination programme as we enter the flu season by maximising the availability of scheduled appointments and ensuring the efficient vaccination of people against both Covid-19 and seasonal flu. Vaccination remains one of our most effective public health interventions against the pandemic.

We have also announced changes to the rules on international travel, including the removal of the

final seven countries from the international travel red list.

The Scottish Government has been working closely with the United Kingdom Government and partners in Scotland, including Glasgow City Council, Transport Scotland, NHS Scotland and Police Scotland, to deliver the 26th United Nations climate change conference of the parties—COP26—successfully and safely. A comprehensive package of mitigation measures is in place, which is aimed at protecting the welfare of everyone involved and the wider community. In addition to an offer of vaccination to delegates, measures include a robust daily testing regime, contact tracing, hygiene measures that include distancing and the use of face coverings, and ventilation.

In relation to the regulations that we will discuss shortly, the Covid vaccination certification scheme continues to bed in well. Last weekend was the second weekend since enforcement began on 18 October. The Covid status app has played a part in the success of the scheme. The original contract cost of £600,000 for the development of an international travel app, which was awarded to Netcompany, was formally extended in October by up to an additional £600,000, in order to reflect the expansion of the original proposal to include new technical development work to support domestic use of the app.

On the statutory instruments that are before the committee, the Health Protection (Coronavirus, Restrictions) (Directions by Local Authorities) (Scotland) Regulations 2020 had been in place since 28 August 2020. They made provision for local authority enforcement powers in respect of businesses, premises, events and access to public outdoor places. The original regulations were due to expire on 30 September 2021, and the current regulations extend the original regulations to 25 March 2022. That ensures that, should local authorities require, in relation to coronavirus, to take local enforcement action regarding businesses, premises, events and public outdoor places, they will have the appropriate powers available to do so.

The Health Protection (Coronavirus) (Requirements) (Scotland) Amendment (No 2) Regulations 2021 provide for the Covid vaccination certification scheme. The Government recognises the concern that was expressed in the Delegated Powers and Law Reform Committee that regulations under the made affirmative procedure can come into force prior to any formal scrutiny by the Parliament, and about applying the procedure to those regulations.

Our decision to use that procedure for the certification regulations partly reflected considerations around implementation of the vaccination certification arrangement, including the need for businesses and the general public to familiarise themselves with the finalised legal requirements that underpin the scheme sufficiently in advance, in order to enable those who are affected by the scheme rules to take the necessary steps to prepare. I discussed some of that with the committee on 30 September.

More widely, the Minister for Parliamentary Business set out the considerations that we took into account in using the made affirmative instrument procedure. Case numbers remain high, and it is for that reason that urgent action was needed in introducing the important baseline measure of certification, given those factors and the need to take action without delay to address the harms that are posed by the virus.

Under the difficult circumstances that we still face, I ask the committee to recommend approval of the regulations. I offer my assurance that the measure will continue to be under review and will remain in place only for as long as is necessary.

I am very happy to answer any questions that the committee might have.

The Convener: Thank you, Deputy First Minister. I will ask a few questions first.

I thank you for your response to our letter on the vaccination passport regulations. In your letter, you stated:

> "it is not possible to establish the individual impact of this scheme on changes in transmission of the virus."

Given that reducing transmission is one of the scheme's aims, will you clarify how you are monitoring the scheme's impact on reducing transmission?

John Swinney: The point that I was trying to make in my response to the committee was that it is impossible to segment the headline data about the prevalence of the virus to which we have access, and to ascribe levels of prevalence of the virus to particular factors. The flipside of that is that it is impossible to ascribe to a particular mitigation measure the avoidance of a situation that has prevailed.

Ministers look at the overall prevalence of the virus and the pressures on the national health service, and we make a judgment, based on the headline data, on whether it is proportionate and appropriate for mitigation measures to remain in force. Ministers undertake that assessment every three weeks. We have to complete our next assessment and consideration of such issues on 16 November. We look at all the evidence that we have to hand, and we make a judgment on the extent to which the virus continues to present a significant threat to the wider population and,

crucially, to the sustainability of national health services.

The Convener: For transparency, I note that the committee requested in its recent letter that certain information be provided to Parliament alongside the three-weekly review and that that information be provided to the Scottish Parliament information centre. Some of the information that we requested goes beyond the information that is provided in the weekly "Coronavirus (COVID-19): state of the epidemic" report.

Your letter notes that only some of the information that was requested is held by the Scottish Government. Notwithstanding that, it appears that the available information that was requested was not provided to SPICe at the most recent review point on 26 October. Will the Scottish Government commit to providing the information that the committee has requested at the next review point and at all subsequent review points?

John Swinney: I will certainly look at that point, convener. As I have said to the committee on a number of occasions, the Government publishes a vast amount of information about prevalence of the virus, with the associated data sets on management of the challenges that we face.

The committee wrote to me about a range of requests and, if there is more information, we will endeavour to provide as much information as we possibly can. The weekly state of the epidemic report already contains a huge amount of information, but if members believe that it would be helpful for more information to be made available, we will certainly consider that.

The Convener: Thank you. As I mentioned last week, the COVID-19 Recovery Committee is trialling an online public platform to allow members of the public to ask questions. Helen Goss got in touch this week, and she said:

"There is a distinct lack of protections for children in educational settings. Schools are having to rely on natural ventilation without supplemental ventilation technologies which will pose a problem going into winter … Latest data from the CLoCK study suggests up to 1 in 7 infected children will develop Long Covid. Why isn't the Scottish Government prepared to protect the younger age groups?"

I will personally add a question to that: do we have any evidence or data on children developing long Covid?

John Swinney: I will take away the point about data on children and long Covid, and I will advise the committee on whether there is any data that could be shared in that respect. Obviously, we will have to consider issues around data protection in that respect, but I will consider that and write to the committee on that point.

I recognise the significance of the point about ventilation. That is an issue that I wrestled with extensively when I was Cabinet Secretary for Education and Skills, and my successor has been working with the Covid-19 education recovery group to ensure that there is an appropriate approach to the delivery of ventilation interventions by local authorities in schools around the country.

The Cabinet Secretary for Education and Skills has written to the Education, Children and Young People Committee with an update on the extent of the measures that have been taken to improve ventilation in schools and on the inspection regime that has been put in place. We have required local authorities to undertake extensive assessments of ventilation interventions, and that work has been reported on to that committee.

Much of the emphasis has been on two things: first, on ensuring that we have all the necessary and appropriate data on the assessments that have been made; and secondly, on ensuring that changes can be made to the school estate to enable appropriate ventilation arrangements to be put in place. The Government has, of course, funded the approaches that are being taken by local authorities.

We have to consider a whole range of different measures. The member of the public who raised the question is concerned about the wellbeing of children in schools. That concern is shared by ministers—hence the decision that ministers took, which has not been universally supported, to maintain use of face coverings by pupils in certain circumstances. That has been an important protection to maintain in trying to suppress spread of the virus within the school estate. Ventilation is another aspect of the baseline measures that we can all take to tackle the situation.

Murdo Fraser (Mid Scotland and Fife) (Con): Good morning, cabinet secretary and colleagues. I return to the matter of the vaccination certification scheme, which the convener touched on in her first question. One of the purposes of that scheme, as set out by the Scottish Government, is to encourage an increase in the uptake of vaccinations. In last week's committee meeting, Mr Mason asked Professor Leitch whether there was evidence that that had been successful. Mr Leitch gave a straightforward and honest response, as we would, of course, expect. He said:

"I simply do not know".—[*Official Report, COVID-19 Recovery Committee*, 28 October 2021; c 21.]

Indeed, you have confirmed this morning, cabinet secretary, that it is not possible to disaggregate from the general data whether the scheme is actually delivering on the objective that was set

out. We do not know whether there are positive outcomes from the scheme.

What we do know, however, is that there are negative outcomes. For example, according to the BBC this morning, more than 42,000 people have reported errors in their vaccination records, which is causing difficulties for them in accessing vaccination certification, and we know that the night-time industries have seen a major drop of 40 per cent in business at their premises, which is having a major negative economic impact. That policy is turning into something of a disaster, is it not?

09:15

John Swinney: No, it is not a disaster in any shape or form. Mr Fraser is completely wrong to characterise the scheme as being just about boosting vaccination levels. That is just one of its purposes.

Perhaps I can provide Mr Fraser with some data. As of 1 September, 53 per cent of the 18 to 29 population group, which I think we would all accept is the most important as far as the Night Time Industries Association is concerned, had had both doses of the vaccine. Shortly thereafter, the Government announced that it would embark on the approach. Then, on 1 October, the figure for both doses had risen to 64 per cent, and on 1 November, to 68 per cent. There has been a sizeable increase in the level of vaccination.

The scheme's other objectives include reducing the risk of transmission, reducing the risk of serious illness and death, allowing high-risk settings to continue to operate as an alternative to closure, and increasing vaccination uptake. Those are the four bullet points with regard to the scheme. Taking each measure in turn, I point out that the Government's priorities are to suppress transmission; reduce the risk of serious illness and death, which is one of the scheme's objectives; allow high-risk settings to continue to operate as an alternative to closure, which, again, is sustained by the scheme; and increase vaccination uptake, evidence of which I have already put on the record. As I have said to the convener, what I cannot do is compartmentalise something or ascribe everything; the scheme is part of the mix that we have in place. I think that the scheme is delivering a positive benefit in suppressing the virus.

On errors in vaccination certification, I have accepted all along that, in administering something of the order of 8 million or 9 million doses of vaccine, you are bound to have errors. However, even with the data that the BBC has reported this morning, we are talking about a very, very small proportion of the number of vaccinations. In Scotland, as in many other countries, the vaccination certification scheme is contributing to the basket of measures that are necessary to deal with a pandemic that continues to pose a serious threat to the population's wellbeing.

Murdo Fraser: You have given us your opinion and belief that the scheme is having a positive impact, but you have not given us any evidence of that. In fact, you said in your letter of 28 October to us:

> "it is not possible to establish the individual impact of this scheme on changes in transmission of the virus."

