The Scottish Parliament
Pàrlamaid na h-Alba

Official Report

HEALTH AND SPORT COMMITTEE

Tuesday 26 June 2012

Session 4

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HEALTH AND SPORT COMMITTEE
21st Meeting 2012, Session 4

CONVENER

*Duncan McNeil (Greenock and Inverclyde) (Lab)

DEPUTY CONVENER

*Bob Doris (Glasgow) (SNP)

COMMITTEE MEMBERS

*Jim Eadie (Edinburgh Southern) (SNP)
Richard Lyle (Central Scotland) (SNP)
*Fiona McLeod (Strathkelvin and Bearsden) (SNP)
*Nanette Milne (North East Scotland) (Con)
*Gil Paterson (Clydebank and Milngavie) (SNP)
*Dr Richard Simpson (Mid Scotland and Fife) (Lab)
*Drew Smith (Glasgow) (Lab)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Marco Biagi (Edinburgh Central) (SNP)
Sarah Boyack (Lothian) (Lab)
Adam Ingram (Carrick, Cumnock and Doon Valley) (SNP) (Committee Substitute)
Dr Alison McCallum (NHS Lothian)
Dr Duncan McCormick (NHS Lothian)
Dr Jim McMenamin (Health Protection Scotland)
Colin Sibbald (City of Edinburgh Council)
Pam Waldron (Health and Safety Executive)

CLERK TO THE COMMITTEE

Douglas Wands

LOCATION

Committee Room 1

Scottish Parliament

Health and Sport Committee

Tuesday 26 June 2012

[The Convener *opened the meeting at 10:34*]

Legionnaire's Disease (Edinburgh)

The Convener (Duncan McNeil): Good morning and welcome to the 21st meeting of the Health and Sport Committee in 2012. I remind all those present that mobile phones and BlackBerrys should be turned off as they can interfere with the sound system.

I have received apologies from Richard Lyle. Adam Ingram is attending in his capacity as committee substitute—welcome, Adam. I also welcome Marco Biagi and Sarah Boyack, who have strong constituency interests in our business this morning.

The first item on our agenda is an evidence session on the outbreak of legionnaire's disease here in Edinburgh. Before we begin, I put it on the record that, while I fully expect this evidence session to be wide ranging, members should be mindful that the potential exists for criminal proceedings to arise from the outbreak. Because of that, if witnesses indicate that they are unable to respond directly to a particular line of questioning, I ask that members respect that position.

I welcome members of the incident management team: Pam Waldron, the director for Scotland of the Health and Safety Executive; Dr Alison McCallum, the director of public health and health policy, and Dr Duncan McCormick, consultant in public health, both from NHS Lothian; Dr Jim McMenamin, a consultant epidemiologist on the respiratory team from Health Protection Scotland; and Colin Sibbald, the food health and safety manager at the City of Edinburgh Council.

I invite Dr McCallum to make a brief statement on behalf of the panel.

Dr Alison McCallum (NHS Lothian): Thank you for inviting us.

Public health is our 24/7 clinical specialty, and it has strong multidisciplinary and multi-agency involvement. Although the incident in question is the largest incident that the health protection team, which is part of my team in public health in Lothian, has investigated since the beginning of this calendar year, it is one of 46 such incidents. In all the incidents that we investigate, we follow the "Management of Public Health Incidents" guidance, which sets out the multi-agency ways of working, how we should conduct our business and the nature of our investigations. At local level, we do that within the framework of the joint health protection plan, as set out in the Public Health etc (Scotland) Act 2008. Again, that process is led by the health service, but it has the full engagement, involvement and sign-up of all the local authorities.

That probably sets the context for what is a challenging investigation, but one that we are trained to carry out and for which we have expert support.

The Convener: Thank you very much. Fiona McLeod will ask the first question.

Fiona McLeod (Strathkelvin and Bearsden) (SNP): I have a number of questions for Pam Waldron of the HSE, but some of them may be applicable to Colin Sibbald, so it would be fine if he feels that he has answers to give.

I think that it would be easier if I just list my questions. How many field inspectors do you have in Scotland? How has that number changed over the past 10 years? What is the average length of service of your field inspectors? How many inspections have you undertaken in the past year in the Lothian area? How many of those were of at-risk legionella sites? How many prosecutions has the HSE led in the past year in Scotland? In relation to the incident that we are discussing, I understand that you have issued three improvement notices since the outbreak began. When were the three sites concerned last inspected?

Pam Waldron (Health and Safety Executive): Convener, I have been asked a lot of questions; I think that I have made a note of all of them. I may not have the exact detail with me to provide some of the information that has been asked for. Please forgive me while I find the relevant resources and information. [*Interruption*.]

I believe that the first question was about the number of inspectors in Scotland. As well as general regulatory inspectors, we have specialists and others, but I can give you the number of front-line inspectors that we have had since 2008. The position has been fairly steady—we have had 98, 100, 105, 101 and 98 inspectors. Those are the figures since 2008.

That was your first question; I believe that you asked a related question about experience.

Fiona McLeod: Yes; I asked two related questions. You have told us what happened going back to 2008, but what about the past 10 years? I realise that you might have to send us that information.

Pam Waldron: Yes.

Fiona McLeod: I also asked about your inspectors' average length of service.

Pam Waldron: I could give you a guesstimate of the average length of experience, but it is probably more appropriate if I agree to send you that information instead. As for the number of inspections in Lothian, I do not have the exact breakdown with me but I can come back to the committee on that. Are you talking about the local authority area?

Fiona McLeod: Yes, where it is contiguous with the NHS Lothian area. If you cannot give me that information, does that mean that you cannot tell me how many at-risk legionella sites have been inspected?

Pam Waldron: Given that legionella is a ubiquitous bacterium, there are probably quite a significant number of at-risk sites. After all, we are talking about not just cooling towers, but all hot and cold water systems. Again, I do not have an exact breakdown for those numbers. To give you an idea of scale, though, I point out that there are 4,600 notified cooling sites across Great Britain and if you add to those the number of hot and cold water systems, spa pools and so on in operation, it is clear that we are talking about a significant number. I also note that we do not record our legionella visits separately.

Fiona McLeod: I understand that under the approved code of practice on Legionnaire's disease it is the operator's duty to "manage and monitor precautions". However, the fact that the approved code of practice was being used—and by so many—should have been putting up risk flags for the HSE and should surely have given you an idea of the number of at-risk sites in the area.

Pam Waldron: The approved code of practice is widely used because, as I said, legionella is a risk in all of these sites. However, the sites vary from the complicated systems in cooling towers to hot and cold water systems in hospitals, care homes and the like, some of which are fairly straightforward and some of which, as in hospital water management systems, are more complex. Other sites might be involved in manufacturing. Legionella is fairly ubiquitous and we have put in place a readily available website with easily accessible guidance to allow people to decide where they sit on the risk spectrum.

Fiona McLeod: I understand that, but the ACOP says that the operator has to "manage and monitor precautions". Does the HSE have no oversight of how someone is managing or monitoring their own precautions?

Pam Waldron: We carry out inspections, but the responsibility for managing risk must lie with the duty holder. Legionella is a good example of why that should be. An inspection is only a snapshot in time; given how legionella proliferates, a problem might emerge weeks after that inspection has taken place. What we are interested in is how a company consistently manages its risk.

Fiona McLeod: If an inspection is only a snapshot in time, where does the HSE's preventative agenda come in? What flags up to you or makes you decide that you need to carry out that one-point-in-time inspection? Is an inspection a preventative measure or is it, as in the current situation, entirely reactive?

Pam Waldron: Sometimes inspections are reactive and take place after an incident or a complaint. We do have a proactive agenda and carry out proactive inspections in high-risk sectors, but not necessarily those with legionella. After all, that is only one of a number of risks that companies have to manage.

