Northern Ireland Assembly

Committee for Health, Social Services and Public Safety

OFFICIAL REPORT (Hansard)

Pseudomonas Outbreak: RQIA Briefing on Final Report

31 May 2012

NORTHERN IRELAND ASSEMBLY

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Members present for all or part of the proceedings:
Ms Sue Ramsey (Chairperson)
Ms Paula Bradley
Mr Mickey Brady
Ms Pam Brown
Mr Gordon Dunne
Mr Samuel Gardiner
Mr John McCallister
Mr Conall McDevitt

Witnesses:

Dr Michael Kelsey	Independent Review Team
Dr Ian Laing	Independent Review Team
Dr David Stewart	Independent Review Team
Professor Pat Troop	Independent Review Team

The Chairperson: Good afternoon. You are very welcome to the Committee meeting today. We got a copy of your report at 12 o'clock, so we have had a chance to read most of it. Because our evidence sessions are with you and then the Minister, I will hand straight over to you, Professor Troop. If you would like to introduce your team and give us your presentation, we will then open the session to questions or comments from members. On behalf of the Committee, I thank you and your team for the report that has been presented to us today and for getting it done by the deadline that was given to you. Thanks very much for that.

Professor Pat Troop (Independent Review Team): Thank you very much, and thank you for asking us to come back. I have with me Dr Laing, who is a neonatologist. He has just retired from clinical practice, but he is running a neonatal network in Scotland, so he will be able to answer questions on that. Dr Kelsey you met last time; he is a microbiologist who has been working particularly on pseudomonas in water over recent times. Dr Stewart is the medical director of the Regulation and Quality Improvement Authority (RQIA), and he has been sharing his local knowledge with us. I will make a short presentation.

We came here earlier with our interim report, which concentrated on how the outbreak happened and what the response was. We made 15 recommendations in that. As we moved into phase 2, the team was very pleased to see progress being made on all of those recommendations, including the planning of a neonatal network. Also, on 30 March, the Department of Health in England issued guidance on water management and pseudomonas. We had recommended that that should be issued in Northern Ireland, and that has happened. In the second phase of our review, we looked at

governance arrangements for responding to circulars on water management; infection control; communication across the whole system; and, most importantly, the impact on families.

I will start with governance. If you look at the issues of responding to circulars and guidance, water management and control and infection control, you can see that all of the trusts have systems in place and all of these reported up through their governance structures. Some of the arrangements were stronger than others, but they all had arrangements that we thought were broadly reasonable.

Some of the particular issues that came out were about the circulars relating to water and pseudomonas. We went back to the circular of September 2010 that we were asked to look at, and, following that, all the trusts had action plans. The wording of that circular said that trusts should carry out a risk assessment to see whether they had a problem with pseudomonas and, if they had, to take certain actions. All the trusts undertook a risk assessment. The Public Health Agency (PHA) sent them figures for pseudomonas in their hospitals and, as a result, none of them found problems with pseudomonas in their neonatal units at that time. Although they introduced a number of actions, they did not see the need to test for pseudomonas at that time. They did enhance hand hygiene, although there were some differences in the way that they responded to those recommendations, particularly on the use of alcohol gel after hand washing. Belfast Health and Social Care Trust, which is the trust we looked at most, implemented an alcohol gel policy and sent information out to all staff on that policy.

Further guidance then came out; an estates-led letter in July 2011 and more guidance in August 2011. When we quizzed the trusts on both of those, they had action plans in response. The later circular was that of 22 December 2011, and we explored in detail the thinking behind that circular and the response of the trusts. When it was first decided to send that out, it was during the outbreak in Altnagelvin Area Hospital. By the time it was issued, the Department still had limited information. It did not have the typing results from Altnagelvin. It was not in the public domain at that stage and it was not yet in the press. Therefore, more general guidance was issued. They identified that there had been a problem within Northern Ireland, but their main advice was to make sure that they were complying with previous guidance. When the trusts received that, they all disseminated it to relevant personnel, but when they looked at it, they thought that they had previously responded to those other circulars and therefore did not see an urgent need to respond. However, they did disseminate it to key personnel and they did arrange to discuss it at their next meetings.

All the trusts had systems for infection control. A non-executive director or chairman was at each of our governance meetings, and they all told us that they took it very seriously at their board meetings. We have included the figures to demonstrate their general progress. They have all made progress, but in some trusts, as you can see, there is still more to do.

We have put a lot about communications in the report. When I came to Northern Ireland on this trip — I have been before — I was told by all the organisations that, "Northern Ireland is a small place. We all know each other, and we all talk to each other." I think that when you read through this report, you find that those informal mechanisms just did not work well enough. They were only partially successful. Although there was quite a lot of information in the system, it did not all reach all the people who needed to know. There were some systems for sharing information, for example, on infectious diseases, but these are more limited than you find in many other places.

We also went into detail about all the exchanges of information, about who said what to whom and when. It is certainly the case that the staff in Belfast, the key people, knew what was happening in Altnagelvin, but most of the information they received was about the clinical care of a baby. They were not in receipt of all the information about what had happened and the measures that had been put in place. We also found that there was a misunderstanding of laboratory information received by Belfast about a baby in Craigavon, and we were not able to resolve all the different recollections of telephone conversations that people had. Not all of these were documented. So, we made some recommendations about having much more routine communication systems — communication on infectious diseases happens weekly in most other places — and more robust mechanisms for reporting unusual incidents and other systematic approaches to communications.

When the outbreak was called in Belfast, the Public Health Agency became involved and actively supported the team. It held daily teleconferences, which were initially chaired by the commissioning board, as, at that time, the issue was about capacity. Then, when it was thought that it was a public health problem, the PHA took over. There were some misperceptions. The Public Health Agency was clear that it thought that it was co-ordinating this, and it issued daily agendas outlining the purpose of the meetings. However, some of the trusts were not clear about the purpose of those teleconferences

and about what the role of the PHA was. So, we have made some more recommendations about a more, if you like, shared approach to a joint incident.