As I said earlier, Professor Leitch told the committee last week that he did not know whether it was encouraging uptake. You have expressed your opinion to the committee, but you have given us no evidence.

To go back to the letter of 28 October, I note that we specifically asked whether you could give us any information on the

"Number of people who have reported difficulties in accessing the COVID status app; their QR code; or paper copies",

and you said, "Data is not available." We asked whether you could tell us the

"Number of people who have reported inaccuracies with the information contained in their vaccination record",

and you said:

> "Data is not currently available."

However, the BBC has been able to obtain the information through a freedom of information request that 42,000 people have complained about inaccuracies. How has the BBC been able to obtain information that you were not able to give the committee?

John Swinney: That issue is causing me some concern, and I intend to investigate it after the meeting. I have only just become aware of the information that the BBC published this morning.

My letter to the committee is based on the advice that I took at a given moment. I am the author of the letter, so I take responsibility for its contents. I am not concerned about the part of annex A of the letter in which I talked about the

"Number of people who have reported difficulties in accessing the COVID status app".

I do not think that that is in any way contradicted by the data from the BBC this morning. However, on the final part of annex A, on the

"Number of people who have reported inaccuracies with the information contained in their vaccination record",

as I have said to the committee, I am concerned by the fact that data is not currently available. I am exploring that point as we speak—or I would be if I

was not here. It is being inquired about on my behalf.

Murdo Fraser: I want to ask again about the issue of economic impact. We have heard from the Night Time Industries Association and the Scottish hospitality group about a major decline in business at many of their premises since the vaccination passport was introduced. Does the Scottish Government recognise that concern and, if so, what are you doing to try to address it?

John Swinney: Mr Fraser has concentrated on a number of points of definitive evidence. I have been candid with the committee, in all my correspondence and in oral evidence, that we cannot ascribe a direct relationship between one particular measure and one particular outcome. It would be misleading to try to do so. There is a basket of measures and interventions that we have to take to suppress the virus and achieve our objective of increasing vaccination.

The principal issue that we have to wrestle with is that the virus remains a significant threat to the health and wellbeing of the population. In my judgment, the Government's judgment and, I think, the judgment of Parliament as a whole, we have to take measures to tackle that situation and the seriousness of the impact that it could have on the population.

When we take particular measures, we are weighing up, in all those judgments, what is the proportionate action to take. With the exception of yesterday's data, cases are stable. Yesterday's data was very high and of great concern. We should not look at one particular day's data, but yesterday's data was of deep concern to ministers. Cases are at too high a level, so we are trying to take measures that are proportionate to our objective of enabling as much of the economy and society as possible to recover from Covid and, at the same time, to our objective of suppressing the virus. The decision on what measures to take involves arriving at a fine judgment.

We know from the experience of the pandemic that the night-time economy is an area of higher risk. We are trying to take measures, consistent with the strategic objective that I have just set out, to enable the night-time economy to continue but in as safe a fashion as possible, which is the justification for the scheme.

Obviously, there may well be an impact on night-time industries as a consequence, but there could be the even greater impact of closure. That is what we are trying to avoid in the measures that we are taking. It is about weighing up what we can enable to happen that does not jeopardise our ability to suppress the virus and the ability of sectors to thrive.

Murdo Fraser: We have heard in evidence and from our adviser this morning that every other country in Europe that has brought in a vaccination passport scheme allows, as an alternative, a negative Covid test. That gets round some of the concerns that people have expressed about the vaccination passport scheme—in particular, the impact on human rights and civil liberties. Previously, the health secretary told the committee that that alternative was still under consideration by the Scottish Government. Is it still being considered as part of the mix? I believe that it would remove many of the concerns about the compulsory vaccination passport scheme.

John Swinney: That option is still under active consideration by ministers.

Brian Whittle (South Scotland) (Con): I will follow on from some of Murdo Fraser's points. As you said, cabinet secretary, there were four bullet points giving the reasons for the implementation of the vaccination passport scheme, one being to improve vaccine uptake. It is my view that improving vaccine uptake will improve the other three bullet points by reducing transmission, reducing the effects of illness, the number of deaths and the pressures on the NHS, and, we hope, helping to keep places open.

However, I was concerned to hear one of the committee's advisers use the phrase "evaluating blind" this morning. Given that we are looking for the most effective deployment of resource, how can we assess the impact of vaccination passports? We have to be able to assess their impact on vaccine uptake, because we have always said that we follow the science. The Government is taking a suite of measures, but it cannot just be a matter of throwing as much as we can at the situation and hoping that we have an outcome.

John Swinney: I would not characterise the situation in that fashion. We are taking a set of carefully targeted interventions to try to secure our objectives. Our strategic intent, which was revised in the summer, is to suppress the virus to a level that is consistent with alleviating its harms while we recover and rebuild for a better future. That is very different from our previous strategic intent, which was about maximum virus suppression.

We are trying to manage the impact of the virus through tools including vaccination, and I agree with Mr Whittle's point that vaccination is a significant factor in making venues and circumstances as safe as possible. It reduces the risk of transmission and provides greater protection for anybody who happens to contract the virus after they have been double vaccinated. We are trying to take proportionate measures, as we are required to by law, that enable us to

achieve the strategic intent that I have just put on the record again.

I make no attempt to make the following point more precisely than I have several times already, this morning and on previous occasions: I cannot ascribe a direct relationship between one intervention and the strategic intent. However, every three weeks, we have to look at the strategic intent and the prevalence of the virus and ask whether the measures that are currently in place are appropriate, suitable and proportionate. The Government believes that to be the case, but we are now preparing for the next three-weekly review on 16 November, when we will have to satisfy ourselves on all those issues and report to Parliament accordingly.

Brian Whittle: What I am hearing in that reply is that you are unable, in the three-week review process, to ascribe an increase in vaccine uptake specifically to the impact of any of the measures. Given that vaccine uptake is one of the most important things in tackling the virus, and given the amount of resource that has been deployed into vaccination passports and the problems with those passports—both practical and in relation to human rights—it is really important that you are able to persuade the population that a vaccination passport scheme is the right way to go, but I am not hearing that, cabinet secretary.

John Swinney: I refer to the data that I put on the record in response to Mr Fraser's question. As of 1 September—before the vaccination certification scheme was put in place—53 per cent of 18 to 29-year-olds had received two doses of the vaccine. By 1 November, the figure had risen by 15 per cent to 68 per cent. That is a pretty substantial increase; it is close to a third.

The scheme supports the Government's objectives. We will continue to review it, because we have to be satisfied that the action is proportionate. I confirm to the committee that the Government will do exactly that.

09:30

Brian Whittle: I want to move on but, from a science perspective, we do not know by how much vaccine uptake would have increased without a vaccination passport scheme. That is the issue.

Given that specific groups are less well vaccinated than others—for example, we know that fewer people in the African population are vaccinated—how are those demographic groups being targeted?

John Swinney: We have been using a number of means of communication. Some of it has been through public information and campaigns to encourage vaccinations. We have also been working closely with what I call trusted voices in such communities. We have been working with a number of representative organisations in the black and minority ethnic community and with various religious figures and faith representatives who have been able to articulate the message to a population that might be sceptical about some aspects of vaccination.

We judge the combination of wider Government messaging on the importance of vaccination and specific input from trusted voices in such communities to be the most effective way of taking the steps that are necessary.

Brian Whittle: We also need to target people who are vaccine hesitant. How are we addressing the needs of those people? Pushing harder is likely to result in more entrenched views so, given that vaccination passports will not persuade that group to get vaccinated, what is the Scottish Government doing to speak to those people?

John Swinney: I will say a few words and then I will bring in Professor Leitch. The Government has wider messaging about the risks that the population faces from being unvaccinated and the significance and seriousness of the impact of the virus on people who are not vaccinated. That messaging includes some of the difficult but necessary information that needs to be shared with members of the public. People who are unvaccinated run the risk of having a more serious condition as a consequence of contracting the virus. For that reason and many others, we share that clinical information with members of the public. The chief medical officer, the national clinical director and others support the Government in providing that communication.

Professor Jason Leitch (Scottish Government): I have invested quite a lot of personal time in talking to the groups that Brian Whittle described. I have discovered a group of African mums and groups in the Polish community, which is generally very vaccine sceptical—Poland and Japan are the two most vaccine sceptical countries in the world. We have a very large Polish community, but we do not have a huge African diaspora in Scotland. However, we have reached out to them through trusted voices; I have done quite a lot of that personally.

The trick is for me not to do the persuasion—they are not going to listen to the 53-year-old white guy—but I can persuade trusted leaders by giving them the data and the information, and then they can take that to the communities. We have done a lot of that, and the number of vaccinations has gone up. That is evidenced by the fact that pretty much every person over 50 in the country is now vaccinated—that is certainly the case for those over 60. We continue to provide communication

through faith groups, community groups and other groups.

I will say a word or two on Covid vaccination certification, since everybody has asked about it. Vaccination certification is now a globally accepted mainstream way of managing the pandemic: countries all over the world use it. What ministers choose to put on certificates is a matter for them, but in general vaccination certification is accepted as being useful at this stage of the pandemic. Airlines, party conferences, countries and independent businesses such as cinemas use it.

I heard that the night-time industry at the weekend turned away 10 to 20 per cent of people, which sounds to me as though vaccination certification is working. That is exactly what it is meant to do. I was at Murrayfield on Saturday and my vaccination certification was checked as I entered the stadium; the crowd was safer because of vaccination certification. There is absolutely no question that it was safer to be at Murrayfield or a full Celtic Park at the weekend because of the crowd being vaccination certified.

Vaccination certification works, although the Deputy First Minister is right that we cannot draw you a straight line from vaccination certification to the data—that is impossible. We cannot draw a line from hand washing either, yet the evidence for hand washing is overwhelming. In the basket of measures, vaccination certification globally has become one of the ways to manage, in a Covid world, how to get out of the pandemic.

