OFFICIAL REPORT
AITHISG OIFIGEIL

Public Audit Committee

Thursday 17 March 2022

Session 6

The Scottish Parliament
Pàrlamaid na h-Alba

Thursday 17 March 2022

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PUBLIC AUDIT COMMITTEE
9th Meeting 2022, Session 6

CONVENER

*Richard Leonard (Central Scotland) (Lab)

DEPUTY CONVENER

*Sharon Dowey (South Scotland) (Con)

COMMITTEE MEMBERS

*Colin Beattie (Midlothian North and Musselburgh) (SNP)
*Willie Coffey (Kilmarnock and Irvine Valley) (SNP)
*Craig Hoy (South Scotland) (Con)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Stephen Boyle (Auditor General for Scotland)
Roy Brannen (Scottish Government)
Jo Green (Scottish Environment Protection Agency)
Derek Hoy (Audit Scotland)
Leigh Johnston (Audit Scotland)
Stuart McGregor (Scottish Environment Protection Agency)
Helen Nisbet (Scottish Government)
David Pirie (Scottish Environment Protection Agency)

CLERK TO THE COMMITTEE

Lynn Russell

LOCATION

The James Clerk Maxwell Room (CR4)

Scottish Parliament

Public Audit Committee

Thursday 17 March 2022

[The Convener opened the meeting at 09:00]

Decision on Taking Business in Private

The Convener (Richard Leonard): Good morning and welcome to the ninth meeting in 2022 of the Public Audit Committee. Before we begin, I remind members, witnesses and staff who are present that social distancing rules apply in the Parliament, and that they should wear face coverings when entering, leaving or moving around the committee room.

Agenda item 1 is a decision on taking business in private. Do members agree to take items 4, 5 and 6 in private?

Members *indicated agreement.*

Section 22 Report: "The 2020/21 audit of the Scottish Environment Protection Agency"

09:00

The Convener: Agenda item 2 is consideration of "The 2020/21 audit of the Scottish Environment Protection Agency". I am pleased to welcome our witnesses this morning, all of whom join us online, as does our deputy convener, Sharon Dowey. I welcome from the Scottish Environment Protection Agency: Jo Green, acting chief executive; Stuart McGregor, chief finance officer; and David Pirie, executive director, evidence and flooding. From the Scottish Government I welcome: Roy Brannen, interim director general, net zero; Helen Nisbet, director, defence, security and cyber resilience; and Kevin Quinlan, director, environment and forestry.

As we are quite tight for time this morning, I would appreciate succinct questions from committee members and succinct answers. On 31 March, the committee will take evidence on major information and communications technology projects in general, at which point we will look at some of the wider read-across from the cyberattack that SEPA sustained and the lessons that we need to learn. I encourage people to be as disciplined as possible, but I hope that our line of questioning will take that into account, too.

Jo Green and Roy Brannen should feel free to bring their colleagues in, if it will be helpful. If those who join us online want to come in at any point to give evidence in the conversation that we are having, they should type R in the chat function, and we will pick them up at the appropriate time.

I invite Jo Green, who had hoped to attend the meeting in person this morning, but is joining us virtually, to make a short opening statement.

Jo Green (Scottish Environment Protection Agency): Good morning. SEPA was the victim of a determined and sophisticated cyberattack that was orchestrated by international serious and organised criminals and which has had a significant impact on our operations and ability to deliver our full range of services. The loss of access to data also impacted on our ability to report for financial year 2020-21 as well as produce our annual report and accounts.

Our focus throughout our response and recovery has been on protecting the environment and communities, protecting and supporting staff, ensuring the most critical service delivery on flooding and environmental regulation and, instead of building back, building new in a way that sets us

up better to meet future environmental challenges. A key aim has been not only to learn from the cyberattack on us but to share that learning. In October, we published and widely shared independent reviews that we had commissioned. We have implemented 35 of the 44 recommendations that were made in the reviews and have made good progress on the remaining nine.

More than 12 months on from the attack, service delivery remains very challenging but, in difficult circumstances, our staff are still delivering important work for the environment and communities. We have now stabilised our most critical systems and are making good progress in the difficult and complicated job of recovering data, but there is still more to do. Experiencing such a sophisticated criminal attack has been very difficult for our staff, and I thank them all for their commitment, flexibility, hard work and resilience. We are also grateful for the support that has been provided by the Scottish Government, Police Scotland, the National Cyber Security Centre and the Scottish Business Resilience Centre.

Before I close, I would like to clarify one point relating to the evidence that the committee received on 10 February. One of the questions was about just 1.6GB of data being stolen, which might not seem so much. Although a very small amount of our data was stolen and published illegally on the dark web, the attack left most of our data inaccessible, as it encrypted or deleted that data and the systems that enable us to use it. That was what made the attack on us so significant.

I will lead for SEPA in answering the committee's questions, but I am also joined by colleagues.

The Convener: Thank you very much, particularly for that very helpful clarification. Indeed, Willie Coffey will be asking questions on that particular subject later in the meeting.

Sharon Dowey, who, as I said earlier, is joining us via videolink, has a couple of questions to start us off.

Sharon Dowey (South Scotland) (Con): Good morning. We know that the cyberattack is subject to an on-going police investigation, but are you able to confirm whether investigations are on-going to establish, as the report says,

"the exact route source of where the cyber-attack breached SEPA's systems"?

Once those investigations are complete, will that information be shared with us or will it remain confidential?

Jo Green: We have a high degree of cybersecurity maturity, but the attack on us was very sophisticated. As you have said, the attack is subject to a live criminal investigation, so there is only a certain amount that we can say about the route in, but I will pass over to David Pirie to talk about that.

David Pirie (Scottish Environment Protection Agency): Good morning. As Jo Green has said, the attack was highly sophisticated. Following the attack, we undertook a number of reviews, one of which was a technical forensic review that informed the Police Scotland investigation. We have not published the technical forensic review as it is part of the criminal investigation, but the headline methodologies and headline information about how the attack happened were published in the SBRC review. The exact route into SEPA's systems and the particular phishing email that originated the attack have not been identified, but the forensic investigation identified that a phishing email was the most likely source into SEPA's systems.

Sharon Dowey: Paragraph 14 of the Auditor General's report states that a

"SEPA staff member received a system alert at midnight on the morning of the 24 December 2020"

and that they

"were unable to reach the key senior management contact to escalate the issue at this point."

The Auditor General has told us that SEPA reviewed its immediate response protocols following the cyberattack. Are you able to give us a brief outline of the changes that have been made as a result of the review?

Jo Green: Yes. To be clear, I point out that SEPA has a strong culture of resilience, governance and incident and emergency management, all of which kicked in quickly when the incident happened. Again, though, I will pass over to David Pirie to talk specifically about the issues that have been raised.

David Pirie: As has been said, we have taken on board the reviews and are working our way through the 44 recommendations. We have reviewed, renewed and updated all our cyber response procedures and playbooks on how we initiate our response to such incidents, but I should say that, on the evening of the cyberattack, our response was effective and worked to plan.

Sharon Dowey: So you are happy that, with the new procedures that you now have in place, you will not have the same issues that you had on the night of the attack.

David Pirie: I do not think that the issue with regard to escalation was material to the impact of the attack—that is, I do not think that it made any difference in that respect—but I am confident that the new procedures that we have in place will be effective.

The Convener: As I mentioned, Willie Coffey has a series of questions to ask.

Willie Coffey (Kilmarnock and Irvine Valley) (SNP): Good morning, everybody. Jo Green said that progress has been made on the recommendations—you have implemented 35 out of 44 of them. I want to explore the back-up issue. We know from the previous paperwork that the back-up data was targeted first, which rendered it inoperable, and you could not perform a back-up. Could you tell us about the current back-up situation? Have you addressed that issue through the action that you have taken since then? Is the back-up data now entirely separate from the main systems data?

Jo Green: That is obviously a key issue in terms of cybersecurity. I stress that the attack on us was extremely sophisticated and had a number of components to it. We had implemented what was, at the time, best practice in back-up policy, but the attack specifically targeted back-up systems as our team tried to recover and restore back-ups. We have made a number of changes, and I will pass over to David Pirie to talk about the detail of those.

Willie Coffey: Is David still online?

The Convener: We have been having some problems with David Pirie's connection. I cannot see him on my screen. We were going to put him on audio only, but he does not appear to be there.

Is there anyone else on your team who could pick that up? If not, I will ask Willie Coffey to move on to his next question.

Jo Green: Would it be possible to come back to that question, if we manage to connect with David Pirie, because he would be so good at answering it?

The Convener: That would be fine. We always have the option of asking you to provide us with a written response to any of our questions if, at this point, you are unable to answer them to the fullest extent that you would like to.

Willie Coffey: I thank Jo Green for that answer. David Pirie does not need to tell us about the details. The committee simply wants to be reassured that the back-up strategy is different from, and more secure than, the previous one. As we all know, another phishing email could come in on any day, through which—by clicking, linking, following or whatever—staff could inadvertently provide access to your systems data. I just want to get a sense that that issue has been recognised and that steps have been taken to provide additional protection for SEPA's systems data.

Jo Green: We had three levels of protection around back-ups, which was in line with best practice at the time, but we have made improvements since then, based on the recommendations that were made in the audit.