You will see that we have made some other recommendations. One was about staff support. We met a lot of staff who felt that they were under enormous pressure, and the parents commented on that as well. Some of them still feel the impact of this. I think that it was Dr Laing who said that the ones who care most hurt most, and I think that there is something in that. That needs to be built into any response.

You will also see that the Health Protection Agency has now completed its report on the taps and on the biofilms in their assembly. The complex sensor taps were the particular problem, and it found a strong link between the pseudomonas in the rosettes in those taps and the pseudomonas that they found in the babies. UK-wide, some guidance on neonatal infections is now being looked at. So, some wider issues have come out.

I would like to finish by talking about the families. One further family came forward after the interim report was published, and one family, through their solicitor, asked not to be associated with "The Experience of Families" section of the report, and we have put that in. Nevertheless, we included the concerns they raised along with those of all the other families.

We met each of the families outside the clinical setting, in what we hoped was a pleasant environment, to help them to relax. We took them through their story from pregnancy to the day that we met them. Their stories were very moving, and we all felt very moved and grateful that they felt able to come to us. As for the general picture that we got from them, most of the families expressed that they were satisfied or, in some cases, very happy with the care that their baby received clinically or within the unit. The main issues that they raised were, again, around communication, particularly around pseudomonas. Some of the doctors seemed to be very good at giving information, but, in general, parents found that the nurses were better, but then they see those nurses all day and are able to build that kind of rapport. They also found that sometimes the nurses used language that was easier to understand.

With pseudomonas, it was different for different groups in different places. In a smaller unit like the one in Altnagelvin, doctors were able to sit down with parents and talk to them on a one-to-one basis. In Belfast, the doctors spoke individually to the bereaved parents but were not able to sit down on a one-to-one basis with all the other parents, so they held a general meeting. We found that that was not very satisfactory for many of the families. The doctors did not feel that they could reveal very much because of confidentiality. The parents, therefore, did not really find out what was going on, and then they heard about it through the media. So, there was some concern that they had not had the right kind of communication.

We also talked to some parents of the babies who were colonised. As you might imagine, they were very fearful. They felt they had perhaps been ignored and pushed to one side. Not surprisingly, the doctors were concentrating on the babies who were very sick, but those parents felt marginalised.

Again, one of our recommendations is about communication, but information is still better coming from the clinical staff. It is about how the trust supports the clinical staff and takes away from them the things that they do not need to do so that they can concentrate on working with the babies.

To finish, we thought that it was very important to have that separate term of reference to look at the impact on families. It is not always there so explicitly in a review. It meant that we kept their needs at the centre of our consideration. We were deeply moved by their stories, and we were very impressed with the dignity and openness of the families we met. We hope that what we have been able to produce will meet their needs and prevent it happening to other parents.

The Chairperson: Thank you for that, Professor Troop. It is important to highlight the families, because we are dealing with families and young children and, sadly, the death of somebody's child. One of the things that struck me in the report was the family stories. They humanise the situation, in a sense. It is also important to highlight how highly families spoke of the staff during that time. Although they highlighted some issues around communication and procedures that need to be changed, I have read that every one of them has said that they were treated with respect and dignity and that the staff could not have done enough for them during that time, outside of managerial communication and the way they operate. It is important to get that out there. Staff were doing a job, but they respected that there were family needs, too.

I have a number of questions about the process. In your presentation, you said that a communication about the water went out in September 2010. You said that all trusts had action plans and that all trusts then undertook to carry out a risk assessment. There was no pseudomonas at that time, but some took action anyway, based on their own action plans. You then said that communications went out again in July 2011 and August 2011 and that action plans were drawn up in response to those communications. Then we come to the circular of 23 December, and I will get to questions on that specifically. During your presentation, I was thinking that, if this was highlighted in September 2010 and if action plans were in place, should we not have been convinced that there would not be an outbreak of pseudomonas? There were action plans in place in response to three circulars that were sent from the Department from September 2010 to August 2011. If we were all so wonderful, why did we have an outbreak of pseudomonas a number of months later?

Professor Troop: I will make some initial comments, then I will hand over to Dr Kelsey, because this is the area in which he has a particular expertise. When they got the circulars in 2010, the Public Health Agency sent round figures for each of the trusts. We put those in here. You will see that the maternity unit in the Royal Jubilee, for example, had maybe one case a year. That was the whole unit and not just the neonatal unit. Some of the trusts went through all of their laboratory records to find out if they had a problem with pseudomonas, and they concluded that they did not have any evidence that they had a problem, and they acted accordingly. It is not that they neglected doing what they were advised to do; they did what the circulars told them to do. However, as you say, that did not prevent an outbreak.

Mr Michael Kelsey (Independent Review Team): To some extent, this is a problem that has crept up on us over the past few years. As we said in the document, the standard for waters in this country is from two documents. One of the documents, L8, is from the Health and Safety Executive. It deals mostly with legionellosis. The other guidance, health technical memorandum (HTM) 04-01, deals not only with legionellosis but the quality and standards of water distribution systems. Neither of those documents has a separate standard for pseudomonas; in fact, HTM O4-01 says that you can accept the quality from your provider — and there is a whole raft of European legislation dealing with the quality of water coming in from the water provider — so long as you do not change that quality when you distribute it round the hospital. That is the acceptable standard. That is the historical situation. Throughout the United Kingdom and other parts of the world, we are now beginning to realise that that is probably not an adequate standard for healthcare and that the quality standards need to take into account other organisms, such as pseudomonas aeruginosa.

