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Health, Care and Sport Committee

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Session 7

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Wednesday 25 November 2026

CONTENTS

Col.
PANDEMIC PREPAREDNESS.....1

HEALTH, CARE AND SPORT COMMITTEE
12th Meeting 2026, Session 7

CONVENER

*Helen McDade (Mid Scotland and Fife) (Reform)

DEPUTY CONVENER

*Jack Middleton (Aberdeen Central) (SNP)

COMMITTEE MEMBERS

*Heather Anderson (Dundee City West) (SNP)
*Adam Harley (Strathkelvin and Bearsden) (LD)
*Kayleigh Kinross-O'Neill (Edinburgh and Lothians East) (Green)
*Joe Long (Mid Scotland and Fife) (Lab)
*Paul McLennan (East Lothian Coast and Lammermuirs) (SNP)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Derek Grieve (Scottish Government)
Dr Jim McMenamin (Public Health Scotland)
Professor Sir Gregor Smith (Scottish Government)
Professor Devi Sridhar (University of Edinburgh)

LOCATION

The James Clerk Maxwell Room (CR4)

Scottish Parliament

Health, Care and Sport Committee

Wednesday 25 November 2026

[The Convener opened the meeting at 10:46]

Pandemic Preparedness

The Convener (Helen McDade): Good morning, and welcome to the 12th meeting in 2026 of the Health, Care and Sport Committee. We have received no apologies, but Kayleigh Kinross-O'Neill is joining us remotely.

Our first agenda item is on the lessons of the Covid-19 pandemic and Scotland's state of preparedness for future pandemics. This one-off session will help us assess whether there is a need to shine more light on whether Scotland is ready to face any future challenge.

I welcome to the meeting our four witnesses. We are joined by Professor Sir Gregor Smith, chief medical officer, and Derek Grieve, director for health and social care performance, from the Scottish Government; Dr Jim McMenamin, strategic consultant lead for health protection at Public Health Scotland; and Professor Devi Sridhar, chair of global public health at the University of Edinburgh. We have up to 90 minutes for this item, and I refer members to papers 1 and 2.

Instead of asking for statements, I will start off with a general question, and then we will move on to questions from members. What do you think are the main lessons from the Covid-19 pandemic, and is Scotland ready for a future event? You have five minutes to answer that question.

Professor Sir Gregor Smith (Scottish Government): I will start, convener.

First of all, I thank the committee for focusing its scrutiny on this issue. It is really important that we continue to do that over time and continually revisit our readiness for the future. I know that this will be part of an ongoing process for the committee.

We could spend the next 90 minutes answering your specific question, convener, but the United Kingdom Covid inquiry has already identified many lessons for the UK system to learn. We have also identified a number of other lessons through other learning, reports and events, and to break them down in five minutes would be incredibly challenging.

It is perhaps important that we reflect back on the period—

The Convener: I am sorry to interrupt, but we have had a private conversation with the Covid-19 inquiry team and have got some background, if that helps.

Professor Smith: Okay. More than anything else, as we face what I feel is the high probability of another pandemic at some point in the future—we have only to look at the UK risk register to see how it rates that risk—we must ensure that we have in place a better infrastructure, which is ready to respond, than we had in 2020. That is the starting point for me. Some of that will involve governance when it comes to our approach to overseeing any response, but we also need an infrastructure that allows us to be confident in the public health and clinical response that is made.

A pandemic's impact on society will be greater than just its health impacts, simply because of the nature of the response. I will be confining myself to the health and public health responses instead of talking about the wider issues, but I would not want those issues to go unacknowledged. For me, one of the most important aspects to consider is the disproportionate impact of the pandemic on different parts of society. What the pandemic revealed was not just the demographic challenges but the health inequalities that people face in Scotland. People had different experiences of the pandemic, and one of the first lessons that we need to learn is that, to prepare for the next one, we, as a country, must improve the overall health and health resilience of the population; improve healthy life expectancy, in particular; and reduce the burden of chronic disease in our society, so that we have a more resilient, healthier population.

We need to get better at identifying those parts of society that are likely to suffer inequalities in a pandemic. Another lesson of the Covid-19 pandemic was that there was a disproportionate impact on the elderly and those from minority ethnic groups. That does not mean that that will be the case in the next pandemic, and we can go into the detail of that in our evidence, but we certainly need to identify who is likely to feel that disproportionate risk and impact.

I have already said that we need to prepare our infrastructure better. Beyond the governance aspect, having stockpiles of personal protective equipment, antibiotics, antivirals and even pre-pandemic vaccines available for future use is an important aspect of the overall response.

One of the major things that happened in the early part of the Covid pandemic was the identification of a reliable test that could be scaled up as quickly as possible. However, I think that we would all recognise that, even with the speed at which we were able to get such a test in place, the subsequent scaling up was challenging. As a

result, it is important that we retain as much as possible of the infrastructure that we have in our public health laboratories across the country, to ensure that we can do that work again.

I feel as though I have said much and yet there is still so much to say. However, before I pass over to others, I want to highlight the incredibly important use of science and technology in this space. One of the major contributions to the UK response was the strength of our academic and research community, both in providing advice on the approach to managing the pandemic and in developing very quickly some really important responses such as platform research and the advent of new vaccines and technologies for testing.

Again, one of the lessons that we need to learn is to be better prepared to respond to these issues and to have more focused research in this area, which is something that we might discuss with regard to the Scottish pandemic sciences partnership.

The Convener: Dr McMenamin, would you like to make some introductory remarks?

Dr Jim McMenamin (Public Health Scotland): Yes. Thank you for the invitation to attend.

Building on what has been said, for me, the key thing is that we have not waited for any recommendations from the UK public inquiry or, indeed, the yet-to-be-determined recommendations that might come from a Scottish pandemic inquiry. We have been building in the background, on the back of what was already in place as a consequence of the Covid pandemic, so that we have a better infrastructure in place to deal with our surveillance, our response and thus our capability to manage any future challenge.

From a laboratory perspective, an important component has been having the advanced molecular technologies available to us not just in Scottish laboratories but across the UK.

In addition—as, I hope, we might hear a little about—we have the opportunity to hold exercises. Any one exercise will test many things, but not everything. A rolling programme of exercises will examine different facets of a pandemic response to whatever the disease challenge is in the future. Working with our colleagues, whether in local authorities, national health service boards or the third sector, will ensure that we have a robust mechanism to generate that response.

Derek Grieve (Scottish Government): I cannot build too much on what my colleagues have said. If you have spoken to the Covid-19 inquiry team, you will be aware that many of us had an active role as part of the response to the Covid inquiry.

To answer your question directly, convener, it certainly feels as though a number of things are in place that were not in place before the last pandemic. All the issues that colleagues have discussed—our ability to tap into and deploy science; our capacity to pivot; our having governance and structures in place; and our having the data and intelligence to understand how best to inform a response—feel significantly different from what we had in 2019. As Dr McMenamin indicated, we have been building on the lessons learned and have not been waiting for reports from the UK or Scottish inquiries but have been doing the work now to prepare, as the chief medical officer indicated, because we do not know when the next pandemic may be or what type of pandemic may arise. The ability to be responsive and pivot to meet those needs feels significant.

The Convener: Professor Sridhar is online. Will you give us a quick run-through?

Professor Devi Sridhar (University of Edinburgh): Thank you for having me. I am glad that you are looking at pandemic preparedness in what we might consider a time of peace. I have five quick points that build on everything that has been said.

First, every pathogen is unique, and responses have to be tailored, flexible and adaptable. I think that everyone was anticipating that the previous pandemic would involve an influenza outbreak, but it involved a very different pathogen, and we must not get caught in the trap of thinking that the next pandemic will involve something like SARS-CoV-2—severe acute respiratory syndrome coronavirus 2. It could be completely different. We have to recognise that each pathogen is unique in the properties of how it spreads, whom it affects and how it impacts society.