Willie Coffey: Is there now physical separation between the main systems data and the organisation's back-up data? To my mind, that would mean that any further attempts of a similar nature could not succeed.

Jo Green: Yes. As part of the 3-2-1 best practice that we had at the time, there was some physical separation in one layer of our back-ups. That was already there, but if David Pirie is able to join us, he can provide some of the detail, or we will follow up in writing to clarify that.

Willie Coffey: What staff support, financial support or other support has SEPA had from the Scottish Government to get through the attack, recover from it and move forward? Other organisations are vulnerable to such attacks, not just SEPA. Have you been able to share your experience with other bodies to make them aware of what might happen and of the actions that you have taken that they might wish to consider implementing?

09:15

Jo Green: I will talk about support and then learning. We are very grateful for all the support that kicked in quickly on the back of that significant and serious criminal attack on us. The Scottish Government moved quickly to support us. For example, our most critical staff, including our emergency team, had access to 120 secure Government laptops. We are really grateful for that. On the finance side, colleagues in SEPA worked closely with the Government.

We had strong support in the early days, especially from Police Scotland, the National Cyber Security Centre and the Scottish Business Resilience Centre. That enormous support was around us in the early stages of our response to the cyberattack.

On learning, that is one of the first things that we landed on. The situation was so serious that we knew not only that we could learn from the attack but that others could learn from it. We commissioned four independent reviews. Those were for us to learn from, but we shared them widely. Last October, we held an event to make public the lessons for us.

The reviews, including the Police Scotland one, were useful in that they made recommendations for us. Most of the recommendations were also for other public bodies, and it was clear what they could take from what had happened to us.

Willie Coffey: Thank you very much for that. If David Pirie comes back online, I might—

The Convener: He is back.

Willie Coffey: Can I go back to him?

The Convener: Of course.

Willie Coffey: Hello, David. I cannot see you on screen. I was asking about the back-up strategy and whether you could give the committee some assurance that the back-up procedure that is in place will, as far as possible, make the same type of cyberattack impossible to succeed, and that your back-up data is physically separate from the main systems data.

As I understand it, the hack reached the back-up data first, so you were unable to reinstate your systems. Have you taken steps to make sure that that data separation is physical, so that the back-up data cannot be attacked, should there be a future attack?

David Pirie: Yes, we have. We had a well-developed strategy for back-ups. The reviews have indicated that we broadly complied with best practice. We had three layers of back-up: a real-time synchronous back-up, off-site back-ups and air-gap back-ups.

When the attack happened, the criminals began encrypting our data. As they did so, they copied that to our synchronous back-up, so the synchronous back-up became encrypted in real time. The criminals targeted and deleted the off-site back-ups. Our air-gap back-ups covered some of our main data sets but not all of them.

Since the cyberattack, we have taken on board the recommendations and put in place new offline back-up arrangements that cover all our data.

Willie Coffey: I appreciate what you have said, but can you please confirm that, should something of a similar nature occur again, the back-up data could not be physically or logically accessed by any hackers who might wish to do that? There has to be complete separation of your data to protect it from future hacks.

David Pirie: Yes, I can confirm that.

Willie Coffey: Great—thank you very much for that.

The Convener: I am conscious of the fact that Roy Brannen is on the panel and that the Scottish Government's role was mentioned in that question. Do you want to come in?

Roy Brannen (Scottish Government): As this was before my time as director general, I will bring in Helen Nisbet, who was there, but from what I can see, and as Jo Green said, there was a lot of activity and close working early doors on 24 December 2020. The on-call cyber resilience unit was contacted early doors and the chief information security officer was engaged, and both of them established the national cyberincident co-ordination arrangement that flowed through the day. As well as providing laptops, secure email accounts and information technology support, we allowed access to the cyberincident response company that provided the early help to SEPA. SEPA's budget in 2021-22 was also uplifted by £2.5 million, but the organisation did not use that funding in its entirety. Support from the sponsor team was pretty good in the early days and continued through the year, with regular engagement with SEPA's management on performance measures that we were tracking as we tried to help the organisation to recover.

Helen Nisbet might want to say a little bit more about the early response from our cyber colleagues.

Helen Nisbet (Scottish Government): As you said, from the word go—I think that it was 11 o'clock on the 24th—the Scottish Government's chief information security officer and the on-call cyber resilience team were notified by David Pirie of the incident, and it quickly became apparent that the attack was of such magnitude that we needed to stand up the incident management plan, which we did.

As for the incident management response company coming in, the critical thing in the early stages of an attack is to get to grips with what has happened, and a bit of time is always required to carry out that diagnostic work. By the time of our first cross-working meeting on 27 December, which brought together the National Cyber Security Centre, Police Scotland, the sponsorship team and, of course, SEPA colleagues, we had already started to push out across the broader public sector in Scotland—and beyond that to, for example, the NCSC, which we were obviously feeding into—our understanding of the attack, so that other companies and organisations could see whether similar activity had been happening in their own area and could take appropriate action. We continued that work in the weeks following the attack.

Willie Coffey: Are you content that, should there be another successful cyberattack attempt, the back-up data could not be accessed, encrypted, destroyed, stolen or otherwise?

Helen Nisbet: I am not a technical expert on such things, but action has been taken in accordance with the recommendations, and we are satisfied in that respect. As you will appreciate, such activity involves almost a constant game of cat and mouse; in some quarters, those who try to infiltrate systems see it almost as a game or challenge to overcome whatever measures are in place. We always face that challenge, but I am satisfied from the reports that we have received that SEPA has taken steps to meet the challenge

and deal with the vulnerability that was exposed in the attack.

The Convener: Thank you very much. David Pirie will be with us for the rest of the session, but on audio only.

Colin Beattie (Midlothian North and Musselburgh) (SNP): Clearly there is still some distance to go with recovering data and so on. Do we have any feel for how much data has still to be recovered? How many systems need to be re-established or developed as a workaround?

Jo Green: In the early stages of the attack, we were really concerned about data and what could be recovered. The work is very difficult and complicated, but the headline is that we estimate that more than 80 per cent of our data has now been recovered. Access is still limited, because we need the systems to be able to get to the data, but really good progress has been made on recovering it.

David Pirie can talk about some of the other aspects that you have raised.

David Pirie: Yes, we have successfully recovered just over 80 per cent of our data. That includes all of our email correspondence and a large proportion of our finance and human resources records. Most important, it includes raw environmental data, such as ecological, chemical, hydrological and discharge results that represent our understanding of the state of Scotland's environment and go back for almost 50 years.

We have recovered that data, but there are systems that we still need to recover, and about 20 per cent of our data remains encrypted or deleted and inaccessible to us. It will take a considerable time to rebuild the systems to give us free and easy access to the data that we have recovered. Recovery is the first step, but the second step is building systems that allow us to access that data.

Colin Beattie: Just to make it clear in my mind, when we say that data has been recovered, does that mean that data that was encrypted has been decrypted or that the information has been rebuilt, perhaps using manual records?

David Pirie: None of the data has been decrypted. We did not pay the ransom, so we do not have any decryption tools. The data has been recovered from offline back-ups of the sort that we were discussing earlier. It has mainly been recovered from offline back-ups, but some data has been recovered by restoring it from sources or locations that were not impacted by the attack, such as our website and other publicly available locations. Some data has also been recovered from manual paper-type records that we held.

Colin Beattie: None of the data has been decrypted. Do we have resources that are capable of doing that, or is it simply too difficult?

David Pirie: It is my understanding that it is too difficult. We certainly have not managed to decrypt any of the data. Very occasionally, decryption keys become available when criminal groups either fall out with one another or get caught by law enforcement agencies. It is not impossible that a decryption key will become available, but the advice that I have received from law enforcement agencies is that it is highly unlikely that we will get one.

Colin Beattie: Continuing on the same line, are there any services or projects that you are unable to provide or deliver at the moment?

Jo Green: Service delivery was obviously challenging in the immediate aftermath of the cyberattack, but our business continuity arrangements kicked in quickly. We were quickly able to provide our flood risk warning service and to do incident response and regulation. Our most critical services kicked back in very quickly, within a day.

After that, we have been on a phased and planned approach to recovery of services. In the early stages, there was a period when we were stabilising really basic services such as bringing our staff back online so that they could communicate and have access to email systems. There has been a gradual and planned approach to all of that.

Quite early on, we put weekly service updates on our website so that people could see the status of our services. Over time, we have brought services back online but, at the moment, it is still very challenging to deliver them, because we need to build the new systems to make it easier to operate in the organisation.

Colin Beattie: At this moment, are there any services that you are not providing?

09:30

Jo Green: One service that we are not currently providing, which we normally would, is a public register. That relates back to data recovery. We have a planned approach to data recovery and to bringing things back online. We need to re-establish our public register.

Colin Beattie: Have any projects been seriously impacted—either delayed or put on the back burner—as a result of the attack?

Jo Green: Clearly, immediately after the attack, we pulled together a plan for the year—an annual operating plan. We are doing a series of projects to deliver and build back and we have kept largely

on track with that during the year. The effort and flexibility of our staff to deliver projects in very difficult circumstances have continued throughout the year. I will just give some highlights of what we have managed to do.