In August 2010, these standards were not even being considered in the United Kingdom. The United Kingdom as a whole deals with these issues, with the devolved Governments taking part. The first major issue was drawn to our attention by the Welsh circular. There was a similar circular from England, which was followed by Northern Ireland and finally by Scotland. Because we did not know the extent of the issue and problem around healthcare in the United Kingdom, it was quite carefully worded. We knew, for example, that there were issues with pseudomonas aeruginosa in a number of fairly major centres. However, these had not been gathered together by the infection surveillance and epidemiological intelligence systems to give us a coherent understanding, so we were quite ignorant. It was early days; things were coming in but we did not know the extent.

We were not saying that pseudomonas aeruginosa is the only problem. The guidance in the circulars started to say that you need to look at pseudomonas but that there may be other things. Because there was no obvious solution to the problem, it was going to take a while, and it has taken quite a while. We have not reached firm engineering or biological conclusions to the problem, so it is going to take a while to sort it out. Therefore, we could not be prohibitive and prescriptive about how people should respond because we just did not know the answer.

The Chairperson: The report says that some trusts receive 50 circulars a quarter. Circulars went out in September 2010, July 2011 and August 2011, and then there was the circular of 23 December. We are told on page 33 of the report that three trusts were not aware when they received that circular that a baby had died of pseudomonas in Altnagelvin. This is probably a question for the second part of this presentation, but I am asking for your response. If trusts were continuing to get circulars, would it not have been wise for the 23 December circular to have been marked urgent or to have highlighted the fact that a baby had died of pseudomonas? I go on then to the actions of the Belfast Trust. I assume that the Belfast Trust decided to defer consideration of the circular for a month because the circular was not marked urgent and did not say that there had been a pseudomonas death in Altnagelvin.

Professor Troop: I will explain. Although we have said that the trusts had a lot of circulars, they have systems whereby when a circular comes in, usually to the chief executive's office, it is looked at, a decision is made on which director should take it forward, and it is sent round. We picked up that people put those onto databases and have systems to ensure that they are responded to. The guidance includes not just circulars but National Institute for Health and Clinical Excellence (NICE) guidance and other guidance. Although they have a lot, they have systematic approaches to ensure that they are looked at by the right people, they are dealt with, and they have assurances that they have been dealt with.

When the Belfast Trust got this circular, it did exactly that. It sent it round pretty quickly to all the people whom it thought should see it. However, because some of the key advice was to make sure that you are complying with the advice that was sent round, the Belfast Trust, like all the trusts, decided to look at it at its next meeting. If you look at what the circular said and how it responded, you will see that that was in keeping with what was in the circular. It did exactly the same as everybody else.

The Chairperson: I appreciate that. My question is this: do you believe that the circular that went out on 23 December should have highlighted the fact that it was not just a routine circular and that it was dealing with the death of a baby from pseudomonas in Altnagelvin? If that had happened, the action plan that you are telling us the trusts had in place from September 2010 might have kicked in.

Professor Troop: As you see in the report, we have said that we thought something might have been more explicit. I do not think that they should have mentioned the baby in Altnagelvin, because, when they issued the circular, it was not in any media. It was not known outside the system that a baby had died in Altnagelvin. I think their concern was that, if they mentioned it, people would find out that there had been that baby in Altnagelvin and could very easily find out who it was. They were worried that it would breach confidentiality. It did not come out in the media until later the same day. However, when they issued the circular, it was not in the public domain, and they did not want to breach confidentiality. That does not mean that they could not have put in something that would have alerted people more to what they might do if they had cases of pseudomonas.

The other point that they made to us was that, when they issued that circular, they did not have the typing from Altnagelvin, so the information that they had on the outbreak from Altnagelvin was limited, and it also appeared to be under control. From the limited information that they had on the situation that they faced, they said that they felt that they had put out a measured circular. Clearly, the trusts did not receive it with the level of concern that those who issued it felt. It was issued thinking that people were being alerted to something, but the people who received it did not take it with that level of urgency. So, there was a mismatch between the sender and the receiver. The action plan was about meeting the needs of the circulars; it was not about dealing with individual cases.

We have said in the report that more explicit wording might have been helpful. On the other hand, we are not sure how much difference it would have made, and we have put that in the report, too. By the time the cases happened in Belfast, they understood the link with water. So, even if something had been stronger in the circular, would it have made any difference? We do not know.

Mr Gardiner: Thank you, Professor. I thank your whole team for how you are trying to help us. I agree with you that the circulars were sent out, but they were not acted on. I hope that, in future, anything of that nature will send out a red alert: whether it is the member of staff sitting at the computer or the member of staff taking the telephone call, they should know that it is a red alert and that action must be taken. There should be no more waffling about and letting things sit aside. That is what happened in this instance. Quicker action should have been taken, and all hospitals should have been on red alert.

Professor Troop: There is a difference here. All the trusts responded to those circulars — each of the circulars, including that one — in a way that was reasonable, in the fact that it said —

Mr Gardiner: Yes, but after a time.

Professor Troop: Perhaps it is not so much a matter of whether they responded in the right way to the circular; perhaps it is a matter of whether there might have been some wording that might have alerted them to take more immediate action. That is the difference. Given the wording that they had, I thought the action was reasonable. My concern is that the circular was not worded in a way that encouraged the trusts to think a little bit more urgently. That was the way round —

Mr Gardiner: That is why I am saying that red alert means red alert action. Speed is everything in these instances. Some of the hospitals and trusts may not have even looked at the circular for a week or more.

Professor Troop: From what we can see, it seems that they did disseminate the circular very quickly. We did ask about that, and they said that they sent it round to all the relevant staff. If you look at what the circular advised them to do, you will see that it was to review whether or not they were compliant. They all said that they had looked at previous circulars and that they were compliant. That is not the same thing as saying to hospitals to be alert and telling them what to do if they get a case of pseudomonas. I think that the intention of sending the circular was right, but there was a mismatch between the concern of those sending it and the level of signal that reached those receiving it.