Fiona McLeod: What about the three improvement notices that were issued when the sites were last inspected?

Pam Waldron: I am sorry—what was the question about the notices?

Fiona McLeod: When were those sites last inspected prior to the current improvement notices being issued?

Pam Waldron: On the inspection history, the issuing of improvement notices is a matter of public record. I want to make it clear that that is not by any means an indication that these companies are the source of the outbreak.

We served two improvement notices on Macfarlan Smith. The previous visit to assess the management of legionella risks was carried out on 4 February 2010.

An improvement notice was served on North British Distillery Company. The last proactive inspection was on 15 March 2012, which was to assess its management of major accident hazards—not legionella in particular.

10:45

Fiona McLeod: When you referred to the 4 February 2010 visit to Macfarlan Smith, you said that that was to look at its management of legionella.

Pam Waldron: Yes.

Fiona McLeod: Given my previous questions, what made you decide to carry out that visit?

Pam Waldron: It was part of a broader programme of legionella visits that we were carrying out across Great Britain.

Fiona McLeod: Can you send us details about that programme—why it arose and why it was a specific programme? I am trying to establish the following, but I do not seem able to—when do you proactively monitor a site that has a high risk of legionella to ensure that the ACOP is being adhered to?

Pam Waldron: Programmes will not be specifically for legionella. The company is managing a number of significant risks as well as legionella. Legionella is a cross-sector issue. We concentrate at the moment on high-risk sectors, which those companies are not part of. From time to time, we carry out programmes of preventative inspections that look at particular topics. That was what was behind the specific legionella visit to Macfarlan Smith in 2010.

Fiona McLeod: What made you decide that legionella was a topic worth exploring in 2010? You said that you look only at high-risk sectors—why did you decide that legionella was a topic?

Pam Waldron: I do not want you to think that at that point in time we suddenly discovered that legionella was a high-risk topic. We do a number of things as a responsible regulator. Proactive inspection is just one small part of that. We issue guidance. We work with stakeholders and with other people in the industry such as the water cleaning companies and the cleaning contractors. We do a wide array of things—proactive inspections are a small part of that array.

Fiona McLeod: That is fine. Does Mr Sibbald have anything to say on that topic? I am not going to ask any more questions.

The Convener: Staying on the inspection regime theme that Fiona McLeod has kicked off, can the other witnesses give any useful evidence on the inspection regime other than the shared responsibility of the local authority in certain premises—is there a difference? Who has the responsibility for the inspection and monitoring of food and drink?

Colin Sibbald (City of Edinburgh Council): I have that responsibility.

I have some statistics for the committee. In 2009-10, 61 qualified environmental health officers were working for the City of Edinburgh Council. In 2011-12, there are 44 officers, 39 of whom are deemed competent persons for the purposes of enforcing the 2008 act. I have had to use 15 of those 39 people to conduct our investigations on other activities as a result of this incident.

In 2011-12, we carried out 897 planned inspections and 1,826 total visits for occupational health and safety enforcement and related matters. In 2010-11, we carried out 1,091 inspections and 2,018 total visits. In terms of the number of staff actively pursuing occupational health and safety issues, in 2010-11 it was 8.7 full-time equivalents across a total of 27 persons. In 2011-12, it was 6.2 FTEs across a total of 16 persons.

The head count is not everything. There has been a phenomenal investment in postgraduate staff training by the City of Edinburgh Council to improve our capacity and capability in this area and I am confident that we remain well enough resourced to deal with incidents of this nature.

The Convener: If the committee came to the view that more resources may be required in this area, you would not want any more.

Colin Sibbald: I can always use more resources.

The Convener: Thank you.

If Fiona McLeod does not mind, I want to build on her line of questioning. I seek clarification from the Health and Safety Executive on its inspection regimes and responsibilities. What type of collaboration takes place? You did pre-emptive work on legionella that focused on certain sites in geographical areas throughout the United Kingdom. I presume that you picked a particular area in Edinburgh because it identified itself in some way and that it was not done just by blindly putting a pin on a map. Why did you choose that area in Edinburgh? Did you return to it because there had been a legionella outbreak there before?

Pam Waldron: We concentrate on densely populated areas because that is where the biggest risk is. We probably chose the area to which you referred because it linked with other aspects of our inspection programme at that time. We would certainly focus on things such as cooling towers, which are one of a number of pieces of equipment that are responsible for legionnaire's disease outbreaks.

The Convener: Has there been an outbreak of legionnaire's disease in that area in the past?

Colin Sibbald: Yes, there has.

The Convener: Was that on one of the 16 sites that have been identified?

Colin Sibbald: Six sites.

The Convener: We are going by press reports. I thought that there were about 16 sites that could have contributed—

Colin Sibbald: There are approximately 16 sites on the cooling towers and evaporative condensers register that is held by the City of Edinburgh Council.

The Convener: Yes, and one of those, in the area in question, was identified in the past as a source of legionella.

Colin Sibbald: No, that is not correct.

The Convener: It was not connected at all. There was no outbreak in that area in the past.

Colin Sibbald: One of the sites was investigated but was discounted.

The Convener: When was that?

Colin Sibbald: My recollection is that it was 1994.

The Convener: I just wondered whether the logic was that you planned work in that area because there were previous outbreaks. Is that not the case?

Pam Waldron: I am sure that there was some logic, but I do not think that what you suggest would have been part of the equation.

The Convener: Okay. Fiona McLeod focused on the inspection regime for the sites in question and how many inspections there were. Have all the sites that could be linked to the present outbreak been inspected at this point?

Pam Waldron: Indeed. We have been discussing this morning that there are in excess of 60 sites in the outbreak area.

The Convener: Sixty sites.

Pam Waldron: They have been visited by us and by City of Edinburgh Council officers.

The Convener: Realistically, what kind of site visit or inspection can that be other than just contacting the management?

Pam Waldron: We have been working with occupational hygienists in teams to carry out some visual inspections as well as assessing records and looking at sampling records.

The Convener: Have all the records on those sites been inspected to ensure that the operators conform to a pretty rigorous risk management regime?

Colin Sibbald: Some sites were visited to exclude them as potential aerosoling sources. Where there was no discernible risk, there would have been no requirement to examine any records. Some of the sites—a bowling green and sites like that—were visited to ensure that they did not store water in such a way that it might have been seeded by a source, wherever it was, and subsequently aerosolised. That was proactive, preventative work for the future, as opposed to work that dealt with the outbreak that we are discussing.

The Convener: But sustainable prevention work in the future will have the managerial capacity to manage that risk and hazard, will it not? It will ensure that people take responsibility, keep up the records and comply with Health and Safety Executive guidance.

Colin Sibbald: Yes, but the vast majority of the 60 sites that were visited pose no legionella risk of any sort whatever.

The Convener: So if those sites are not maintained in compliance with the inspection and risk management regime that the Health and Safety Executive lays down, that does not matter.

Colin Sibbald: Many of the places that were visited are not covered by the approved code of practice—L8. As I said, they were visited to ensure that they had not become compromised as a result of any droplet spread from an as-yet-unidentified point source.

The Convener: It is interesting that those sites could be identified in relation to the outbreak but not required to comply with the Health and Safety Executive's rigorous standards for controlling legionella.

Colin Sibbald: The 60 sites were risk assessed by competent people and the decision was made that no risk pertained to the vast majority of them and that the usage and storage of water at them would not have been compromised by any plume.

The Convener: Is Ms Waldron content with that?

Pam Waldron: The approved code of practice applies to higher-risk systems, but the Health and Safety at Work etc Act 1974 applies to any work activity. As Colin Sibbald said, risk assessments would be required.

