

Review of Management of the Outbreak of Legionnaires Disease in Herefordshire - November 2003

Report by the Health Scrutiny Committee – August 2004

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REVIEW OF THE MANAGEMENT OF THE LEGIONNAIRES DISEASE OUTBREAK IN HEREFORDSHIRE – NOVEMBER 2003

Introduction

An outbreak of legionnaires disease was declared in Herefordshire on 6th November, 2003.

In considering its work programme at its meeting on 13th November, the Health Scrutiny Committee agreed that a review of the response to the outbreak of legionnaire's disease in Hereford City should be added to the work programme. It was acknowledged that this would be complementary to and not a substitute for the more detailed review which would doubtless be undertaken by NHS bodies and others.

The key areas of interest identified in the scoping statement were:

1. The role of the Health Protection Agency and chronology of events from the diagnosis of the first case in Herefordshire through to the winding up of the special management arrangements put in place;
2. Any national criteria used to trigger the decision to change the status of a disease outbreak and any other associated policies regarding publicity etc;
3. The actions taken by the Primary Care Trust to manage the outbreak;
4. The actions taken by the Council's Environmental Health service to identify the source of the outbreak;
5. The arrangements put in place in order to communicate with the public via the media.
6. the effectiveness of the joint response to the outbreak of the agencies involved.

The desired outcomes identified in the scoping statement were:

- To make recommendations to improve the overall management arrangements for dealing with outbreaks of serious diseases such as legionnaires;
- To make recommendations on the specific role of the Primary Care Trust in dealing with outbreaks of serious diseases such as legionnaires;
- To make recommendations on the specific role of the Council's Environmental Health service in dealing with outbreaks of serious diseases such as legionnaires;
- To make recommendations on the arrangements for communicating with the public via the media when dealing with outbreaks of serious diseases such as legionnaires.

The Committee deferred its review, aware that a report on lessons learned was being prepared by the Health Protection Agency (HPA) and that this would be a key piece of evidence for the Review. A draft report was made available to the Committee in mid-June 2004.

On 28th June the Committee was able to receive information in person from the following people:

- Dr Mike Deakin Director of Public Health – Herefordshire
- Dr David Kirrage Health Protection Agency - Hereford and Worcester Local Health Protection Unit
- Mrs Lynne Kedward Hereford Hospitals NHS Trust - Acting Director of Nursing at the time of the outbreak and now Project Director – Emergency Services Redesign
- Mr Paul Nicholas Herefordshire Council - Environmental Health Manager (Commercial)
- Mr Andrew Tector Herefordshire Council - Head of Environmental Health and Trading Standards

Each invitee had provided a written submission in advance which had been circulated to Members of the Committee detailing actions taken by the respective agencies.

Mr Neil Pringle, Chief Executive of Herefordshire Council also provided evidence to the Committee.

The Committee had also received a letter from Mr Paul Bates, the Chief Executive of the Herefordshire Primary Care Trust (PCT), reflecting on his personal experience as a Chief Executive tackling his first major public health challenge.

Dr Ian Tait General Practitioner and Chairman of the Primary Care Trust's Professional Executive Committee had also written about the communication of information to GPs during the outbreak. Subsequently a letter was received from Dr A Eyre, Secretary to the Local Medical Committee.

Background

The Committee was informed that, in summary, an outbreak of legionnaires' disease was declared in the City of Hereford on 6th November 2003. It took almost a week of intensive case finding and environmental investigation before the likely source was identified and by the time the outbreak was declared over on Monday, 8th December 2003 there were a total of 28 associated cases and 2 deaths.

The Committee received a presentation from Dr Kirrage on the chronology of the outbreak broken down into five stages: identification and investigation of first confirmed cases; formation of the Outbreak Control Team; the restructuring of the Outbreak Control Team; the running of the investigation; and the debriefing after the outbreak was over. He identified lessons learned at each stage and the outcomes. These are summarised in appendix 1.

The Committee also received a presentation on the work carried out by the Environmental Health Service with the IT Service to use the GIS system to map the outbreak and how this had reduced the time taken to identify the source.

The Committee is mindful of the detailed work carried out by Dr Kirrage, Dr Deakin and the Council's Environmental Health Service in considering the lessons learned from the outbreak. A formal comprehensive outbreak report is also in preparation by the Health Protection Agency (HPA). There is no intention or need to replicate the detail of those reports in the Committee's report.

The Committee does, however, consider that it is essential that the lessons learned are acted upon. The recommendations made in the various reports submitted to it and the Committee's comments are therefore set out below, together with some additional observations in response to information provided to the Committee.

Dr Kirrage's conclusion

Dr Kirrage concluded that the key messages were:

- The need for awareness of the scale of an outbreak and the effect on the Primary Care Trust in providing local health services.
- An experienced media response was vital.
- The strategic management of the incident should be separated from the investigation and management of the outbreak.
- The need for dedicated, large rooms to accommodate the Outbreak Control Team, noting that many staff had had to travel across the City to attend meetings.
- It had been fortunate that there had been very good working relationships between the participant organisations.