Mr Gardiner: The words "red alert" should be inserted in future.

The Chairperson: Other members want to come in on the circular, but let me finish some of my questions. In page 34 of the report, Professor Troop, you mention sterile water.

Professor Troop: Sorry, which part?

The Chairperson: In page 34, under the heading "6.4.5 HSS (MD) 4/2012 Interim guidance on Pseudomonas and Neonatal Units". When did Altnagelvin Hospital start using sterile water?

Professor Troop: It started using sterile water when it had two cases in December. It had three cases, and when it had those two cases within a day or two and called its outbreak —

The Chairperson: Was it advised to use sterile water?

Professor Troop: The hospital spoke to the Public Health Agency, and it is not clear who advised it. I think that Altnagelvin decided itself, but others in similar situations came to similar conclusions.

The Chairperson: I am trying to get the dates, because it is important that we get those. There was some type of discussion, but Altnagelvin made the decision itself to use sterile water. Do we know when the Public Health Agency was informed that Altnagelvin was using sterile water?

Professor Troop: Yes. The Public Health Agency was very involved in that. Altnagelvin advised the Public Health Agency, which identified staff, who then went to the meetings in Altnagelvin.

The Chairperson: Was any other trust informed that sterile water should be used after Altnagelvin started using it?

Professor Troop: No, the Public Health Agency says that, because it felt that that outbreak was brought under control very quickly, it would normally have advised the other trusts but that it was aware that the Department was sending a letter out, so, on that occasion, it did not. What we tried to show in the report is that we came across insufficient routine communication systems across infectious diseases and neonatal care, and that is why our recommendations are to have much more routine, systematic approaches in place. There was too much reliance on informal networks and on people assuming that other people would do things.

The Chairperson: I appreciate that, and I support your recommendations, but, just for clarity, it is the case that Altnagelvin started using sterile water and the Public Health Agency was either part of that decision or became aware of it. None of the other trusts was advised of that because the PHA assumed that the Department was going to do that. Is there a possibility that the outcomes could have been different had sterile water been used elsewhere when Altnagelvin started using it?

Professor Troop: My understanding is that it was considered by the Department and the Public Health Agency to be a pragmatic solution to a particular problem while Altnagelvin sorted its water out.

The Chairperson: Yet the other trusts were not told.

Professor Troop: The other trusts were not informed.

The Chairperson: OK. Again, I appreciate your being here, because it allows us to get into some of the detail. At the bottom of page 44, the report states:

> *"Information about the incident in Altnagelvin was shared at a meeting of the PHA Regional Health Protection Advisory Forum... Not all trusts were represented."*

It goes on to say that the notes issued after the meeting advised that the Western Trust had five outbreaks, which included three babies.

Who was missing from that meeting? Was the information from that meeting passed on?

Professor Troop: David, do you have the details of that?

Dr David Stewart (Independent Review Team): I cannot recall which trusts were represented, but the minutes of the meeting are recorded at another point in the document. That is really what was said. In the notes of the meeting, there were five bacteraemias — that is, an infection of the bloodstream with bacteria but not necessarily pseudomonas — and it was confirmed that it included the three babies infected with pseudomonas. The notes of the meeting did not specifically say that there had been a pseudomonas outbreak. They did refer to the conversation that had taken place at the meeting, however.

Professor Troop: We were aware that representatives from Belfast were there, but the people who were there were not necessarily the same people who would be handling the problem in neonatal units.

The Chairperson: Therefore, if the relevant people had been at that meeting —

Professor Troop: There were some people there, but they were not necessarily the people who would manage an outbreak in a neonatal unit. There are quite a lot of people involved in health protection.

We were advised of that meeting. However, when we looked into it, we found that it did not provide the detailed information that we thought that it might do.

The Chairperson: I will ask one more question before opening the meeting to members. I will then come back with a few points.

As part of the review team, and as people with a long history in health and social services, you state, in page 63 of the report:

> *"Three trusts advised that they were not aware for several weeks that an outbreak of pseudomonas had taken place in the neonatal unit at Altnagelvin Hospital".*

Does that shock you, considering that you said earlier that this is small place and that people talk?

Professor Troop: I was surprised, having been told that a lot of informal communication happens.

The Chairperson: I am led to believe that the chief executives meet the Department at senior level regularly. You would think that this would be a topic for discussion.

Professor Troop: I think that I would have expected it more to have gone around professional networks. It is back to, as I described, Dr Kelsey getting a weekly report of infectious diseases in London. That follows a UK-wide teleconference, in which Northern Ireland takes part. Locally, people take information from that, as they do in London, add the London flavour, and send it to everyone in infection control. There is no similar mechanism here.

Similarly, you do not have a managed neonatal network. Therefore, informal discussions are relied on. There are a number of other areas, not just those, in which information automatically goes out if you have routine, systematic information systems. Sometimes people use social media to do that as well. It does not have to be formal or highly bureaucratic. However, it must be systematic.

I was surprised when we found that out, and it did highlight that you do need those systematic approaches in place.

The Chairperson: Not only were other trusts not aware of it — I am trying to find the comment — I am led to believe that they became aware of it only when they saw it in the media.

Professor Troop: The first that they heard of it was when it first came into the media.

Ms P Bradley: It is at the top of page 44, Chairperson.

The Chairperson: They became aware of it only when it was in the media. It was not as though the system decided that there was an issue and that it needed to be proactive and do something. It was only when they saw it in the media that they became aware of it?

Professor Troop: Two of the trusts said that that was from where they picked it up. One other trust —

The Chairperson: I know that we are very critical of the media at times, but perhaps the media were quite right here, in a sense, in that two of the trusts picked up a major story from the media. Is that not the case?