Brian Whittle: For the record, I am not necessarily against vaccination passports, but I need to understand their implementation and that resources are being used as best they can be in tackling the issue.

Professor Leitch: I agree.

Brian Whittle: I go back to addressing the needs of people who are vaccine hesitant. What work has been done to ensure that those people are not excluded from everyday activities because of their concerns around vaccination passports? We should not create a two-tier system.

John Swinney: The circumstances in which vaccination certificates are required for entry are rather limited—late-night premises with music that sell alcohol, unseated indoor events with 500 or more people, unseated outdoor events with 4,000 or more people and any event with more than 10,000 people. If people want to go to a mass event such as a Scotland rugby match or a large football match, vaccination certification will be required, because it is an effective way of trying to suppress the virus and improve vaccine uptake.

I accept the obligation on Government to make sure that we provide the highest quality information about the rationale for why it is in an individual's best interests to be vaccinated, and our clinical colleagues support that argument extremely well by giving dispassionate clinical information to members of the public to aid them in that judgment. I understand that people will have hesitancy in some circumstances, but all that we can do is provide the best clinical advice, which many of us have followed and which we encourage other citizens to follow.

Brian Whittle: I will ask a quick final question, if I may, convener. Has the Scottish Government decided what the criteria will be for withdrawing the passport scheme?

John Swinney: Every three weeks, we have to consider whether it remains proportionate to have the scheme. We retain the issue under active review, and we will consider it again before 16 November.

We are not dealing with a fixed situation; we are dealing with the fact that the case load changes frequently. As I said in one of my earlier answers, yesterday's numbers are very unsettling to ministers. I have not seen today's numbers—it is a bit early for that—but we will be watching closely. The briefing that the chief medical officer gave to the Cabinet on Tuesday showed that we have been at a high stable level for a few weeks, but the numbers have begun to tick up again over the past seven days, compared with the numbers over the previous seven days. We will be mindful of that when considering whether we have the right measures in place.

Obviously, the COP26 summit is taking place and there are a lot of people there. A lot of people have come into the country for the summit. Therefore, as we have flagged up to Parliament already, there is the possibility of a rise in infection rates over the autumn or winter—whatever we are in just now—which might put further strain on the system. We have to be mindful of the fact that we are dealing with a moving picture on the data.

John Mason (Glasgow Shettleston) (SNP): I will build on some points that have already been raised, one being the question of when we will stop using vaccination certificates. I take it that, because the scheme is part of a package and we cannot tell what specific impact it is having, it will continue along with mask wearing and the other restrictions. Its use is linked to the overall numbers of cases and of people in hospital. Is that what you are saying?

John Swinney: That is, in essence, the assessment framework that we have to work with. We consider the prevalence of the virus—which is roughly measured by the number of cases—the levels of vaccination and the pressure on the national health service. Those three factors are

critical to the judgment that we have to make. On the other side of that is a set of baseline measures, including face coverings, Covid certification and encouraging people to work from home where that is possible. Those measures are designed to keep as much of the economy and society as possible functioning in a fashion that is consistent with alleviating the harms of the virus.

Ministers make a judgment every three weeks as to whether those two sides are appropriately in balance. If case numbers and the number of people in hospital get worse, we have to look at whether the baseline measures are accurate. In the interest of absolute candour, I say to the committee that there is the possibility that baseline measures could be relaxed, but there is also the possibility that they could be expanded. Vaccination certification could be extended to other sectors, or it could have no role to play within our measures. That will depend on a judgment on proportionality, which is the legal duty that we have to fulfil.

John Mason: That leads me to where I was going next. I understand that more venues in Wales, including cinemas, will require people to have a certificate. I have been enthusiastic about the certification scheme, including the fact that it is limited to what I would call extra activities or things that are not a major part of people's lives. That has been a good way to deal with it.

However, it is clear that the scheme is beginning to expand—we can call it creep or whatever. I think that Professor Leitch said that more places are requiring certification. For example, I am going to a COP26 meeting on Monday night where they want to see my vaccination certificate. That event is important to me. I do not go to big football matches, as members know, so I have not needed to use my certificate much. Are you worried that organisations could be using the scheme excessively? How do you see the scheme working, moving forward?

John Swinney: I can understand that happening in a society where many organisations want to play their part in suppressing the virus. We are very fortunate that many organisations, businesses and institutions in the country recognise the serious threat that the virus poses to human health and want to play their part. I can understand why some of them, without a requirement from the Government, want individuals who come to particular events to show their certification.

Organisations need to make a judgment about whether that is leading to any form of exclusivity, if they are interested in wider participation. I am sure that people at the event that Mr Mason will be attending will be interested in hearing from a range of diverse voices. Organisations have to make that judgment, but I can understand why they want to play their part and to do all that they can to suppress the spread of the virus.

John Mason: What about employers who want their employees to have a certificate? Does that take it to another level of pressure?

John Swinney: There will be circumstances in which employers wish to exercise as much influence as they can to stop the spread of the virus, to enable them to sustain their activities. Employers have to make that judgment.

09:45

John Mason: Does Professor Leitch want to say something on that?

Professor Leitch: Let me not give my personal view—I was tempted. Globally, that is becoming an issue. You will have noticed that, in the US, a number of states have said that public employees must be vaccinated. I think that the Government, on advice and on policy decision making, has consistently said that that will not be an obstruction to public services. From a clinical perspective, that is correct. In the health service, I would not want anybody to have their access to mental health care, a pharmacy or anything else limited by their health status, let us say, or their ability to evidence that health status. What happens more broadly than that is a matter for civic society—I have a view, as you will—and the Government and the Parliament should decide what to do on that.

There is a slightly difficult area, which relates to care homes and health service employees. The UK generally and the four health ministers continue to discuss that. There is no plan to enforce certification for such employees, but there is a clinical argument that care home workers are different from workers in supermarkets or in the Department for Work and Pensions. We have not gone down that route UK-wide, and nobody is suggesting that we should, but that area will require consideration.

John Mason: That is helpful. I will move to a slightly different angle. Brian Whittle asked about groups, including ethnic minority groups, with a lower vaccine uptake. I was struck by the geographical spread of uptake. SPICe provided us with some figures. For example, 96.4 per cent of people in East Dunbartonshire have had two doses, whereas the figure for Glasgow, which I happen to represent, is only 78.9 per cent. That seems to be quite a variation. Should I be worried about that?

John Swinney: We should all be worried about that. The level of vaccine uptake in the likes of East Dunbartonshire is, frankly, getting to

maximum participation. We would like all local authorities to be at that level. We know that one of the challenges is that people in areas of deprivation are more reluctant to come forward for such interventions. Through the way in which we have deployed the vaccination programme, we are trying our best to reach as many people as possible. The continued communication from Government is about inviting and encouraging people to be double vaccinated. Absolutely anybody who is not yet vaccinated is welcome to come forward through the different approaches. We want to ensure that they can be vaccinated, and we encourage that higher level of participation.

John Mason: Our advisers suggested that we look at why people are not getting vaccinated and that we perhaps need to do more work on that. The three words that they used were "complacency", "confidence" and "convenience", as the things that are stopping people or that we can encourage. Some people are complacent about getting vaccinated—certification probably helps with that. On the confidence issue, do we just have to accept that there is a core element of the population that will just not be vaccinated no matter what we do, or do we need to do more work in that area?

John Swinney: Let us look at those three factors: confidence, convenience and complacency. The Government can do something about complacency and convenience. We can definitely do something about convenience, because we should be making the vaccine as readily available as possible. For example, if individuals in the communities that Mr Mason represents are required to use public transport to get to another part of the city, or to go outside the city, to get their vaccine, which involves cost, I can understand why that would be inconvenient for those on low incomes. Therefore, as far as possible, we have to ensure that vaccination facilities are available in communities.

Mr Mason raises a fair point. Perhaps we need to look afresh at the geographical distribution and whether there are certain areas that we need to put buses into or where we need to establish clinics in relevant public facilities such as church halls to try to reach those individuals. The Government and public authorities can do something about convenience. As for complacency, the Government's public messaging and the steps that we are taking are designed to tackle any such issues in the population.

Confidence is the sticky and really difficult issue. If someone is anxious about different things in life or struggles with confidence in public authorities or their own wellbeing, it might be quite difficult for us to overcome that challenge. However, I think that we can do so through genuine engagement with individuals and communities to make it as practical as possible for people to be vaccinated.

Alex Rowley (Mid Scotland and Fife) (Lab): As far as the legislation is concerned, genuine concerns have been expressed about the lack of scrutiny and the lack of evidence to support its objectives. As we have seen this morning, you cannot just claim that the increase in vaccination rates amongst young people is down to the scheme. There is also a danger that if organisations, companies and so on start to mandate the use of the vaccination passport among their employees, enforcement will become the only tool in the box.

That is the main point that I want to make: I am not convinced that the Government is on top of the other measures that have been put in place for the majority of people who do not go to the venues where the vaccination passports are used. Those people are still being put at risk. For example, I have previously raised the issue of retail, and shop workers are still telling me about people, particularly the younger generation, going into shops without face coverings. Indeed, I have seen that with my own eyes.

Going back to Brian Whittle's earlier point about the best use of resources, can you tell me what resources are being put in to ensure that these other measures are effective? When a senior member of the UK Government's advisory board resigned the other day, one of the key points that he made was that face coverings were not mandatory in England when they should be. Although they are mandatory here, people are simply ignoring that. The passport is easy to enforce, because nightclubs and other venues have to do so or pay the consequences, but lots of other companies and retail outlets elsewhere are simply ignoring things, with staff being told that they cannot approach people to tell them to wear a face covering. The more that that happens, the more that people will not do it.

