OFFICIAL REPORT
AITHISG OIFIGEIL

COVID-19 Recovery Committee

Thursday 4 May 2023

Session 6

The Scottish Parliament
Pàrlamaid na h-Alba

Thursday 4 May 2023

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COVID-19 RECOVERY COMMITTEE
11th Meeting 2023, Session 6

CONVENER

*Jim Fairlie (Perthshire South and Kinross-shire) (SNP)

DEPUTY CONVENER

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

COMMITTEE MEMBERS

*John Mason (Glasgow Shettleston) (SNP)
*Stuart McMillan (Greenock and Inverclyde) (SNP)
*Alex Rowley (Mid Scotland and Fife) (Lab)
*Brian Whittle (South Scotland) (Con)

*attended

COMMITTEE SUBSTITUTES

Jackie Baillie (Dumbarton) (Lab)
Sandesh Gulhane (Glasgow) (Con)
Ash Regan (Edinburgh Eastern) (SNP)

THE FOLLOWING ALSO PARTICIPATED:

Professor Tom Evans (University of Glasgow)
Professor Andrew Morris (Standing Committee on Pandemic Preparedness)

CLERK TO THE COMMITTEE

Sigrid Robinson

LOCATION

The David Livingstone Room (CR6)

Scottish Parliament

COVID-19 Recovery Committee

Thursday 4 May 2023

[The Convener opened the meeting at 09:30]

Interests

The Convener (Jim Fairlie): Good morning, and welcome to the 11th meeting in 2023 of the Covid-19 Recovery Committee.

Agenda item 1 is a declaration of interests. As this is Stuart McMillan's first meeting as a new committee member, I welcome him to the committee and invite him to declare any registrable interests that are relevant to the committee's remit.

Stuart McMillan (Greenock and Inverclyde) (SNP): Thank you, convener. I have no interests to declare.

Standing Committee on Pandemic Preparedness

09:30

The Convener: This morning, we will take evidence from members of the Scottish Government's standing committee on pandemic preparedness.

I welcome to the meeting the chair of the SCPP, Professor Andrew Morris, who is also the director and chief executive officer of Health Data Research UK—or HDR UK—and is vice-principal of data science at the University of Edinburgh. I also welcome Professor Tom Evans, professor of molecular microbiology and a consultant in infectious diseases at the University of Glasgow. Thank you both for attending.

We estimate that the session will run up to 10.30 am, which gives each member approximately 10 minutes to speak to the panel and ask their questions. I am keen that everyone gets an opportunity to speak. I apologise in advance if our time runs on too much, as I might have to interrupt members or witnesses in the interests of brevity.

We now turn to the questioning, and I will ask the first question. What meetings have been held and what activity has the committee undertaken during the past six months?

Professor Andrew Morris (Standing Committee on Pandemic Preparedness): Good morning, on behalf of Tom and me. It is great to be here in person after our previous challenges with technology. In answer to your question, during the past six months, the committee has met three times, and we are also meeting next week.

There are two other comments that I would like to make, the first of which is that we are now in the detailed analysis phase of our work. Having set out the stall, we now need granularity and detail, and so we have set up three so-called short-life working groups, which are interdisciplinary, to look at three areas that we feel need greater definition. As the first area is data, we have called the group the Scottish data for pandemic preparedness oversight group, and it is chaired by Professor Dame Anna Dominiczak.

The second area is very important. As we have recommended a centre for pandemic preparedness, we have set up a sub-group on what that centre would do, how it would be led and how we suggest it might be governed.

The third group is on behavioural intervention and community engagement. As members know, the social contract in Scotland is so important and

working and communicating with the publics is very important, too.

The other thing that I would like to highlight, as the independent chair of the group, is that it is very important that we are outward looking. Pandemics are global, so the exam question is: "How does Scotland position itself in a global ecosystem of pandemic preparedness, working with the UK and internationally?"

We set up an international steering group that met on 10 November 2022. It is bijou, but we have three fantastic members, including Professor Sir David Nabarro, who is chair of global health at Imperial College London's institute of global health innovation and who was also asked by the World Health Organization director general to be his special envoy in March 2020. The group also comprises Jeremy Farrar, who was formerly director of the Wellcome Trust and is now chief scientist at the World Health Organization, and Camilla Stoltenberg, who is the director general of the Norwegian Institute of Public Health. The group has met, and Tom Evans and I are happy to provide feedback from any activities that are of interest to the committee.

The Convener: I think that this will be a fascinating session. When do you expect the final report to be published?

Professor Morris: Well, we intend to be on time—[*Laughter*.]—and on budget. The guidelines were set by the First Minister's commission. The request was that the final report be published within 18 months of the interim report, which would be February 2024, but we actually hope to publish the report in the fourth quarter of this year, so we have another seven or eight months.

The Convener: I have one final, small question—at least, I hope that it is small—before I bring in other members. Will you say more about the United Kingdom Government's resilience framework for all risks and civil contingencies?

Professor Tom Evans (University of Glasgow): A number of other groups are working across the UK and, as Andrew Morris has said, internationally. I have been involved a bit with the emergency preparedness and clinical countermeasures group, which is a four-nations group but has been organised by the Department of Health and Social Care in London. It has directed itself at looking at a number of different pandemic preparedness issues, such as epidemiology modelling on what kind of diseases might become pandemic. In other words, what do we need to think about for disease X?