The visits were for exclusion purposes. As members would expect, we took a wide approach and assumed nothing when investigating the outbreak. That is why many visits were made.

Jim Eadie (Edinburgh Southern) (SNP): I ask Dr McCallum and the other witnesses to tell the committee in detail about the approach that NHS Lothian and the incident management team have taken to addressing what is clearly a major public health challenge. What approach was taken in identifying the outbreak? What steps were taken to diagnose cases of legionnaire's disease? What measures have been taken to limit the outbreak's impact on the general population, on at-risk and vulnerable groups in the older population and on people with underlying health conditions?

Dr McCallum: Thank you for those questions, which I will pass to Dr Duncan McCormick, who chaired the incident management team.

Dr Duncan McCormick (NHS Lothian): I can give a little history to the outbreak's development, which might help members to work out how such things progress.

On the evening of Thursday 31 May, we received a report of a single case of legionnaire's disease. The affected individual had been admitted to hospital on Wednesday 30 May. In accordance with guidelines, we investigated that case on the Friday as a single case—we make such investigations relatively regularly throughout a year.

There were no other cases on the Friday. Another case was confirmed on the Saturday. The guidance on how to deal with two cases of legionnaire's disease that are similar in time and place says that an assessment should be done with a microbiologist, Health Protection Scotland and a public health consultant. When that assessment was done on the Saturday, it determined that the two cases occurred close together—the individuals' residences were about two minutes away from each other—and it showed a suspicious hot-water boiler in one house. Because of the patients' condition, we could not get a full history. The people were—obviously—very sick, and their families were dealing with that, too.

The decision was made that the situation would be assessed, that we would keep an eye on things, that we would inform clinical services in the community and in the hospitals and that we would be vigilant about any other cases. The plan was to follow up on that over the following few days. At that time, it was not determined that we had an outbreak. There was no concrete evidence that the two cases were linked.

On the Sunday, we had a case at about lunch time and another case an hour or so later. It was then clear that we had an outbreak. By 4 o'clock or 4.30, we had convened an incident management team, which involved partners from Health Protection Scotland, from environmental health services—that was Colin Sibbald—and from the HSE and microbiology services. We discussed the situation. We had a map that showed that the cases were in a geographical cluster. We decided that we needed to do something quickly. We did not have enough evidence to do the full investigation that has been done up to this point, but the suggestion was that there was no link between the patients other than the area of Edinburgh in which they lived. Our hypothesis was therefore that there was an outdoor external source that was somehow infecting people who had no other links other than the fact that they lived in that area.

11:00

The environmental health officers had a list of all the registered cooling towers, so we identified the towers in that area and, in discussion with the HSE, decided to take action on them that night as the most likely source. That evening, the environmental health officers went out to two of the sites, on Wheatfield Road, took samples and carried out a shock dosing with a chemical to clean the towers. The following day, the other two sites in the area were given the same treatment.

The main method of identifying the outbreak is that, first, when we have a single case, we are always vigilant for any other cases. When we have two cases, we become more vigilant, and we ensure that the clinical partners are informed so that they can identify new cases coming in. When we have three cases, that is an outbreak, and then we take action.

On the Sunday night we also informed all the clinical services again, and we informed the public to ensure that they were aware and could come forward if they had symptoms. We ensured that clinical colleagues in the community and in hospitals were aware so that when people came in with symptoms, they could report that to us.

Does that answer your question on identification?

Jim Eadie: I think that that covers the identification point.

Dr McCormick: Was your other question on diagnosis?

Jim Eadie: It is on diagnosis, and on how to limit the outbreak's impact on the wider population.

Dr McCormick: Diagnosis is quite complex. There are three main ways of diagnosing and confirming legionnaire's disease. One involves a urine test, which shows the antigen of the legionella bacteria, which is a particle of the bacteria in the urine. That can get a result relatively quickly. The second method involves a blood test, which shows the antibodies to the bacteria. It is not such a rapid test; it takes a bit longer, and we have not used it very much in diagnosis in this outbreak. The third method involves the patient coughing up a sputum specimen, which is tested for particles of bacteria.

In this outbreak—and generally in NHS Lothian—diagnoses have been carried out through urinary antigen tests because that is the more rapid and better way of determining the presence of legionella pneumophila, which is the most common type of legionella and causes severe illness in humans.

Jim Eadie: That is very helpful.

Dr McCormick: On how we have sought to limit the impact on the general population, the first thing we did was very quickly make a hypothesis based on mapping, which is the standard technique for any outbreak—especially of legionella. I hope that, by taking that rapid action, we have managed to reduce emission of bacteria from the potential sources.

Secondly, we informed the public in order to ensure that people were aware of symptoms so that they did not stay at home thinking that they had the flu, a cold or one of the things that they regularly get. Our ensuring that the public can come forward with symptoms is an important step, because people can deteriorate very quickly with legionella.

Thirdly, we ensured that general practitioners were aware. We also informed nursing homes, which have a population of vulnerable people, to ensure that people were vigilant and would come forward early for treatment and to be referred.

Jim Eadie: On your last point about healthcare practitioners—GPs in particular—how do we ensure that doctors who do not have first-hand experience of legionnaire's disease are fully informed about how to diagnose and treat it? What steps are being taken to increase awareness of how to manage the disease's effects?

Dr McCormick: The initial letter that went out was, because of the circumstances, a short letter that described the symptoms and signs, recommended the antibiotic to use—because we had a microbiologist involved—and recommended the test to use. Those are the three key things that a GP needs to know. It went out on the Sunday night, and was updated almost daily over the next week.

At one point later in the week—I think that it was Friday 8 June—a more detailed algorithm was developed with Health Protection Scotland and the microbiology and general practitioner teams to guide GPs on how to manage the milder and severe cases. There is a spectrum of legionella: the mild version can be asymptomatic—there are no symptoms—or people can be very ill and have legionnaire's disease. The guidance was to help GPs to distinguish between the mild cases—which would still benefit from antibiotic treatment empirically—and the severe cases, in which there might be pneumonia or other severe symptoms. Those are the steps that we went through.

Dr McCallum: I should say for those who are not aware of the procedure that the letter went out not by post, but by secure fax, which is the usual emergency cascade procedure. On the Monday morning, all the general practices in the area were telephoned to let them know what was going on and what the symptoms are and to tell them to expect patients. That was followed up later in the week with a further phone call to ask how things were going and to reinforce the messages.

Jim Eadie: I thank Dr McCormick for his detailed evidence.

Dr Jim McMenamin (Health Protection Scotland): To add to that, although the problem was identified in Edinburgh, one key measure that was taken on Monday 4 June was to inform all the other national health service boards in Scotland that an issue was under investigation and to ask for early reporting of any such cases in other board areas, because people travel. As information became available about the emerging issues, we in turn shared with the other boards information in the letter format that Duncan McCormick described, so that they were made aware of the practical clinical management issues. We also sent information to our colleagues in the rest of the UK, particularly in the Health Protection Agency, through an early alerting system that is in use across the European Union. In turn, we asked them to relay that information through our colleagues in the European Centre for Disease Prevention and Control.

Jim Eadie: Based on the evidence that we have heard, the response certainly seems to have been robust and comprehensive. However, are there any lessons that should be learned from the experience? In particular, are the current systems fit for purpose? On the basis that we should always strive for improvement, are any changes to public health procedures required?

Dr McCallum: The process following the investigation of an outbreak involves a formal incident management team report and a formal debriefing process that picks up the operational lessons to be learned. There is then a more formal process, which the emergency services call a cold debrief and which identifies what we have learned from the incident about quality improvements, changes to education and training and different ways of doing things. We then feed that into the national health protection networks and back to the Scottish Government, as we would for any other emergency. I am sure that, with hindsight, we would do some things differently, but I would like to wait until we have a systematic overview of those so that they can be thought through and prioritised.