We have been monitoring Covid in waste water—we have kept our labs going and have managed to do that. Our expertise in designing and implementing a monitoring network, coupled with our scientific capabilities, enabled us to make that contribution to the response to the pandemic. We are also responsible for the forecast and monitoring of Scotland's water resources. We produce a weekly water scarcity situation report between May and September, and again we managed to keep that going. Similarly, we successfully monitored Scotland's designated bathing waters.

In the key headline areas of priority, therefore, we continued to deliver during the year, but it was extremely difficult.

Colin Beattie: You have not said whether there are any services that you are not able to deliver at the moment.

Jo Green: The public register is one. We see that as very important and we will get it back online.

Colin Beattie: Are there any other services that have been impacted?

Jo Green: It has mainly been about services being delivered in different ways, rather than them being impacted. For instance, we have a significant role in responding to planning consultations and working with planning authorities. Clearly, in the early days, we had lost access to our data and files, so the initial communication was very difficult. Very quickly, our planning service kicked in and made direct links into each local authority to triage what was most important for us to get on with in order to provide advice to the planning authorities. We cleared the backlog and established a different way of operating with the planning authorities, which we intend to carry forward. There has been a lot of ingenuity and finding workarounds in difficult situations, but some of that is stuff that we will want to continue in the future.

Colin Beattie: I have one final question. I believe that you have established a figure of £17.9 million as the potential worst-case scenario for costs. Are you able to firm up on the cost to date and give a projection of the cost of the recovery and your responses?

Jo Green: Yes. We are doing work to pin down the cost of the cyberattack. We intend to publish that and make it available, which should be by the end of this month. It is imminent; we are doing that detailed work now. Clearly, it is not necessarily straightforward. As I say, we are not recreating all our old systems. We are building from new and some of that is investment that would have been needed in the coming years anyway, so it is quite tricky to pull together the accurate cost of the cyberattack. That is what we will do, and we will try to lay it out as transparently as possible so that people can see it.

I will just check whether Stuart McGregor, our finance officer, would like to come in on that question.

Stuart McGregor (Scottish Environment Protection Agency): Thank you very much. I will take the question on the £17.9 million first. That was based on a paper that was prepared in 2019, which was part of our normal practice of doing some forward financial forecasting over a number of years. There were a number of forecasts in that on potential reductions and increases in grant funding, and there were some wide ranges. That was to give the board and the management team a feel for the potential challenges that we might face in the future. The £17.9 million was out there as the worst-case scenario that we should look at, but that is not coming to fruition. In the main, we have had flat-cash settlement budgets for grant in aid. Although that adds some complexities for us in covering wage awards, inflation and so on, the figure is certainly not near the £17.9 million value that was quoted in the report.

The on-year finances are looking okay. In 2020-21, we did not need to utilise the £2.5 million from the Scottish Government—we operated well within that. In the current year, we are looking at the forecast outcome against the planned budget being there or thereabouts. We work closely on forward forecasting with the Scottish Government sponsor and finance units, and we are nowhere near approaching the figure of £17.9 million.

Colin Beattie: [*Inaudible*.]—correctly. Obviously, there are costs. That is mitigated to a certain extent by SEPA accelerating the delivery of its digital strategy. I presume that that is within your budget in any case. I am not putting words in your mouth, but the impact on your budget should therefore be much less financially.

Stuart McGregor: Yes, that is the case. You have summed it up well. We look at our annual allocation—it is a one-year settlement—and we are working within that. We prioritise delivering the priority outcomes for SEPA in the budget strategy. We are not expecting major gaps, although there will be challenges across the public sector with the funding availability.

You are correct about moving forward with cyber. We have to bring forward some of the digital strategy, so we are reprioritising our spend

within the year to do so. We are phasing over the period of time.

The Convener: Thanks, Mr McGregor. That is helpful.

I want to go back to a point that Jo Green made a few minutes ago. Jo, you told us that the public register is the one service that is not currently available as a result of the cyberattack. For the layperson, will you explain what information is captured in the public register and what we cannot see that we normally would be able to see? When do you expect the public register to come back online?

Jo Green: Our public register is where we make available all the information on the permits that we issue. I might check with David Pirie when it will come back online. We have had a planned approach to data recovery, and we are just going into the next phase of planning to set out what we are going to recover and when. I do not know whether we can say at this point exactly when the public register will come back online, but I will check with David Pirie.

David Pirie: We are bringing our services back online in a phased manner. Some services are already back online. Some of our licences for things such as septic tanks and some of our waste carrier notices are already online, but it will be a considerable time before we have all our services back up and online. When I say "considerable time", I mean years. It will probably take us at least a couple of years to get all our services back up and online.

The Convener: Wow—that is quite a stark conclusion to draw, isn't it?

Craig Hoy (South Scotland) (Con): Obviously, the impact of the cyberattack is significant, and it will be felt throughout the organisation. I have questions about staff training and future workforce planning.

You all seem to be in quite good spirits this morning, but you might want to say a little about the impact of the attack on staff morale and how that has been managed since December 2020.

Jo Green: I am glad that you asked about that—it has been uppermost in the minds of the exec team throughout. I come back to the point that being victims of such a significant cybercrime has been very difficult for staff, particularly when set against the backdrop of the pandemic and what everyone was already dealing with personally and professionally.

SEPA has a culture of resilience governance and incident and emergency management. We are used to responding to incidents, but the extraordinary levels of flexibility and commitment that we saw, which went even beyond that culture, were quite something. The attack happened on Christmas eve, and people voluntarily gave up their leave and just kicked in. Over many months, they have carried an awful lot.

We have talked about the loss of access to data and to some of our services, but we still have the skills, experience and ingenuity of 1,300 people in the organisation, which have allowed us to keep operating services without some of the systems and data that we talked about.

What did we do? We did a range of things. Communications were critical so, straight away, we started communicating with our staff weekly or sometimes more frequently. We pulled our managers together weekly in order to support them and enable them to support staff. Communications were a huge focus so that people knew what had happened, what was happening and what was coming next. It was critical to bring our staff back online, because people had lost access to email and the ability to communicate easily. Therefore, bringing people back online over a period was important.

The attack was a crime and, understandably, staff were concerned about their data having been stolen and staff protections. We made available antivirus software for their use at home, and Police Scotland pulled together great guidance to help our staff to understand the actions that they could take to protect themselves. We had a number of means of support from the organisation and others.

I will mention Unison's efforts throughout this time. In SEPA, we have a strong collaborative working relationship with Unison, and the support that it provided to the organisation was key. We gave Unison a seat at the table for our emergency management team meetings, all-staff calls and manager calls. It played a significant role throughout.

Craig Hoy: As a result of the SBRC review, there was quite high awareness of and training in cybersecurity—95 per cent of staff underwent cybersecurity training in 2020. Since the attack, how have you approached the issue in order to raise awareness and develop skills among staff in relation to emerging and future risks to cybersecurity?

Jo Green: We had a good level of cyber awareness in the organisation already. As Police Scotland said, we are not a poorly protected organisation in terms of cyber. Training for staff is key, and I will ask David Pirie to talk about that.

David Pirie: As we developed our new systems and brought staff back on board, we had an induction session for every staff member and went through dos and don'ts. We utilised the National Cyber Security Centre's security training, which all

staff went through. Just this week, we have purchased new cybersecurity training and we are about to launch a second wave of cybersecurity training for our staff in the coming month.

As everybody was brought on board following the incident, they went through training and, this month, they will be going through a second set of cybersecurity training.

Craig Hoy: I will put this question to both David Pirie and Helen Nisbet for SEPA's and the Scottish Government's perspectives. Earlier, Helen described the situation as a game of cat and mouse, and cybersecurity is getting increasingly sophisticated. What impact is that having on workforce planning to ensure that public bodies—SEPA and the wider public sector—have the skills that they need to make sure that they can not only recover from this attack, in the case of SEPA, but safeguard against future attacks?

09:45

David Pirie: Cybersecurity is an increasing threat and, as indicated earlier, it is a game of cat and mouse. There are two areas of our cybersecurity training: there is the general training that we talked about earlier for all staff, because staff are the first and best line of defence, so we need to keep them aware of the broad threats. The second area is the more detailed, advanced training for our information services specialists in relation to all the new and emerging threats.

I am pleased to say that, since the SEPA event, we have seen increased support in that second area from the Scottish Government. Since the SEPA cyberattack, regular forums have been held by Scottish Government cyber professionals, where they share intelligence, learning and approaches for some of our cybersecurity staff to make them aware of upcoming threats and things that they need to be aware of. That has proved very useful in recent months.

Helen Nisbet: David Pirie has described the SEPA experience. From our point of view, we rely heavily on the strategic framework for a cyber resilient Scotland that was launched in February 2021, which built on the original cybersecurity strategy that was published in 2015.

We are adopting a multifaceted approach. Rather than having a strategy to be reviewed every few years, we have a framework that can be built on with successive action plans.

We have four action plans covering 2021 to 2023 activity just now that seek to achieve the same things across the public, private and third sectors. The four overarching aims are that, across the piece, people recognise cyber risks and are well prepared to manage them; that businesses and organisations recognise cyber risks and are well prepared to manage them; that digital public services are secure and cyber resilient; and that our national cyber instant response arrangements are effective.