Other issues include the infrastructure of diagnostics, testing, surveillance and so forth that is needed to deal with a pandemic, and the provision of personal protective equipment in healthcare—that is, what we need to think about getting. That will also include medicines, the agents the United Kingdom might think about stockpiling, where we will procure those from and so forth.

Clearly, some of those issues overlap with the work of our committee. We certainly want to make sure that everything that we do is relevant to Scotland—indeed, that is key—but we absolutely need to be integrated into the United Kingdom's response and what is happening internationally. The international reference group has been hugely helpful in making sure that we align with international best practice and are not precious about our own ideas and so forth to make sure that we leverage all the help that we can get. There is potential overlap but we are, as much as possible, working collaboratively with all the different institutions, as well as the UK Health Security Agency.

The Convener: There might well be overlap, but it is better to have overlap than to miss something.

Professor Evans: Absolutely.

The Convener: I will now bring in other committee members.

Murdo Fraser (Mid Scotland and Fife) (Con): Good morning, Professor Morris and Professor Evans.

You will remember, Professor Morris, that when we saw you back in September 2022, the session was plagued by internet problems, so it is good to see you in person. At that point, you had published your interim report, and we asked you whether you had had a response from the Scottish Government. The answer was that you had not, although you were hoping to get one. Has there since been one that you can tell us about?

Professor Morris: Yes. On 8 December, the then First Minister wrote to me as the independent chair, and I am happy to summarise what was written. I should add that, because transparency is key, we are keen to publish everything, so we should definitely ensure that the response is in the public domain.

I will give the key points. First, despite a recognition of the increasing demands on Government, there was a commitment to prepare for the future. Secondly, the First Minister confirmed that she accepted our interim recommendations. Thirdly, she expressed an interest in meeting the international reference group, and I think that that is something that we should revisit.

There were two other comments. First, the First Minister said that she recognised the urgency of the importance of surveillance data and analytics

and the necessity for Scotland, in the future, to have a core data infrastructure, which will enable pandemic preparedness. She noted the urgency of that and asked us to push on that agenda as quickly as possible. Finally, she asked the then Cabinet Secretary for Health and Social Care, Humza Yousaf, to take forward the necessary work. Those were the conclusions of the letter.

Murdo Fraser: That was back in December. Have you been following that up with the Scottish Government? You have mentioned that it said that it accepted all your recommendations. Are you aware of the Government taking forward work on them?

Professor Morris: A learning that came out of the pandemic was deep collaboration across science, service delivery, the national health service, industry and policy makers. The standing committee—of which I am the independent chair; I have a day job, too—has been constituted with Scottish Government representation. In my view, although it produces an independent report to Government, making that report the best-quality product will require on-going dialogue, and to that effect, the group also includes the chief scientific adviser and gets great support, too, from the deputy director who has oversight of Public Health Scotland. That approach is dynamic, and I see our work as continuous rather than some periodic, "Here's our report" process.

Murdo Fraser: So, it is a work in progress.

Professor Morris: Yes.

Murdo Fraser: Okay. In light of that, then, the interim question for the committee is the state of Scotland's readiness, in your view, should we have another pandemic. Let us say that next year—perish the thought—another pandemic comes along. Are we now in a better place to handle a pandemic than we were before Covid? If not, what more need we do to get there?

Professor Morris: That is an important question. Is it okay if both Professor Evans and I take it?

Murdo Fraser: Yes, of course.

Professor Evans: It is a very important question. We are certainly, without question, in a better place now than we were before Covid. We have learned so much. If I were marking the current response, I would give it a B. That is partly why we have the committee—we are trying to elevate that mark to an A.

We clearly need to do some things better in a number of areas, which all interrelate. The data infrastructure is critical. We did really well in that area; indeed, Scotland contributed hugely to both analysis of data and participation in clinical trials, and so forth. In that area, we are world leading—I use the term advisedly, because it is often overused—and data infrastructure has been a key part of our response.

The danger is that that work falls by the wayside as other things, quite understandably, take precedence. It is really important that, in accepting that we cannot be at a pandemic level the whole time, we ensure that the mechanisms and ways of allowing clinicians and others to set up trials readily are absolutely embedded in the infrastructure. It is important, too, that the data can be acquired without losing public trust in it, because we enjoy a high level of public trust in the health service in Scotland. We must ensure that that trust is protected and, at the same time, oil the wheels to ensure that we can get that data analysed as quickly as we can.

The other issue that was highlighted in our interim report was that of ensuring that the right, independent advice was available, and rapidly. Again, we are moving in the right direction in that respect. We learned a lot—certainly, I have—from a variety of scientific advisory committees on the sort of advice that is useful and on whom you need to have with you, and we are working towards those elements.

On the linkage—others have called it the triple helix—between academics, public health and industry, we have a good life sciences industrial base in Scotland and in the UK, which we need to ensure can continue, because it is vital that we get the most out of that base in relation to a future pandemic. Again, we cannot have labs or factories sitting empty; they have to be purposed for something else while still able to react when called on. You might have read that Moderna, the very large American vaccine company, is situating a plant in the United Kingdom, which is very welcome, as is anything else that can be done to reinforce those interactions that were so fruitful during Covid-19. Those are some of the areas that we are working towards.

09:45

Professor Morris: Tom Evans has covered your question very eloquently. There is a cultural dimension to this, and I worry about complacency. The global geopolitical and economic pressures are immense, but we must not forget the pain that the pandemic caused, so, as I have said, I am worried about complacency—the idea that Covid is done or that pandemics are done. We need that awareness, and that is why this committee is so important. There is a real opportunity to learn and gear up our preparedness—that is, keep it warm—so that if, unfortunately, another pandemic came along, we could pivot readily towards it.