Professor Troop: As I said, they were disappointed that they picked it up that way. I would have hoped that they had learnt about it through other networks.

The situation at Altnagelvin Hospital was in the media only around there. It did not reach anywhere else; it did not reach the media in Belfast.

The Chairperson: I appreciate that, Professor Troop. I know that David sent you a note, but this is a small place. When someone coughs in Derry, we know about it in Belfast. Therefore, we should not be using that as an excuse.

Professor Troop: That is why I was, as I said, disappointed and a little surprised.

The Chairperson: Shocked.

Dr Ian Laing (Independent Review Team): Thank you very much for your welcome to Northern Ireland. I wish to expand on the issue of professional communication, because Professor Troop and I have talked about that a lot.

I work in a managed clinical network, which is very formal, and I am the clinical lead. Wherever I have gone in Northern Ireland, I have been very impressed by the consultant neonatologists and paediatricians, who have said that a formal, managed clinical network is needed here. I have agreed with that. That is a universal feeling that I have come across, although there is not one pattern for a managed clinical network. If you had a neonatal clinical lead, who would clearly be chosen within Northern Ireland, that person would work with a manager. As part of the role, they could disseminate that information.

I am really glad that you have approached this in a very learning way, asking what you can do for the future years. Mae Nugent, the very distinguished nurse with whom I have spent time going around the trusts here, and I have been impressed by the feeling of, "Let's see what we can put in place to make this better." The clinical information from a managed clinical network, which has been formalised, properly set up and supported clerically, will make a great deal of difference to communication, not just to the five main trusts that you have here but to Erne Hospital, Daisy Hill Hospital and others. You can set it up in a really constructive way. That would be a terrific learning point for the whole perinatal system.

Mr McDevitt: For clarity, can you tell me the exact date of the press report in Derry about the incident in Altnagelvin?

Professor Troop: It came out on 22 December.

Mr McDevitt: Therefore, it appeared on the same day on which the Chief Medical Officer sent the letter?

Professor Troop: Yes. I do not think that he was aware of that until the circular had gone out.

Mr McDevitt: Are you absolutely certain that it was 22 December?

Professor Troop: Yes.

Dr Stewart: It is not documented in the report, but that is our recollection.

Professor Troop: Yes. We looked at that.

Mr McDevitt: Page 44 of the report concerns the basic question of who knew what and when. The first paragraph highlights that the point at which everyone appears to have known everything about what was going on was 17 January. You identify six reasons that the information may not have been known to other trusts. The first states:

> *"Trusts advised the review team that it would not be common practice for them to advise other trusts about incidents in their area, unless there was a need to share details for particular clinical or health protection reasons."*

The second argument that you put forward is:

> *"PHA advised the review team that the duty room can be informed of unusual events, which have occurred in relation to infectious diseases in trusts in advance of outbreaks being declared, but this did not occur in relation to these incidents."*

You also state:

> *"PHA advised the review team that DHSSPS had confirmed that they would be issuing an early letter to the service following the incident at Altnagelvin".*

Therefore, the Public Health Agency chose to wait for the Department to do something.

In addition, you state that there was local media coverage in Derry but that it was not picked up outside the trust area. You then point to the nature of the Chief Medical Officer's letter of 22 December, and you highlight the fact that it was written:

> *"to raise awareness of potential cross infection from taps and basins".*

Although it refers to outbreaks in England and Wales similar to what happened in Northern Ireland, it does not specifically say that there had been an incident in Altnagelvin.

Finally, you state:

> *"Information about the incident in Altnagelvin was shared at a meeting of the PHA Regional Health Protection Advisory Forum on 5 January 2012. Not all trusts were represented."*

You already pointed that out to the Chairperson. The report goes on to state:

> *"The notes issued after the meeting did advise that the 'Western Trust had five bacteraemias (which included the 3 babies infected with pseudomonas) among neonates over recent weeks' but did not specifically mention pseudomonas."*

There are six significant individual failures. Whether they are as a result of a lack of process or a lack of judgement, you clearly identify six separate points of failure.

Professor Troop: We were trying to get across two things in the communication section of the report. The first is that, when we were here earlier — I do not mean at the Committee — there seemed to be an assumption that the situation at Altnagelvin Hospital was common knowledge in January, and,

therefore, it should have been higher up in everybody's mind. We were trying to get across that it was not "common" knowledge. The people who knew about it were limited. They were the people in Altnagelvin, the Public Health Agency and the clinicians in Belfast who had been informed. Outside of that, the situation was not generally known. We were trying to share the fact that it had not become the common knowledge that a lot of people thought that it had.

Mr McDevitt: And that was a clear failure.

Professor Troop: It goes back to what I have already said. You need those systematic systems — sorry, that is a tautology. If you do not have routine systems in which you, as a regular process, share information, you do not get used to the idea of always just sharing everything. If you send something out every week, time and time again, whether on social media or a blog, it becomes second nature to share everything, and you find that your informal mechanisms get stronger. However, unless you have the bedrock of those systems, that does not happen. What we were trying to explain in the report is that there was not a bedrock of sound systems of sharing that information.

Mr McDevitt: Therefore, there was systemic failure.

Professor Troop: You call it systemic failure, but I prefer to say that the lesson to learn from this is that there were not sound enough systems in place. I came into this looking at what could be made stronger, instead of going around telling people that they had failed. People have been really honest with us, because we went in asking how we might learn from this. The most important thing was to get that honesty from everybody, and that is why I did not go in telling people that they had failed. I went in asking how we could make this better.

Mr McDevitt: I appreciate that. However, they are public servants, and they have a duty to behave in an accountable fashion. What I see in those six points is systemic failure, Professor Troop.