With regard to vaccine hesitancy, are you doing enough to counter the anti-vaxxers and the messages that they are putting out? There will always be people who see this as a big conspiracy and so on—you will never sort that—but the misinformation that they are putting out is spreading on social media. I am amazed at the number of people who are quoting stuff at me that sounds very plausible, and that sort of thing is growing. As I have seen at first hand, there is a massive danger of your taking your eye off the ball on vaccination uptake and the other measures that I would argue are far more important in countering the anti-vax messages out there and the very real threat to the vaccine itself.

John Swinney: First, I assure Mr Rowley that we do not view vaccination certification as the only tool in the box—far from it. He makes a fair point about Sir Jeremy Farrar and his resignation from the scientific advisory group for emergencies—SAGE—over the lack of a requirement for face coverings in England, and it is fair to highlight the contrast between that situation and our continuing to reinforce the importance of baseline measures.

I accept that there is a certain amount of resistance to those baseline measures. However, the opinion polling that the Government has conducted shows that there is generally a very high level of awareness of baseline measures and a very high level of compliance with those measures. I will not say that it is total, because I can see with my own eyes that it is not total; there are circumstances that are of concern.

At Cabinet on Tuesday, we received an update from members of Cabinet who were deputed the previous week to reinforce the messaging about the application of baseline measures to critical sectors in the economy. Direct engagement by ministers and our officials with sectors of the economy to ensure that they are playing their part has been a consistent part of the strategy that the Government has taken.

As a personal anecdote, I happened to be travelling on a Caledonian MacBrayne ferry during October, and I was struck by the public messaging. Normally when you are on a CalMac ferry, you get a safety briefing over the tannoy system and you also get briefings about the availability of high-quality catering in the cafeteria, which is always a treat. However, there was also heavy messaging about the importance of wearing face coverings in enclosed spaces, and I would say that compliance was high on that trip. I appreciate that that is just one example.

I have also been quite struck by some of the feedback during COP from individuals who have come into Scotland and who talk about how the level of compliance with the wearing of face coverings on public transport has been much higher in Scotland than what they have experienced in other parts of the United Kingdom.

The point that Mr Rowley made is absolutely right. All those baseline measures—face coverings, social distancing, hand washing and working from home—are critical, and I would contend that the Government is concentrating on those measures and will continue to do so. There is also vaccination certification, but it is not the only tool in our box.

On vaccine hesitancy, there are difficulties and people are having their heads turned by some of the nonsense that is circulating. The best antidote to that is to put forward sound clinical advice. That is why we invest so much time in ensuring that the chief medical officer and the national clinical director and their colleagues are able to have the opportunity to interact directly with members of the public and to give that clinical advice through the mainstream media and on social media in a way that—I think—carries a lot of weight. They are experienced clinicians who are able to support the public in making their judgments, and to try and counter some of the points that are circulating more widely that would encourage vaccine hesitancy and virus scepticism.

Like Mr Rowley, I have been concerned by some of the things that people have said to me and my constituents about those questions. It is deeply unsettling when I hear those things, because I know and appreciate the risks that are faced by members of the public if they are not vaccinated.

Alex Rowley: If a nightclub owner did not enforce the passport, they would be in difficulty. All I will say to you is that you need to take the same approach to retailers. If you are not prepared to take that approach, we will see people ignoring the fact that they should be wearing face coverings in shops, particularly—as I have seen first hand—people in our younger generations.

John Swinney: Mr Rowley makes an absolutely fair point, and I have not in any way tried to dismiss it. Indeed, going back to what I said in response to Mr Whittle and Mr Mason, if we find ourselves in the next few weeks with a rising prevalence of the virus and greater pressure on the national health service than we are already experiencing—it is under colossal pressure just now, as Mr Rowley and I have had exchanges about in the chamber—we might have to take stronger measures, which might apply greater mandatory force.

We are saying to business organisations, transport providers, various public authorities and all sorts of organisations: “You need to get folk to wear face coverings and observe social distancing. You need to do the baseline stuff, because, if you do not, we will end up with more significant restrictions.”

I do not want the committee to take from me any message other than that the Government is wrestling with that dilemma. We want to avoid having to put in place more restrictions but, if we have to do that, we will, because we have a public duty to protect members of the public.

10:00

Alex Rowley: You need to look at retail, but I have two other points. My first is on the policy that the Government has announced on redirecting people from accident and emergency

departments. Dr Andrew Buist, the chair of the British Medical Association's Scottish general practitioners committee, has said:

"This is about proper resourcing across the whole system. A and E is under massive pressure, so are GPs and this should not result in everyone being redirected from A and E to their GP practice."

Last week, we discussed with Professor Leitch, among others, the difficulties that people are having in trying to get face-to-face appointments. Will the policy put more pressure on other parts of the system? Is the Government looking at the whole of the NHS? If the Government is trying to redirect people and keep them out of accident and emergency departments, but they cannot then be signposted to where they need to go, what is the point?

John Swinney: I will bring in Professor Leitch in a second. The key point is that people should access the healthcare resources that are appropriate for their condition. I know that we have had a debate about that in the chamber, which is a slightly less cerebral forum than parliamentary committees, where we can discuss such questions. I am not arguing for self-diagnosis; I am saying that people should go to accident and emergency departments only when they have had an accident or are in an emergency situation. That people should go to the appropriate healthcare setting based on their symptoms and circumstances is an important point to establish.

Dr Buist makes the point that the whole healthcare system is under pressure, and I accept that unreservedly. In fact, the whole health and social care system—not just the healthcare system—is under colossal pressure. As Mr Rowley and I have discussed during exchanges in the chamber, the problems at A and E are caused, in part, by hospital wards being congested. There are people in those wards who should not be there; they should be supported through care packages at home or in another care setting. However, we do not have enough staff in social care to deliver care in those settings. There is therefore pressure on the whole system.

Given that, the best thing that we can to is to try to ensure that people are supported and get their healthcare addressed in a setting that is appropriate to their circumstances. If somebody is having an acute emergency and needs an ambulance, that is what they should get. If they need to be admitted to A and E on clinical grounds, they need to be admitted to A and E. However, if there is an alternative solution through a pharmacy, a GP or NHS Inform—whatever the device is—we should enable people to take that up as long as it is appropriate to their circumstances.

Professor Leitch: It is not about overloading any piece of the puzzle; it is about taking a whole-system approach to try to get people the right care in the right place, so that they do not wait too long in emergency departments and then do not get the right care. If someone comes to an ED with toothache, they will not get the right care there—they will get it at their dentist, so we will redirect them to the right place. If someone needs an optometry review, rather than have a long wait and a ophthalmology review, it might be more appropriate for them to be directed to their optician and get an ophthalmology appointment for two days later, rather than wait in the ED at 2 o'clock in the morning.

Mr Buist is absolutely right that we do not want to have a dumping in any direction. He also wants to see the appropriate patients in primary care. He does not want ED patients there; he wants primary care patients in general practice. What we have said is one element of how we do that. We have just formalised guidance that has existed for a long time.

Some EDs are better at that than others. Our best example is NHS Tayside, which has done redirection for many years. It has usually been at the top of the league table for waits—with the top of the league table being the best place to be, rather than the worst place to be. NHS Greater Glasgow and Clyde has started to do that redirection, and that has worked really well. Yesterday's announcement was about formalising the guidance so that all A and E departments do the same thing.

Alex Rowley: I simply say to you that we on this committee have been warning for weeks now that, if primary care and community care are failing, people will end up at the door of accident and emergency—and that is what we are seeing happening. If they are then being sent back into another part of the health service that is failing, that is not going to work.

I will come now to my third point.

Professor Leitch: I am not sure that you can do that without asking me a question and allowing me to respond, can you?

Alex Rowley: On you go.

John Swinney: I acknowledge that the whole system is under pressure. I am not sitting here trying to deny that. Ultimately, it comes back to the fact that, in a variety of different settings, while the Government is trying to do as much as it can, we do not have enough people available to deliver the healthcare that we require.

I will come back to talk about the availability of people because of free movement of the population. We have lost that. We have lost

people who have left our country who were offering social care services. They have gone, because of Brexit and the loss of free movement. The workforce has been thinned down because of that—it is a hard reality. We are trying to recruit more people, which is why the Cabinet Secretary for Health and Sport has announced enhancements to social care remuneration, and it is why we have expanded the resources available for social care services.

We entirely accept the point that Mr Rowley is making: that, if somebody cannot be supported in their home, they will end up in some form of healthcare setting. It might not be necessary for them to be there, because they could be perfectly well supported at home. However, if they do not have a care package at home, they cannot be properly supported at home.

I think we are in violent agreement here.

Alex Rowley: Coming to my last point, what kind of pressure is being put on the NHS as a result of the growth of private healthcare in Scotland? I read just recently that demand rocketed in the period from April to June this year by more than 1,100. There were 3,400 patients, which was up from 2,300 over the same period last year. The figure for cataract surgery, for example, was up 85 per cent in private hospitals; the figure for hip replacement rose by 144 per cent.

In this country we seem to be moving to a position where the private sector is investing more and more, and there is more growth. That must be putting pressure on NHS staffing. Are you content about the growing situation where the only way that someone who needs a hip replacement or some other kind of medical treatment can get it any time soon is by going private and buying it, if they have the money. For those who cannot afford it, that goes against the very principles upon which the NHS was established.

John Swinney: I am not familiar with the data that Mr Rowley refers to. However, I see this from my constituency cases: people are having to wait longer for what we now consider to be relatively routine procedures, such as hip replacements, knee replacements or cataract operations. That is why the Government is investing in elective care centres. I saw one being built in Inverness on Monday, in fact. A 24-bed unit is being built at the Inverness campus site. Mr Fairlie and I very much welcome the investment that has been made by the health service in his constituency, at Perth royal infirmary, on a similar venture. That is the Government investing to make it easier for what one would call routine surgery to take place, which cannot be disrupted by the disruptions that can happen within the health service. That is all about ensuring that we have expanded capacity to deal with the fact that, with an ageing population, more people will need cataract, knee and hip operations.