My second observation is that there has been a slight elevation in bureaucracy and a tendency for us to go back into our sectoral silos, if I can put it that way. Another feature of the pandemic response was that, in working with the publics, we required policy makers, the academic community and the industrial community to co-create really innovative solutions at pace. What I have observed has been a tendency to go back into our boxes, for want of a better phrase. Therefore, I have to agree with Tom Evans that at the moment, we are a B, but we want to be an A, and that is the opportunity that Scotland has.

Murdo Fraser: I just want to follow that up, if I may. Clearly, since Covid, we have seen huge pressure on public services, particularly the NHS, and there has been a lot of emphasis on NHS recovery and on catching up with a lot of what was lost during Covid. Is there a risk that, as you say, we take our eye off the ball and think that Covid is done and that we do not need to have that drive?

Perhaps I can slip in a second question. Where is the public's thinking on that? Have the public basically decided that Covid is done? If we had another pandemic, do you think that we would have quite the same public buy-in that we saw during Covid to, for example, restrictions on people's activities?

Professor Morris: Those are two very good questions. Which one do you want, Tom? [*Laughter*.]

Professor Evans: I will take the one on public response.

I should point out that I am not a behavioural psychologist. Obviously, in my work as a clinician, I interact with the public; we were privileged and lucky to have some real experts in behavioural psychology on the scientific advisory group on Covid-19, and that has continued on the standing committee.

The key was that the public response was overwhelmingly fantastic, compared with what people feared. Overwhelmingly, most people adhered to what they were told to do, because they recognised the real need—it was spelled out very clearly. Would that happen again? I think that it would, if it was clear that that was going to have a major impact.

We have learned a lot about the four harms of Covid. We focused very much on the immediate health consequences, but there were clearly other consequences for other diseases, society and the economy. I would point out that those consequences are not devoid of an impact on health—unemployment is extremely bad for your health, for example—but, somehow, that point has got a bit lost.

I do not have a crystal ball, but I think that people would adhere to what they were told. We have good channels of communication, and there was a huge amount of public trust in the decision-making processes. That said, you have to be very clear and transparent and express clearly exactly why people are being asked to adhere to these principles.

Obviously, this sort of thing has fallen out of the public consciousness, but it will come back very rapidly, should there be a further threat. That is my personal opinion.

Professor Morris: As I think that we discussed last time, the public are the solution, not the problem, in a pandemic. The social contract in Scotland was strong, and we should endeavour to maintain that. We are very fortunate to have deep wells of expertise in Scotland, with folk such as Professor Stephen Reicher and Professor Linda Bauld, who are leading work on that.

As for your question about the NHS, our international advisory panel was really useful. If one establishes, in isolation, the skills and capabilities for a really effective pandemic response, it will not work. We need to make the exceptional routine by embedding best practice between pandemics. To use a phrase of the chief scientist of Singapore, which has had a similar process to ours, it is about keeping expertise, capabilities and networks "warm" between pandemics, so that the capability is there if, unfortunately, we need it in the future. Embedding that approach within an efficient, effective and safe health system is the key, instead of seeing it in isolation.

Murdo Fraser: Thank you. You have raised lots of issues that I would love to explore further, but I appreciate that my time is up, and I am sure that other members will come in on that.

Alex Rowley (Mid Scotland and Fife) (Lab): I will pick up on Professor Evans's point that we are in a better place now with regard to preparedness. How are you measuring preparedness? Professor Morris, you said in September—I think that you have made this point again today—that the

"principles of good pandemic preparedness are, first, a very good and strong health and care system".—[*Official Report, COVID-19 Recovery Committee,* 29 September 2022; c 5.]

In the evidence that we have taken throughout the past year or two, in answer to how best we can be prepared, people have told us that we need a good health and social care system. From what I can see in Scotland right now, the social care system is falling down about itself, with massive staff shortages and burn-out of the staff who are still there, and we also have record waiting times. Professor Evans, what do you mean when you say that we are in a better position now with regard to

being prepared, when everything tells me the opposite?

Professor Evans: I can speak to the clinical side, because that is where I worked during Covid and I continue to do so. Before Covid, I worked in infectious diseases, so that is what I am trained to do, but most people are not, so there was a very steep learning curve for those people who were at the sharp end of dealing with patients with Covid-19. That experience has hugely expanded the knowledge base and training, so we are undoubtedly in a better place than we were. That also goes for those people who work in social care who, again, had had very little or limited experience of dealing with infections on the scale that Covid-19 presented us with.

That level of training and expertise has to be maintained, so there is a danger that, over time, as memories fade and new people come and go in the health service and social care system, that expertise will begin to be lost. It is not the job of our committee to operationalise, but we can give scientific advice. Obviously, all the points that you have highlighted are key, and we have to ensure that there is resilience there. We can highlight areas, particularly with regard to staff training in the NHS and the social care system, to ensure that the expertise is maintained and that there is adequate provision of all the necessary personal protective equipment and infrastructure, so that that work can continue.

Certainly, there are many challenges facing healthcare at the moment, as members of the committee are all well aware. We are in a better place with regard to the general institutionalised memory of what to do during a pandemic. The real issue that we need to emphasise in our report is that that expertise needs to be maintained because, as Andrew Morris alluded to, there is a real danger that complacency will creep in. However, it is not our role to operationalise that. We can offer advice; it is then up to others to say how it will be embedded in the system.