Professor Troop: Some of those may not have been regarded as failure, because if the Altnagelvin people saw that their primary duty was to the baby that they were transferring, the information that they transmitted was about the baby that they were transferring to ensure that that baby was looked after. They informed the Public Health Agency, and when we asked the trust, it said that it saw the Public Health Agency and others more centrally as having a responsibility to share information. I do not think that saying that the Western Trust did not tell all the other trusts was a failure. The trust was in the middle of a big situation: it had those three very sick babies whom it transferred to Belfast, and it concentrated on looking after them. It is not the trust's role, in the middle of that, to start telling all the other trusts. The Western Trust wanted to tell a more central agency to do that.

Therefore, each of the points was an instance of people doing things that they thought appropriate for their role. It just shows that some roles were missing, which is not necessarily the same as saying, for example, that Altnagelvin was failing. I do not think that Altnagelvin was failing; rather, it did what it thought was right for that baby.

Mr McDevitt: From a silo perspective.

Professor Troop: No, because the people in Altnagelvin informed the Public Health Agency. If they had kept it to themselves, that would have been. However, they informed the Public Health Agency and others centrally, because they also informed the Department of Health, Social Services and Public Safety. You might say that it is their role to send that information around, but their job is to look after those very sick babies and not to phone other people. That is a legitimate thing to do. We have to be careful whether or not we are telling people that they are failures when they are doing what fits with their role. The report just shows that some roles were missing.

Mr McDevitt: Your report states on page 50:

"On 14 December 2011, two DHSSPS Medical Officers were asked to prepare a draft circular".

That is the circular that issued on 22 December, six days later. Is it normal for a circular to take six days to draft?

Professor Troop: It can do, because you would first want to make sure that you have the right information, and you would also want to consult with the trust responsible for Altnagelvin to make sure

that the information that it put out reflected accurately what it and the Public Health Agency knew. It can sometimes take a number of days. Whether that was right for that particular circular, I really cannot say. I have been involved in putting circulars together, and it rarely happens as fast as you may think. You have to consult a number of people, and that often takes time.

Mr McDevitt: What was learned from that, if anything? Was that a reasonable period? Is there a need to develop a system in which urgent communication can be made, as you described earlier, through the use of social media or other methods? That may fall short of what might be called a circular standard. However, it would give the capacity to alert the system to introduce an element of vigilance into the system that clearly was not introduced, at a regional level, during December 2011 and early January 2012.

Professor Troop: Yes. I think that you can use other less formal systems that can then be followed up by a circular. For example, you could phone the five trusts. There are different ways that you can do things, and they do not always have to be done through a circular. I think that it was very reasonable to put out a circular, and the action of doing so was really proper. However, one should not rely on one method of communication. We have described some of the other mechanisms of communication that would have filled that gap.

Mr Brady: Thank you very much for the report. It is very comprehensive. My questions are about the taps, and therefore probably for Dr Kelsey. The final paragraph of page 21 of the report states:

> *"Trusts have carried out risk assessments in relation to water systems as required under L8."*

Apparently, L8 is the document that deals with the control of legionella bacteria in water systems.

The report goes on to state:

> *"The review team found that the approach used and stage of completion was different between trusts. Plans to carry out actions to improve compliance of systems were in place but the review team was advised that additional resource would be required if full compliance was to be achieved."*

Do you think that that will happen?

I have a couple of other questions about the taps. The report refers to the necessity of flushing taps, particular taps that may not be used regularly. The report suggests that taps were set to flush once, and in some cases twice, every 24 hours. I asked you before about pseudomonas in the plastic inserts in the sensor taps. Is flushing taps once or twice every 24 hours enough?

My final question concerns the point-of-use filters. The trusts seem to have considered using those. However, for various reasons, one of which was cost, they did not feel that it was necessary to use them. If point-of-use filters had been used, would they have been more effective? I am not suggesting that the use of those filters would have stopped the pseudomonas, but why are they mentioned? We have to presume that those filters have a purpose, which is to prevent something or to filter out something that is harmful.

Dr Kelsey: If it is all right, I will start off by answering the question on the filters. Point-of-use filters are bacterial filters that, in this part of the world, are largely made by a single manufacturer called Pall. They are designed specifically to remove bacteria from the water supply. That does not mean that tap spouts do not get contaminated, and they can do. Those filters are fitted when you know that pseudomonas or legionella is present in taps, and you had a reason to remove those bacteria.

When the circular mentioned fitting those filters to the taps, it told the trusts to do so if they had a problem. The trusts would have had to do their analysis and risk assessments. They would also have had to recognise that they had a problem, which, as we know, no one had done in 2010 and the early part of 2011 — and realise that the solution to the problem was to remove the source. The source was the water from the taps. A quick and urgent response is to fit filters to those taps. Then, you can more or less assume that, if you follow the manufacturer's instructions, the water coming from the spout of those taps will be suitable for use in a clinical setting.

Mr Brady: Are you saying that the solution is reactive rather than proactive?

Dr Kelsey: Yes.

Mr Brady: Another point has just been brought to my attention. It is stated on page 21:

> *"All trusts provided evidence that a training needs analysis had been carried out to identify requirements of staff undertaking water management".*

It continues:

> *"Evidence submitted by trusts did not always provide assurance that individuals with specific responsibilities in relation to water management were receiving accredited training in relation to their roles."*

I presume that all those issues will be included in some sort of accredited water management training. You are saying that, if a problem is identified, a filter is fitted. Is it not possible to fit the filter beforehand to prevent the problem, rather than after to deal with the problem?

Dr Kelsey: The issue of cost comes into this. A trust very close to my trust had a problem in its neonatal unit, the solution to which was to fit filters. At present, the filters cost around £30 each. You have to change them every 30 days. The trust reckoned that it would be spending £70,000 a year just on filters for that one purpose. If you multiply that throughout Northern Ireland, you can see that the cost would be very considerable. It is probably justifiable only where you knew that there was not a solution to the problem. However, nobody had established by December, apart from Altnagelvin Hospital, that water supplies were contaminated.