There is also a training and skills action plan. The key thing that we are trying to do with that is to embed cyber resilience and an understanding of the need for cyber resilience through the education system, starting with schools and going through into further and higher education, so that general awareness is established. We are also looking at what we can do to establish that pipeline of skills that brings properly qualified cyber resilience and cybersecurity people into the workforce because, as David Pirie has said, and as I said earlier, this is a growing problem and it is unlikely to diminish.

I will just add one last thing on what support we have been offering since the attack. The National Cyber Security Centre makes a number of products available that allow businesses to self-assess their cyber resilience. There is a base or foundation level known as cyber essentials that allows organisations to self-assess and there is a higher level known as cyber essentials plus, which is basically self-assessment. It is not accredited, but there are cyber technical challenges that allow organisations to be tested on their understanding to see whether there are any weaknesses. There is a product called exercise in a box, which is almost as it sounds. It is a packaged exercise that can be utilised by organisations to test their understanding. We have supported the use of that across Scotland in the past several months, both financially and through public awareness.

More recently, via the public sector cyber resilience network that has been established, we have been doing sessions to raise awareness of the current heightened level of risk as a consequence of the current events in Ukraine. We have set up a daily information-sharing cell to ensure that we pick up on anything that is happening. We have also been able to engage with the Scottish Government chief information security officer to offer surgeries, primarily to public sector bodies, to answer any technical questions on our current cyber resilience needs.

Craig Hoy: That is reassuring—thank you.

The Convener: As I mentioned, some of those broader themes will be picked up in the evidence session that we have planned for 31 March.

That brings us to the end of our short evidence session on the report on SEPA. I once again thank Jo Green, acting chief executive of SEPA, Stuart McGregor and David Pirie, who joined us visually and by audio only at points. Thank you very much for the evidence that you have given us, which has

been valuable. I also thank Roy Brannen, Helen Nisbet and Kevin Quinlan from the Scottish Government, who also joined us. If there are any points that, on reflection, you feel that it would be useful for us to have, by all means submit them to us in writing—we would receive them gratefully.

I briefly suspend the meeting so that we can have a changeover of witnesses.

09:51

Meeting suspended.

09:52

On resuming—

Section 23 Report: "NHS in Scotland 2021"

The Convener: Agenda item 3 is a discussion of the Audit Scotland report "NHS in Scotland 2021". I am delighted to say that we are joined in the room by the Auditor General for Scotland, Stephen Boyle—welcome, Auditor General. Alongside him, we have Leigh Johnston, senior manager and Derek Hoy, audit manager, Audit Scotland. Eva Thomas-Tudo had hoped to be with us, but unfortunately she is not able to attend.

I invite the Auditor General to make an opening statement, after which we will ask what is quite a wide range of questions.

Stephen Boyle (Auditor General for Scotland): Good morning. I am pleased to bring to the committee this report on the national health service in Scotland in 2021. Last year's report focused on the response to the pandemic; this year, we turn our attention to the recovery and remobilisation of NHS services, while acknowledging that the NHS remains under severe pressure from the pandemic and the backlog of patients that has built up over the past two years. We have seen the NHS start to emerge from the immediate impact of Covid-19, but it remains on an emergency footing, and the path of the pandemic remains unpredictable, as we saw with the omicron variant towards the end of last year.

The Scottish Government and the NHS are planning the recovery from the pandemic, but the scale of the backlog will make that very challenging. The NHS must reform; services were already being delivered in an unsustainable way before the pandemic, and the Scottish Government must focus on transforming health and social care services to address the growing cost of the NHS and its recovery from Covid-19. However, improving the NHS will be very difficult against the competing demands of the pandemic and an increasing number of other policy initiatives, including the plans for a national care service and meeting net zero targets.

The Scottish Government and the NHS also need to prioritise prevention and early intervention in their recovery plans. The innovation that we have seen during the pandemic shows that positive change can happen quickly and effectively, and that momentum has to be maintained. The Scottish Government published its NHS recovery plan last year and is developing a care and wellbeing portfolio to provide strategic direction for its reform, but it needs to involve the

public in deciding how future service will be delivered.

We have identified workforce availability and wellbeing as the biggest risks to recovery. Staff wellbeing has been affected hugely by the pandemic. The Scottish Government and NHS have introduced measures to support staff, but it is still too early to tell how effective those measures will be in the longer term. In addition, the NHS recovery plan makes ambitious commitments and places some big asks on a workforce that is already at risk of fatigue and burnout. The impact of those ambitions on staff wellbeing must be monitored carefully.

The recovery plan requires significant growth in the workforce, but that comes on top of existing commitments. A new health and social care workforce strategy was published last week and we will consider its contents and the NHS's progress against it in our future audit work. It remains the case that plans to recruit and retain staff are ambitious and will be challenging to achieve, given that, historically, the NHS has struggled to recruit enough people with the right skills.

Our report also notes that one major risk to recovery and reform is the availability and quality of data across health and social care. That includes data on primary care, community and social care, the workforce and health inequalities, all of which are crucial to planning and scrutinising the delivery of services.

I am joined today by two of the report's authors, Leigh Johnston and Derek Hoy. Between the three of us, we will try to answer the committee's questions.

The Convener: We will press on with a couple of questions from Sharon Dowey, who joins us remotely.

Sharon Dowey: I apologise for not being there in person.

According to the third bullet point in paragraph 6 of the report, the Scottish Government has committed to supplying personal protective equipment free of charge to the NHS and social care services

"until at least March 2022",

but it is not clear what the arrangements will be after that. Do you have any update on that?

Stephen Boyle: I will turn to Leigh Johnston in a second to see whether she has an update on that, but what I would say is that that comment is consistent with the point that we made in our PPE briefing last year about the Government's plans for the future being key. That is the case not just for NHS settings but for social care, given the role that the Government played in stepping in to support health and social care providers across the country in the provision of PPE. There is a necessity for all providers to have clarity on this, given the significance of PPE; after all, as I touched on in my opening remarks, the pandemic is still in place and there are still variants. All of that will have a bearing on what that means for all health and social care settings.

Leigh Johnston will provide an update if she has one, but if not, we can follow that up in writing.

Leigh Johnston (Audit Scotland): You might be aware of the consultation that the Scottish Government has issued on PPE, and I am particularly interested to hear what lessons have been learned. The Government has committed to putting in place a clear strategy for future arrangements by the end of this month. According to the consultation document, the Scottish Government anticipates that the provision will extend beyond March 2022, but that will be subject to discussion with delivery partners. We are still waiting for an update on this, but I can tell you that there is a commitment that extends beyond the end of this month.

Sharon Dowey: Measures to reduce delayed discharges in the first wave of the pandemic from December 2019 to April 2020 were effective in the short term. Can you outline what those measures were? Given that delayed discharge continues to be a huge problem, what do you believe needs to be done now to achieve a longer-term solution to it?

Stephen Boyle: It is an important and long-standing challenge. I will ask my colleagues to talk about some of the circumstances covered in the report that led to a reduction in delayed discharge, and about how the rate of delayed discharge has grown during the pandemic and is now at a similar level to what it was before.

10:00

Our report touches on a number of factors in health and social care that lead to delayed discharge. First of all, patients and their families might find themselves in complex circumstances, and people might be provided with care but not in the appropriate setting, which might then lead to delayed discharge. Our report notes the need for a concerted plan to be shared between the NHS and its local government and third sector partners. This committee and others across the Parliament have been considering delayed discharge for many years now, and we want it to stop being a feature of the delivery of health and social care.

I will ask colleagues to say more about the circumstances in the early stage of the pandemic, but the rapid discharge approach that was taken

undoubtedly had its pros and cons. It is inevitable that some of that will be considered in the upcoming public inquiry into the Covid-19 pandemic. We note that, will be aware of it and will track what it means for our future audit work in this area.

My colleagues might have more to say about some of the numbers.

Derek Hoy (Audit Scotland): The rapid discharge strategy that was put in place at the start of the pandemic was very successful, but it was a temporary arrangement. After that, we saw delayed discharge numbers rise to what they had previously been. That has been the case ever since—we have seen them creep back up.

There was a slight decrease in winter 2021, when additional resources were used to put in place further measures to reduce delayed discharge, but when I checked the figures a few days ago, I saw that the numbers had started to creep back up since the end of winter. There is no permanent solution as yet, and it is definitely an issue still to be resolved.

Sharon Dowey: On workforce issues, which you mentioned earlier, paragraph 20 of the report refers to the 2021 Royal College of Nursing employment survey, which

"found that 40 per cent of staff are working beyond their contracted hours on most shifts ... 67 per cent ... were too busy to provide the level of care they would like and 72 per cent ... were under too much pressure at work."

What steps is the Scottish Government taking to address those issues?

Stephen Boyle: The paragraph that you quote has some significant statistics about the overarching impact of the pandemic on health and care workers. The numbers that we quote are drawn from a survey by the Royal College of Nursing and relate specifically to nurses, but it is safe to say that the pandemic has affected all health and social care workers. Indeed, in our report last year, we drew on the conclusions in some work by the British Medical Association.