Alex Rowley: But the system is falling down about itself. I get what you say about how different professionals in the health service will have gained expertise and knowledge, but if social care is falling down about itself and the hospitals are not coping, there is another question to be asked, which people are asking: did we do the right thing in shutting down so much that we now have excess deaths, much higher cancer rates and longer waiting times for operations?

People are suffering as a result of all those things. Is there a balance to be struck and did we get it right? The fact is that we have come out this side of Covid with health and social care systems that are creaking and struggling.

Professor Evans: Those are really important questions. By and large, they have to be addressed by the relevant Covid-19 inquiries. It is not our role to comment on or to provide evidence about what we did during the pandemic, what worked well and what did not. I am sure that that will be revealed in great detail during the various inquiries.

Looking forward, we cannot provide everything in our report, but we are keen to highlight the areas of resilience in healthcare and social care that need to be absolutely robust and, as you say, to factor in the other elements of the non-immediate Covid harms, such as waiting times and other activities in healthcare, education and so forth that were understandably badly affected during the pandemic. However, it is for Government and other agencies to decide what policies are put in place to ensure that that is addressed.

I absolutely agree with you that all those things are really important, and we will highlight them as being important, but it is for others to carry that work forward.

I do not know whether Andrew Morris would like to comment on that.

Professor Morris: The standing committee's specific role is to look forward: it is about future pandemic preparedness. We have to be sensitive not to comment on issues that it is more appropriate for the multiple Covid inquiries, which are another part of my life, to address.

Alex Rowley: Okay. You said that you had set up a sub-group to look at a centre for pandemic preparedness and to work up the detail. When we spoke in September, you said that you were starting to work out what that centre might look like. Are you able to elaborate on that? Has progress been made? What is the thinking behind the centre?

Professor Morris: I will outline the process. We have established a group, which has met twice. In June, we will have open meetings—one in the central belt and one in Perth—to take comments from the community about the options for the purpose and functions, and the structure and governance, of such a centre. That is moving on, and we hope to have that framing by the end of August. It is moving well, and we are looking to consult openly on how the centre might work.

The second comment that I will make on the subject came from our international advisory board. It suggested that the terminology of "centre" is unhelpful, because we are trying to achieve a collaboration across boundaries, so we might reconsider the terminology.

We often get embroiled in process, but we should be really clear about what outcome we are trying to achieve. We are looking for Scotland to be an excellent place where we can rapidly detect new and emerging pathogens; understand transmission, severity, high-risk populations and health consequences; deliver scalable testing, tracing and isolation as required; and be plugged into an effective diagnostics, vaccines and therapeutics system. That must all be underpinned by the social contract and working as a team across policy makers, industry and academia.

That is what we want to achieve, and to do that, we need certain capabilities. The discussion is about our current capability and future need in surveillance, diagnostics and testing. You can break it down into the so-called buckets or capabilities that we will need to have at our disposal in Scotland. Some of those include surveillance, diagnostics and non-pharmaceutical interventions, such as decision-making structures. That is how we are doing it, and we will make sure that you are invited to one of the meetings.

Alex Rowley: That is great—thank you.

The Convener: Do you want to add anything, Professor Evans?

10:00

Professor Evans: Yes. I will say a couple of things. It is clear that, at the moment, we cannot tell you, "This is exactly how it's going to work: this is what they're going to do, these are their responsibilities and this is the leader." That will happen but, at the moment, the group is clearly in a phase of ensuring that it consults with relevant stakeholders. As Professor Morris said, a number of meetings are planned during June for that, which is really important.

What we learned, and what has always been emphasised by all those dealing with Covid, including our international group, is that you have to be local to be effective. The most effective responses were in countries that had a very strong local sense of how to deal with it, and that comes through in the short-life working group. It is very much taking that on board. The idea of a centre is good in the sense that you have to know who is in charge but, at the same time, you have to involve the people who are working at the coalface, such as local public health teams.

We have to make sure that those very good collaborations between academia and public health that were so helpful during Covid continue, and that people do not retreat into their individual silos and say, "Oh—I'm only interested in that."

We have seen really good examples of where public health teams have leveraged the scientific expertise in the University of Glasgow centre for virus research and have said, for example, "Look, we've got this outbreak of really unusual hepatitis in children. Can you help us? We can provide the data acquisition and so forth if you can look at the science." That was extremely helpful and led to the discovery of an unusual and novel virus that seemed to be precipitating that cause.

I do not want to get into too much of the detail of that, but that is a good example of where the two groups came together. We want to be sure that a centre for pandemic preparedness encapsulates that joint working and, I hope, brings in industry as well.

I appreciate that the situation is a bit vague at the moment, but I hope that you can see the direction of travel. We very much hope that, by the end of the year, we will be able to put some flesh on those bones.

Professor Morris: The industrial science base is an important dimension to this. If we look back at Covid, the UK and global response would not have been the same unless we had partnered with the industrial science base. I will give two examples—first, what used to be called the AstraZeneca-Oxford vaccine. The mechanism of using a viral vector to get the immune response was devised by the University of Oxford, but the scale-up, manufacturing, quality control and clinical trials had to be done by industry.

This is an example that Patrick Vallance gives. You will recall that the Covid infection survey had some of the best information in the world on surveillance; some of us might have been in it. It was run by the Office for National Statistics. The natural history of that is that the ONS had the methodology, but we required 25,000 house visits a week to do the testing. That was provided by a clinical research organisation that had had to lay off its staff because we were not doing clinical trials.