Jim Eadie: That is helpful. No doubt, you will share that with the committee in due course.

Dr McCallum: Indeed.

The Convener: On the lessons, one issue that was mentioned earlier and which is in Dr McCormick's report is the role for GPs in such incidents. I do not know whether the fact that legionnaire's is not a notifiable disease is an issue

in relation to GPs' role. It was not until someone had the disease and presented at hospital that we became aware and all the other issues kicked in. Is the urine test something that a GP could have done?

Dr McCallum: We have investigated a large number of potential cases of legionellosis, which is legionnaire's disease and the milder forms, during the past three years, but we have had fewer than five confirmed cases in each of those years. It is a reportable disease so, if a test is positive, we are required under the Public Health etc (Scotland) Act 2008 to know within a couple of days.

When people come into hospital, they come in with pneumonia symptoms and when the test is positive, that is when we know that it is legionella. We would investigate using the same format if there were a cluster of cases of pneumonia from other causes. The process would be the same, but the pneumonia from the first case was caused by legionella.

The Convener: The disease is not reportable by GPs.

Dr McMenamin: It is a laboratory notifiable disease.

The Convener: That is why I mentioned GPs.

Dr McMenamin: When they see the patient, a general practitioner or any other medical practitioner would not necessarily know that the person has legionnaire's disease. They might know that the patient has a severe pneumonic illness and that something has caused that pneumonia, but they would not necessarily know that cause. That is why we need laboratory information about the cause, and pneumonia is often how we seen the disease presenting. That is why there is a distinction for laboratory reportable infections, which are notified to us by each of the laboratories and each of the reference laboratories across the country. That information is collated in each of the health boards and centrally in Health Protection Scotland.

Dr Richard Simpson (Mid Scotland and Fife) (Lab): The convener has anticipated my area of questioning. If a general practitioner saw the symptoms that were described in the letter, and they did not do a test but went ahead and treated the patient, there would have been no notification of the fact that the patient might have had legionnaire's or Pontiac fever at the lower level, so the question about the disease being notifiable is difficult. I understand that confirmation is required, but should all GPs who saw a case and used the appropriate antibiotic on the supposition that it might have been legionnaire's have done a rapid urinary antigen test? Otherwise, we really do not know the true extent of the condition, and the system does not ensure that we would know the true extent during an outbreak.

Dr McCormick: Initially, we recommended that GPs do a urinary antigen test on milder cases with symptoms as well as on the severe cases. It should be borne in mind that people turn up every day with symptoms that could easily be legionella or something else, and GPs are very good at sifting out which need further treatment and which do not. However, during the week, it became clear that testing every single person who turned up would be to the detriment of making sure that we tested sick patients who needed very quick diagnosis. Towards the end of the first week, it was decided that we would recommend to GPs that they manage the patients clinically, and that they code patients by one of the three or four legionella Read codes. That was not disseminated to GPs, but it is normally what happens in such situations.

We do not necessarily know the urinary antigen test of every single patient who presented, but we have a good number of urinary antigen tests from the beginning of the outbreak.

A lot of people have also presented at accident and emergency services during the outbreak, and we have their details. With that information, we plan to do follow-up studies with general practitioners, A and E and microbiologists to try to see the iceberg of milder cases in the community. That will help us to plan for future situations.

11:15

Dr Simpson: I understand that you do not want your laboratory to be totally overwhelmed with suspected cases and that sifting out mild forms of legionella from other conditions is very difficult, but should there be a system that ensures the collection of urine, even if that urine will not be used immediately? In other words, a urine test should be required to be taken if the person's symptoms are mild and the GP thinks that they might have legionella and is therefore going to code them. The urine may be stored for future use or, if the condition got worse, it could be tested. That would allow us to see the extent of the mild form.

Dr McCormick: We have around 1,500 urine tests stored, which is quite a good, rigorous sample.

Dr Simpson: I hope that you have the resources to be able to deal with that.

Dr McCormick: We hope to get there. We hope to follow up with serology testing, as the urine tests were negative. We have around 1,500 negative tests, and we want to do follow-up serology tests with the blood tests to find out

whether there is evidence of infection that was not apparent in the urine test. Such evidence will perhaps be apparent in a week or two through a blood test. We should have the information that you seek through that.

Dr Simpson: That is very helpful and answers my question.

I want to go back to Fiona McLeod's point. I understand that legionella is ubiquitous. We have heard that there are five sporadic cases annually that do not result in second cases and therefore to the system evolving. I have two questions about that. First, it is clear that you focus on high-risk areas. I presume that they are identified, marked and notified, but is there potential for reverse spread? Low risk does not mean no risk. You checked for possible aerosol spread from a potential original source to new sources. Could that happen in reverse? In an outbreak situation, how quickly should you look beyond your initial high-risk group?

Colin Sibbald: We have done that with four of the six sites, which were originally checked out on the Sunday and the Monday. We asked people to look at the potential that standing water on their sites had become contaminated from a plume on any of the sites, in order to exclude that possibility for re-seeding of the towers that were subsequently cleaned. We have had information from the duty holders at those locations that they have examined that possibility and excluded it.

Pam Waldron: We have also looked at whether those premises were the source. We have not looked at only what we have thought might be the epicentre and outward spread. To pick up Richard Simpson's point on whether we looked at the areas around that to see whether the source lay outside it, that was done on our visits to some 60 places, among which there was great variety.

Dr Simpson: That is fine.

The Convener: Can you explain further the process to get from 60 to six places? There were visits, but how did you manage that among you? How do you eliminate a site?

Colin Sibbald: No; we got from six sites to 60.

The Convener: So, you worked up the way.

Colin Sibbald: We looked at the premises that were on the register of cooling towers and evaporative condensers and were within the theoretical distance of a plume's spread. We dealt with two premises on the Sunday, two on the Monday, and two on the Wednesday. I stress that the two on the Wednesday were theoretical—they were based on modelling. For topographical reasons, we did not believe that either could be the source. Because there were no environs-related cases between the cooling towers at the last two locations and Stenhouse, that was done on a purely precautionary basis.

We then looked at anything else that might aerosolise water. We and our colleagues in the HSE went to all the places we could think of. If the place was closed, we tried to get access to it to check that there was no stored or stagnant water at the location. Although we satisfied ourselves that the locations were not the sources of the outbreak, we wanted to exclude them as potential sources—had stored water at those locations been compromised—of any future secondary spread.

Nanette Milne (North East Scotland) (Con): This is maybe a daft cousin question. You mentioned stagnant water. Do ambient weather conditions have any impact?

Colin Sibbald: You are asking whether ambient weather conditions have any impact on the temperature of stored water. If the stored water is at less than 20°C, there should be no risk of legionella, even if it is aerosolised.

Dr Simpson: The problem assessment group was called on the Saturday. Am I correct in saying that if there are two cases, you get a problem assessment group together, before you create an IMT?

Dr McCormick: On the Saturday, there was no formal problem assessment group, but the problem was assessed by the key players—microbiology, public health people and Health Protection Scotland. On the Sunday, we started off the problem assessment group, which 10 minutes later turned into an IMT.

Dr Simpson: The other issue is the cascade. I understand that the local electronic cascade to general practitioners seems to have been quite effective, but we know that there were considerable public gatherings in the area. I believe that there was a march in celebration of some football thing—I am not sure what that was about. We now know that there are cases elsewhere in Scotland.

You notified the health boards, but did the cascade to GPs go out from those health boards or from HPS? How were GPs throughout Scotland informed, in the light of the fact that there were significant public gatherings?