By that investment, we are trying to ensure that that happens within the national health service and that such services are available to all citizens, regardless of their financial circumstances. Obviously, however, if people want to or feel that they have to pay for such treatment in the private sector, that choice is available to them if they have the resources. I also accept that that can potentially draw people away from working in the national health service.

The Convener: I am conscious of the time—we have 10 minutes left.

Jim Fairlie (Perthshire South and Kinross-shire) (SNP): Best of luck with that, then, lads.

Unfortunately, being the sixth person to ask questions, a lot of my stuff has already been brought through, although there are some details that are missing for me, so you will get a wee stream of consciousness here.

First, it has twice been mentioned this morning that the Welsh system requires a passport or a test. Am I not right in thinking that it is both? People still need the passport to get into venues in Wales, and the number of places is being increased. Is it not both there, as opposed to one or the other?

John Swinney: I do not think it is both; I think it is one or the other—but it applies to a broader range of venues than our scheme. Ours applies to quite a limited range of venues, but in Wales, from my recollection, theatres and cinemas are included, and some hospitality as well.

Professor Leitch: Yes.

John Swinney: It covers a much wider range of sectors. I think it is one or the other, though.

Jim Fairlie: I cannot remember who mentioned it but, earlier on, there was mention of the hard core that we will never reach. There will always be a hard core that we will never reach. To be honest, I think that we just have to accept that that is the case.

We have figures here for the demographic areas where we are. As we get to the stage when we know that the hard core will just not take a vaccine—and we have to accept that that is the case—at what point is there a tipping point, where we acknowledge that we have everybody who is going to take the vaccine and we are controlling the virus to the best measure that we can? I get the point that we cannot make a straight line, as in "That's worked because of that." I get the fact that there is a suite of measures, and there is a belt-and-braces approach.

At what point do we get to a tipping point, however? If we see that everybody who is going to take the vaccine has got it and that the infection is at a stabilised rate, do we then say that there is no real value in having the passport any more, because we have reached that tipping point? Is that a viable proposition to get to at a later stage?

John Swinney: I will come to Mr Fairlie's question in a second, but I had better correct what I said a second ago about Wales. Wales introduced a mandatory NHS Covid pass on 11 October, and the Government is planning to extend the scheme to theatres, cinemas and concert halls from 15 November. On 29 October, the First Minister of Wales said that

"the hospitality industry needs to use the next three weeks to prepare for the possibility that Covid passes may have to be introduced in that setting."

That is not quite as definitive as what I said a moment ago—I just wanted to correct that point in the interests of harmony among devolved Governments.

On Mr Fairlie's point, a judgment has to be arrived at. He is absolutely correct about this—and I think I covered this in my answer to Mr Mason. There are three principal points that the Government considers in judging the state of the pandemic and the actions that we are taking in relation to the strategic intent: cases of the virus, levels of vaccination and pressures on the national health service. If we found that vaccination was getting to exceptionally high levels, with cases really falling and the health service being under less pressure, we would not have a proportionate argument for maintaining the limited restrictions that we have in place or the vaccine certification scheme. We have to assess whether we think that there is a proportionate argument that can be sustained for those provisions.

In theory, that point could be reached, but we are nowhere near it, because cases are very, very high, the health service is under acute pressure and, although vaccine levels are really good, they are not complete.

10:15

Jim Fairlie: I go to back to something that we talked about with Professor Leitch last week. After that exchange, I was contacted by a constituent regarding natural, as opposed to vaccination, immunity. I do not know whether it is correct, but I have been sent reams of "evidence" that natural immunity is more effective than vaccine immunity because you have been exposed to the virus's entire sequence of about 30,000 genes, whereas the vaccine is primarily focused on the spike element. Lots of people say that they want to have the same freedoms as everybody else because they have had Covid, but they do not want to have the vaccine. How do you answer the belief that natural immunity is as strong as the immunity from vaccination?

Professor Leitch: I think that I have been contacted by the same constituent and I have that same pile of documents from a number of sources.

Let us keep it simple. Natural immunity does not last for ever; nor does vaccine immunity. Whether you have had the virus or the vaccine, you need to stay immune, so we should talk about the length of time of immunity rather than the type of immunity. Everybody needs the vaccine. You are not permanently protected by either immunity; you are temporarily protected by both. However, as we said last week, I cannot take your blood and decide whether you are a one out of 10, a four out of 10 or a 10 out of 10. That is, literally, scientifically impossible. Therefore, it is a matter of taking a belt-and-braces approach—the phrase that you used—and adding vaccine immunity to natural Covid immunity.

Otherwise, the argument would be that we would just let the country catch Covid and then we would be fine. That way lies real, real trouble for us and the world. We need vaccines on top of natural immunity. To the best of my knowledge I have not had Covid, but if I have it or had it, I would happily take the vaccine 28 days later.

Jim Fairlie: Okay, but that leaves a question for the Government. If that person knows that they have had Covid and the timing of it, because they had a positive test, are their rights being impinged if they say that they do not want to have the vaccine because they know from the positive test result that they have a certain amount of immunity? Why should that person not be given the freedom to say that having had the disease is their "vaccine"?

John Swinney: That is for the simple reason that Professor Leitch gave, which is that immunity does not last forever whether you get it because you have contracted Covid or because you have had the vaccine. When we look at the serious health implications of Covid for individuals, the Government has a duty to do all that it can in the circumstances to protect the health of the public. That requires us to take the steps that we take.

If Mr Fairlie's constituent is suggesting that we should let people get Covid, as I think he is, does that mean that we have learned nothing from the past 18 months? Have we literally learned absolutely nothing? On Tuesday afternoon, I sat with the families who have lost loved ones in care homes who are contributing to the thinking that the Government is putting into the terms of reference for the Covid inquiry and literally, literally—

Actually, the best thing to do on vaccine hesitancy is probably to get the people who are vaccine hesitant to have a conversation with the bereaved relatives who have lost loved ones in care homes. In my role as a minister, I sit through many tough conversations and that was a tough one on Tuesday, believe you me. Perhaps folk should listen to that.

Jim Fairlie: I absolutely take that point on board. As I say, I am merely passing on the views of my constituent. On compulsory vaccination for care home workers, which the committee has spoken about before, a company in my constituency has made that a stipulation and I totally agree with that because, like you, I speak to people who have lost loved ones to Covid.

I want to move on very quickly to an issue that has been raised previously: long Covid. I know that we are still battling with the pandemic, but, from what I am hearing from others, long Covid has the potential to create long-term damage long after we come out of the current period. A group called Long Covid Kids has been set up by the parents of children as young as two or three years old who have had Covid and now have severe problems. I am not asking a question—I am merely urging the Government to look seriously at what is happening with kids with Covid.

John Swinney: I assure Mr Fairlie that the Government is doing so. It is important that every individual has their clinical needs properly addressed and supported as they wrestle with their circumstances. For some, Covid will be a relatively mild experience while, for others, it will have long and enduring effects, and we have to ensure that, whatever the circumstances, people are properly and fully supported.

The Convener: I will bring in Graham Simpson, but I must ask him to be very brief, as we are running short of time and, in fact, should have finished by now.

Graham Simpson (Central Scotland) (Con): I appreciate that you are up against the clock, convener, as the committee always is. I will be as brief as I can be.

The committee will be aware of the Delegated Powers and Law Reform Committee's decision on the regulations. I sit on the committee, but I am not the convener, so I cannot report back in that sense. However, the committee took the view that the procedure for bringing in the regulations—they come into effect and then the policy committee looks at them, as it is today—was inappropriate and wrong. On a point of information, we are in discussions with the Government about setting up a series of protocols to determine when the made affirmative procedure should be used. I think that that will be useful for everyone.

If I have time, I want to make a comment that people, if they wish, can respond to. Professor Leitch mentioned his experience of the rugby on Saturday and also referred to football matches. I did not go to the rugby, but I have spoken to people who did, and they said that they were just being waved through. Someone told me that one of the stewards said, "The app's down—in you come."

I have been to three football matches since the scheme came into effect, and the checks, such as they were, were cursory. You flash a bit of paper at a steward, it is not looked at in any great detail—it could be anything—and you get waved through. If any club in Scotland did anything different, it would cause absolute chaos. If they were to start scanning everyone they would not get everyone in.

I therefore think that the way in which things are working on the ground makes the scheme pointless. People are not being checked properly and are still getting into events. I have to say that I am comfortable with that, because I cannot see how else you can do it.

When I was last here, I asked about theatres. Ms Sadler told me that all Scottish theatres are exempt from the scheme. That is the case legally, but the picture out there is rather confused. For example, some events at the Usher Hall here in Edinburgh are requiring a vaccination passport to be shown, while others are not. Other theatres seem to be doing their own thing. The Playhouse—

The Convener: I am sorry, Mr Simpson, but we really have to move on. Perhaps I can ask Professor Leitch or the Deputy First Minister to respond.

John Swinney: There was a lot in there, but I will make two points. First, on the made affirmative procedure, the Government is dealing with a pandemic that requires us to take actions swiftly, but we have to be mindful of the question of proportionality in those actions.

We used the made affirmative procedure because we were concerned about the rise in the number of cases and the need to improve vaccination levels, but we had to be certain that the measures would be proportionate. We had to give warning that we were going to move in that direction, but ultimately the final detail could only be put in place with the swiftness that the made affirmative procedure allows.

Parliament considered that question on two occasions before the measures came into force—once on Government time and once on Conservative time—and on both occasions the Government's position was supported by Parliament. We will of course engage with the

Delegated Powers and Law Reform Committee on those questions.

On the use of vaccination certificates, Celtic Football Club reported that 75 per cent of the attendees at one of its games in the past week were checked, and initial reports from the rugby match on Saturday were that around 40 per cent of people were checked, which is much higher than was anticipated under the scheme.