You asked about actions that the Government has taken. As we note, there are helplines, additional rest areas and some provision of meals to mitigate some of the impact. The long-term benefit of those measures, and whether they will continue into the longer term, remains to be seen. We will expect the NHS to continue evaluating what that means. [*Temporary loss of sound.*]

The Convener: I think that the power has been restored, Auditor General, so I will bring you back in. You were telling us about the findings and the evidence that you had looked at in the area of staff wellbeing and about the surveys that organisations such as the Royal College of Nursing had carried out on the views of its members.

Stephen Boyle: The deputy convener asked about paragraph 20 of the report, which shows some of the results of the Royal College of Nursing survey on the impact of the pandemic on its members and some of the steps that the NHS has taken in mitigation. As I was saying, the extent to which those steps will have any long-term bearing remains to be seen.

We look to the future in the report, too, and note that the remobilisation and recovery plan draws heavily on existing and new staff to deliver NHS priorities and to recover from the backlog. All of that work will be key to ensuring that the risk of fatigue and burnout that NHS staff are already experiencing is not exacerbated by the implementation of what we see as ambitious and challenging plans.

The Convener: The report draws to our attention the additional funding that has been provided for the express purpose of attending to staff wellbeing. I think that the figures are £8 million and £4 million, which does not sound like an awful lot of money compared with the overall NHS budget. Are those amounts addressing the scale of the challenge?

Stephen Boyle: I will bring in colleagues in a moment, if they wish to add anything about how the NHS intends to evaluate the impact of that spending.

There is no denying that those amounts are relatively small compared with the overall NHS budget. As well as additional spending, some of the new measures are about culture and management, and our assessment is that it is probably too early to tell what their impact will be. However, we have seen the challenges that NHS workers face. In order to guard against the risk of increasing pressure on them as we look to recovery, the NHS has to be clear about the impact that the schemes have on staff.

Derek Hoy might wish to say a bit more.

Derek Hoy: We looked at the Government's arrangements around the new measures that have been introduced to support staff wellbeing, and we were quite satisfied that they are robust and that a plan is in place to evaluate and monitor them. As the Auditor General said, it is the very early stages. Those measures will have a long-term effect, but it is not possible to know how effective they are now.

Generally, engagement with the measures that have been introduced has been quite good—perhaps with the exception of the telephone helpline, which is understandable given the nature of how people might want to seek support.

Generally, the response to the measures that have been introduced has been good. Early feedback suggests that they are having a positive effect and that people are benefiting from engaging with the services.

We have said in the report that the Scottish Government and the NHS need to continue to engage with the workforce to ascertain whether those measures are the right ones and whether they cover the breadth of support that is needed across the workforce. For now, as much as could be done has been done, but there is still a job to do to monitor and evaluate those measures.

The Convener: I read in the report that a short-life working group is being established. Again, is that sufficient to properly monitor the impact of the measures?

Derek Hoy: That working group is one of a range of groups that have been set up to monitor the measures, so other, longer-term arrangements are in place. Although there is one short-life working group, we determined the rest of the arrangements to be robust and suitable. Obviously, it remains to be seen whether that will continue to be the case. We will, I hope, keep an eye on that.

The Convener: We will keep an eye on future trade union and Royal College of Nursing surveys to see whether there is any movement backwards or forwards.

Craig Hoy has a series of questions on the diagnosis and treatment backlog element of the report.

Craig Hoy: Good morning, Mr Boyle. As we know, the diagnosis and treatment backlog has got significantly worse because of Covid, but, in many respects, Covid is not its principal cause. Although NHS boards around Scotland are trying to tackle the backlog, it is, as you say in the report, still significant. Are you aware of any health boards in Scotland that are making good progress in that area? Conversely, are there any boards that you are concerned about with regard to the pace of tackling the backlog?

Stephen Boyle: I will bring in Leigh Johnston in a second to elaborate on some of the local geographical circumstances that we have seen.

I draw the committee's attention to exhibit 4, which sets out the impact of the pandemic across a range of indicators. As you have rightly noted, there were challenges with NHS capacity before the pandemic, but, because of the pandemic and the situation that the NHS faces as it tackles the backlog, we now see an increase in demand, a reduction in activity and, as a consequence, longer waits.

Another contributory factor that I will highlight is that, during the pandemic, fewer people presented than had been the case historically. We are missing a cohort of the population who have undiagnosed illnesses, which will inevitably lead to those people presenting in years to come. Unfortunately, it is likely that those illnesses will have progressed further than would have been the case and will therefore need to be dealt with urgently.

The NHS plan for tackling the backlog relies significantly on the presence of national treatment centres and the recruitment of more staff to provide the services in them. Some centres are already in operation—the Golden Jubilee national hospital, for example, is classed as one—and there are plans to increase capacity around the country in order to tackle the backlog. As I have said, the central component of the NHS recovery plan is that such centres be up and running, but the timetable for that varies across the country. Leigh Johnston will give some details in a moment, but I think that the timetable goes up to 2025-26, which means that delivering the centres is based on medium to long-term plans.

It is still probably too early to tell how all of that will translate into regional variation and to see whether we have a clear picture as to whether patients around the country should expect variation or what the national picture will be. Leigh Johnston might wish to say a bit more about that.

Leigh Johnston: We did not look at any boards in particular—instead, we took an overall view—but one of the main points relates to the clinical prioritisation framework that, as we say in the report, the Scottish Government published in November 2020. In our 2020 report, we asked for that data to be published, and we have made that recommendation again in this report, because that data is still not available. That data will start to give us an idea of how different NHS boards are tackling their waiting lists and times, how many patients are being seen and when that is happening, but it is still not available.

Craig Hoy: Do you have any way of assessing or measuring how many patients might have chosen to self-fund their treatment in the independent sector during the pandemic? I asked NHS Lothian that question last week. Is there any way of capturing that detail, other than by looking at what happens when a patient's appointment comes up or seeing whether they have elected to drop off the waiting list?

Stephen Boyle: I am fairly confident that we do not have that analysis. A direct feature of our assessment of waiting lists was certainly not whether a clearly evident and comparable group of the population were not featuring in the numbers as one might have expected. I suggest that, if

NHS Lothian or other individual health boards are not able to provide that information, the other route for the committee to explore would be through Public Health Scotland. As you would expect, we will look again at our data to see whether we have that information and, if we do, we will share it with the committee.

10:15

Craig Hoy: Ms Johnston, as you said, the report includes a recommendation to publish data on waiting times based on the categories in the clinical prioritisation framework, and that is being progressed by Public Health Scotland and NHS boards. What role is the Scottish Government playing in implementing that recommendation? If the information has not yet been published, what more should be done to get that data out there?

Leigh Johnston: We have spoken to the Scottish Government and Public Health Scotland about the data, and they have told us that they hope to publish it soon. As with any new data set, they are just working on the robustness and reliability of the data. They need to be sure that it is robust and reliable before they make it publicly available, and they are taking steps to make that possible. They have promised us that it will be published soon, but we are still waiting.

Craig Hoy: The issue of general practitioner appointments—face-to-face appointments and appointments through NHS Near Me—has featured significantly in the news. The report highlights that data is not yet available on the number of GP appointments that have been carried out. That means that it is difficult to determine the true number of people who have avoided seeing their GP during the pandemic and who might therefore, in effect, be storing up health problems that could become more extreme later. Do you know why that data is not available? Should the Scottish Government be doing more to gather and disseminate it?

Stephen Boyle: In a second, Leigh Johnston can come in on the point about why the data is not available.

Mr Hoy and the rest of the committee will recognise that a recurring theme in our reporting is the need for more robust data on all aspects of public services and how important that is as we consider the future of the NHS and different service models. Having a clear understanding of current demand and future demand patterns will be key to determining how best to reform the NHS. In relation to GPs, as you rightly pointed out, and across primary care and some acute settings, the quality of data and the connections are not as strong as they need to be. A key recommendation in our report is that the Government and the NHS make progress in that regard. Doing so will give the Government many more levers of scrutiny and enable it to track the progress of its reform agenda.

Leigh Johnston might be able to say a bit more about the point about GPs.

Leigh Johnston: I do not have a great deal to add, other than to say, again, that the issue of data has been a recurring theme for us. We cannot access data about activity and demand relating to GPs. Over the years, they have tried to implement different systems. We have been waiting for the Scottish Primary Care Information Resource—SPIRE—system, but we still do not have access to that data.

In the new health and social care workforce strategy, the Scottish Government has made a commitment to do an annual survey of GPs, which might give us more information about the workforce—we also do not have a huge amount of data on staffing in GP practices—and more access to data. However, that has not been implemented yet, and it will, of course, be a survey, with all the challenges that that can bring.

Craig Hoy: A stark statement in the report, at paragraph 45, is:

> "The scale of delayed diagnosis and treatment and what this means for NHS services and patients is not yet known."

To make progress on that, you recommend that

> "a cohesive strategy is needed to better understand ... the wider health impact of Covid-19 ... on NHS services and inform future service provision."

Do you know whether the Scottish Government has any plans to develop such a strategy?

Stephen Boyle: As you suggested, that will be for the Government to determine. It is our understanding that it has accepted the recommendations in the report. The Government will be able to advise on whether that will be a standalone strategy—whether it will feature as a dedicated strategy. However, it is important. As we have touched on, delayed diagnosis has such significant health consequences for the longer term, along with the broader unequal impact of the pandemic both on delayed diagnosis and across different groups in society, that that is a key feature in our recommendations.