Dr McMenamin: That is right. A similar arrangement is in place within each board area so that, following receipt of information from Health Protection Scotland, the boards cascade the information down to medical practitioners locally. Over the course of the initial weekend and subsequently we kept NHS 24 informed because it, too, provides a national service. That is a key

organisation that all of us were keen to keep updated.

Beyond Scotland, it was, as I have outlined, important to let our colleagues know—throughout the UK and internationally. Infection knows no barriers, and it may have been carried by individuals who were incubating it.

Dr Simpson: Is the outbreak finished? My understanding is that the incubation period is 10 to 14 days. The toxic shocks were administered to the six cooling towers by Wednesday. Are we still getting cases? If we have treated the towers, and they were the potential source, should the outbreak be over?

Dr McCormick: The IMT will meet later today and will decide the date for declaring that the outbreak is over. The incubation period can be up to 19 days. We also have to look at the date from which we have seen that the towers have been definitively treated. That will be discussed later.

Sarah Boyack (Lothian) (Lab): Jim Eadie asked about lessons to be learned. When I heard which people are most vulnerable to legionella, I was very worried because it sums up a lot of the people who live in the area, in terms of income, health, demographics, density and access to things like broadband.

Looking back, would you have done anything differently? I know that, from a bottom-up perspective, people complained most about access to reliable information. The following weekend, I was still having to tell people that their tap water was drinkable and that they did not need to buy bottled water. They were following their own precautionary principle of not using their water supply, despite the fact that all the public health information had said that that was not a problem. The point is that, although you might have to tell people these things and send out that information, there is still a problem with people picking up on things and acting accordingly.

We have not spent a lot of time talking about the public health side and people's resilience in dealing with such matters. Having spoken to families whose loved ones have been affected by this incident, I get a real sense that people were completely thrown by the situation and simply did not know how to handle it. What lessons have you learned for the future in that respect? How will you pick up on the issue and communicate it to other teams managing such incidents?

Dr McCallum: Those comments are helpful and the issues will certainly be covered in any analysis. The member will know that on the Sunday night, as soon as we were aware of what was happening, we briefed the media to ensure that they all received reliable information. We had already briefed accident and emergency, unscheduled primary care services, general practitioners and hospital staff. Over the next couple of days, we set up a helpline through NHS 24; in doing that, we found the use of staff from programmes such as keep well to be very effective in engaging with patients with additional communication needs, who have limited literacy or are very vulnerable. We also ensured that information was available on Facebook, Twitter and the internet, and we leafleted the areas in question.

Clearly, certain things might be done differently. For example, did we implement all the appropriate parts of the care for people guidance that we would after a major incident? I should point out that this kind of situation is not covered in the guidance but we would certainly consider including it in the guidance now. It is not part of the current approach but it might well be one of a range of issues on which we might make recommendations for doing things differently in future. However, as I have said, I would not want to single out that one issue until we have had a chance to look at things in the round.

Dr McCormick: We informed nursing homes of the situation both on Sunday night and subsequently; indeed, they were involved in all the secure faxes. We also discussed with the primary care office the possibility of sending out district nurses, who deal with more vulnerable people in communities, to identify people quickly and were told that some of the people whom you highlight are already covered by district nurses' case load and are supervised routinely; indeed, district nurses were undertaking that supervision, particularly in light of the legionella outbreak.

We are following up the incident with, and hoping to learn lessons from, a case control study, in which we interview the cases and a control in the area about their behaviour with regard to seeking healthcare, the kind of houses they live in, whether they had their windows open and so on. That information will not only help us next time to identify risks and to give more specific information to those in the community about how to prevent infection, but allow us to identify barriers to seeking healthcare. For example, after our extensive interviews with each case, we have identified that, with the warm weather at the time, people were sitting outside a lot and had their windows open all day and all night for three or four days in a row.

11:30

Sarah Boyack: It was a brilliant weekend and it was a holiday weekend. Given that people in that area live in quite small flats, loads of people were not in or had their windows open. Another thing that occurred to me is the fact that the area is

heavily tenemented. Anyone who has done any leafleting in the area will know that it is hard to get into those properties. You might think that you have leafleted the area when, in fact, there are piles of leaflets at the bottom of stairwells.

One issue is targeting the groups that might have been vulnerable; another is targeting the general population, which should have taken place, particularly from the Thursday onwards. As well as being told to get themselves checked, people should have been told when it was thought that the area was safe. There was an emotional response from local people, who were worried about whether their area was safe. That might not be an issue that would be considered in the context of the management of people's health problems, but how people felt about their personal safety, given the weather and the fact that people were out and that local fairs were being held—although that is not something that could necessarily be planned for—is a public health issue and one that should be considered in the future. It is fundamental that people feel safe, not just that they come forward when they are vulnerable.

The demographics in the area are such that there are lots of older people and people on low incomes who do not have access to computers. That is a particular challenge that is worth factoring in in the future.

Dr McCormick: Those are good points. Yesterday, we got a report on leafleting and your point about getting into tenements is valid. Normally, leafleting is done in the early morning, so that someone will be in and the person who is delivering the leaflets will be able to press the buzzer and get in. Because of the desire for rapid turnaround in this case, some of the leafleting was done in the afternoon, which means that some tenements would not have received their leaflets. Instead, leaflets were left in high footfall areas such as supermarkets, so that even if people did not have a leaflet delivered, they would get one if they went out to a local shop. However, it is clear that such an approach will not reach everyone.

Radio is a good medium with which to reach people who do not have access to the internet. If something happens, older people listen to the radio. Information was provided on the radio, but if it did not get through, we must think about how we can do it better.

Marco Biagi (Edinburgh Central) (SNP): I would like to follow that up with a brief additional question. How was the outreach in minority languages? I am thinking of eastern European languages, in particular, because the eastern European sector is very strong in Gorgie.

Dr McCormick: That is a good point, too. The leaflets were only in English. It would have been useful if we could have issued them in different languages, especially Polish. That is definitely a lesson to learn for next time.

Marco Biagi: I completely agree with everything that Sarah Boyack said on how the situation was dealt with, but the point that I really want to look at relates more to the issues that Fiona McLeod raised regarding inspection. Figures of six, 16 and 60 have been mentioned. As I understand it, the HSE served three improvement notices. Is it correct that only three notices were served in relation to the legionnaire's outbreak?

Pam Waldron: It is correct that three improvement notices were served as part of the investigation.

Marco Biagi: How many of the places that were investigated could have been served with an improvement notice, based on the investigation and the nature of the equipment? Is the figure six, 60 or something else?

Pam Waldron: Enforcement action was taken in line with our normal enforcement policy. The action that was taken was the correct enforcement action. The correct number of notices was issued.

Marco Biagi: What I want to know is how many premises were given a clean bill of health that could have been served with an improvement notice because of the equipment? In other words, what was the incidence of an improvement notice being required among the sites that could have been served with such a notice?

Pam Waldron: If a notice was required, a notice was served. I think that you are asking whether there were shortfalls that we did not address with a notice.

Marco Biagi: No, that is not what I am asking. Different kinds of inspection have been mentioned. I presume that the 60 sites where there was a possibility of infection by the plume and secondary infection are distinct from potential sources. Am I right in thinking that there were six potential sources? Six towers—or was it 16?—were assessed as potential sources for an airborne infection.

Pam Waldron: We looked very broadly at potential sources, not just at those six. That was the whole point: one looks immediately at the most obvious sources. That was what Colin Sibbald was referring to; he might want to pick that up.

Colin Sibbald: Of the six premises that are on the City of Edinburgh Council's cooling towers and evaporative condensers register, improvement notices were served—sorry, I will begin again.

Of the six of 16 premises that were checked as a direct result of the incident, improvement notices—as I understand it—have been served on three. Two were served by my colleagues in the HSE, and one was served by the council jointly with the HSE and the assistance of one of its occupational hygiene experts.