The second point is the importance of having honesty and clear communication with the public on pathogen uncertainty and mutation. Virus mutation is unpredictable to everybody. It is sometimes hard for people to understand that science, knowledge and the database change. We have to keep trust with the public. It is not that people do not know what they are talking about; we need to quickly communicate that the evolution of a virus is unpredictable, to keep people believing what is being said by the Government and by public health authorities.

The third point is about moving early. Waiting usually makes things worse. We are seeing that right now with the Ebola outbreak in the Democratic Republic of the Congo. Because it was caught a couple of months too late, it has now spiralled into being probably the worst Ebola outbreak ever—if we project it into the future.

There is learning to be had from other countries that might be affected earlier. The UK and Scotland would be very unlucky to have such an outbreak originate here, so if one has affected another country, such as Russia, China or the United States, it is important to be able to say what has happened there in real time and to learn what has or has not worked in how those countries have responded.

11:00

The fourth point is about medical countermeasures, which are usually the solution to infectious disease threats. For most viruses, from HIV to malaria to polio, we have found medical countermeasures, whether vaccines, antivirals or diagnostics, that limit the impact, harm and disruption that a disease causes. However, that means investing in science and higher education. That is why universities matter, and it is why such research matters in times of peace, because you need to activate that knowledge later on.

Finally, there have been changes since Covid. You have an eminent panel of witnesses who can talk about Scottish changes and the progress that has been made here. I would just reflect on the UK Health Security Agency, which is a relatively new body. I work with the agency as an expert, but I consider myself to be an outsider, and I am not in any way biased by being employed by it.

The UKHSA has done a really good job. If I look at how the agency has managed the meningitis B outbreak in Kent and the hantavirus patients who had to be disembarked from a ship, and how it is managing Ebola guidance, I consider that it has real technical expertise and provides high-quality guidance, with good people working there. That has made a real difference to the landscape, at least UK-wide, and it has, I hope, helped Scottish bodies by providing a partner to work with on various preparedness initiatives.

I will end there.

The Convener: Thank you very much. That was a great start. I am sure that everyone has quite a lot of questions.

I ask Heather Anderson to kick the questions off for us.

Heather Anderson (Dundee City West) (SNP): We have seen the report of module 1 of the UK Covid-19 inquiry. One of the key findings is that the

"institutions and structures responsible for emergency planning were labyrinthine in their complexity."

As a layperson reading the committee's papers, I picked up that there is a future pandemic preparedness ministerial oversight group, whose membership includes the Cabinet Secretary for Health and Care and the Cabinet Secretary for Justice. There is a crisis preparation oversight group, which is chaired by the director general of strategy and external affairs—I do not know who that is. There is also a future pandemic preparedness programme board, on which the director for population health sits.

Given all those different groups, I am concerned about whether we have learned the lesson about avoiding labyrinthine structures.

As a member of the public and as an MSP, I want to know who will advise the First Minister when another pandemic occurs and whether we have a clear structure in place to enable that. How do we ensure that all these new groups are sharing intelligence and communicating with one another?

Derek Grieve: I appreciate that it may appear really complicated, but the structures that we have in place, which you have described, are a cross-Government delivery group, with a programme board sitting above it and a ministerial oversight group sitting above that. Those structures were not in place in advance of the Covid pandemic. They are now in place to ensure that we are making the links across the various components.

As you may be aware, the ministerial oversight group not only meets regularly but publishes its minutes, so those are visible and transparent.

Those structures provide information and intelligence to feed into and support decision making. However, a future pandemic will not wait for a meeting schedule. Therefore, regardless of the structure—which can be stood up and pivoted depending on the situation—there are well-established and well-defined means by which intelligence flows into Government from outwith Scotland to organisations such as Public Health Scotland. That intelligence is then channelled through clinical and policy advice directly to Scottish ministers, regardless of the meeting schedule.

The governance structure in the Scottish Government is clear and concise in supporting that process and, as I said, can be stood up and pivoted should that be required.

Professor Smith: There is a governance structure, as Mr Grieve has outlined. That is particularly important at this stage, in what Devi Sridhar described as the peacetime phase and in preparing for the next pandemic.

However, if things were to change and there were a signal that something had happened to which we needed to respond, there would be a flip. We have now developed governance arrangements that, although they would initially operate through the Scottish Government

resilience room in the emergency phase, would quickly transition to ScotOps. That is a kind of mnemonic for a framework for responding to pandemics The advisory structures that feed into that will be important in the future. We had the opportunity to test that during exercise Pegasus recently—an all-UK exercise that was conducted over several days, looking in particular at how the governance might work in the event of the emergence of another pandemic.

In Scotland, one of the things that we have retained through the ScotOps framework is the four harms process. People might recall that, during the Covid response, one aspect of the advisory structure was that we examined not just the direct impacts of Covid on the population but the other health impacts that were caused, by displacement and so forth, because of the pandemic. Beyond that, we also examined the economic and social impacts on the country. Those four harms, as they became known, gave us a blended approach to assessing where the potential harms would fall through some of the decisions that were being made.

We have strengthened that as part of the new process of ScotOps, and we have strengthened the process that sits behind that on the provision of advice and, more importantly, the analysis of the data. A new Scottish framework for the analysis of data sits behind it, with a mechanism by which we can put in place what I was going to call an army of analysts but will call a group of analysts, who can, specifically, feed the process with data that relates to those four harms, so that we take a rounded and blended approach to how we assess the impacts across society. That feature was a particularly strong aspect of the response during Covid, but we have tried to strengthen it further.

As I said, we tested it through Pegasus. Later this winter, we will have the formal analysis of the response.

Heather Anderson: Can I come back on that? We are meant to be scrutinising what has happened. A complex structure had been explained to us. We did not see a bar chart about who is on which committee or how each one reports. You have now explained that an alternative structure will kick in if there is an issue. That is good to hear, but we have not had any information about that, or what its structure is.

A number of us have also commented on, and will be asking more questions about, exercise Pegasus. There has been no information to the committee about what the learning was. We did not get any evidence about a new structure that resulted from that exercise. We are also concerned about the delay. However, we will ask about that in detail.

I am expressing my concern that I do not feel reassured by the paperwork. I am reassured by what you have said—that another structure will kick in—but I still do not know who is in that structure.

Professor Smith: The important thing is that one structure is for preparedness—which is why you may have been briefed about it—and another is for the eventuality of having to respond, if that makes sense.

Heather Anderson: Okay. It was said that Public Health Scotland would head up the future pandemic preparedness body—is that the right one? Has the Public Health Scotland person been appointed? If so, is it Dr McMenamin or someone else? If it is someone else, why are we not hearing from them?

Dr McMenamin: There are two components to my answer. First, I am the strategic consultant lead for all health protection issues; however, corporately, PHS has in Michael Kellet a director with responsibility for the assurance of what we do as an organisation.

You are probably asking about the Scottish pandemic science partnership, which is hosted by PHS but is independent of it. It draws together academic perspectives on what our research gaps are and how we can address those. That partnership was established in direct response to the population health framework, which was published in 2025, and implemented as a consequence of that. Currently—in peacetime, as it were—it addresses our current areas of concern and how they can best be understood by my organisation, NHS boards or local authorities, which have a statutory duty to ensure that the population is best protected against all possible threats. The questions are, where are our areas that need further work, and where can that work be directed to?

Three projects are currently being discharged by that group. In the next financial year, they will report back on the activity undertaken from the research budget available from the Scottish Government, administered by PHS on behalf of the SPSP. I hope that that is clear.

Heather Anderson: It is slightly labyrinthine, but yes, it is clear.

The Convener: Yes.

Jack Middleton has follow-up questions on exercise Pegasus.