The Convener: I want to take you back to the point about GPs. I am at a bit of a loss to understand why the issue is so problematic. Are GPs saying, "We're so busy getting on with it that we don't have time to record these things"? Are health boards asking them to do that? Are GPs saying, "We are independent organisations and we make our own determinations about what our priorities are"? Is the issue at the health board

level? Why is there such a long-standing problem in finding out that information?

Given that, at the moment, GPs are defending their position and are often under attack because people feel that they are not getting access to them, it seems to me that, if GPs were able to demonstrate with evidence the extent to which they are meeting patient demand, that would serve their cause better, rather than there being a complete absence of data.

Stephen Boyle: The data is not available because of a combination of all those factors. Leigh Johnston will want to say a bit more about that. She specifically mentioned the lack of progress on new technology. For example, it was anticipated that the SPIRE system would have been implemented.

You are right: the innovations that we have seen during the pandemic, such as NHS Near Me, are changing the way in which patients interact with their GP. For almost all of us, such systems will typically be the first port of call when accessing health services. That is all the more reason to have a co-ordinated strategy and for progress to show that we have robust and reliable data not just in individual sectors, but across our health and social care services.

The issue with data is due to a combination of the contributory factors that you mentioned, but Leigh Johnston might wish to elaborate.

Leigh Johnston: Again, I do not have much to add to what the Auditor General has said. There is a combination of factors. One of the issues with SPIRE is that it was up to individual general practices to decide whether to implement the software that was needed, and fewer practices than was hoped signed up to that. That was their choice. There are lots of problems and challenges in trying to get that data from GPs. GPs talk about how busy they are, and entering data manually can be time consuming for them. A host of issues have not been resolved yet.

The Convener: I am sure that this committee and other committees in the Parliament might well return to that point in the future.

I will move on to another area of interest in the report: long Covid rehabilitation. The report says that

"The Scottish Government has funded nine studies to develop the clinical knowledge base"

for understanding long Covid. Could you give us a bit more information about those studies, including on timescales and how the results will be reported to the Scottish Government to inform its future decision making in the area?

Stephen Boyle: We will say as much as we know. Colleagues can assist me in that regard.

As we set out in the report, the Scottish Government has announced the establishment of a £10 million long Covid support fund, building on the surveys that you noted, to inform its understanding of and approach to long Covid. The point about understanding is coming through in much of the Government's commentary on the issue; it still feels like very early days. Long Covid can cover a multitude of different conditions, and patients have different experiences of it. Nonetheless, the issue matters to patients who are affected by long Covid because it can have a real and direct impact on their ability to lead a normal life.

We have not done any dedicated audit work on the subject, but we will continue to track and monitor the Government's progress on it. As ever, given its significance—this links to the questions about the clinical prioritisation framework—it matters that things are clear and transparent. Patients with long Covid should have a clear understanding of the services that they can access, so that we manage their expectations about the treatment options that can be chosen.

The Convener: Again, I think that we will come back to that issue.

You said earlier that one of the central recommendations of your report relates to the very unequal impact that Covid-19 has had. At paragraph 58, you reflect on your "NHS in Scotland 2020" report from last year. You note that you relied on data that was provided by National Records of Scotland and the Scottish Learning Disabilities Observatory, and you conclude—fairly starkly, I thought—that

"Those from the most deprived"

backgrounds

"and from some ethnic minority backgrounds were more likely to die from Covid-19."

You go on to state that

"Further data has shown that disabled people were more likely to have died from Covid-19",

and that

"Adults with learning disabilities were also at a greater risk of being hospitalised or dying from Covid-19."

That is quite harrowing, is it not? To be frank, it is something of an indictment of our society that that is a feature of the pandemic.

You go on to say, a couple of paragraphs later, that you reviewed the situation again this year and found that there was a

"disproportionate impact of Covid-19 on certain groups".

You say that that has led the Scottish Government to address that situation in some measure by focusing on tackling health inequalities. However, you go on to state:

"but there is no overarching strategy."

Do you want to say a bit more about that?

Stephen Boyle: The unequal impact that the pandemic has had across society is really stark. You rightly mention that we featured that prominently in our 2020 overview report on the NHS, and we did so again this year. The NHS's and the Government's understanding of the impact of the pandemic is increasing. We note that, in September last year, the Government published its "Race equality: immediate priorities plan" to ensure a more equal and fair recovery from Covid-19 for Scotland's minority ethnic communities.

As you mention, we go on to note that there is still no overarching plan for the Government to address all its equalities requirements and the impact that the pandemic has had on people from Scotland's disabled communities and those from our more deprived communities. We are clear on the need for the Government to develop an overarching strategy so that it better understands the impact of its interventions over the course of the pandemic as part of its preparations for the future.

I think that it is safe to note a couple of other developments, if I may: the Government's plans for a health inequalities unit as part of its overall arrangements to tackle health inequalities, and the role that Public Health Scotland will play in tackling inequalities.

Public Health Scotland was set up with that purpose in mind as part of the joint arrangements between the Scottish Government and the Convention of Scottish Local Authorities. At the time of its creation, which was right at the start of the pandemic, it focused—understandably, perhaps—on the Covid-19 response. As the pandemic ebbs, however, it will have a clear role, part of which will involve more than the development of a strategy. That point is important, and I will say more about it.

Strategies in themselves are important, but we have to consider what happens after the strategy is produced so that there are clear plans, measurable milestones and good-quality data in order to assess its implications. None of that should detract from the overall point that we make in the report, which is that there are still hugely stark disparities in how the pandemic has been felt across the country.

The Convener: I will move on now, as we want to ask questions about the "NHS Recovery Plan 2021-2026". I ask Willie Coffey to come in.

Willie Coffey: Auditor General, I want to talk about NHS workforce recovery and connect it to the skills issue. I know that the Government agrees that innovation and service redesign are essential. I go back to the time of your predecessor Robert Black, when I sat on the Public Audit Committee. I think that Colin Beattie was there, too. Robert Black presented a report like yours, in which he said that service redesign was essential. I know that a lot of work has been done since then, but you say in your report that

"there is not enough detail"

in the recovery plan to give us the assurances that we need on achieving the ambitions and the timescales that might apply.

Will you talk a little more about that? What kind of information do we need in the recovery plan to help us to drive the redesign process forward?

10:30

Stephen Boyle: I will bring in Leigh Johnston to talk a bit more about the detail of the recovery plans and what is required.

You rightly referred to the work of my predecessors and the fact that auditors have been reporting on the need for reform, detail and high-quality data. The unsustainable nature of the NHS means that reform is key. I noted in my introductory remarks that the NHS has recently published its workforce strategy. The strategy is mentioned in the report that we are discussing today, but it was not available before we published the report. We note the strategy as a positive contribution because the Government is beginning to set out how it will go about recruiting the necessary staff to support the recovery of NHS services.

It is perhaps worth noting that the workforce strategy does not come with the detail that would be necessary to enable Parliament or users of the NHS to make an assessment as to when the Government will get the service operating at the level that it is looking for. A positive aspect is that there is a commitment to provide an annual progress update on the workforce strategy and its contribution to recovery. That commitment, linked with clear transparency around the national treatment centres and the clinical prioritisation framework, is what we would expect to see.

Ultimately, we know that there is a big backlog and that there will be challenges in delivering and recovering. Managing people's expectations is a key part of the transparency that we all expect.

Leigh Johnston: The Auditor General mentioned that there is not enough detail. At the time of our report, we did not have the health and social care workforce strategy. That contains big

ambitions around increasing the workforce, but little detail on how to achieve that. We have the strategy, but we need a bit more time to make a more thorough assessment of the detail in it.

One of the other key topics in the recovery plan is the national treatment centres, but there is also little detail on how those will operate in practice. As we say in the report, we would like to see more detail on how NHS boards will access those services. Back in 2017, we talked about the layers of planning in the NHS and said that it was not clear how they would all work together. The national treatment centres will add to that complexity. We need more detail on accountability, on roles and responsibilities, and on how NHS boards will access the centres.

Willie Coffey: I will ask a question about workforce planning in a moment. However, on the subject of service redesign as it applies to people's experience of general practice, have we done a good enough job in taking the public with us on the changes? I still get a lot of my constituents raising issues about access models, and the expectation is expressed that the system that we had will be the system that we have going forward. Have we made enough progress on taking the public with us and changing the model for the better?

Stephen Boyle: We are clear in our report that, when public bodies transfer services, they must engage with the public in a meaningful way. There will be various views on whether they have done that up to now.

The NHS requires transformation to move to a sustainable model that prioritises preventative and early interventions. During the pandemic, we have seen changes in technology and innovation. If we want to retain those, it is important that full equality impact assessments—evaluations of how different groups in society feel about them—are undertaken. It matters that people feel that the changes are relevant to them and that they have been able to make a contribution to them. In the report, we say that meaningful engagement with the public is a key part of future reform.

Willie Coffey: I turn to the workforce issue. We know that there are more staff than ever working in the NHS. The number is up considerably compared with 2006. However, recruitment is still an issue. Is retention also an issue? Are we losing staff from the service? Can we pin that down as being due to Covid? Are the recruitment issues and our ability to find staff and attract them into the service connected to Brexit? Is our recruitment strategy working? What should we do to improve it?