The notice that was served by the council relates solely to training matters: there were no matters of evident concern in relation to the towers at the location where that improvement notice was served. The other two notices were served by our colleagues in the HSE, and they will be able to talk authoritatively about why they served them.

Pam Waldron: It was actually three notices, as I said earlier: two at one company and one at another. Those notices, plus the notice that Colin Sibbald mentioned, add up to four.

Marco Biagi: So there was one notice from the council and three from elsewhere. That means that the failure rate was 67 per cent, and it was 50 per cent for the HSE inspections if three improvement notices were served as a result of six inspections. Is that correct?

Pam Waldron: I am sorry—I must be missing the point. Are you saying that there is a high rate of enforcement in those six premises? Is that your question?

Marco Biagi: I am wondering whether we should be concerned that six places were inspected and three failed.

Pam Waldron: Three were given improvement notices—

Marco Biagi: Sorry—three were given improvement notices.

Pam Waldron: That shows a contravention, which showed that the standards fell below those that are required by the approved code of practice.

Marco Biagi: I will take that as a yes. Do you think that that is the rate more widely around Scotland?

Pam Waldron: That is something that we may look at. There is concern that compliance with the approved code of practice appears to be creating some problems, not just in Scotland but more broadly. We are reviewing our approved codes of practice at present, but more importantly we have commissioned research by the health and safety laboratory on the past 10 years of outbreaks so that we can see what lessons need to be learned.

That piece of work will be reported to the HSE's legionella committee on Thursday. When we look at what the standards are, we will clearly need to look very carefully at the issue of compliance and how good it is.

Marco Biagi: One of my constituents who had received a diagnosis of legionnaire's disease contacted me to ask whether suspect facilities or facilities that could cause a legionnaire's outbreak were inspected by relevant external authorities on a daily, weekly or monthly basis. I take it from the earlier mention of 4 February 2010 that there is an external inspection every few years.

Pam Waldron: There are no set periods for inspection. As I said, we look at high-risk factors and the way in which the duty holder is managing health and safety. We select a number of risks, which may include legionella or other risks within the business, and look at how well they are managing those.

You make a good point about whether we inspect every week, every month or every six months. Quite clearly we do not, and I believe that we should not: it is not for the regulator to control those risks, particularly with regard to legionella.

As my colleagues here know, for a system to be well controlled it must be maintained effectively; that is why most companies use water treatment companies and cleaning contractors to assist them in that. Unless that is done, a regulator could find a problem on their next visit, for example. The push must therefore be for a consistent and effective control regime, which is why we inspect, produce guidance and work with industry and stakeholders to ensure that they understand the issues and comply with the regime.

Marco Biagi's point is well made, because we need to consider how difficult it is for people to comply. We would consider the elimination of a wet cooling system as a much better option than having to deal with a system that has all sorts of possible issues. Another strand in any of our programmes is to encourage, where possible, at least looking at alternative systems.

Marco Biagi: You said that the February 2010 inspection was part of a wide programme of looking at legionella management. Was it possible for sites that were visited as part of that process to receive improvement notices on the basis of the inspection in the same way as the sites that were visited following the current outbreak?

Pam Waldron: I will keep it in general terms, if you do not mind, but what you suggest was indeed possible.

Marco Biagi: How big was the programme? Was it across the UK?

Pam Waldron: It was.

Marco Biagi: How many sites were visited?

Pam Waldron: Some 120 sites.

Marco Biagi: How many improvement notices arose from that?

Pam Waldron: I cannot give you an exact figure just now, but I could give it to you in writing later.

Marco Biagi: I would be interested to receive that.

Pam Waldron: Convener, I have the inspection figures that Ms McLeod asked for earlier, if you want them now.

The Convener: Yes, thanks.

Pam Waldron: Ms McLeod asked how many proactive inspections took place. I did not think that I had the Edinburgh figures with me, but I do. To give the committee an idea of the scale of the work, the HSE is responsible for inspecting about 900,000 premises. In 2011-12, HSE inspectors undertook 21,603 proactive inspections.

Fiona McLeod: Was that for the UK, Scotland or the Lothians?

Pam Waldron: It was across Great Britain. You asked earlier for the figures for the city of Edinburgh; in 2011-12, we undertook 361 inspections of sites within the City of Edinburgh Council or EH postcode area.

Marco Biagi: Those were all kinds of inspections.

Pam Waldron: Yes. As I said, in an inspection we assess how a company manages health and safety rather than focus on a specific issue. The important thing is how the company manages health and safety. Within that, we hope to ensure that the company identifies the significant risks, understands what they are and either eliminates or controls them—that is the purpose of an inspection.

The Convener: Are both agencies confident that the majority of companies that have the cooling systems for which you would rather see an alternative are fully appreciative of their responsibilities, given the inspection regime that is in place?

Pam Waldron: The companies with those systems understand what their responsibilities are and engage contractors to assist them in managing what can often be quite a complex challenge.

Colin Sibbald: I was involved in the investigation of the outbreak in the early 90s in south-west Edinburgh, so I am acutely aware of the reduction in the number of wet cooling towers and evaporative condensers in the city as a whole. I estimate that there are less than half the number that existed then.

The Convener: So, it is a trend. How difficult is it to replace those towers? I know that if you cannot isolate a tower, so to speak, you can replace it or get an alternative. However, if 50 per cent of the cooling towers in the city have disappeared, how do we encourage other companies to follow that example? Is replacing the towers a costly exercise? Do some companies keep them because there are processes that they cannot do without?

Colin Sibbald: Some processes might require the towers to be retained for technical reasons, particularly if they are part of industrial cooling systems, on which I do not profess to be an expert. Most of the systems that we have historically enforced and currently enforce are air conditioning systems. I believe that there are very acceptable alternatives to using wet systems for air conditioning in office blocks.

Bob Doris (Glasgow) (SNP): I am keen to follow up on the issue of the HSE's system of inspections. With regard to risk assessment, how many of the 361 places in the Edinburgh postcode area that were visited in 2011-12 for a variety of reasons had cooling towers or other risk factors associated with potential legionella outbreaks?

11:45

Pam Waldron: There will have been some but, because I do not have all the details about those 361 visits, I cannot specifically say how many. Nevertheless, I point out that we would have been working in high-risk sectors and dealing with, for example, manufacturing premises; moreover, some of those visits would have been part of an investigation rather than an inspection. Legionella is one of a number of things that are deemed to be a potential major concern in any inspection and, if there were a legionella risk, the inspector would cover that in discussions about the overall management of health and safety.

Bob Doris: That is precisely what I wanted to clarify. Are you saying that irrespective of the main reason for the HSE's visit, and even though you might have been making a visit for an completely different reason, the 361 premises that were visited in 2011-12 would have been screened as a matter of course for risk of legionella and, if such a risk emerged, they would then have been inspected? Would that flag up on your system and lead you to decide that, as the HSE has mainstreamed its duty with regard to legionella, you should inspect for it while you are on the premises?

Pam Waldron: Such a risk would be flagged up not on our system, but to our inspectors, who are trained to understand the risks of legionella and would, if there were a legionella risk in a business, cover the issue as a matter of course. The answer to your question, therefore, is yes.

Bob Doris: I think that I am getting the answer that I want, so I do not want to push the issue any

further. However, I believe that across the UK about 21,000 inspections have been made.

Pam Waldron: Yes. There were 21,603 inspections in 2011-12.

Bob Doris: So, irrespective of why the HSE was visiting those premises, if any of them had cooling towers or anything else associated with legionella risks your inspectors would test for that as a matter of course?