Those two examples show that we cannot ignore the industrial base; effective pandemic preparedness needs that tight partnership.

The Convener: I have one quick question about what you said about needing the centre but also needing localisation. Does that mean that local health boards will have to have the people in place to tap into if there is an outbreak in any particular area of Scotland?

Professor Evans: Policy has not yet been finalised, but the direction of travel is very much towards ensuring that the local expertise that was so useful in the test and trace programme and in interactions with various communities is embedded in the system.

John Mason (Glasgow Shettleston) (SNP): First, I will follow up on one or two points that Professor Evans made. In answer to Murdo Fraser, you made the point that decisions were made quicker during Covid, and that that was generally a good thing. The Finance and Public Administration Committee is looking at how Government makes decisions. On the one hand, we were told that decisions were made better and quicker during Covid, but the counter to that, especially from Engender, the women's group, was that there was a lack of consultation and that women suffered through the pandemic in a variety of ways because we had not spent the time to think through policies—maybe we did not have the time to do that. How do you react to that comment?

Professor Evans: It is a very good point. There is a balance to be struck. The pace of Covid was incredible. I well remember moving from a time when it was a theoretical risk of someone coming from Wuhan, to a few skiers coming back from holiday who were well, to an absolute onslaught of seriously ill people, many of whom tragically died. The need to formulate policy and react to it was paramount. That is the real need during a pandemic.

The downside to that is that you can say that, without broader consultation, we might miss things. As I am sure the inquiry will reveal, nobody is perfect and mistakes were made.

What can we learn about that as we move forward? We must ensure that there is rapidity in the system. Part of the package that we are trying to formulate in our committee is that systems are in place so that they can react rapidly. Providing independent rapid advice to Government is very much a part of that.

It is clear that, moving forward, we have to not only understand but address the differences in health inequalities across the country not just for women but for different ethnic groups, those who are less well off and so on, which we have known about for a long time—ever since the Black report and subsequently. It is not for our committee to decide on that, but we will highlight the point, I am sure, and then it will be up to policy makers to decide on how to ensure that we can react rapidly, while at the same time not leaving behind those very important small groups.

John Mason: Is it just inevitable that there has to be compromise on these things?

Professor Evans: Yes. In my view, that is the case.

John Mason: Professor Morris, do you want to come in?

Professor Morris: Public participation, involvement and engagement have shown their value, because they allow you to make better decisions. During the pandemic, there were good examples of where public involvement at an early stage added value, despite the need to make decisions urgently. The key to it is to have an existing engagement capability in place that you can pivot. That is why I am pleased that Linda Bauld and Stephen Reicher are leading our behavioural science group.

Looking ahead to the future, there are things that we can do that will bake public participation into the framing and decision-making process. That is not unique to pandemics.

John Mason: I get that. There are some general problems out there.

I also want to touch on what we can learn from other countries—the international aspect. First, I am not sure whether the phrases that you have used—"international steering group", "international reference group" and "international advisory panel"—refer to the same body.

Professor Morris: Have I used those three terms? [*Laughter*.]

John Mason: Between you, you have.

Professor Evans: I apologise for potentially misleading you. Those terms all refer to the same thing. It is a small but highly knowledgeable group of individuals. We have been fortunate enough to take some of their very valuable time.

In addition, during the pandemic, we all looked at what other countries were doing and what seemed to be working and what seemed not to be working. It is clear that what works in country X might not necessarily work very well in Scotland. That has to be tempered with what we have locally and so forth.

Even within the United Kingdom, there are clear differences in how healthcare is delivered. In Scotland, we have a much more remote and rural population than the rest of the United Kingdom does. We therefore had to take on board important differences. However, we are keen to learn from best practice. That applies to all the different groups.

I am also on a committee on antimicrobial resistance and healthcare-associated infection, which is led from within NHS National Services Scotland and has a number of arms across different areas of healthcare delivery. Key to that is the fact that we have established an international group of participants from across different continents, so that we can understand the best practice that I have talked about. That is a really important part of things.

John Mason: Where should we look to? Singapore was mentioned. Is it a good example of being prepared for the next pandemic? Can you point us to any other countries that are really on top of things?

Professor Evans: Singapore is a good example, among others.

Professor Morris: Context and culture are always important. Singapore is not the only case study; however, the people there have done two or three things. They have been through their inquiry process and published a white paper, which is to be discussed by their Parliament next week, I think. They have said clearly, "This is what we did well, but these were the gaps," and they are putting an emphasis on filling those gaps.

In addition, to go back to a phrase that was used earlier, they are keeping it warm. They have created a pandemic fund called, of all things, PREPARE: the programme for research on epidemic preparedness and response. That involves an investment of about 100 million Singapore dollars over five years, which is about £10 million a year—it is a lot of money, but at the same time, it is not. They recognised that they needed to do that in order to keep the connections across the ecosystem primed—they are keeping it warm.

We are learning from other initiatives as well. The committee may be aware of the G7 100 days mission, which is now being picked up by the G20. The thesis is that, if such a pandemic was, unfortunately, to happen again, we should, within 100 days—three-and-a-bit months—have diagnostics, vaccines and therapies. We would do that through targeted investment. The WHO is prioritising the pathogens that it thinks present the highest risk, so the question is how we target research and development across those pathogens.

Secondly, especially in vaccines, there are so-called platform technologies. The mRNA capability is a platform capability. Do you remember Meccano?

John Mason: I do.