I understand Mr Simpson's concerns, but we cannot have it both ways. On the one hand, Mr Simpson and his colleagues suggest that the application of the scheme is so effective that it is disrupting the night-time economy, but on the other hand, we have heard the argument today that the scheme is not effective at all. They cannot have it both ways; it is either effective and is disrupting parts of the economy, or it is not effective. We cannot run those two arguments because they are totally contradictory. [*Interruption*.]

Yes, they are, Mr Fraser—they are completely contradictory arguments. The scheme is working well, as envisaged, in all the circumstances that it was intended for, and the Government believes the intervention to be proportionate.

The Convener: That concludes our consideration of the agenda item and I thank the Deputy First Minister and his officials for attending.

Our third agenda item is consideration of the motions on the made affirmative instruments that were considered under the previous agenda item. Deputy First Minister, would you like to make any further remarks on the Scottish statutory instruments that are listed under agenda item 3?

John Swinney: I set out at the beginning my reflections on the instruments and I will not add any further comments.

The Convener: I invite the Deputy First Minister to move motion S6M-01399.

Motion moved,

That the COVID-19 Recovery Committee recommends that the Health Protection (Coronavirus, Restrictions) (Directions by Local Authorities) (Scotland) Amendment Regulations 2021 (SSI 2021/329) be approved.—[*John Swinney*]

The Convener: Do members want to comment?

Murdo Fraser: I will comment briefly. I do not doubt the intention of the Scottish Government in seeking to bring in the Covid certification scheme, but we still have not heard compelling evidence that it has value, despite the assertions that we have heard from the Deputy First Minister. We have, however, had significant evidence—

The Convener: Mr Fraser, motion S6M-01399 is about local authorities.

Murdo Fraser: I thought that you were taking them together—I apologise.

The Convener: No, I will take them separately. That was my fault; I should have explained that. Do members agree to motion S6M-01399?

Motion agreed to.

The Convener: We will now consider the next motion under the agenda item, and I invite the Deputy First Minister to move motion S6M-01529.

Motion moved,

That the COVID-19 Recovery Committee recommends that the Health Protection (Coronavirus) (Requirements) (Scotland) Amendment (No. 2) Regulations 2021 (SSI 2021/349) be approved.—[*John Swinney*]

The Convener: Do members want to comment? Mr Fraser?

Murdo Fraser: I will start again. I do not question the intention of the Government in bringing in the vaccination certification scheme, but we are yet to hear evidence of its positive impacts. We have significant evidence of its negative impacts, including from the Scottish Human Rights Commission and those concerned about civil liberties, and we have heard about the negative economic impacts.

If the Scottish Government were to go down the route of offering the alternative that is offered in Wales and every other European country that has brought in a certification scheme, which is to produce a negative Covid test, we would be more sympathetic, but we cannot support the scheme as it stands.

The Convener: I will now put the question on the motion. The question is, that motion S6M-01529, in the name of John Swinney, be agreed to. Are we agreed?

Members: No.

The Convener: There will be a division.

For

Brown, Siobhian (Ayr) (SNP)
Fairlie, Jim (Perthshire South and Kinross-shire) (SNP)
Mason, John (Glasgow Shettleston) (SNP)
Rowley, Alex (Mid Scotland and Fife) (Lab)

Against

Fraser, Murdo (Mid Scotland and Fife) (Con)
Whittle, Brian (South Scotland) (Con)

The Convener: The result of the division is: For 4, Against 2, Abstentions 0.

Motion agreed to.

10:30

The Convener: The committee will publish a report in due course setting out our decision on the statutory instruments that were considered at

this meeting. That concludes our consideration of the agenda item and our time with the Deputy First Minister. I thank the Deputy First Minister and his supporting officials for their attendance this morning.

I now suspend to allow a changeover of witnesses.

10:31

Meeting suspended.

10:36

On resuming—

Baseline Health Protection Measures

The Convener: We move to agenda item 4, under which we are taking evidence on baseline health protection measures from a panel of ventilation experts. I welcome Dr Hywel Davies, who is the technical director of the Chartered Institution of Building Services Engineers; Dr Shaun Fitzgerald, who is the director of the Centre for Climate Repair at the University of Cambridge; Professor Catherine Noakes, who is the professor of environmental engineering for buildings at the University of Leeds; and Professor Tim Sharpe, who is the head of architecture at the University of Strathclyde. We thank them all for giving us their time.

This is the first of four planned evidence sessions on baseline health protection measures, which are the main tools that we are using to respond to Covid-19. They include the steps that we are taking to enhance ventilation in our homes and workplaces and in settings where public services are delivered. This will be a short scoping session to allow us to consider the role that ventilation will play in lessening the impact of Covid-19, especially during the winter. We will also consider the role that ventilation might play in the recovery phase of the pandemic.

We hope that the session will inform further sessions that we plan to hold as part of our inquiry. We will hear from stakeholders in health and social care services, the hospitality, business and leisure sectors, and schools.

Will the witnesses briefly outline what they think are the main ventilation challenges that we should address as part of our response to Covid and our long-term recovery?

Dr Hywel Davies (Chartered Institution of Building Services Engineers): Thank you for the opportunity to speak to the committee.

In the short term, the biggest opportunity would come from getting people to concentrate on what they have and on getting that to work properly. It has become clear in the past 18 months that many buildings have not been as well ventilated as they could have been. Things that should have been working have not worked, and things may not have been properly maintained.

It would be a good start if we could get people to do those things, which need not be hugely expensive or time-consuming. There are some fairly straightforward things that can be done. I believe that the committee is aware of the

guidance that the CIBSE has produced along with other organisations such as the Health and Safety Executive.

We could concentrate on getting over basic messages about the role of ventilation. Before the meeting, I looked at the Scottish Government website and found some helpful material. Getting fresh air into buildings is important and, in that respect, it might be worth asking Dr Fitzgerald to talk about the use of windows. Opening a window might seem like a simple and trivial thing to do, but there might be a bit more to it than that.

There is a lot that we can do through fairly simple tasks before we get into a discussion about more complicated matters, but I wonder whether we can turn to Dr Fitzgerald to talk about windows.

The Convener: Thank you, Dr Davies. Before I bring in Dr Fitzgerald, I note that we live in Scotland, which is very cold, we are now moving into winter and energy prices are increasing astronomically, so I hesitate a little bit at the suggestion that we should open our windows. I understand that we would do so for ventilation, but I wonder whether in reality it will happen when people cannot afford to pay their energy bills.

I will bring in Dr Fitzgerald at this point.

Dr Shaun Fitzgerald (University of Cambridge): Thank you for allowing us to contribute to this evidence-taking session. I am grateful for that.

For me, there are two issues, the first of which is the need to ensure that spaces are adequately ventilated. We must be absolutely clear that we do not want spaces to be so cold that we lose the battle, particularly with regard to work and educational environments. If they are so cold that people are not able to function or learn appropriately in them, those people might as well be at home.

As a result, we must ensure that spaces are not overly cold. Conversely, though, we have to ensure that an appropriate amount of ventilation is provided, and something that could help greatly in that respect is the use, wherever possible, of high-level rather than low-level windows. That would have two benefits. First, air that comes in through a high-level window will mix with the interior air before it hits anybody, which ameliorates what will otherwise be a fairly cold draught. Secondly, if there are only low-level openings, the air at the top of a room where people might be standing and so on will not be ventilated and displaced. There are health benefits to using high-level windows.

Unfortunately, my experience is that many spaces are not that well maintained. In older buildings with sash windows, for example, it is quite common for the top sashes to have been painted shut, which means that people can use only the lower sash windows. It is very simple—cracking open the top sash windows can provide massive benefits. However, coming back to your point, I stress the importance of not freezing spaces, and we must bring poorly ventilated spaces up to a certain standard to ensure that we do not have major infection hot spots.

The second issue that I would like to highlight is culture. In certain work and educational environments, there has been a huge focus on having a lot of ventilation—sometimes, I would argue, too much ventilation, if it impairs children's learning. It is great that a lot of attention has been given to ventilation, but it is important that we do not overventilate. In comparison, there are other environments, particularly in the retail and hospitality sectors, where there are challenges in providing ventilation and where the windows can be kept closed, especially as the colder weather sets in. There is a high degree of disparity between different settings in the way that the principle of ventilation is adhered to.

Perhaps Professor Noakes or Professor Sharpe can comment on how to gauge an appropriate level of ventilation through, for example, the use of carbon dioxide monitors.

The Convener: I think that Professor Noakes has asked to speak.

Professor Catherine Noakes (University of Leeds): Thank you very much, convener, and thank you for inviting me to join this evidence session.

I want to make two comments. We have talked about some of the things that we can do about ventilation, but before we even get to that point, people need to know why ventilation matters.

Knowledge is still variable. Some people are still focused on washing their hands and the idea that the virus transmits on surfaces. However, as we have gone through the pandemic, we have learned an awful lot more about transmission. It is likely that the majority of transmission happens through inhalation of the virus. You are at greater risk of that when you are close to somebody, but certain settings—particularly rooms where people are talking or singing for long periods of time or doing aerobic exercise—generate more virus particles and longer-range airborne transmission across a room at more than 2m.

10:45

Getting across the understanding of transmission helps people to understand why ventilation matters. It matters more in workplaces, educational settings and other communal settings than it does in homes. If you are at home with only

your family, it is less of an issue. You do not need to have your windows wide open all the time if you do not interact with others but, when you have visitors, you should perhaps think about ventilating an environment.

To follow on from the points that Dr Fitzgerald made, you do not have to open windows and ventilate continuously. You can open windows a small amount. You get more ventilation for the same size of opening as the weather gets colder, so you can get away with making—[*Interruption*.]

I apologise for the background noise. I am by a main road with an open window.

In cold weather, as you reduce the size of an opening, you still get quite a good flow through it. Therefore, you do not need anywhere near as big a window opening in cold weather as you do in warm weather and can open windows periodically. Rather than opening them all the time, you can perhaps open them for a few minutes every hour to refresh the air in a space. That can help to manage the balance between temperature, energy bills and ventilation.