Pam Waldron: They would be inspected, not tested. Even in some of the places that we might visit if we found that they had hot and cold water systems, the operator would be assessed on whether they understood the legionella risk and how well they were managing it. We do not perform tests—we do not take samples, for example—but we assess their compliance against the benchmarked standard in the approved code of practice.

Bob Doris: I am sorry for my slip in terminology, but would there be any benefit in inspectors carrying out spot tests during a visit?

Pam Waldron: No. As I have said, the nature of legionella means that sampling is notoriously unreliable. The more important matter is whether a system for dealing with it is in place. I guess that the key baseline is whether operators understand that they have a legionella risk and the issue, then, is what they are doing about it and whether they have systems for controlling it. A sample taken at one point in time would not give us an accurate picture of how well they were managing the risk.

Bob Doris: That is helpful.

Fiona McLeod: I have a final question. When Jim Eadie asked about the lessons to be learned, Dr McCallum replied by outlining a debriefing and reviewing process. Given that the answers to Marco Biagi's question suggested that in 80 per cent of the six premises that were giving concern the duty holders failed to follow ACOP L8, I wonder whether the HSE and the health officers can tell us how they will debrief and review the situation and apply what they learn to their own practices.

Dr McCallum: Although each agency has its own statutory responsibilities, the initial process is a multi-agency one to ensure that we do not lose lessons that should be shared across sectors.

Pam Waldron: We would always hope to learn lessons from any outbreak like this. We will be discussing it on Thursday at the HSE's legionella committee. We will have discussions with our colleagues at the City of Edinburgh Council but it is too early to say what might result from those discussions. If we feel that there is any need for an adjustment to our current programme or the plans that we have for dealing with legionella, we will clearly take those points on board.

Dr Simpson: The system is one of assessing high-risk areas and inspecting as required. According to the memorandum, it is a system of self-regulation. Are the sample results always notified to HSE, whether they are positive or negative?

Pam Waldron: No, they are not. There is no requirement to notify sample results to us or the local authority if the premises are local authority-enforced premises.

Dr Simpson: Right. How do you get a feel for whether the sampling is being done properly at the frequency that you recommend? You have no real way of knowing that.

Pam Waldron: If you were to ask me whether I know at any point in time how many people are doing that in the city of Edinburgh, I would have to say that I do not. However, we know that there are robust systems in place that use competent persons. We have seen no indication that people do not have systems in place.

Dr Simpson: Presumably, a positive sample can come through at any point before the water treatment is done. A positive sample is not notified to anyone.

Pam Waldron: No.

Dr Simpson: We are talking about source samples, not clinical samples, and source samples are not notified. If source samples were coming up positive more frequently—if there were rising levels of positive samples—even if they were being treated, would that not indicate that problems might occur?

Colin Sibbald: There are different protocols for different types of sampling with different time intervals. The results that were most important to us early in the current investigation related to total viable counts in the towers and to the presence of free disinfectant in the towers. As a matter of routine, we would review the sampling protocols of premises that we were inspecting that had cooling towers or evaporative condensers to see whether the company was applying the approved code of practice, as far as we were able to determine. At the moment, the City of Edinburgh Council has no plans to stop carrying out periodic inspections of the premises for which we are responsible that have cooling towers.

Dr Simpson: But we have no electronic data transmission system of the measures that individual companies are adopting, so you have no way to check, except when you inspect.

Colin Sibbald: We inspect duty holders' records, training records, records that relate to

chemistry and microbiology from the towers, and who the company is employing and whether they are of the calibre that one would expect. All those things are looked into.

Dr Simpson: How frequently do you do that?

Colin Sibbald: It depends on the risk assessment at the previous inspection. We currently have a three-year inspection programme. The other premises that we have discovered is now ours to enforce will shortly have a baseline inspection, and the next full inspection will be programmed at that time.

Dr Simpson: So it is a three-year inspection programme.

Colin Sibbald: It might not be. It depends on the risks that are identified at the time of the inspection.

Dr Simpson: A company in Linlithgow contacted some of us about a rapid test that could be applied to water treatment works. There was some discussion about its application being refused, although it might have helped. Would anyone like to comment on that?

Dr McMenamin: Any test that might be of use in any investigation will be discussed as a matter of course at any incident management team meeting.

In this instance, we sought guidance from colleagues across the UK on what tests were available, including tests that had recently become available, and what our options were for testing. My understanding is that, following discussions, particularly with colleagues in Wales, the feeling was that the testing system that you are talking about might not be appropriate for use on this occasion.

Dr Simpson: I hope that that system will be looked at, because I understand that it has been approved by the Dutch Government's equivalent of HPS—at least, that is the information that I have been given.

As of today, is the number of proven cases 46?

Dr McCormick: As of 25 June—yesterday—at 12 o'clock, we have 48 confirmed cases and 47 suspected cases, which is a total of 95.

Dr Simpson: The potential number is 95 cases, if all the suspected cases are confirmed. What clinical follow-up do you intend to put in place? People who have had relatively mild symptoms might have longer-term problems.

Dr McCormick: The clinical follow-up will be as it is for any severe disease or illness that the NHS has dealt with. GPs will collaborate with hospital doctors to ensure that people receive continuing care, as they need it. There have been other people in intensive therapy units and on the wards during the outbreak, of course, and all people get the same standard of care.

Dr Simpson: I take it that there are no complications that require a particular specialist, and that if a person has cardiovascular complications, for example, they will be seen by a cardiovascular specialist. Although there is no need for a special measure to be set up to follow up the 95 cases, I presume that someone will follow them, just to get information on the longer-term effects of the outbreak.

Dr McCormick: Patients will be followed up individually, as normally happens.

Dr McCallum: We plan to try to determine whether there are long-term consequences. Given the nature of the illness and the range of severity, and because a number of treatments were used, following a particular protocol, which appears to have been quite effective for many people but will not have been without consequence, there will be work to follow up those patients as a population. That is not to say that the individuals will not receive the high-quality clinical care that people with chronic respiratory illness in Edinburgh and Lothian would normally expect to receive.

Gil Paterson (Clydebank and Milngavie) (SNP): On the duty of care, if a company tests its water and finds it to be contaminated, is it required to log that, just as it is required to log accidents in the workplace, to protect employees?

Colin Sibbald: Records of that nature must be kept for at least five years, and corrective action that is taken must be recorded.

Gil Paterson: So that would be logged.

Colin Sibbald: We would expect to see evidence of what was done to bring the tower back in line with L8, at any time when we inspected. That is the way that it is supposed to work.

Gil Paterson: Does that apply even outwith the context of an incident such as we are considering? Are you saying that if there is an incident in any working week, the company records it and the record is kept for a given time?

Colin Sibbald: The duty holder must bring the system back into control and be able to demonstrate what they did and why. That must be recorded.

The Convener: A lot of such work is done by contractors. How are contractors managed? Is there an inspection regime for them? Do they have to notify you that they have come across an issue?

Colin Sibbald: A duty holder who employs a contractor must have a person in a senior position who understands what the contractor is doing and is able to deal with the contractor and ensure that

they are meeting the requirements of the approved code of practice.

The Convener: Have you had no dealings with the contractors who have been providing a service on the sites that seem to be connected with the incident?

12:00

Colin Sibbald: We have had dealings with contractors directly at one site and, in the fullness of time, we will meet the duty holder and the contractor to define clearly the relationships and responsibilities. We do not have concerns about that site at the moment; our activities are aimed at implementing the decisions of the incident management team as speedily as possible.

The Convener: Did I hear that you have some concerns about one contractor that is linked to one site?

Colin Sibbald: The city council has no concerns over any contractor about the site at which it is responsible for enforcement.