Jack Middleton (Aberdeen Central) (SNP): Professor Smith, one of the most stark findings from the Covid-19 inquiry was that Governments were warned about weaknesses in pandemic preparedness but failed to act sufficiently on them

before Covid struck. Do you agree that identifying weaknesses is totally meaningless unless you take timely action to address them?

Professor Smith: When we consider cycles of assurance and improvement, they both fit together very importantly. The assurance must come in terms of the identification of any gaps or weaknesses in whatever system you work in, and that can be done in a variety of ways. In this context, the exercise is part of that assurance process; it identifies learning that we can then take on, develop and improve upon. However, I agree with the question: unless we then take that work further, by building and improving in relation to the gaps that are identified, there is little point in doing the exercise in the first place.

We expect that there will be both UK and Scottish evaluations of exercise Pegasus, which was an incredibly involved piece of work, and that those will be published over the course of this winter. The learning that is contained in the evaluation will then need to be turned into some sort of action plan in response. Some of it tested some of the mechanisms that we have in place just now, but that does not mean that those mechanisms should not be revised further in the future, according to that learning.

Jack Middleton: Can you tell the committee this morning what key weaknesses the Pegasus exercise identified?

Professor Smith: No, I cannot. That is for the evaluation that will be published later this winter.

Jack Middleton: The inquiry was also clear that these emergency exercises should produce a report within three months and an action plan within six months. Those deadlines have not been met—it has now been more than a year. Why has there been such a delay?

Professor Smith: I have to say that, because of the source where the exercise originated, I do not know of any reasons why a particular length of time is being taken to provide the learning from it. However, since my involvement with exercise Pegasus, I have not been aware that there was ever a point in time when it was going to report on its findings within three months.

Jack Middleton: I am sorry, Mr Grieve—I know that you want to come in.

Professor Smith, what do you mean when you talk about the source where the exercise originated? I also want to pick up on another point that you made. You said that you were never aware that you were ever going to meet the three and six-month deadlines. However, that was a key ask of the Covid inquiry. So, why not?

Professor Smith: The evaluation has been conducted from elsewhere. I am not involved in the evaluation of it.

Jack Middleton: Okay. Can you elaborate, Mr Grieve?

Derek Grieve: It might help if I explain to the committee that there were two parts to operation Pegasus. The first phases were in autumn 2025, and they tested the emergence, containment and mitigation phases of a pandemic. Those were followed by a fourth phase, in June 2026, that covered recovery. As the chief medical officer has indicated, the evaluation of the total operation will be published this winter, in line with the expectations of the timeline set out by the Covid inquiry.

Jack Middleton: Does “this winter” mean this side of the year 2026?

Derek Grieve: That is certainly my understanding, yes.

11:15

Jack Middleton: Last September, the Scottish Government published a whole-system civil preparedness report. It is largely descriptive—it does not include any detailed performance metrics or a comprehensive assessment of any gaps in preparedness. How do you think that this committee, MSPs in general and the public can hold the Government to account and identify weaknesses if it is just publishing reports that are largely descriptive and do not have any set targets?

Derek Grieve: As the chief medical officer has indicated, a full evaluation will be published on exercise Pegasus. The Scottish Government also routinely publishes three-monthly progress reports on things such as the Covid inquiry, which provide Parliament with a good level of detail. Many of the modules have not yet reached recommendations, so the Scottish Government cannot yet outline the actions that will be taken.

Ministers are keen to keep Parliament updated through that regular reporting, which, as I have indicated before, includes the publication of things such as the minutes of the ministerial oversight group.

Jack Middleton: Would you agree that there is a need to develop further measurable targets in this space, so that Governments and committees can scrutinise the level of preparedness?

Derek Grieve: I am not sure that I can offer a view on targets per se, but I think that it is right to ensure that the Scottish Government is held to account for the actions that it commits to, and the

processes that I have set out are a means by which Parliament can absolutely do that.

Jack Middleton: I appreciate that, but I feel that we have a lack of visible, tangible targets. I appreciate what you have said, Mr Smith and Mr Grieve, but we are well past the deadline for publishing the findings of exercise Pegasus. What assurances can you give this committee and members of the watching public that we are not just repeating the same mistakes that were made before the Covid-19 pandemic?

Derek Grieve: I do not wish to contradict you, but exercise Pegasus did not complete until the fourth phase, which was in summer this year. As the chief medical officer indicated, there is a commitment to publish in full the evaluation of that, and I hope that the evidence that is provided to the committee in relation to the Government's response to the recommendations of the Covid inquiry and the work that is in place in advance of some of those recommendations being published will give some assurance that the work that is in hand will strengthen preparedness.

There is a clear commitment in the programme for government to strengthen our national preparedness for future emergencies. Again, I trust that that is a signal of the priority that is placed on the issue by the Scottish Government.

Jack Middleton: Professor Smith, do you have anything to add?

Professor Smith: No; Mr Grieve has explained the position. I just want to reaffirm that, when exercise Pegasus was planned across the four nations, the timescale for that evaluation was always towards the end of 2026. I have not been informed of any perceived delays in the publication of that report. The progress of the work is consistent with what we were briefed on at the beginning of the development of the exercise.

Jack Middleton: If a pandemic breaks tomorrow, are you confident that the Scottish public should be reassured that we have identified weaknesses and are already in the process of acting on them in terms of preparedness for such an event?

Professor Smith: Yes, I am.

The Convener: Mr Grieve, you said that the three-monthly reports on the modules of the UK Covid inquiry have not been fully reported, but there are recommendations with every module, are there not?

Derek Grieve: Yes.

The Convener: I think that Jack Middleton's question was to do with whether, for each of those modules, the Scottish Government has a written response about what is being done on them that we can study. That is certainly my question.

Derek Grieve: I do not know about every module, so I would have to come back to you in writing with confirmation of that. However, I can confirm that the Scottish Government has committed to respond to every module. As I have referenced, it also provides regular updates to Parliament on the progress against the actions and commitments made in relation to each module.

The Convener: Okay. You referenced the Scottish Government's programme for its first 100 days, so we will take that as it is.

Joe Long has some questions on data sharing, which I think relates to this issue.

Joe Long (Mid Scotland and Fife) (Lab): I have three or four questions on data, which has been quite a theme in what we have seen across several of the modules from the Covid inquiry.

In our work on different themes, we see problems with data sharing across the health and care system in Scotland, whether that is between primary care and secondary care or between the health system and the social care system or whatever. Thinking about patient records and the recording of the potential vulnerabilities of various citizens and so on, where are we in terms of building a more robust data system that can help with the response in relation to those issues in the event of another pandemic?

I ask Professor Smith to start.

Professor Smith: Professor McMenamin has been quite heavily involved with that issue, so perhaps he would want to respond.

Joe Long: In that case, I am happy to redirect the question.

Dr McMenamin: I am happy to start off the response. Yesterday, in Glasgow, there was the annual Public Health Scotland and Faculty of Public Health meeting. At that meeting, one of my colleagues, Scott Heald, reminded everyone that, in a spirit of openness and transparency, PHS, on behalf of the national health service boards and local authorities, has an open data platform where all our data on surveillance trends—whatever the infection—is available for scrutiny. That involves not only summary statistics but more detailed statistics that researchers and others can access, which demonstrates that we have nothing to hide in relation to any of the data. That is an incredible development that, during the pandemic, had something like 50 million hits, because the general public were intensely interested in the data that was available to us.

Scotland is a data-rich area compared with some other component parts of the United Kingdom, and we are in a much better position today than we were in previously in relation to the provision of data that could be interpreted to indicate the beginning of any increase in infection, as well as, we would hope, any reduction in the impacts of any incident because of the preventative measures that we have introduced, no matter the infection challenge. That site offers an opportunity for us to outline how we can do that in relation to a variety of infectious diseases.

I will give you an illustration of that. We currently have a seasonal challenge in relation to respiratory infections, including influenza, respiratory syncytial virus and Covid-19. Each week, we produce an analysis that utilises data to provide a description of the impact of those issues for Scotland in terms of our boards and local authorities, including what our inequalities review demonstrates. We have made great strides in how we can best present that information, to allow our view of current challenges to be more and more refined.