As Dr Fitzgerald indicated, in some settings, carbon dioxide meters might be a good way of managing ventilation. A human breathes out carbon dioxide at a higher rate than is naturally present in the air so, when you measure carbon dioxide in an indoor environment, it gives you an idea of how much of the air in that space was previously breathed by other people—how much of it is exhaled air and how much of it is fresh air. The closer it is to background levels—outdoor levels are about 400 parts per million—the better the ventilation is.

We have looked at some of the data on that and have suggested that, if buildings have carbon dioxide levels of about 800 parts per million or less, that represents quite good ventilation but, if you regularly see values such as 1,500 parts per million or much higher, you should think about improving the ventilation or reducing the occupancy in the space. Carbon dioxide meters can be used for that. You cannot use them in every space but they work quite well in offices, schools and classrooms—spaces that have the same people in them regularly over periods of time.

I will hand over to Professor Sharpe, who might be able to talk a bit more about that.

Professor Tim Sharpe (University of Strathclyde): I agree with all the points that have been made.

One of the challenges about ventilation is that it is at the same time simple and complicated. You cannot see or feel it in the way that you can see or feel thermal comfort, so it is challenging to assess the ventilation of a space. That is one of the reasons that devices such as CO_2 monitors can be helpful. They give you some indication of what is going on in a space, which can be useful for, if nothing else, raising awareness of what is going on.

CO_2 monitors are by no means a measure of ventilation; they are an indicator. They are a blunt tool but, nevertheless, potentially useful in some situations to help users to manage their spaces. The first port of call is to get people to do what they can to manage ventilation, which includes the issue of thermal comfort. It is important not to overventilate and become very cold, but there should be a reasonable level. It is useful to have a tool that helps you to maintain that level.

Regarding measures, the first is to get building owners and occupants to do what they should be doing to manage the space.

Secondly, we must ask what measures we should take for spaces that are not well ventilated or cannot be well ventilated. That might involve unsticking windows, ensuring that systems are effective and work, or introducing other relatively simple measures.

Ventilation does not have to come from windows. Some spaces have trickle vents that provide background ventilation. As Professor Noakes said, ventilation can be open intermittently; it does not have to be open all the time. In a classroom, for example, the ventilation could be open between lessons to purge the space. That is a useful technique.

Ventilation is one of a hierarchy of measures. Our principal concern is about the spaces that might be more affected by ventilation, which are spaces that are occupied for long periods of time by relatively high numbers of people.

The Convener: You have made some fascinating points. I have a question about businesses, hospitality businesses and others, that are thinking about bringing people back into offices. How easy is it for normal businesses to get carbon dioxide readings for their premises?

Dr Fitzgerald: I used to run a company that provided such sensors as part of our standard fare. Sensors typically cost between £100 and £200, depending how many are bought. They are quite readily available. We would not be able to provide 32,000 monitors for all the schools in Scotland in one fell swoop, but they are available.

I urge people to think carefully about the quality of the sensors and the urgency of the timescale. The more expensive the sensor is, the better it is, and less work is required to calibrate it. Some cheaper sensors might be appropriate only for this

winter, but that might be suitable as a way of dealing with priorities.

Murdo Fraser: My question is about issues in schools. I have received a number of complaints from teachers. In most of the schools that I am aware of, ventilation is provided only by opening windows. That might be fine in the summer, but it creates for teaching staff and pupils an increasingly uncomfortable environment at this time of year. In many schools, the radiators are close to or under the windows, so the heating is on full blast but most of the heat is going straight out the window. That is bad for the climate and bad for school heating bills.

The First Minister said in the summer that she was providing local authorities with an additional £10 million to support enhanced ventilation in schools. Does anyone have a sense of the likely overall cost of fitting adequate ventilation in schools? If that money was available, how, practically, could the work be done and what would the timescale be? I presume that it would take not months but years to bring every school in Scotland up to an adequate standard.

Professor Noakes: That is a real challenge and it demonstrates that we have a legacy of buildings that we have not thought very much about for many years. To go back to the earlier point about carbon dioxide monitoring, I note that that can be quite a viable solution for schools for the short term, because many carbon dioxide monitors show the temperature as well as the CO_2 level. People can therefore try to use them to balance the environment.

I appreciate that that is a very difficult thing for schools to manage. We probably need to start to think about the strategy for how to identify schools that do not have effective ventilation and about how to start to put together a plan for improving that ventilation over the longer term.

It might be found to be the case that not all schools have issues. For some schools, there will be issues across the whole estate; in others, a very small number of rooms will have issues.

There are other things that can done in the short term. It is possible to use portable air-cleaning technologies that might rely, basically, on pulling the air in the room through a high-efficiency particulate filter, which can remove the virus from the air. They do not ventilate the space, but they will reduce risks in spaces that are harder to ventilate. However, they are ultimately only a temporary solution because they do not ventilate spaces. We know that ventilation is important not just for Covid reasons; it is also important for productivity and cognitive reasons, as well as for general health and wellbeing.

Every school and workplace will be different. There is no simple one-size-fits-all retrofit solution, but there are technologies out there that can be retrofitted—for example, mechanical ventilation with heat-recovery systems. They are often stand-alone systems.

I could not tell members the cost—I have not looked particularly at that—but it will cost money. If we are thinking about public health benefits that go wider than Covid, exposure to air quality, learning outcomes and preparation for what might be the next pandemic as a long-term strategic challenge, perhaps it is time that we thought about long-term investment in some of our buildings. Over many years we have not invested in that legacy.

Professor Sharpe: Buildings should be designed, constructed and maintained to meet building standards. That is the case whether or not we are in a Covid pandemic. An unfortunate fact is that the pandemic has revealed deficiencies in that respect. One of the real challenges is that we realise now that we have very little knowledge of how buildings perform in practice. Buildings should meet regulations, though—that is still non-negotiable.

We have the opportunity to gather information on how buildings are working and then to put in place measures to try to address their performance in general. That includes a wide range of things. It is certainly about ventilation, but it is also about energy. One of the big challenges in construction is that we do not regularly go back and monitor the results of our buildings, so we are flying a little bit blind in understanding performance and its implications.

Dr Fitzgerald: To go back to the specific question about opening windows and heat going out of them, the preferred strategy if a school can only open windows—I am thinking about the coming winter—is to use high-level windows. The problem is that, if there is a low-level window and a high-level window that is often used, the air will come in through the low-level window and be heated by a radiator that will not only add heat to the air to ameliorate what would be a cold draught, but will cause heating in the classroom. If you are ventilating in accordance with modern building regulations, the classroom then gets too hot—weirdly—and the air then moves to the high-level vent. The problems are changed if you focus on using just high-level vents, in which case the radiator will be a lot more effective and will use a lot less energy.

11:00

As director of the Centre for Climate Repair at Cambridge, a lot of my research and work has

been on reducing energy consumption in the built environment. I have done a huge amount with schools to get the ventilation strategy right. My first port of call would be to try to use the infrastructure that is already there—namely, opening windows—and to be smart about the way that it is used. If, in the future, there is an opportunity to look at, for example, putting in fan-assisted devices because the opening windows are not the right design or are insufficient, you might want to look into prices. Within the industry, it costs something like £3,000 to £5,000 for the equipment alone to fix ventilation for many kinds of classrooms.

Jim Fairlie: This is the COVID-19 Recovery Committee, so I see this as a bit of an opportunity. Professor Sharpe just talked about the current building regulations. If someone is building a house now, they have to make sure that there is trickle ventilation in the windows, and it has to take into account the size of the room relative to the size of the window and so on. You are right about schools—I, too, have been in some where the windows cannot be opened. That was the case when I was at school a very long time ago, and some of those windows will still not have been opened since then.

There is an opportunity for us as a country to say that we have a problem, and that we know that it will help to transmit the virus in enclosed spaces. A very simple solution for some high-level windows—I am taking in what Dr Fitzgerald said about high-level ventilation—would simply be to put trickle vents into wood-framed windows in older Victorian-age schools. Would it be sufficient to allow there to be heat at the bottom and a trickle vent at the top? Would that create enough ventilation in those spaces?

Dr Fitzgerald: Would you like me to answer that?

Jim Fairlie: Yes, please.

Dr Fitzgerald: My experience is as follows. Trickle vents are typically very small, so the amount of ventilation that they provide is probably insufficient for 30 children.

I repeat Professor Noakes's point that, for a given opening, when it gets cold outside and you are trying to maintain an interior temperature of, say 21°C, you need a lot more ventilation because of the bigger difference in air temperature and density, and because in winter there is more wind blowing.

I urge that we look at our high-level windows to see whether we can get them to function properly. Unfortunately, the situation is revealing a problem in respect of how we maintain and manage our buildings, and the attention that we have paid over the years to ensuring that everything is working properly. The situation is revealing problems in the culture of facilities management of buildings. That is what we need to address, instead of saying that we are going to go and fit trickle vents in windows.

The Convener: I will bring in John Mason, because he needs to leave for the chamber shortly.

John Mason: Building on what folk have said so far, I have a couple of questions. First, I am assuming that older buildings might be better in this regard than newer buildings, because their ceilings are higher and they are probably more draughty because they are not as well sealed. I am thinking of public buildings and people's homes. Is that a fair assumption?

Professor Noakes: That will depend on the building. In many, the answer is yes—older buildings will have higher ceilings and be leakier, and they will naturally have more ventilation, although in a leaky building the ventilation is often very uncontrolled.

However, one challenge is that some buildings have been retrofitted over the years. Quite often, very old buildings have been retrofitted with UPVC windows, so instead of having windows that open at both the low level and the high level, they have windows that open only at one place. They are cheaper windows. We have often engineered out the original ventilation strategies that were put in place in those buildings.

We need to think through the consequences of something that might have been done from an energy perspective and for cost reasons. It is cheaper to have a window that has only one opening than it is to have a window with two or three openings. That relates to the earlier point that was made about trickle vents. Rather than retrofitting a few trickle vents, we should put some effort into improving schools. It is one thing to take some cheap and quick actions that might reduce an immediate problem, but if we are going to put effort in, we should make sure that we do it properly and not retrofit inadequate trickle vents, say that we have solved the issue but then come back in five years and say that we wish that we had done it differently.