Mr Brady: The cost of the pseudomonas outbreak has been considerable. That is a moot point, but it is worth making.

Dr Kelsey: I could respond, but that is not something that we considered in the report. That is a matter of human issues.

Professor Troop: That is a balance of judgement to be made by others. You will see that the guidance that came out after — I think that it was in —

Dr Kelsey: March of this year.

Professor Troop: The Department of Health guidance that was published in England was very much more detailed, and Northern Ireland picked up on that. Some of the findings of the interim report fed into that guidance. How to manage problems in the water system if you have pseudomonas is now a much more detailed programme that is set out in that letter. A lot has been learnt and has fed into that circular. The report proposes a number of solutions, not just filters.

Dr Kelsey: The new guidance that will be completed hopefully by this time next year on water quality in healthcare will include a programme of testing in areas so that you will become aware a lot earlier if you have a problem. That is already outlined in the March 2012 guidance that will go into the national standard documentation Health Technical Memorandum (HTM) 04-01.

Mr Gardiner: Thank you for your response to Mr Brady. He asked a question, and your response was "cost". Can you put a cost on the life of a baby? You are trying to defend the health service and explaining that this or that was not done because of cost.

Dr Kelsey: No, what I am saying is —

Mr Gardiner: You cannot buy a baby.

Dr Kelsey: No, what I am saying is that, when you are running a healthcare system — again, this is not something that we considered — everything has a cost, and you have to look after the system as a whole. You cannot just make an isolated decision.

Professor Troop: When that first guidance went out, it was not part of the review to look at the cost benefit of different solutions that national guidance might have indicated. There was national guidance, and the trusts followed it. Whether it might have been different —

Mr Gardiner: You need to raise the bar in it, because we are not at that standard.

Professor Troop: We did not issue the national guidance. We checked on whether the trusts complied with it. I can assure you that when we met all those families, they were right at the centre of all our thinking, when we heard their stories. I assure you that there is no issue about not taking the lives of those babies really seriously.

The cost-benefit consideration of how different circulars were written was not part of our review.

The Chairperson: Some of these questions will overlap with questions to the Minister in the next session. They are questions that, probably, he can answer.

Dr Laing: May I respond as a paediatrician, father and grandfather; I take the essence of what you said absolutely. You cannot put a price on a human life.

I would like to give you a slightly broader perspective of infection in this group of children. We are caring for really precious infants at 24, 25 and 26 weeks' gestation. We take for granted, as adults and children, that we have our castle wall — the skin — which has thickness and an epidermis. The extreme pre-term baby, in the early days of his or her life, does not have that defence. They are wide open to bacteria just walking through their skin into the blood and causing these illnesses.

Since coming here, I have read some commentaries about it not being rocket science that these babies have to be managed in a sterile environment. That is actually incorrect. The babies are not managed in a sterile environment; what we have to do is manage them in a clean environment. Babies need bacteria. They need to experience them. There are bacteria in breast milk, so that, as they swallow, they get, if you like, protection from the good bacteria that are going into their intestines. That is strengthening their immune systems and protecting them. It is causing them to survive.

I think that we should start off by thinking that they are completely precious and that we ought to do everything we can to protect them. Today, we are talking about one bacterium, the pseudomonas; however, what we will not be able to do is to create an environment inside the neonatal unit in which bacteria do not settle on the babies and, indeed, cause them infection from time to time. We have the good bacteria that are causing them protection. However, sometimes they have invasive qualities and cause disease. We have to recognise that it is universal that they are going to come across these bacteria. What we have to is protect them against the bad ones. Almost all bacteria, under some circumstances, will cause bacteraemias. Your pronunciation, Mr McDevitt, was spot on, thank you. Bacteraemias can be harmful to these babies and can kill or cause damage that can be perpetual. So, they are precious children, and we have got to try and protect them as best we can. We are not always going to be able to do it perfectly, and we should all take forward the notion that they are not in a sterile environment and that bacteria can help.

Mr Dunne: I would like to thank the team for their work. I think that we have all recognised the professional approach that you have taken and the open and honest way in which you have carried out your investigation. It has been done very well indeed. We are most impressed by what you have done and what you have told us.

A lot of the issues have been covered. I would like to go back to what I raised on a number of occasions about the source of the problem. What assurance was there that the water management systems were in place? One issue has just jumped out at me. Page 21 of the report states:

> *"Evidence submitted by trusts did not always provide assurance that individuals with specific responsibilities in relation to water management were receiving accredited training in relation to their roles."*

That does not assure me that the management of the water systems in the trust was carried out consistently. There are a number of issues: letter PEL(11)13 dated 1 July 2011 asked for a return from the various trusts by 31 July. Three met the target; two did not. The South Eastern Trust responded on 12 September 2011, and the Belfast Trust obviously did not make a return but

eventually made some submission on 2 February this year. That shows inconsistency of the management in the trusts.

An issue has been identified with the flexible water-supply hoses. Again, on 1 January 2012, returns were to be made. There is a whole range of different dates. There is inconsistency in the management of the processes. To me, that is a considerable risk and it needs to be addressed effectively.

Professor Troop: The person who looked at all of the documentation and had some meetings is not here today. He is an estates adviser who does a lot of gateway processes where they go through all the documentation very carefully. He found that quite a lot of documentation was not as complete as it should have been. When we had the meetings with the trusts, we asked them to take us through their water management systems, the way that the water safety committees worked, how they went up through the governance system and what they had done after other response to all of those circulars, and we then asked them for more documentation. We got more assurance through those discussions, and we made the recommendation that some of them need to get their documentation more up to scratch because it is not where it should be. We did a lot of quizzing to ensure that we were satisfied that they had systems in place, but, clearly, we have shown —

Mr Dunne: The assurance level was low.