That is an important issue that we have been addressing. I am not saying that improvements are not continually being made, because they are, and that is something that we will all see the fruits of.

Joe Long: It is great to hear about that public health and population-level data. To turn that question towards the health and care system, are we confident that individual health records are robust enough that, when people present to health services, particularly during a pandemic, we can identify individual vulnerabilities from those profiles?

Professor Smith: A lot of work has been done on this, but I will start at the macro level and then drill down to individual aspects.

Data was an important feature of our response to the pandemic. At the beginning, we encountered lots of difficulties with some of the data-sharing agreements, and again I would highlight the need for preparation in advance of any future pandemic. The four UK nations now have a memorandum of understanding on sharing data with each other that we can invoke in the event of a pandemic, and the office of the chief statistician is doing some work on data sharing to ensure that, in the event of an emergency, we have a framework in place that will allow us to do that sort of thing more properly.

Drilling down into the system, we are looking at how all of the data is encoded and available to share. One source of very rich data is our general practitioner data, but it is of little use if it is locked in a GP practice and not available elsewhere in the system. Therefore, one of the pieces of work that has been done has been to enhance the emergency care summary and other things that carry information through the system. I would expect that, in future, as we develop the MyCare.scot platform even more, more of that information will be available not only to the general public but as part of the care processes.

Joe Long: Do you feel that that work is happening quickly enough?

Professor Smith: I would always like it to be done more quickly. One of my frustrations with the system is the speed and reliability of some of the digital frameworks that we use, and I would always encourage that that work be done more quickly. That said, really significant progress has been made on this aspect. Indeed, one important thing that I want to mention is the Seer 2 national digital platform, which is facilitating some of the data sharing and has, I think, been an incredibly important step forward.

Beyond that, something that was poor at the beginning of the pandemic response, and which we have got much better at recording, is our data on people's ethnic backgrounds. We now have a completely different picture across the country. It could be improved further, but we certainly have much better systems and availability of data to link to people's ethnic backgrounds—after all, we know how important that was during the Covid response.

The Convener: Dr McMenamin, I see that you want to come back in. When you talked about monitoring what is happening at the moment, you mentioned Covid. Is Covid still among us?

Dr McMenamin: The direct answer to your question is, unfortunately, yes. Covid is still among us. Indeed, output that we are producing every week is demonstrating its impact.

The Convener: I think that it is just a bad cough now. I hear everyone saying, "Oh, I've got that dreadful cold."

Dr McMenamin: I wish that that was all that it was.

The Convener: Do we have numbers for those who have been hospitalised?

Dr McMenamin: I can give you a flavour of that from my own extended household. Someone who does not have any major underlying medical problems was recently hospitalised as a consequence of Covid. So, yes, it can, from time to time, still produce serious consequences for individuals in our community.

The Convener: Do you not think that most of the people listening to this will find that surprising? I do not find it surprising myself—I understand that viruses mutate. However, going back to a point

that was made in the informal session before the meeting started, people do not necessarily understand that. There has been talk of public trust and understanding, but I do not think for a minute that people understand that Covid has mutated. Obviously it is less than it was, or we would all know people who had been hospitalised with it.

You have just talked about data. Perhaps you can send them in to us, but do you have any numbers for those who have been hospitalised with Covid over the past year? I just think that that would be really helpful. I do not think that people understand what is going on, and I do not think they understand how viruses move on and mutate.

Dr McMenamin: Of course.

The Convener: That was just a point of interest. Did you want to make a point yourself?

11:30

Dr McMenamin: I am going to be greedy—there are two points that I want to make.

First of all, as Professor Smith has set out, even though we have access to primary care data, we were still beholden to our academic partners during the pandemic, because they were able, using the unique capabilities that we have across Scotland, to assist us in finding the best description of the raft of things that might be putting people at risk of complications of—at that point—Covid; with early observations on the effectiveness of the vaccines that were deployed; and with what we were continuing to see with each new variant.

We have worked collaboratively with the early estimation of vaccine and antiviral effectiveness—or EAVE-II—consortium. Much of the work that was done on a research basis has now been taken in-house in Public Health Scotland, and it has given us the data linkage capabilities that are now available to us. That academic understanding, and the advances in data sharing, lie at the heart of one of the five main themes in the Scottish pandemic sciences partnership, and that aspect remains one of the most important things that we are continuing to develop and refine.

The Convener: Professor Sridhar, I notice that you have been quiet there, on the internet. Do you want to comment on any of the issues that have been raised before we move on to some questions that we have about preparing for the wrong pandemic? Maybe you could talk about that, too.

Professor Sridhar: I am just quiet because I have been muted and I am getting selective access.

What has been said is really interesting. I, too, am learning from what is happening, and I want to say well done for all the data sharing, which I know is not easy, and for all the organisation involved.

An issue that has not been raised yet but that does worry me about pandemic preparedness when we look at it too narrowly—and it is a global issue; it is not just Scotland that has not moved enough on this—is school closures. I remember being asked a month before the schools were closed during the pandemic whether they would be closed, and I said, “Well, they closed in west Africa during the 2014 outbreak, and they have already closed in Italy and in other places, so why would they not close here?” That was considered shocking—and guess what? The schools closed.

We now know the harms of those school closures, and I think that those harms were recognised for the entire time. As Gregor Smith has mentioned, there was the four harms group, which had head teachers on it; there was an education sub-group; and there was awareness of the rise in child abuse, and of children being left hungry, unprotected and in vulnerable situations. However, there was really no way out, because there was no way of reopening schools in what might be called a safe way, given what was happening.

Therefore, when we look at pandemic preparedness, it is great and really important to look at data sharing, at health and social care, at the diagnostics, and at preparedness exercises. All of that is important, but I have to wonder whether Scotland, where education is devolved, will be an oversight in any UK-wide exercise or, indeed, any global one. After all, Scotland is unique in that our school year is different from others and it is organised in a different way. That was already an issue during Covid, because the guidance for schools—even the Joint Committee on Vaccination and Immunisation guidance on vaccination—was aligned with the school year in England, not in Scotland, where, as I have said, things are slightly different. It was the same with school openings and school closures. I would like to see more done in that area.

Right now, we are in a moment of peace, and everyone is saying, “Never again. We will never close schools, given the damage. It was unnecessary.” However, that is what we said before Covid, and the schools still closed, because there was no practical way of keeping them open. We need to think about what we can do now to prepare and ensure that, for example, the Department for Education has plans in that area, so that it can say, “Okay, a pathogen is spreading. How do we move to other facilities that are ventilated or other kinds of provisions, so that we do not fall behind in this?” The damage of the pandemic can still be seen in our younger generations, whether it be in mental health issues,

in the people who have been left behind or whatever. I worry, sometimes, that this is construed as just a health issue, when it is also an education and social care issue.

The Convener: Thank you. Adam, do you want to ask a couple of questions?

Adam Harley (Strathkelvin and Bearsden) (LD): My questions follow on fairly nicely from that response. Indeed, my first one is for Professor Sridhar. One of the main criticisms of the UK Covid inquiry is that we prepared initially for the wrong pandemic, so what assumptions might we be making today that would worry you most? Perhaps you can give us an international as well as Scottish perspective on that.

I have some follow-on questions, but I will kick off with that for now.

Professor Sridhar: I will give a global perspective, which is that we try to predict the next big thing but are generally quite bad at predictions. For example, I do not think that anyone would have thought that the next Ebola outbreak would be a Bundibugyo strain that we do not have a vaccine for and that was not detected through our usual test. Although we can have expert briefings and look at the data, the first point is, therefore, about having humility.