Stephen Boyle: There are several components to that. I will do my best to cover them all, but I will bring colleagues in, too.

As Leigh Johnston said, the health and social care workforce strategy will be key. In addition to the numbers that are set out in our report, the NHS recovery plan identifies ambitious plans to recruit 1,500 new clinical and non-clinical staff for the national treatment centres by 2026. Significantly, that is on top of existing commitments, and there are already vacancies in some NHS disciplines.

We comment in the report that, historically, the NHS has struggled to recruit and retain enough staff to meet all its ambitions. However, there are other relevant factors, and you mentioned a couple of them. There is a risk of staff fatigue and burn-out after two incredibly challenging years, and there is also the impact of the UK leaving the European Union. As we note in the report, however, it is probably too early to tell what overall impact Brexit has had on the NHS workforce and what that means for the future delivery of the strategy.

A huge number of variables affect how the NHS can get the people that it needs in place and support them so that all of us, as users of the NHS, can get the treatment and services that we are looking for.

The strategy is welcome. There is now a need for detailed plans to accompany it, along with clear and transparent annual reporting and monitoring.

Willie Coffey: The committee has been doing some work on skills identification and has discussed that at previous meetings. How does this strategy tie in with the strategic approach to skills identification? I asked particularly about the Ayrshire context at a previous meeting. How can we demonstrate or identify the skills that are needed to meet future demand in NHS Ayrshire and Arran, for example? How does that tie in with the strategic approach that is happening elsewhere?

Stephen Boyle: I will bring in Leigh Johnston to support my answer.

All NHS boards prepare individual workforce plans. Those are for not just the here and now but the future. The boards' own workforce strategies culminate in a national strategy. The scale of change at the moment makes that all the more important.

As you say, the committee's on-going discussion of skills planning is particularly relevant, not only in the NHS context but for social care. We have touched on that already today in talking about the impact of delayed discharge. The success of that plan will be determined by the

extent to which it applies across health and social care. It is not just a plan for the recruitment of additional nurses. We need to have all the right skills in place across health and social care.

There is a key role for local health boards and their partners in local government and the third sector in understanding movement between the different sectors. Ultimately, patients want services to be provided when they need them. They do not really care about the role that the person providing the service has in the organisation that they work for.

We are noting overall progress on the strategy, but that needs to be accompanied by more individual and geographical detail.

Leigh Johnston: The published NHS and social care workforce strategy is based on what it calls the five pillars of the workforce journey: plan, attract, employ, train and nurture. We welcome the plan pillar because it focuses on how to get better workforce data and improve workforce planning, and we have been calling for that for a number of years.

The training aspect of the strategy includes looking at the skills that we need and how we are going to get them, whether that is by working with colleges and universities or by retraining and reskilling people to do different things. The workforce strategy focuses on the skills that are needed and how we are going to get them.

The only other thing that I would add is that, with the innovations that we have seen during the pandemic—a lot of digital technology, the use of Near Me and, of course, our digital strategy—there is a big focus on having people who have the skills to use that new technology and to use the new digital advances that we are seeing in the healthcare sector.

Willie Coffey: Lastly, do you think that we are doing enough to make the public aware that those opportunities are there? Every year that I have been in Parliament, we have identified issues to do with skills. I represent a constituency where the unemployment levels are always higher than those in the rest of Scotland, and in NHS Ayrshire and Arran, we need those skills for the future to help us redesign the service. How are we closing that gap between the skills that are needed in the service and the skills that people have? How are we making opportunities available to local people to fill the gap? We seem to say every year that the gap is still there—how do we close it? Is it strategies, is it documents such as this one or is it workforce planning? How do we reach out to the public to draw them into the services that we need to fill?

Stephen Boyle: It is undoubtedly complex, and probably too complex. That is probably one of the barriers that explains why it has not impacted in the way in which, ultimately, we would all like it to, so that there are not the historical vacancies and there are appropriate plans, strategies and real-life steps that will recruit and retain the staff we will need for health and social care.

The committee has spoken in recent weeks about some of the real and immediate challenges in social care. I think that part of it is absolutely about promoting the opportunities, but there are other fundamental factors too, such as fair work and parity between health and social care settings for people who have skills that are transferable between those settings. Longer-term planning is a factor as well, through the important role that Scotland's colleges and universities play and through Skills Development Scotland and its skills programmes. It is also important that people see it as a long-term career option that will meet their ambitions, give them a fair work environment and so forth. It is multifaceted.

It is probably too early for us to form any judgment about this particular aspect of the workforce strategy but, given how central it is to the recovery and reform of the NHS, it is clearly part of our work, and we will continue to report on it through this year and beyond.

Willie Coffey: Thank you.

The Convener: Thanks, Willie.

Are there any health boards or parts of the NHS that carry out exit interviews to understand why people are leaving, such as because of retirement or better pay elsewhere?

Stephen Boyle: I will turn to colleagues to give examples, but I think that there is an expectation that everybody would have an exit interview when they leave any job, and the NHS would want to have that good practice. The exit interview has been a feature of employment arrangements for decades, so that intelligence ought to be there. Also, it ought to be being used, which is the point that I think you are driving at, so that it informs employers, including the NHS in its totality, of the experience that people have, of their reasons for leaving and—ever more importantly, especially on the back of the past couple of years—of the risk of fatigue and burnout. In that way, the NHS can understand the experience that they are giving people who work in the NHS.

Leigh Johnston or Derek Hoy might have real-life examples to share.

Leigh Johnston: I do not have real-life examples, because I do not think that we have looked in detail at what the health boards do. However, through our conversations with the Scottish Government, we know that it is trying to

track people's careers so that they understand more.

For example, with regard to the 1,500 staff that are needed for the national treatment centres, one of our concerns is that those staff may come from NHS boards, so it will almost be a case of taking staff out of one place to staff another place. In our conversations with the Scottish Government, it said that it was going to try to track people's careers through the system. If they leave the system, it would also try to understand where they go and what they are leaving for, and look at how we can prevent that in future and retain people in the system. I know that the Government is doing some work on that.

The Government has also committed, through the workforce strategy, to publish annual progress reports. We welcome that, and hope that that enables us to keep an eye on the progress that it is making on some of the commitments in the strategy.

The Convener: Thanks. That is very helpful. It is surely about retention as well as recruitment, isn't it?

10:45

Colin Beattie: I would like to cover a couple of areas, neither of which will necessarily come as much of a surprise. The first is leadership. The quality of leadership in the public sector has been discussed and debated in the committee for many years. It is vital that the right people are in the right place. An initiative that has been put in place is the Project Lift leadership development programme. What has the impact of that been on the development and retention of leadership in the NHS?

Stephen Boyle: I will ask colleagues to say as much as we can about the impact of that project. The intended impact will, of course, have been interrupted by the pandemic.

We recognise the vital role that leaders play in the NHS. You have alluded to the committee's on-going interest in that. It is not that long ago since your predecessor committee held a round-table discussion on leadership challenges and opportunities in the NHS, or since we commented on the turnover of leaders in the NHS, the vacancies that existed, and the vital role that leaders play in the delivery of services. We note the real pressure that leaders in the NHS have been under over the past couple of years in particular during the pandemic, in delivering services in an unprecedented context.

As we look to the future and the health and social care workforce strategy in particular, it will matter that the NHS is able to recruit to support the delivery of the recovery plan and, equally, that it has consistent and well-managed plans for leadership for succession planning, accountability and effective governance. Project Lift is part of that. I will turn to colleagues to express a view on how successful that has been.

It matters for us that we continue to report on and track that. In the long term, effective leadership will be vital to the success of the reform of the NHS.

Leigh Johnston: We did not look in detail at leadership this year, mainly because it has been more stable since our previous report. There have been only four new chief executives—three in national boards and one in a territorial board. The churn has therefore not been the same.

As the Auditor General said, we are probably more concerned about the resilience of the leadership, given everything that they have had to deal with in the pandemic. Obviously, with new policy initiatives coming online, such as the national care service, further pressure is put on already exhausted leaders.

We did not look at the Project Lift programme in detail. I do not know whether Derek Hoy wants to add to that.

Derek Hoy: To be honest, we struggled to ascertain what impact Project Lift has had. As Leigh Johnston said, we did not look at it in great detail. We know that things are moving on now in leadership support and development. A new national leadership development programme is just kicking off. We are not entirely sure yet about the relationship between Project Lift and that new programme. We are still trying to get to grips with that, and we will need to do more audit work in the area to fully understand it. We know that there is a succession planning programme in the NLDP. There has been previous work on succession planning, but we are not entirely sure how those two pieces of work relate to each other or come together. We need to do more work to get to the bottom of that.

As Leigh Johnston and the Auditor General have said, leadership was not a particularly strong focus of the report this year, and it is probably too early for us to comment too much at this stage, but there are developments that we need to monitor.

Colin Beattie: Part of my next question was going to be about how the brand-new national leadership development programme workstream that has been put in place fits in with and complements Project Lift, and whether there is a risk of duplication in connection with succession planning in the NHS in particular. However, from what you are saying, you do not really have any answer to that at this point.

Derek Hoy: Not yet, Mr Beattie. My understanding is that the NLDP will build on Project Lift, so it should, by definition, be complementary. However, I think that more work is definitely needed to get the information that will enable us to understand that.