Professor Troop: They took us through how they managed their system, how it was reported, and the action plans that they put together after the various circulars. However, it was clear from the review of the information that quite a lot of the documentation was not as complete as it should have been, and that is why we have made the recommendation that that needs to be pulled up to scratch. However, when we discussed with them whether they had a water safety committee, whether they had responsible officers and whether they had put together action plans, we got better assurance than the documentation showed.

Mr Dunne: However, it is clear that there was inconsistency across the trusts.

Professor Troop: The trusts were variable in different ways. No trust —

Mr Dunne: That is a risk.

Professor Troop: Yes. No trust was perfect on everything. Some were better than others, but nobody seemed to come out to the level where we raised our hands in horror. When you look at anybody's system, you will always find things that could be better. However, they all had water safety committees, they all responded to the circular and they all showed us their action plans.

Mr Dunne: Is there an argument that the standard of those should be consistent, led by the Department and implemented. We need to have processes in place that work. Give us and the public an assurance that systems are in place and that they are working effectively.

Professor Troop: Absolutely, I agree with you. When we met the trusts, they told us that they had taken the opportunity of the review to go back and look at their systems and, where they thought they had weaknesses, they would strengthen them. We were picking up the assurance that people recognised that, although some might have stronger systems in one thing and others in another, they would ensure that they were more consistent across the patch. You are right; they were not consistent, but we probed to ensure that there was nothing unsafe. However, it was clear that they should all get up to the level of the best of them.

Mr Dunne: Staff were carrying out duties that they were not properly trained to do, and they were not accredited. To me, that is a risk.

Professor Troop: No; we found that the documentation to demonstrate that was missing. That is not the same, necessarily, as saying that training did not take place. It was whether they had properly documented and recorded all the things that they should have done. That was the issue. And that is why we made a recommendation that they should review that training and make sure that it is properly documented as well.

Mr Dunne: Just to pick up on the point that Mickey made, what more can be done to reduce the risk within the water supply systems? Last time, we were told that the main area is that last two metres of pipework. I still feel that professionals and medical people in hospitals will go back to use of the sink because it is the system in place. Surely, we are bringing in further risk by bringing in another supply system, the bottled water. That is a risk in itself. Why can we not go back, eliminate the risk completely and try to reduce the source of the problem? We should try to identify it clearly and get back to where we were originally with the safe use of tap water.

Professor Troop: That is where everyone wants to get to. As Dr Kelsey said at the beginning, what has happened is that these sensor taps were introduced because of scalding problems that happened when vulnerable people would switch on the hot tap. The taps were also found to be beneficial for infection control. In doing that, more complex taps have been introduced that now appear to cause another problem. It is an unintended consequence of what was a good proposal for other reasons. Now we must find a solution to the new problem that has arisen. Dr Kelsey is involved in producing new guidance which has come out from the Department of Health. It is about how to ensure that we can still have the benefit of preventing scalding and other infection, but, at the same time, reduce the incidence of pseudomonas. The guidance on that has got stronger; more evidence is coming through; and the next guidance will be much more fundamental. It is a learning process for the whole of the system.

If we had a simple answer, it would be done. What is coming out is that there is no simple answer. That is why, until we get to that stage, we continue to recommend that, for those tiny babies, we still use sterile water.

The Chairperson: I do not think that I need to remind anyone that the reason why this review came about — as I said in my opening remarks, and you said in yours — is the death of very small, vulnerable babies. On the basis of your first report, your final report and what you have seen, heard and witnessed, and given that you said earlier that the systems in place are not sound enough, do you believe that the buck has to stop with someone? If so, is it the Department, the trusts, the PHA, the permanent secretary, the Chief Medical Officer, the Minister or the neonatal units? We have lost four babies. You said that the systems are not sound, so someone has to take responsibility for it.

Professor Troop: We talked about a number of system issues. We did not try to apportion blame, for all the reasons that I have given. I do not think that we would have had anywhere near the openness that we met with had people thought that we were coming in just to pin them down. We have identified some weaknesses and some areas where different decisions might have been made. It is up to those organisations to decide whether to take those points forward. Most of the recommendations that we have made are about strengthening across the board. They are not necessarily down to individuals; they are down to how things are organised. If those are strengthened, the situation will be very much better, and we are very pleased to see that many of the things that we put in the report have already happened.

I hope that what comes out of this is a lot of learning and improvement. I have worked in healthcare for 40-something years, and we have been trying to encourage an openness, a sharing of mistakes and learning from them in the health system. If I tell people that they are going to get the blame, you lose that.

It has taken us a long time to get this system where staff are willing to speak up and say, "Yes; we recognise that something needs to be better". You cannot do that at the same time as feeling that you are going to be trodden on. I would encourage that approach to maintain an environment in which people always speak up and say, "Yes; we have a problem here".

The Chairperson: So, if those systems had been operating in the way that you believe they should, this might not have happened?

Professor Troop: If we had stronger systems. We might not be in this situation if a number of things in the report had been in place. Fundamentally, though, we must not lose sight of the fact that pseudomonas got in to the taps in the first place as a consequence of other practices. That was not a failure of individual staff; it is a problem that has arisen across the UK as a whole. It is then a question of how you manage that situation.

The Chairperson: OK, on behalf of the Committee, I thank you and your team so much for coming and carrying out the review. You carried it out within the given time frame, which is probably a first. I wish you well in your next 40 years in the business. *[Laughter.]*

Professor Troop: Thank you very much. It was a privilege to be asked, and we hope that we have been able to provide you with some support for the future.

The Chairperson: OK, thank you.