Right now, I would flag H5N1, or avian flu, as the number 1 global risk. In the States, it has spread among dairy cattle and there has been a mammal-to-mammal mutation, which we did not have previously—it was always from bird to mammal. We are now seeing more people becoming infected, and labour unions in the States are raising concerns that their workers on dairy farms are being infected but are hiding their infections. We also had the first person die this year. We can kind of predict things; however, aligned with that, there has to be humility about the fact that we do not know.

I am an academic, so I will talk about a paper that I wrote last year with a colleague at Georgetown. In it, we said that it probably matters less to Government, and to those with oversight of Government, what the exact pathogen is and more what the properties of it are. For example, how does it spread? What is the hospitalisation rate? Do we have medical countermeasures? Who does it affect? Obviously, a pathogen that affects children is very different from one that affects adults. It is about flexibility, adaptability and humility.

On Scotland specifically, one of the things that I, at least, was not aware of before the pandemic, but that I learned, is that local responses are much more accurate than a UK-wide response. Those of you who have worked in Scottish government, and more closely in Scotland, will already have recognised that. There is a need to understand the demographics in Scotland—what the population looks like, including ethnic minorities, but also the health demographics and things like that. For example, in the UKHSA, which I see as a technical agency and source of guidance, there has to be a nuanced understanding that Scotland is different and needs a tailored, local response for the population here.

Some of that work will go beyond Scotland. For H5N1, for example, the medical countermeasure will be a vaccine, and procuring that stock will be reliant on UK manufacturers. It will then go into NHS Scotland, which will distribute it.

That is my two cents.

Adam Harley: That is really helpful.

I have a quick follow-up question for you. You mentioned that we were required to close schools during the pandemic that we just experienced and that, initially, there was a sort of disbelief around that. The Covid inquiry also picked up on issues around groupthink while scientific and academic voices were raising the alarm about particular issues, or dissenting from a course of action, and how sometimes those voices were not listened to. Is there a danger of that happening again?

Professor Sridhar: When you get a group of people together—in relation to a pandemic or anything else—there is always a danger that they will not see major weaknesses, other ways to approach things or other perspectives. That reinforces the point that we need diversity in the room—people with different expertise and backgrounds. The education sub-group in the Scottish Government, which I was part of, was really strong on that. We had child psychologists on it who could speak about, for example, what a mask means to a two-year-old versus a 10-year-old versus a 15-year-old, which I would not have been aware of as a public health person who thinks that a mask is a mask. We also had a headteacher who could talk about implementation and what it means to bring in a mask mandate, and we had public health experts and people such as Dr Jim McMenamin who had the data on what was happening in the spread.

It is important to have different perspectives and different views. That is how we avoid mistakes, because we can be led to suddenly think, “I have a blind spot.” We all have blind spots. As I said, I never before would have thought about what a mask feels like to a six-year-old versus a 20-year-old, or about the implementation challenges for headteachers in saying that all secondary school children have to wear masks and in having somehow to get their students to do that, including those who do not want to wear a mask. Having

different people in the room is, for me, how we avoid those blind spots.

I do not want to get too much into it, but, when we talk about groupthink and the Covid inquiry, one of the issues was around the scientific advisory group for emergencies—SAGE. The problem with SAGE was that it had on it largely infectious disease modellers who perhaps did not understand how care homes operate, or about zero-hours contracts and issues such as that, which are about lived experience. When we have groups, they need to include a wide variety of views and everyone needs to listen to each other in order to reach an outcome that, although ultimately very difficult, hopefully brings in all those different views.

Adam Harley: That is really helpful. I will briefly ask the panel to talk more specifically about Scotland in following up on some of those points. I have a couple of direct questions. What are we doing right now to prepare for the unexpected in terms of a future pandemic or a future virus that might not behave like Covid? Where are we placed in relation to ensuring that we do not repeat mistakes such as groupthink, which we have just discussed?

Professor Smith: To go back to the beginning of the evidence that we gave, an important point is that we should not make the assumption that we will know the characteristics of the virus—if, indeed, it is a virus; it might be some other sort of pathogen—when it arrives. It is about being able to detect it quickly and then to analyse and understand its characteristics in relation both to the way that it spreads and its pathogenicity in terms of the way that it creates the disease associated with it. What we are doing right now, in order to be able to do that in Scotland, is enhancing the surveillance mechanisms that we have available to us, which give those signals of something different happening.

We are also investing. One of the techniques that became common parlance was genomic testing, which was an emerging technology at that point in time. It certainly was not mainstream technology. However, since the pandemic, through using genomic testing, we are able to understand so much more about the characteristics of a virus.

Given his expertise, I will pass to Dr McMenamin in a second, to say a little bit more about the particular aspects of surveillance and genomics testing that Public Health Scotland has been leading the way on.

Those are two of the most important things that we have done in Scotland. There is also, of course, the Scottish pandemic sciences partnership, which is creating funded research projects that will further enhance our ability to respond to and pick up those signals.

The Convener: Perhaps Paul McLennan can come in here. Do you have a follow-up on this, Paul?

Paul McLennan (East Lothian Coast and Lammermuirs) (SNP): It is more on care home settings.

The Convener: Okay. Dr McMenamin, do you want to follow up just now?

Dr McMenamin: On the genomics aspect, we are blessed in Scotland by two things. The first is that, academically, we happen to have the centre for virus research, which is based in the University of Glasgow. Secondly, the University of Edinburgh's virology expertise is also available to us. Those are just two of the many virological teams that are available to us.

We have seen how incredible advances were made across the course of the Covid pandemic and in the subsequent period in relation to metagenomics, whether for a next iteration of the virus or otherwise. Metagenomics is basically when we do not know what something is and do not understand whether it will be a virus or anything else, but we have available to us bits of genetic material such that we can look it up in an encyclopaedia that says, "Actually, this looks very like a particular kind of virus," or the like. The CVR and the University of Edinburgh are actively involved in that amazing development, which is now available to us. The whole area has been a recipient of funding, either directly from the Scottish Government or through Public Health Scotland, which is enabling that work.

There is also the Scottish pandemic sciences partnership. The committee just heard from Professor Sridhar about Ebola. We are also looking at whether, even before that step, there are early antibody tests that we can do for emerging infection challenges that might allow a local determination of whether there is or is not a problem emerging in the population. That is one of the three demonstration projects that the SPSP is already involved in.

Paul McLennan: It has been acknowledged that there were weaknesses in how we dealt with those in the care system during the pandemic, with a clinical position taken. What lessons can we learn from the pandemic about how to build resilience in the care system?

11:45

Professor Smith: We must acknowledge that what happened in the care industry in Scotland was an absolute tragedy, which affected many

people in the population, and it is important that we learn lessons so that we can do better next time. As you know, one of the UK inquiry's modules focused specifically on the experience in the care industry. The Scottish Government is considering its response to that module's recommendations, and we are working closely with Scottish Care in that regard.

Having a better understanding of how the care industry operates lies at the heart of the matter. We must utilise to best effect the skills that there undoubtedly are in the care industry, ensure that staff are supported—not just through the provision of PPE but through its proper use—and consider the characteristics of the patients in care.

I see that Professor McMenamin is desperate to come in, so I will pass over to him.

Dr McMenamin: In addition to what Professor Smith has said, I note that my colleague Scott Heald, whom I mentioned in relation to yesterday's public health conference, is working collaboratively with the care industry to see what data will enable us to best understand the current challenges and the impact of any intervention that might be available to us. It is fundamental that we address data gaps, and I look forward to the fruits of the endeavours of many of my colleagues, who are working with Scottish Care and others to ensure that we have data available to inform the actions that we can and should take.

Derek Grieve: As well as the point about data, the committee might find it useful to know that the Scottish Government recently published updated guidance on planning priorities and principles when dealing with surges, which is for the social care system as well as for the NHS. Our approach to pandemic preparedness applies across the whole system—we are not thinking about something for the NHS and something else for social care—but we recognise that the two systems are different and require a different response.