It is worth thinking through what was originally designed for the ventilation strategy in a space—whether that strategy is still applicable, whether it has changed over the years and what we can do to improve it. We will probably struggle most with buildings that were built in the 1960s, 1970s and 1980s, when energy was a big focus and there was a reduction in the size of spaces. It is much harder to get good ventilation in those buildings, so they might be hardest to deal with.

Perhaps it would be worth bringing in Dr Fitzgerald on that point.

The Convener: I am sorry—I will bring in Professor Sharpe, who has asked to come in.

Professor Sharpe: I will make my points brief. First, the regulations apply to new buildings, but the vast majority of the stock is made up of older buildings that were built to older regulations or no regulations, and which have, as has been pointed out, been changed and so on. There are lots of examples of that.

When we apply measures, they need to be designed in and not just put in as blanket measures. That needs to be undertaken with consideration of the whole performance of the building, including its energy performance. There are plenty of examples of where we have taken single measures—such as forms of retrofit for thermal performance that have not included ventilation measures—which create unintended consequences. It is important that when we think about measures we try to understand the intended performance.

Dr Fitzgerald: I will go back to Professor Noakes's comment. In relation to more modern buildings, it is cheaper to build buildings with a shallower floor-to-ceiling height, because there is less wall. Unfortunately, those buildings are not as well suited to the old strategy in Victorian-type buildings in which, with sash windows, you could just crack the top sash open and allow air to come in naturally and mix with enough of the warm room air to ameliorate a cool draught. The higher the floor-to-ceiling height, the smaller the problem of a cool draught is.

Professor Noakes is right that the more modern buildings—from the 1960s onwards—which were built on the cheap and have smaller floor-to-ceiling heights, have more of an issue with draughts. There is then the issue of trying to preheat the air with radiators, which has energy penalties, so assisted mixing or heat-recovery units might be necessary. The more modern buildings are a bigger challenge than historical ones.

Dr Davies: I will pick up the regulatory aspect, because a committee member made a comment about the opportunity that might exist there. We have to make a significant effort to improve the energy performance of our buildings and we are aware that we need to think about ventilation. It is important that we take a systematic approach and do not allow people to pick off one issue at a time. When work is being done on buildings to improve their energy performance, it is important that ventilation is also considered.

There is an opportunity, particularly in Scotland, where there is a single system of building verifiers in the public sector. They need to be encouraged to consider the role that they can play, when supervising projects, in ensuring that ventilation is properly considered at the design stage, then properly installed. It is easy to include such measures in the design and to get it signed off, but designs are sometimes altered. The euphemism is "value engineering", but it is not engineering, nor does it add value, usually. It is usually about reducing costs, some of which are associated with providing important things.

Building verifiers need to be encouraged to see ventilation and energy efficiency as two sides of the same coin. We would then avoid running the longer-term risk of people thinking that they can either have good ventilation or have energy efficiency and lower bills. It does not need to be that way. We can ventilate well and be energy efficient if we think things through systematically. I hope that that is helpful.

John Mason: If we are okay for time, convener, I will aim my next question at Professor Noakes. I want to follow up on what she said to Murdo Fraser. She talked about air-cleaning technologies and high-efficiency particulate filters, which I am trying to get my head round.

I have an issue with ScotRail, our railway operator. This might be slightly different from the situation with buildings, but ScotRail has some trains with locked windows. They could be opened, but they are not. I asked ScotRail whether it would be better to open the windows, but it said that its artificial air-circulation system is just as good as having the windows open. Is that likely to be true?

Professor Noakes: It is quite likely to be true. It is difficult to say definitively, because every system is different. It is quite likely that the trains will have a mechanical ventilation system that can provide fresh air that is as effective as opening windows.

The risks on public transport are difficult to understand, because it is difficult to get direct evidence on whether transmission happens on public transport. We can consider the factors that influence risk. One is proximity to people, and public transport, of course, increases that risk. Activity is another factor, and that risk might decrease on public transport because, a lot of the time, people are relatively passive. If the wearing of face coverings is done well, that reduces the risk on public transport quite significantly, because we reduce the amount of virus that is put into the environment.

Another factor is duration. There is probably a relatively low risk—from the perspective of airborne transmission—from very short commuter-type public transport journeys, which are often only 20 minutes or so. We need to think about ventilation for longer journeys, in which people might be in the same carriage as others for

several hours. Some trains can, and are designed to, have their windows opened, but those trains tend to be used for shorter-distance commuter journeys. I urge that those windows be open, as far as is practically possible, although that will probably not work in certain weather conditions because people will end up very wet.

Trains that are used for longer-distance journeys rarely have opening windows. Given their speed and the pressure that goes through them, they are not practically designed to have opening windows. They are designed to have a ventilation system that usually results in about eight air changes per hour in the carriage, which means that there is fresh air every seven to 10 minutes or so in that space.

John Mason: That is helpful.

11:15

Alex Rowley: I have a quick question. Returning to schools and the short-term, or the here and now, as we head into winter, the Scottish Government has continued the policy that face coverings should be worn in schools, but what is your immediate advice for education authorities? Education authorities have property managers that manage the school estate, but do they have the required skills and knowledge, or do we need to bring in advisers? Earlier, Murdo Fraser mentioned a figure of £10 million, which is not a lot. What would you advise the Government and education authorities to do in the short or immediate term as we approach winter?

Dr Fitzgerald: My urgent request is simple. Many schools just have opening windows, so we need to make sure that they are properly maintained. Do schools have high-level windows? That is not a skills issue; it is an issue about previous budgets and attention and adherence to those measures. I will let someone else comment on the use of face coverings but, from an estates point of view, my immediate priority would be to look at high-level windows. Subsequently, I would go back to the other issue of making sure that we do not freeze the spaces, and carbon dioxide monitors can help to make sure that we provide enough ventilation, but not so much that we have issues with energy bills and thermal comfort.

Dr Davies: As Dr Fitzgerald said, the priority is largely about making sure that what is there is working. In older schools, there are lots of instances of windows being painted so that they cannot open. We need a basic audit of what we have, in order to see whether it is working. If schools have CO_2 monitors, they can be used in identifying areas where there might be greater risk of transmission, so that they can focus on those places and see whether something is not working.

Those spaces might never have been very well ventilated, but the schools have not had a reason to find out until now. Professor Noakes's comment about air cleaners might be one way of dealing with those circumstances. An audit might reveal just one or two spaces that are currently so badly ventilated that it would be better not to use them for a few weeks and to take advice on how to deal with them. Those are immediate short-term ways to reduce risk over the next few weeks and months.

Brian Whittle: I will be brief, because a lot of the points have been covered. Everybody recognises the importance of ventilation, not just for Covid but for many other considerations, as well as the fact that CO_2 monitoring would be beneficial. I am thinking about the practicalities of developing a country where the buildings have good ventilation. As the convener said at the start of the discussion, we know that poverty is a major driver of proliferation of the virus. The practicalities of developing all our buildings so that they have good ventilation is beyond the Government's budget, so I presume that we are talking about a focus on commercial rather than domestic properties.

Professor Noakes: I will make two points—one on that question and one about a prior question.

There was a comment about use of face coverings as well as ventilation. It is important to recognise that ventilation is only one mitigation measure for the virus. We must also think about other mitigations in spaces and about how we mitigate at close proximity to people. Ventilation will not mitigate close-range transmission, which is where face coverings and physical distancing come in. We must also think about other strategies, such as requiring people to stay at home when they have symptoms, making sure that we have good testing in place and so on. Those strategies limit the risk of having infected people in a space.

We must recognise that making our buildings good for the long term is a really big challenge and not something that we can solve overnight. If we do not have an ambition for that long-term goal, it will never happen. That ambition must be tied up with reaching net zero. We have a long-term ambition to reduce emissions and to make our environment more energy efficient in order to reduce our impact on the climate. Ventilation should be tied in with that. When we put heat pumps or insulation into buildings, we must ventilate them at the same time. That should be part of the long-term strategy for commercial and domestic buildings.

There will be a hierarchy with commercial buildings. We must start with the worst ones. The example of schools has come up several times.

Some schools will already have good ventilation in the majority of their classrooms, so those are not such a concern. Others will have ventilation that is okay but not great. We could look at what we can do to those in the short term and consider longer-term improvements.

The buildings that we are most concerned about are the ones with truly inadequate ventilation that impacts more widely on people's health and wellbeing. We should think about a programme for those. The first question should be whether buildings are fit for purpose. I know that there are programmes of building new schools and other buildings. Those programmes should prioritise the buildings that are not fit for purpose. With buildings that are fit for purpose, we should think about the priority spaces where we have to invest.

That is a long-term strategy, and we need ambition to make it work. We have ambition for other things, so I do not know why we do not have an ambition to have healthy buildings. The benefits could be enormous.

Professor Sharpe: We know how to do that—it is not rocket science. We have the tools and technologies to make buildings perform very well, but we do not do that as a matter of course. That is the challenge. There are plenty of ways to address the problem. We should think about a building as a whole system. It should be properly designed, constructed and maintained to care for that system.

The challenge is in no way impossible. The problem is a lack of political will. There is a question about whether our regulations are being properly complied with. There are also important questions about retrofitting. Building regulations do not apply to retrofitting, unless the changes are significant. We should look at that area. There are technical challenges, but there are also significant policy challenges about whether we want to mandate those things.

The Convener: I thank the witnesses for their time and for their evidence, which has been beneficial. If any of the witnesses would like to share further evidence, they can do so by writing to the committee. The clerks will be happy to liaise with them about how to do that.

The committee's next meeting will be on 11 November, when we will continue taking evidence on baseline health protection measures.

11:24

Meeting continued in private until 11:31.

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