The Convener: The Health and Safety Executive may have some concerns about the contractor. We could be working together here, but it seems that some of the answers—

Pam Waldron: Sir, we are exactly the same as the City of Edinburgh Council. Whenever we look at compliance with the code of practice, we look at all the players. When we look at the company, which is the main duty holder in law, we will also look at the competence, selection and actions of the contractors—the process is exactly the same. We are having discussions with contractors in relation to this investigation, as you would expect us to look at the actions of all parties.

The Convener: Does the Health and Safety Executive have any concerns about the contractors that have been involved with any of the six, 16 or 60 companies?

Pam Waldron: It would not be appropriate for us to comment further on that. We have had discussions with water treatment companies over a number of years, as it is important that they understand our standards.

The Convener: I hear what you are saying. I will not press you, given what I said at the start of the meeting. That is fine.

Drew Smith (Glasgow) (Lab): We have heard from Dr McMenamin some of the timeline around how you have taken things forward at the level of the incident management team. Can you tell us whether it was Health Protection Scotland's decision to request the Scottish Government to mobilise its resilience committee? What was the linkage between the health board on the ground, other partners and the role of the Scottish Government in co-ordinating the response? The incident was related to only one health board, but you seemed to say that you were able to disseminate the information to other health boards and outwith NHS Scotland. Did you do that yourselves, or did the Scottish Government do that for you?

Dr McCallum: As a matter of routine for any incident, as part of the on-call system, we alert the on-call consultant in public health in the chief medical officer's team at the earliest possible opportunity. Therefore, they were aware at the earliest stage.

The Scottish Government became involved not particularly in the public health management of the outbreak but because we had a large number of very ill people in intensive care, and it was important proactively to ensure that everyone was assured that the mutual aid that we were saying was necessary, in public health terms, to manage the other incidents that were going on at the time was being mobilised, if necessary, in terms of intensive care resources. Across Scotland, there was an assurance process on which various clinicians were working together. We alerted the Scottish Government to the fact that we had dusted off our pandemic flu plan and were using that, which we had tried and tested. It was the importance to the people of Scotland of the issue in the round that led to that action. It was not a single board incident. The formal link with the UK and Europe in an incident is through Health Protection Scotland as part of the memorandum of understanding.

Dr McMenamin: To return to Mr Smith's specific question, HPS made no formal request of the Scottish Government to convene its resilience group. One of our many roles in such an incident and in the co-ordination of activity in a public health investigation is to offer advice and support. As Dr McCallum outlined, there might well be any number of local actions being taken, but there is a sharing of resource between NHS boards and my host organisation, Health Protection Scotland, so that, as required, we bring in team members from outwith an NHS board setting to help with the investigation of the incident or to provide support to ensure that we deal with the issues as rapidly as possible.

Probably the most difficult thing for any incident management team is knowing, in the middle of dealing with a problem, exactly what the magnitude of the problem will be. In an epidemic or an outbreak such as the one that we are discussing, the team is not clear whether the corrective actions that it put in at the start—we have outlined what they were in this case—will be successful and, if so, how quickly things might

come back under control. The team then needs to ensure that it has the appropriate resource available to deal with that and to escalate the response as required.

Drew Smith: That sounds reasonable. The only question that arises is about how we gather the learning points for a future outbreak. It seems a bit unusual that the Government resilience committee was involved at that stage, although Dr McCallum correctly suggested some things that it might have been able to do had it been needed later, so there was a preparatory element to that approach, which seems reasonable. However, the more people who are involved in an on-going situation, the more chance there is that communication will become an issue. You are carrying out a review of your operations, but is the Government conducting a review, too? Have you been asked to give feedback to the Government on what worked well and what processes should perhaps be set up? Should there be a formal trigger for such a process in a future outbreak, or are we not sure about that yet?

Dr McCallum: The incident management team review will have at the table as part of the group one of the senior medical officers who is an experienced consultant in public health medicine. Under the guidance, there is a formal process for ensuring that the review's final report is presented and shared.

Dr McMenamin: To be crystal clear, that senior medical representative is from the chief medical officer's team in the Scottish Government.

The Convener: When will that report be available?

Dr McCallum: The guidance says that it should be available three months from the outbreak having been declared over. We will ensure that it is made available within the timescale that is required by the guidance.

The Convener: It is slightly less than satisfactory that we cannot examine some of the themes and issues that the review will discuss. I will not press you now, but the committee might want you back when the report is finalised to get something on the public record about the conclusions.

As no other committee members have questions, I will allow Marco Biagi and Sarah Boyack to ask final questions. We appreciate the time that the witnesses have given us this morning, and we are running out of time ourselves, so we need to move on.

Marco Biagi: I have a few brief questions. I see from the press statement from the Health and Safety Executive that the improvement notices are subject to a 21-day appeal period. Can the HSE say whether any such appeals have been lodged, or is that one of the issues that you cannot talk about?

Pam Waldron: It is probably not appropriate to talk about that at this stage.

Marco Biagi: Given that the system that was described earlier is in essence self-regulating—with the HSE acting as capacity builders—it needs the potential for strong penalties or sanctions if it is to work. I ask you to say—without talking about the current case—what penalties a negligent company, individual or other body could face if found to have caused a legionella outbreak.

Pam Waldron: Information is available on our website about cases that have been taken across the country for failures to manage legionella. In general, there is the potential to impose unlimited fines in such cases.

Sarah Boyack: Having today's discussion in public has been excellent. As a non-member of the committee, I am grateful to have been part of it.

I have questions about where we go next. Will an inquiry be held? How will everybody be required to report formally? This is our chance to ask questions, but the families of people who have been affected—including the people who tragically died—and the wider community have lots of questions that they want to be answered. A fatal incident occurred—a firefighter died—nearly three years ago in the area involved, but we still have not had an inquiry into or resolution of that.

I make a plea: people need to understand the process, what the prospects are of an inquiry and how the follow-up processes will be reported on because the issue of accountability for why the outbreak happened and ensuring that another outbreak does not happen is a live issue for local people.

Dr McCallum: An interim report will go to NHS Lothian's board tomorrow; it has already gone to the City of Edinburgh Council's policy and strategy committee. The board and the committee include elected representatives. The board has two appointed patient and public representatives and we have a network of patient and public involvement committees.

Once the interim report is published, I expect it to feature in my statutory report on the health of Lothian's population. The number of requests to do personal visits as a consequence of that has declined over the years, but the situation might reverse that trend. Normally, people ask for copies of my report on the web or for schools and particular organisations. Once that report is published, the offer to do personal visits is always there.

We work with a range of organisations that have networks in various communities. I expect that some of the mechanisms that we might have used less frequently in recent years for feeding back to the public might be reactivated.

We need to think how best to feed back appropriately to the people who helped us with the investigation—the families and other people who have been involved—by providing their insights. We have good examples from other areas to follow. We will think about that as we develop, publish and follow up the interim report.

The Convener: Will you ensure that the committee gets a copy of the interim report when that is appropriate?

Dr McCallum: Yes.

Sarah Boyack: What is the Health and Safety Executive's process? Will that go public, too?

Pam Waldron: The Crown Office and Procurator Fiscal Service is investigating the two deaths and the Health and Safety Executive is assisting that investigation. That is now a matter for criminal procedure.

The Convener: Will your legionella review be a public document? Can that be made available to the committee?

Pam Waldron: The information is not public at the moment, but I am sure that I could provide an update on the outcome of the legionella committee's deliberations and on any proposals that we might have, if that would be of interest.

The Convener: That would be of interest.

On the committee's behalf, I thank the witnesses for their evidence and for all the time that they have given, which we appreciate. I also thank Marco Biagi and Sarah Boyack for their participation and their very good questions.

Marco Biagi: Thank you for having us.

The Convener: As previously agreed, the committee will now move into private session.

12:15

Meeting continued in private until 12:52.

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