As the CMO and Professor McMenamin have indicated, we have a better understanding of the challenges and complexities as a result of better data, and it is important to note that many of the things that we are preparing for apply, by their nature, across the whole system, because the different parts of the system are so connected.

Paul McLennan: There is a parallel with the approach to schools, which has been mentioned. We have talked about the general population and the younger population, and we are obviously talking primarily about the older population in relation to care homes. You talked about the education department considering its approach to schools. Have you any thoughts about how that could apply to care settings? Professor Smith mentioned the engagement with Scottish Care.

A key issue relates to who will take leadership if there is another pandemic. In clinical settings, it will be you, Professor Smith, but who will take ownership in care settings and in school systems? That is an important point. I will bring in Professor Sridhar, but I might come back to the other witnesses.

Professor Sridhar: Care homes are probably as tricky as schools, because, although they are different sectors, they are just as vulnerable in relation to the harm that can be done and was done. On the point about how care homes are run, it comes down to the people in them: the carers. There was a real issue in preventing infections from getting into care homes, and that comes down to the people who provide the care—the contracts that they have, the precarity of their lives and where they come from. That is the tricky issue.

On a broader point, in relation to Scotland's ageing population, life expectancy has recovered from the hit that it took during the Covid pandemic, but healthy life expectancy is still not good. Recent National Records of Scotland data shows that healthy life expectancy—when people are not dependent on social care or healthcare systems—is 59 for men and 60 for women. That worries me, because it is likely that more and more members of our population will rely on social care in the years to come. What would that mean in a pandemic and more generally?

The conversation about pandemic preparedness must include consideration of what it means to have an ageing society and people living longer when there is sub-replacement fertility—there is not a young population coming up behind in the way that there was 20 or 30 years ago. What does that mean for healthy life expectancy? Are we happy with it being 59 and 60? I think that those are incredibly low numbers and reflect a real burden—not on systems but on individuals and families, as people think, "What will happen to my parents when they are 65 or to me when I get to that age?"

A broader conversation is needed that links social care to healthy ageing, because we cannot treat our way through an ageing population. Support for people in old age needs to be reserved for those who need a system to rely on. We need to think about how we get a healthier population overall, especially among the age groups over 60, because there will be a demographic shift to those age groups in the decades to come.

Paul McLennan: Who wants to come in on the leadership issue, which is important? Who should take the lead if there is another pandemic?

Professor Smith: Under the Civil Contingencies Act 2004, responsibility for pandemic preparedness in relation to adult social care lies with local authorities and integration joint boards. Undoubtedly, leadership is being shown in those bodies. In the event of another pandemic, we would expect that to be fed through the other level 1 system responders through regional resilience partnerships.

However, if we are to take an approach with the expansive scope that is needed, we cannot assume that leadership will come only from those bodies. Leadership is needed at all levels and must be blended with input from a variety of stakeholders, including people who live in care homes and their families. That is an important lesson, and it is why it is important that stakeholders such as Scottish Care and the families who have been impacted have a stake in the preparedness work. In the future, it is important that there is a blend of level 1 responders and a public health response.

Paul McLennan: Thank you.

The Convener: Professor Sridhar, you will be pleased to hear that we talk a lot about healthy life expectancy, which is actually below 60 for both women and men. Of course, that is an average, which takes into account people older than 60 who are still fit and a lot of younger people who are not fit.

That leads me to a question for Professor Smith initially. In relation to long Covid, I was part of a group that wrote to the Government in May or June 2020 to say that there would be a lot of cases of post-viral syndrome, given what happened with SARS-CoV-1 and the similarities with other post-viral conditions. It is now estimated that 100,000 people in Scotland have myalgic encephalomyelitis or long Covid, but that figure is based on GP records, so it will be an underestimate. At what point during the pandemic did the Government recognise that as an issue? Things happened very quickly. A lot of people who got the virus at the beginning, when it was more virulent, might have been affected. What numbers does the Government have on the issue, and what is it doing about it?

Professor Smith: Many viruses have the impact of chronicity, with long-term symptoms, and Covid 19—SARS-CoV-2—was no different. At the—

The Convener: I think that it is different when there are 70,000 cases.

Professor Smith: We will perhaps come back to that.

The impacts of long Covid on people are significant. We started to be aware of signals relating to chronicity at a very early stage of the pandemic, but the mechanism by which the effects were being exerted was unclear. Subsequent research has shown that there is a variety of mechanisms by which the syndrome or symptoms that we call long Covid have an impact on people. We are still in the process of understanding some of those mechanisms, so that treatment regimes can be sorted out properly.

We continue to invest in research to determine more information about the nature of long Covid and its background impacts. The Scottish Government is currently investing about £4.5 million a year in supporting people with long Covid across the country, and our boards have guidelines on how to do that. I do not have data just now that I can share with you about how many people across Scotland are impacted by the condition, but I can certainly see whether we can develop that for you.

The Convener: I would say that it is a matter of urgency. As I say, I believe that those figures come from GP records, but I could be wrong. I am talking about the group that has post-exertional symptom exacerbation, which makes it very much like the ME community, so I think that we can look at those groups together. Quite a lot of research has come out about that issue in the past 20 years, but nothing has changed in Scotland.

The figure of 100,000 people might be correct, but I am happy for you to send me some data that would prove it to be wrong. That would be great.

Those sufferers are often young people who are often unable to do anything with their lives or are just managing to do part-time work. They cannot manage to have relationships, and they struggle. If there are 100,000 of them, an investment of £4.5 million comes to £45 each, which is not really adequate. We are discussing that issue with the health secretary.

Interestingly, when members of the Bavarian health committee visited us, we asked them about the issue and they told us that it is recognised as a major issue in Germany, which recognises that it has lost a huge amount economically due to long Covid and is doing research on it. I am interested in what other countries Public Health Scotland is looking at in relation to the issue. I would be grateful if you could send the committee any information that you have in that regard.

I have another question for Professor Smith. During the pandemic, it was suggested that the origin of Covid-19 was clear. However, even at that time, top virologists did not seem to accept that. What is your view now of the origin of Covid-19?

Professor Smith: The origin of Covid-19 as in how it transferred into the human population?

The Convener: Yes.

Professor Smith: The evidence suggests to me that it transferred from an animal source in China. The accepted wisdom on that, in relation to scientific evidence, is that it probably came from an animal source in one of the many markets around Wuhan. I am aware of some of the other speculation about potential sources, but, as yet, the World Health Organization has been unable to find any hard and fast evidence to prove that the source is anything other than that.

The Convener: As a vet, I am interested in the processing of the issue. The idea is that it was a bat virus, but the bats were not native to that area around Wuhan. I am just interested in the trajectory of the infection, given that we are thinking about the possibility of future pandemics. Apparently bats have a lot of viruses that it is pretty unlikely we would want to have. So, once that bat had the virus, how did it get into a person, given that it is a respiratory virus?

Professor Smith: One of the things that people across the globe are keeping a close eye on is the evolution of zoonotic diseases, and vector-borne diseases in particular. We find that vector-borne diseases come about for a load of reasons. Occasionally, one host—a bat, a rodent or some other animal—can become infected by various vectors that we have in our environment, whether they be mosquitoes, midges, ticks or various other creatures, and that infection can be passed on to other animal sources as well. That leads to a process of evolution whereby infections begin to become endemic in other animal populations. There is a process—

The Convener: So, the bat bit a pangolin—I believe that that was the animal that was mentioned at the time, but I am prepared to take another mammal—

Professor Smith: There is a gradual process—

The Convener: —and it breathed on a person, or a person ate it, and then got a respiratory virus. Alternatively, the disease came from a lab in Wuhan that was conducting research, which sounds more likely—that is what Occam's razor would suggest.

Professor Smith: I am certainly not going to get drawn into any speculation in that regard, as there has, as yet, been no proven evidence for that.