Professor Morris: You are showing your age. [*Laughter.*]

John Mason: We have already established that I am the oldest member of the committee, yes.

Professor Morris: It is a bit like Meccano or Lego. Those platform technologies mean that we do not have to go back to the drawing board. We can tweak things, based on the antigen that we are trying to target. As you know, during Covid, we were targeting the spike protein. Things can be modified as mutations develop.

John Mason: For clarification, you said that next time, we would hope to have a vaccine within 100 days.

Professor Morris: That is the bold, global ambition that is supported by the G7 and a global organisation called CEPI—the Coalition of Epidemic Preparedness Innovation.

There is some evidence that that is happening. You might recall that in October, a Sudanese Ebola virus strain—as you know, Ebola is an emerging pathogen, which we do not want—arrived in Uganda. Within 79 days of that outbreak being declared in Uganda, a candidate vaccine arrived.

10:15

We are beginning to see, therefore, that if we use alignment, collaboration and joint strategy, we can be more prepared globally, but there is a long way to go. We should be aware of the G7 100 days mission and contribute to it through our Scottish capability and through our partnerships with the UKHSA and others.

John Mason: That is quite exciting, and very positive.

Professor Evans: The only thing that I would add to that is the need for trials. The technology can now be developed quite rapidly with these platform capabilities, but we need to know that it works and that it is safe in the real world, which takes time, unfortunately.

Correspondingly, the fantastic contribution that Scotland made to the vaccine trials means that people have trust in the product because we can show them what we did, how we tested it, the likely side effects at a certain level and the effect. If we are thinking about vaccinating a population, we must have clear data, particularly on safety, and that takes time. We need to make sure that those expectations are managed.

John Mason: One of my colleagues will be on about data shortly.

The Convener: This session is fascinating and we could go on for hours. Would you mind if we go 10 minutes over? Is everybody comfortable if we do that?

Professor Morris: I am on a meter, but it is fine.

The Convener: We will speak to the parkie.

I call Brian Whittle.

Brian Whittle (South Scotland) (Con): Good morning, Professor Morris and Professor Evans. I am the data geek.

When we look at preparedness and try to understand what that means in practical terms, it is about understanding the threat and our ability to deploy solutions to protect the public. It is also about the ability to gather, assess and deploy data. Initially, that would be international. When we look back at what happened with Covid, it seemed that we watched—almost with morbid fascination—as it moved inexorably across the world towards us, and yet when it got here, we were not ready. We also need to look at data across all our health boards and the ability to tap into that data on the front line, almost in real time.

I am interested in hearing your thoughts on where we are with both of those platforms, if you like. During the years that I have been in Parliament, a recurring theme has been that we do not yet have a healthcare platform that allows us to pick up data from around the country in real time. What are your thoughts on those points?

Professor Evans: Andrew is the expert here.

Professor Morris: I have a few thoughts. Looking forward on preparedness for pandemics, we need to see data as core infrastructure. A phrase that I sometimes use is that, if one does not have real-time intelligence of how a pandemic is progressing, it is like driving at night with no headlights.

What we showed with Covid was how useful it was to use routinely collected data and to link it to demonstrate how the pandemic was progressing; who the high-risk groups were; what the pressures on the healthcare system were; and how the vaccines were working and whether they were safe. There are myriad questions that we are able to answer if we have good data infrastructure.

To give you an example, clinical trials are absolutely essential. You can get a vaccine to market having tested it on about 30,000 to 40,000 people; what we did in the UK was expose it to 40 million or 50 million people. We need to understand whether a vaccine is safe and effective in all groups—such as children, pregnant people and different ethnic groups—and unless we have a data capability that is linked and accessible, we are driving at night with no headlights.

Scotland is in an interesting place because it has a good track record of using data. In the pandemic, some of the work that came out of Scotland was truly world-leading—I use the term advisedly. I think that you have met Professor Sir Aziz Sheikh, who will have told you about the EAVE II study. However, the capability in Scotland lacks the critical mass and what I call the “ities”—scalability, sustainability, interoperability, reliability and security.

Since the pandemic, we have regressed. It sometimes takes 200 days to access data from some of our most eminent researchers in order to ask the most relevant questions, because we do not have the data infrastructure and the underpinning governance in place to enable access to those data for trustworthy purposes. Scotland has a huge opportunity in the use of data infrastructure for trustworthy purposes, but we are at risk of squandering it.

Brian Whittle: So, what do we have to do?

Professor Evans: I will follow on from some of Andrew Morris’s points and go into a bit more detail. I have been involved in looking at antimicrobial resistance, both where I work and in research capabilities across Scotland. The system is good and, as Andrew has said, we saw some fantastic examples of it. The real issue for those who want to join up nationally is the silos in which those data are kept. Understandably, data are very protected to ensure that patient confidentiality is maintained, but if I want to look across health boards, at data from Tayside or Highlands and Islands, I cannot do so without going through an enormous bureaucracy. Although that bureaucracy is there for a reason—I do not think that anyone would dispute that it is very important that the public has trust that their data are maintained—it hinders that kind of approach.

Part of what the data group is working on is the question of how to maintain that integrity of confidentiality while making research much easier, so that one could go from making a proposal to it being able to be carried through in much less time than it currently takes. That is a real sticking point in the system; I am sure that that will come out strongly in our report.

Brian Whittle: We are talking about working across health boards, but there are only 6 million people in Scotland.

Professor Evans: I know.

Brian Whittle: Working internationally means that we have to share data with other countries. Do you agree that the opportunity here is to create an environment in Scotland where, with only 6 million people, we can be agile with our data platforms?