Colin Beattie: It is important to know how we are handling leadership succession and so on, because good leadership is essential for the NHS.

Auditor General, I want to return to what you were saying about Covid. The virus is still with us, and it is still overwhelming some hospitals and taking up a huge amount of NHS time. How practical is it to bring in these programmes and try to make them work in the middle of what is still a crisis? Are we just asking too much? Should we put some programmes, such as the leadership initiatives, on hold until things are more stable?

Stephen Boyle: We note in the report that the NHS is still on an emergency footing as a result of the pandemic. Whatever expectations we might have had last November were quickly reset as a result of omicron, and none of us has a crystal ball that will show us what will come next.

There is a balance to be struck between dealing with the here-and-now issues around the pandemic, which we anticipate will ebb at the end of this month, and looking to the future and thinking about reform as well as recovery. In our reporting, we are keen to point out that we are talking not about recovery to an unsustainable model but about reforming the NHS to move to a system of health and social care that is preventative, closer to people's homes and less focused on acute settings and which involves fewer unplanned emergency interventions, all of which builds on high-quality data and so forth. However, there are risks involved in that. In discussions with the committee in recent weeks, we have touched on other initiatives, such as the national care service, in particular, that will place additional demands on the capacity of the NHS and its leadership at the same time as reform of the service is going on. The two elements undoubtedly go hand in hand, but there are risks to do with capacity constraints—there might be drifting timelines, or a lack of high-quality data might inhibit planning milestones, project management and scrutiny.

In our report, we touch on all those points and note that, as the ambitious plans are taken forward, there is an issue about what is manageable and achievable, given that, as you say, the NHS is still in the midst of a pandemic and is on an emergency footing.

Colin Beattie: Clearly, leadership will be key to managing our way through all that.

I will move on to another of our favourite areas: data, which seems to come up at every other meeting. In today's context, I am interested in the collection of data on health and social care. It is acknowledged that there is poor data sharing and there are difficulties in accessing health records and so forth. To what timescale are the Scottish Government and COSLA working on the development of a data strategy for health and social care?

Stephen Boyle: In October, the Scottish Government and COSLA published a revised digital health and social care strategy. However, as you suggest, there remain gaps in the provision of a collective, robust and reliable dataset across primary care, social care, inequalities in the workforce and so on, and all of that must be captured in a robust way not in a strategy but in detailed plans.

Leigh Johnston might be able to supply you with more detail on that.

Leigh Johnston: We expect the data strategy later this year. It will focus on the availability of data to understand demand and activity—as we have talked about, there are gaps in that—and it will talk about sharing data between systems. We have talked many times about the lack of sharing of data, particularly in our report on integration. We expect the strategy later this year.

Colin Beattie: The obvious question is about the extent to which the strategy will improve the collection and sharing of health and social care data. I know that that is a bit of speculation at this point but, as the Auditor General mentioned, there are clear gaps. Are we satisfied that the strategy will cover all that?

Stephen Boyle: That reasonably remains to be seen—as you suggest, we would be speculating. That said, it feels unacceptable that, after so many years and so many audit reports and strategies, we are still talking about data gaps and barriers to sharing data effectively between public bodies. It feels like we have to move on from that. If we are to genuinely reform public services and health and social care, the data strategy is one of the pillars that will allow that to happen effectively. It is of course welcome that the Scottish Government and COSLA are doing it collectively. As Leigh Johnston said, we look forward to seeing the strategy so that we can form a view on it. I remain optimistic that the strategy will be the foundation on which to address some of the long-standing data issues.

Colin Beattie: An optimistic auditor? Hmm.

Does Audit Scotland have any input into the process? Historically, you have produced reports and given recommendations, but are they being taken into account? The issue of the

implementation of recommendations has come before the committee many times.

Stephen Boyle: Yes. We have regular engagement with COSLA, local authorities and the Scottish Government on their progress in implementing recommendations, and we report on that publicly through our work. As ever, we strike the right balance in providing an independent audit function, as opposed to advice or consultancy, which is a responsibility for the management of the organisations. That said, it is important for us that, through the development of our work and audit reporting, we understand public bodies' progress and thinking. We look to do that through regular engagement with public bodies to track their progress.

As you would expect from our public reporting, and given how important the issue is and how regularly we have commented on the data gaps and the importance of quality data to support progress and scrutiny, the issue is part of our forward work programme.

The Convener: The final series of questions is on NHS finances. I was struck by paragraph 115 in the report, where you use the well-chosen words that we are used to seeing from you, Auditor General, when you say:

"The Scottish Government is providing additional support to six NHS boards facing a particularly challenging financial position."

You go on to say that those boards have to submit monthly plans. I presume that, every month, they have to submit plans that outline the savings that they are making. That is during a period when we are, in effect, still in an emergency. One of the six boards affected is NHS Highland, which was the subject of a section 22 report that we considered earlier this year.

Will you reflect on that position? Is it your understanding that the financial positions of those six boards will be improved by the 2022-23 financial year?

Stephen Boyle: I would hesitate to be definitive or give you a prediction on the overall financial position that the boards will settle on. The distorting effect of the pandemic has been clear. In previous years, we regularly spoke about brokerage arrangements that NHS boards received if they were in financial difficulties. Those evolved into medium-term arrangements—financial planning frameworks and so forth.

11:00

To an extent but not entirely, some of those arrangements have been put aside as, over the course of the pandemic, the Government stepped in to fund health boards' financial requirements, so that all boards broke even. We are seeing an evolution of that now. The Scottish Government has a more targeted focus on particular health boards and, through evaluation of savings plans and longer-term financial positions, it makes judgments about how boards are progressing towards financial balance.

There are a couple of things to note. The Government plans to review the overall cost allocation model, which will be a feature of the financial position of individual health boards in the future. Rightly, the Government still has oversight of individual health boards' progress. You mentioned NHS Highland, and the committee has explored the specifics of NHS Highland, its cost model and so on. In particular, arrangements for the delivery of acute services at Raigmore hospital have featured.

As you would expect, we continue to audit individual health boards as part of our annual audit. We assess financial sustainability and the financial position. When we report towards the end of this year, we will draw on some of the judgments and interactions that health boards are having with the Scottish Government as it arrives at judgments on the longer term.

The Convener: I will come back to the funding formula, which is the subject of review at the moment.

Another aspect of the report that set out pretty clearly the financial challenges that the NHS in Scotland faces is exhibit 8, which contains a breakdown of funding by key items such as drug and medical supplies. The amount that was spent on prescribed drugs in secondary care was £818 million; the amount was more than £1 billion in primary care. We know about the spending on PPE, testing kits, further medical supplies and so on.

To what extent is the Scottish Government taking into consideration the fact that we expect there to be further inflationary rises or increases in demand that will lead to a requirement for an increased budget to meet such items?

Stephen Boyle: The NHS is planning its overall financial position on a long-term basis. As you touched on, there are some existing financial pressures, in which the pandemic has played a part, and there are now emerging inflationary pressures that we are all seeing in the cost of living. Those will feed through to the procurement costs that the NHS will face. Overall, that will be a matter for the Parliament through its consideration of the Scottish budget and any budget revisions that it looks to make in the light of the pandemic and as we emerge from it.

Audit Scotland has commented in many reports, as we do again this year, on the unsustainable

financial position of the NHS. As you mentioned, a number of boards are again experiencing financial pressures. For us, that makes the case again for the need for reform in order to move to a more sustainable delivery model and accompanying financial model. The current challenges of the cost of living and inflationary pressures will further exacerbate that need. As I said, overall, it will be for the Parliament to determine its priorities and for the NHS to manage its resources within whatever allocation it receives.

The Convener: The roll call of NHS boards that are in a very tricky financial position includes small boards such as NHS Orkney but also NHS Fife, NHS Ayrshire and Arran, NHS Borders, NHS Dumfries and Galloway and NHS Highland, which I mentioned earlier. It is a substantial issue.

You mentioned that the funding formula was being reviewed, presumably to appreciate whether funds are being distributed as effectively, efficiently and equally as they ought to be. The committee's understanding is that dates have not been set for the completion or implementation of the review. Are you any the wiser as to when there are likely to be changes, what those changes might be, what criteria are driving the review of the funding formula and, potentially, the allocation of funding between different territorial boards, as well as between different NHS tiers?

Stephen Boyle: All those factors are relevant. As we note in paragraph 118,

"The Scottish Government has not yet set a date for this review to be completed."

It is significant for individual boards. It perhaps speaks to the earlier conversation about staffing. In reviewing the funding formula, we must guard against issues of parity being moved from one board to another. The Scottish resource allocation formula is currently the model for allocating funding to individual boards. In evolving from that, I suggest that we do not move from transferring concerns about overall funding from one place to another and that it is elevated to what the overall requirements for health and social care will be in the future.

That is just one component of it; it requires a co-ordinated workforce planning and estate strategy that evaluates how health and social care services will be delivered in the future.

The Convener: On that note, I draw the evidence session to a close. Thanks very much, Auditor General, for the evidence that you have led, and thanks to Leigh Johnston and Derek Hoy, who have also contributed this morning. It is greatly appreciated.

I close the public part of the meeting.

11:06

Meeting continued in private until 11:38.

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