The Convener: No, but there are a lot of scientists who think that the trajectory that you suggest is unlikely.

Dr McMenamin, do you have a view on that?

12:00

Dr McMenamin: I cannot add anything else. It is all conjecture. It would be great to see hard scientific evidence that would conclusively demonstrate what the origin of the virus was, one way or another.

The Convener: Do you accept that, in your horizon scanning in relation to a future pandemic, it is important to be open to looking at where that threat might come from?

Dr McMenamin: Absolutely, and the joint—

The Convener: So, if we were talking about the Challenger shuttle, we would ask why it crashed. It is not enough to know that it crashed; if you want to avoid that kind of thing happening, you need to determine how it happened.

Dr McMenamin: Absolutely, and the World Health Organization has done work on that jointly with veterinary colleagues in a similarly named organisation. We have a similar approach in the UK, where the Centre of Expertise on Animal Disease Outbreaks looks at animal infections, and we look at the zoonotic potential of those infections—that is to say, the potential for any infection to pass to humans from the animal kingdom. That joint work, and the joint work that we undertake with the SPSP, looks to see what could potentially affect a human population, either through direct exposure to an infection, or, as Professor Smith has alluded to, through emerging issues around climate change and infections that can be transmitted by ticks, mosquitoes or midges.

Professor Smith: Could I make a wider point on this just now, convener?

The Convener: Yes.

Professor Smith: We are talking about pandemic preparedness today, which is obviously an important topic. However, there is an allied topic that is equally important, which concerns our response to the changes in disease within our society. We are already seeing, through globalisation and climate change, a changing pattern of vector-borne diseases in particular, but also other infectious diseases, across Europe and the UK. We are seeing diseases such as dengue fever in northern Europe, which we have never seen there before. West Nile fever is becoming more ubiquitous across some of the countries in northern Europe, too. Even in this country, we are seeing for the first time various other tick-borne and midge-borne diseases that are impacting on animals.

When we are thinking about pandemic preparedness, it is important that we think not only about disease X waiting out there, but also about the presence of diseases that our population would not normally come into contact with, how

they might be exposed to them and how we could respond to that. That is relevant not only in relation to a pandemic. We have to recognise that we have a changing disease environment because of a variety of different factors, and we need to think about our response to that.

The surveillance mechanisms that are employed and are being developed by Public Health Scotland look not only across the animals in our country, but across humans as well, to see whether there is evidence of any of those unusual pathogens beginning to emerge, either in the vectors or in the animals of the country.

The Convener: Yes, you are right to say that that issue is important.

You have mentioned that we have level 4 virus labs in Scotland. Is research on coronavirus going on in any of them?

Dr McMenamin: I do not know. I would have to come back to you about exactly who is doing what where. I am aware of the sensitivities around level 4 facilities, so I will take my lead on what can and should be shared about level 4 facilities from Scottish Government and UK Government colleagues. I am happy to share what I find out, within whatever permissions I have.

The Convener: That is great. Moving on, Kayleigh Kinross-O'Neill, who is joining us online, wishes to ask some questions. We cannot unmute Kayleigh's mic, so, while we get that sorted, Heather Anderson will ask some questions.

Heather Anderson: Professor Sridhar, while you are here, I want to say thank you so much for keeping me sane during the pandemic. Your pieces to camera were incredibly important. In the paper that you shared with us, you mentioned the vital need to ensure that we can scale up manufacturing so that we can distribute vaccines quickly. You also talked about regional hubs being ready to scale up for mass production.

Professor Smith, you talked about investment in laboratory capacity, stocks of PPE and antivirals. Are the laboratories that we need available? If so, how much capacity do they have, and what stocks of PPE do we have? If we had a pandemic next week, how far would we get?

Professor Smith: I can start, and Devi Sridhar might want to come in as well. I will deal with PPE first. We now maintain a stock that we could use for 12 weeks at the maximum usage point that we had during the Covid response. There are also mechanisms by which we can enhance that during such a period. Beyond that, we maintain stocks of other countermeasures, which I have mentioned, such as antibiotics and antivirals. They are all kept in the background should we ever need to deploy them.

We also now have strategic partnerships with various companies. In general, those are at the UK level, particularly for vaccines. That means that when we identify the pathogen that is present, we can begin to use its molecular characteristics to develop vaccines such as those that we used to such good effect last time. Those strategic partnerships are also used in other ways in the production of vaccines, so we have the ability to pivot, if need be, if there were a pandemic in the future.

There has been heavy investment in labs across the NHS estate. A lot of learning about how we use the wider lab capacity across the country has also taken place. The Lighthouse labs that were deployed the last time have not been fully maintained, as would be expected. However, the ability to move back to a model of that type in the future, if it were necessary, is important; we must not lose the ability to do that in the future. The rapid evolution of viruses and the ability to test at scale are among the most important lessons of the last pandemic and must be a priority should we ever face such a situation again.

The Convener: Thank you, Professor Smith. Kayleigh is now online and she has some questions.

Kayleigh Kinross-O'Neill (Edinburgh and Lothians East) (Green): My questions build on issues that have already been mentioned, such as public trust in science and in Governments. I hope that they will leave members with food for thought on misinformation. With the rise of anti-Government misinformation and artificial intelligence giving out misinformation about health, what are your concerns about pandemic preparedness being in a vacuum or being overpoliticised, and how do we combat that?

Derek Grieve: I will try not to get drawn into the politicisation component of that question. The committee might find it helpful to know that the Scottish Government published the first Scottish health information integrity strategy in October 2025, which was the first strategy of its kind to be published in the world. Speaking as the former senior responsible officer for the Covid vaccine programme, I know only too well how important it is to give accurate information. That ensures that the public trusts that we will ensure that they receive the help that they require. Hopefully, that strategy is a helpful indication of the importance and priority that the Scottish Government places on that.

Professor Smith: I will say a bit more about the strategy. As Mr Grieve says, we are recognised by the World Health Organization as being the first country in the world to produce such a strategy, and other countries are learning from that. It is

incredibly important that we harness the lessons from the harm that misinformation and disinformation caused in relation to our response during the Covid pandemic.

The strategy, alongside further research into the issue, is absolutely key. We have mentioned the Scottish pandemic sciences partnership on several occasions, and one of the funded research projects is on how social media is used to ensure that there is trusted messaging. That will be an important aspect of our response in the future.

The Convener: Dr McMenamin wants to say something.

Dr McMenamin: That is exactly what I was going to say. One of today's recurring themes is that, as I said in my first response, no national exercise tests everything. However, there are opportunities to address misinformation and our laboratory capability, which was not tested during exercise Pegasus. There are opportunities for us to continue to refine everything that we do, and we look forward to addressing all of that in future exercises.

The Convener: We have had a very good discussion around about Covid. We have learned a lot, and I hope that we will get more information.

There are still a few minutes left. Professor Smith, I am sure that you will understand that people are very interested in what is happening currently. Jack Middleton would like to ask a question or two about that.

Jack Middleton: We have talked a lot this morning about the consequences of failing to act on weaknesses when they are identified. As the MSP for Aberdeen Central, I represent Aberdeen royal infirmary, so you will appreciate that I am keen to understand your role in the situation just now at NHS Grampian.

You discussed the clinical review that identified 19 potentially avoidable deaths at ARI with the then Cabinet Secretary for Health and Social Care, Humza Yousaf, in October 2022. As Scotland's chief medical officer at the time, which you currently remain, what specific steps did you take on reading those findings to make sure that no patients were in danger at ARI?

Professor Smith: First of all, thank you for your question, and I think that it is important to address it. I recognise that it is a great concern for many people across Scotland, not least those who live in the Grampian area.

For those people who feel that they need to seek any kind of clinical or medical attention in that area, it is my strong view that they should continue to do so. If it were me who was looking for care in that area, I would have no hesitation in seeking it. It is really important that people do not avoid going for care because of some of the representation of the issue that we have seen. That is my first point.