Professor Evans: I am very hopeful about that. Scotland has numerous strengths on that point. We have the unique health identifier of the community health index—CHI—number. That number enables us to link up anyone across Scotland, which is fantastic and is, I think, the envy of many other health systems. We have very little in the way of private medicine, so most people are enrolled in, and use, the NHS.

The data is there—the issue is ensuring that scientists and clinicians can access it as quickly as possible and, at the same time, that public trust is

maintained, because people will not be happy without that.

Embedded in our healthcare system in Scotland is a real potential to use data. What we call metadata—simple data on age, ethnicity and so forth—can be completely anonymised or pseudo-anonymised, so that those who are extracting and working with the data do not know the people from whom it is coming. That process might need a little better communication so that, when we receive data, we are not actually looking at Mrs Bloggs from number 2 but only at a number, although that would give us the richness of detail that we need.

Brian Whittle: The other thing that struck me was that international collaboration and co-operation in a pandemic seems absolutely logical. If we are going to tackle a pandemic in the future, we need international preparedness. We can be as prepared as we like in isolation, but if the rest of the world is struggling, it is inevitable that we will struggle as well. Where are we, globally, on international preparedness?

On the back of that, I am reminded of the scramble for vaccines and how, all of a sudden, international cooperation broke down. We could say that we were the winners in that, but I do not think that anybody is a winner in situations of that kind. Where are we with international collaboration?

Professor Evans: That is not in the remit of our committee, but the point that you make is important. Obviously, there is the WHO and various other international bodies, which, throughout the pandemic, emphasised—I liked this expression—that "we were not all in the same boat; we were all in the same storm, but we had different boats."

I agree with you that vaccine nationalism, which we saw, ultimately does not help anybody. A number of non-governmental organisations have worked on vaccines for many years; there is Gavi—the global vaccine alliance—for example, which works in the field to ensure that effective vaccines are available for low-income and middle-income countries. All that we can do in our committee, and in Scotland, is emphasise the importance of that in order to ensure that that voice does not get lost. We have to accept that our leverage over a global situation is not huge, but at least we can ensure that we consistently give out that message.

Brian Whittle: Do I have time for one more question?

The Convener: A very quick one, Brian.

Brian Whittle: Thank you, convener, for indulging me. Following on from Alex Rowley, I think that part of preparedness is about the ability of our healthcare system to cope with what comes down the line. If the same thing happened again, I fear for those on the front line if they were asked to step into the breach the way that they were last time. As part of the work that you are doing, will you look at how we look after our healthcare professionals?

Professor Evans: Again, that is an excellent point, and we can highlight its importance, but it is not the role or remit of our committee to say how that will be enacted. By putting all these structures in place—or by recommending that we think they are valuable—I hope that we will improve the resilience of those who work on the front line.

Professor Morris: The principle is that good pandemic preparedness needs a skilled and supported interdisciplinary workforce and it is about how we provide those support mechanisms, but Professor Evans is quite right that we have a pastoral responsibility to our staff. We can highlight that.

Stuart McMillan: I will go back to something that was touched upon earlier, regarding the centre for pandemic preparedness. The language used by the advisory panel was highlighted—in particular, the use of the word "centre." Can you clarify whether you are considering setting up a building somewhere as a centre, or whether it will be more flexible than that?

Professor Morris: It is still under discussion. My sense is that it is not about bricks and mortar. It is about interdisciplinary expertise and how we create a network that delivers that expertise and consistency to all four corners of Scotland, rather than a building.

10:30

Professor Evans: The work of that group is very much about having a virtual centre, which gives it much greater agility. There are no aspirations for something in concrete. In five years' time, there will be different technologies, knowledge will expand, and so forth, so the group has to be able to respond to that. That is very much its hope.

Stuart McMillan: Has the network—I will use "network" rather than "centre"—had full support from the private sector thus far in your engagement?

Professor Morris: It is a work in progress. "Private sector" is a very broad term. If we consider capabilities, we have vaccines, diagnostics and, in the data space, analytics.

As a group, we are challenging ourselves to ask, "How can we in a trustworthy way have a dialogue with those multiple capabilities?". I would call it the industrial science base. As we have

discussed, pandemic preparedness needs to engage that community in a transparent way. We are grappling with that at present.

Professor Evans: To add to that, we cannot tell industry what to do; clearly, it is not a charity. It may have charitable thoughts, but it has to turn a profit.

One thing that came out of Covid was rapid development of technology, such as the wee tests that we all had—the lateral flow devices—and so on, which were incredibly important for allowing people to decide whether they needed to self-isolate. It was vital that we had those rapid diagnostics in healthcare.

That is an emerging area and has many applications beyond the pandemic. Every year, the front doors of our hospitals are full of people coming in with respiratory illnesses. Many of those illnesses are influenza, but there are other respiratory viruses, too. Industry would be very interested in developing rapid diagnostics for those groups, which would have the spin-off of developing a technology that could be applied to a future pandemic.

The balancing act is between what we can do now—in peacetime, if you like—that maintains expertise and technological development and what can be ramped up in the face of another pandemic. That is challenging, but we need to make sure that we keep those interactions warm and promote interactions between healthcare, science, academia, public health and industry, so that industry sees that it can invest in that technology now for the future.

It is a wee bit nebulous at the moment, and I do not think that we will have that set in stone by the end of our report, but it is a route map that we can continue to follow.