I was informed of a concern by the then executive medical director in October 2022.

Jack Middleton: Which was who?

Professor Smith: It was Dr Nick Fluck. Dr Fluck contacted me because he wanted to discuss the results of an internally commissioned external review that the board had commissioned into the hepato-pancreato-biliary services through the Royal College of Surgeons and conducted by Professor Giles Toogood and Professor Stephen Wigmore. It is unusual for me to have something like this relayed to me, but what he conveyed to me on those results was of sufficient concern that we needed a wider meeting about it, which I arranged, first of all, with the chief operating officer of NHS Scotland and members of the Grampian executive team, before we subsequently briefed the cabinet secretary at that time.

Dr Fluck brought me not just the results of that report, but a proposed action plan, part of which contained a recommendation to pause complex HPB surgery and divert patients to an alternative site for that surgery. That was appropriate.

12:15

Jack Middleton: How quickly were surgeries paused after that review was received?

Professor Smith: It is a small-volume surgery site, so they were paused very quickly thereafter, following the meeting and the briefing with the cabinet secretary. In fact, there was no scheduled surgery at that point in time, between those meetings. The aspects that were discussed were in the response.

It is probably important to outline the role of the CMO in terms of supporting with clinical information. It is my view that the review that was commissioned by NHS Grampian was appropriate. There was a signal there that had to be investigated further, and NHS Grampian did that in an acceptable and recognised manner for NHS Scotland in that it went to an external assurer to conduct the review.

Jack Middleton: At any point in the process, did you think it would be appropriate to make those findings public?

Professor Smith: That is not for me to decide—that is not my role. I give advice on the clinical side of things; I do not give advice on policy or political handling.

Jack Middleton: It is my understanding that the surgeries were then recommenced before being

paused—ceased—again in January 2026. What was your role in those decisions?

Professor Smith: My role was largely between October 2022 and May 2023, when the all-clear to start surgery again was given. During that time, Dr Fluck kept in contact with me and gave me updates on contact with patients, and on Professor Wigmore's progress in working with the unit to get it ready for surgery again. Endorsement of the restart of surgery was made in May 2023.

Jack Middleton: Was it your endorsement to restart surgery?

Professor Smith: No. It was Professor Wigmore's endorsement to restart surgery. The decision to restart surgery then was down to NHS Grampian.

Jack Middleton: How many times throughout all of that process did you visit ARI, see the clinical setting and meet the surgical team concerned here?

Professor Smith: I did not visit the surgical team during that time. I was a visitor to NHS Grampian and spent a day there in December 2021.

Joe Long: It is my understanding that there were several suspensions of surgery between 2022 and 2026. Is that right? When were those flagged to you and how would you have raised those concerns with the cabinet secretary or Government ministers?

Professor Smith: As you know, the cabinet secretary has determined a review of the process and what was known within Government during those times. It is important for that review to establish the facts and who knew what in Government at the time.

Joe Long: When would it have been flagged to you that there were further suspensions of surgery?

Professor Smith: It would not ordinarily have been flagged to me in the general way that I am aware of things in the system. That generally comes into Government through other routes, if it is flagged.

Joe Long: Do you think that it should have been flagged to you?

Professor Smith: I am not going to make a comment on that just now, because I think that we should wait for the output of the review to see whether proper processes were followed.

Adam Harley: In the time since hearing about the issues from Dr Nick Fluck, did you have any discussions with the First Minister about what was going on in NHS Grampian?

Professor Smith: No. I had no discussions at all with the First Minister in relation to this. The discussion that I had was with the cabinet secretary.

Adam Harley: In a situation where there have been 19 avoidable deaths, do you not think it would have been appropriate to ensure that the First Minister was aware of that?

Professor Smith: It would be for the cabinet secretary to decide what to make sure he was making other colleagues aware of.

Adam Harley: In your opinion, would it have been appropriate for the cabinet secretary to have informed the First Minister and ensured that all the necessary steps were taken?

Professor Smith: I think that is a question that you would have to wait for the output from the review for, to see whether processes were followed.

The Convener: We appreciate your giving us your time on this matter, Professor Smith. It is not what you were called here for, but it is obviously one of the major things in everybody's mind at the moment.

Before this current week, people were very interested in another point about NHS Grampian, which was the cessation of certain paediatric operations at Dr Gray's hospital. What involvement did you have with the ongoing clinical problems there?

Professor Smith: Members of my team have been closely involved with the assurance board, which has been put in place to oversee the escalation of NHS Grampian to level 4. They have been providing input into that space for many, many months and they have my delegated authority in that space to act. They also have the necessary expertise and competencies to input into that fully and effectively.

The Convener: Other NHS inquiries are ongoing, and some of them take a very long time. There are currently major concerns among people who are using Queen Elizabeth university hospital and who maybe have children in the cancer ward. I was there recently and walked through what seemed like a building site at times. I wonder what your remit is there. We cannot just wait for an inquiry, because inquiries take years and people are still going into these hospitals, so we still need to have ongoing answers about what has been happening to improve them, regardless. Could you address the issue of the Queen Elizabeth university hospital?

Professor Smith: As you know, a hospital inquiry is going on there just now. Perhaps it is useful to explain the different parts of our NHS

Scotland system and what their roles are. It is potentially important to say that our national body for assurance and scrutiny is Health Improvement Scotland, which has been involved quite regularly in visits to the Queen Elizabeth university hospital, examining various aspects and making follow-up visits. It continues to feed into some live issues there just now. Again, it is important to say that that differs greatly from the role of the chief nursing officer or chief medical officer within Government, who do not have a role in the assurance or scrutiny processes. Our role within Government is as the professional heads, and we provide advice to officials and ministers in that sense. It is for the national scrutiny bodies to do the inspection visits in a way that provides assurance. There are other ways that we do that as well—for example, through antimicrobial resistance and healthcare associated infection—ARHAI—Scotland. However, that recognised system is the really important part.

The Convener: That is helpful. As the professional head of other professional heads, you meet them regularly. If there is an ongoing problem with what seems, possibly, to be the training level of professionals, do you speak to them and say, "Look, you need to do something about the training and continuing professional development here?" Is that part of your role, or is it not?

Professor Smith: That is part of the process. Part of the process is ensuring that, across Scotland, we have the training schemes and packages that support professionals to do their roles, and that we have the governance framework that enables the boards, as the accountable organisations, to deliver care to a quality that is assured and that also gives assurance to Scottish ministers. I have a variety of other specific remits. I am the higher-level responsible officer for Scotland, which has a specific remit around about the revalidation and relicensing of doctors.

The Convener: That is very helpful.

Dr McMenamin wants to say something.

Dr McMenamin: I will comment on one specific aspect that you took us into—NHS Greater Glasgow and Clyde. I am a member of the patient safety oversight group that is jointly chaired by the chief executive, Jann Gardner, and by Professor Sir Lewis Ritchie, and that is an important component of what is done at that local level to try to provide assurance. That group has patient representation on it, so that patients can contribute to that local assurance. The group continues to meet, and we look forward to its conclusion over the coming months.

The Convener: As part of that group, do you feel that things are moving in the right direction? Are the patient representatives on the group happy with the progress that is happening while they are waiting for this inquiry?

Dr McMenamin: I can only tell you that, from my perspective, looking in, it is great to have the contributions that those patient representatives are able to make. Using real-life examples that they have previously encountered, or through the groupings that they represent, their input can influence the direction of travel.

The Convener: Thank you. That is very useful.

We have run over our time, so I very much appreciate the input from all four of the witnesses, although I think that Professor Sridhar has now moved on. Thank you very much for your evidence. It is very helpful, and we will consider it as we go forward.

Next week, the committee will meet on the subject of NHS Grampian in further detail.

12:26

Meeting continued in private until 12:56.

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