Stuart McMillan: You touched on the issue of complacency earlier. The language that is used for the public is hugely important. There are politicians in the Scottish Parliament who 12 months ago claimed that the pandemic was over, but that is clearly not the case; there are still people going to hospital with Covid. Politicians have a role to play.

In relation to what you just said about the private sector—I accept that it is a broad term—if there is a sense of cooling from the private sector about looking ahead, that is a concern. Is the private sector purely thinking about a profit opportunity in the future, or does it want to engage in that dialogue?

Professor Morris: Looking ahead, it is essential that Scotland does what I would call an environment scan of its industrial base. I think that we employ 40,000 people in life sciences in Scotland.

In terms of the UK's capability during Covid, we did well in vaccines and therapeutics. We did not do as well in diagnostics. We need to think through whether there is an opportunity in relation to diagnostics. That said, it is a global market.

For excellent preparedness, one needs to discuss openly with the industrial science base its contribution to various components of a good pandemic response, whether that is on the data side, genomics or surveillance, because industrial science has a key role to play. Neither academia nor the NHS can do it all. I anticipate that the industrial science base would be an integral part of a future network. At present, we are considering how to make that work.

Professor Evans: We need to see industry as a partner. There has to be a slight culture shift in how we view socially delivered healthcare versus private industry. The two can work well together. In terms of clinical trials, for example, industry can look at vaccine platforms. The NHS in Scotland and the UK offers a fantastic resource to industry, so it would be interested in that. Likewise, universities are good at coming up with blue-sky thinking and ideas but, as Andrew Morris said, it took an industrial complex to scale up the AstraZeneca vaccine to population level. We need both and we need a slight culture shift, which is already happening, so that we can embrace industry not as the other but as a partner in the work.

Many things are being developed. The new vaccine platforms will already be turned to other diseases. People are interested in whether we can make a vaccine against flu that works better than our annual vaccine and whether it might be resilient to future variants. That goes for a lot of other infectious diseases as well. There is real hope in that but it is a work in progress.

Stuart McMillan: I could not agree more regarding the partnership approach.

My final question is regarding the network. You touched on it earlier in answer to Brian Whittle's question about bureaucracy. Looking at the confidentiality issue with the data, could the network that is being considered be the mechanism to access the data from the different health board areas in Scotland? That could guarantee confidentiality but also provide the information that is required to assist with any research.

Professor Morris: I appreciate that time is short. In brief, the network is a real opportunity to provide a trustworthy data platform for the population of Scotland that links what I call journeys of care—primary, secondary and

tertiary—into social care in near real time to answer the questions that we will need to answer for future pandemics. We have a vehicle called Research Data Scotland, which the Scottish Government has set up to do that, but it is still hitting blockages, such as the need for 10, 15 or 30 approvals for the same study across different parts of Scotland.

The Convener: We have included in our long Covid report a request that the Scottish Government update this committee on the network's work, its delivery, its priority as a health and social care matter and the data sharing. We are already looking at that.

Professor Morris: We are a national health service and we should have a national data capability.

The Convener: Have you got time to take one small supplementary question from Alex Rowley?

Professor Morris: Of course.

Alex Rowley: Thanks. You have talked about future pandemics. I have heard people describing Covid as a once-in-100-years event. What is the threat? Has the world changed? Are we, as the evidence suggests, likely to see another pandemic within our lifetime?

Professor Morris: Ah! Well, we will both answer that one.

Professor Evans: If we look back at the past 200 years, we had the influenza pandemic in 1918-19, we had HIV, which was a completely novel pathogen, and in the past few years we had the original severe acute respiratory syndrome, which did not become a pandemic, SARS-CoV-2 and the related Middle East respiratory syndrome virus, which, fortunately, has remained geographically localised.

That is happening for multiple reasons. Essentially, the expansion of the human population means that urban centres are encroaching more and spreading out. Most new infections are what we call zoonoses, which means that they have been acquired from an animal. The infection has made the jump from an animal host into a human host. Our exposure to those animal reservoirs is continually increasing. Another reason is travel. The number of flights and people moving around the world increases year on year as the human population increases.

It is always dangerous to make prognostications but I think that the threat is very real, and it is not just from something that we know about. There has always been a bit of a danger of thinking that it is going to be flu or something else, but it could be disease X, which is something that we have not come across before. It is important that we take that broad view.

Whether it will occur in my lifetime or your lifetime depends on how long we live. It would, however, be foolish to assume that it is not going to happen again for another 100 years. There is every possibility that we are looking at going through another pandemic within the next 100 years.

Professor Morris: Shall I answer briefly?

The Convener: Very briefly.

Professor Morris: The world is changing. I was born in 1964, when there were 3.2 billion people on the planet. On 30 November last year, it was an estimated 8 billion people. That, plus air travel, climate change, urbanisation and increased human-animal contact, means that the conditions for pandemics are tilted towards it being a real risk. We should take it seriously.

The Convener: I have one final final question. [*Laughter.*] I promise it will be very quick. You twice mentioned at the start of this meeting the importance of "this committee". Which committee were you talking about?

Professor Morris: Yours.

The Convener: This committee?

Professor Morris: Yes.

The Convener: That is all the clarification that I needed.

Professor Morris: I did not mean ours.

The Convener: I would say that yours is also rather important.

I thank you for giving us some extra time. It has been a fascinating session. If you would like to raise any further evidence with the committee, you can do so in writing and the clerks will be happy to liaise with you on how to do that.

That concludes the public part of the meeting.

10:43

Meeting continued in private until 10:57.

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