The Committee was advised that the learning from this outbreak was being disseminated and translated into changes in systems and practice in the following ways:

- Papers for expert journals (both health protection and health care governance audiences), and a mainstream health service management journal, are in preparation.
- national and local presentation to a range of audiences.
- New HPA legionella guidance is being drafted.
- HPA regional communications managers are being appointed.
- All HPA regional teams are to be equipped with "Smart Boards" for use in incident rooms to allow interactive access to GIS-based plume modelling at HPA Porton Down.
- Training to improve Local Health Protection Unit expertise in the use of GIS software and techniques is under consideration within the HPA Local and Regional Services Division (LARS).

Work involving LARS and HPA Emergency Response Division with the Department of Health (in the light of learning from this and other recent incidents and exercises) is ongoing to agree the changes necessary to existing guidance about organisational roles and responsibilities in the event of a public health incident.

Committee Observations

The Committee notes that steps had been taken to strengthen the effectiveness of any media response with the appointment by the HPA of Regional Protection

Managers, the appointment for the West Midlands Region already having been made.

It has not received evidence that further consideration has been given to the identification of dedicated, large rooms to accommodate a future Outbreak Control Team.

It has also noted that whilst there had been some initial uncertainty over the respective roles of the agencies involved in responding to the outbreak the position had been quickly resolved. The impression was given that to an extent potential complications had been smoothed over by the very good working relationships between the participant organisations. The Committee suggests that there is perhaps a case for formalising these relationships through a protocol clearly defining the respective roles of agencies involved, particularly as it is when people are under stress and tired that there is the potential for such relationships to become strained.

The Committee also notes that changes to a number of systems and practices are ongoing and suggests that mechanisms are put in place to confirm that they are implemented.

Dr Deakin's Annual Report Recommendation

Dr Deakin in his Annual Report 2003 had made the recommendation that the lessons learned about the organisational relationships between the PCT and HPA should be shared at a national level.

Committee Observations

The Committee notes that Dr Kirrage has indicated that the recommendation in Dr Deakin's Annual Report is being pursued.

Environmental Health Service Recommendations

Mr Nicholas in his report had made the following conclusions and associated recommendations:

Plans are in place, produced jointly by the Council and the PCT/HPA to deal with foodborne disease outbreaks. However, there was no specific plan in place to cover an incident such as the legionnaires' disease outbreak. The Strategic Health Authority does, however, have a Major Emergency Plan.

Recommendation: That current emergency plans are revisited to establish whether one or more cover adequately the actions to be followed, roles to be adopted etc, in the case of another such outbreak or incident.

Forthcoming changes relating to certain industrial processes will mean that powers used by Environmental Health to enter, sample, examine etc will no longer be available for many industrial premises. This would obviously severely hamper any actions (sampling, etc) that we could take in future.

Recommendation: Representations be made to Government in order to address the issue.

Legionnaires' disease is not a notifiable disease and therefore powers available to relevant agencies are limited. Legionnaires' disease is a notifiable disease in Scotland.

Recommendation: Representations be made to Government in order to encourage changes to legislation that would bring the disease into the scope of the Public Health (Control of Disease) Act and make available powers contained therein.

A review that was undertaken by the Environmental Health and Trading Standards Service (EHTS) produced listings of learning points.

Recommendation: The learning points that emerged from review of actions etc carried out by EHTS along with other learning points produced by the HPA must be carefully considered, prioritised, resource need identified, action plan developed and actioned.

Committee Observations

The Committee supports these recommendations and was particularly concerned by the view that the effectiveness of the response to any future outbreak would be significantly hindered by the transfer of powers from the Environmental Health Service to the Environment Agency. It recognises that not all Environmental Health Services would have the resources available to Herefordshire as a unitary authority and the benefits of coterminosity with its partners. However, it suggests that the Executive should make the recommended representations to Government, if they have not already been made.

It also suggests that the Executive puts in place mechanisms to ensure that the Environmental Health Service action plan referred to above is developed and implemented.

Additional Observations

The Committee did ask those who gave evidence to identify the one thing they would have done differently, noting the observation that hindsight is a marvellous thing.

Mr Pringle reiterated that the Council might usefully have departed from the practice of issuing joint press releases some 24-48 hours earlier. The difficulty with the joint press release was that although every one contained a reference to the safety of the city centre, the overriding message being picked up by the press was that of the health message. If the releases had been separated out (without withdrawing from Gold Control) then the Council might have had more success in getting the message about the safety of the City Centre over.

Dr Kirrage advised that in the light of the outbreak what he would do differently would be to demand more support at an earlier stage on the basis that it was better to run the risk of over-reacting rather than having to play catch-up as an incident developed. He has advised that systems are now in place to detect and respond to a slowly emerging threat.

He also acknowledged the Committee's comments that further changes to the Health Protection Agency could compromise a stable structure, that early warning systems should be enhanced and the need for regular training sessions with local emergency services including Herefordshire Council.

He advised that these comments have been passed to the HPA Regional Office; funding has been earmarked to enhance early warning surveillance systems; and a new Primary Care Trust Emergency Planning Advisor is also to be appointed.

Mrs Kedward suggested that while she believed communications had been handled well within the Trust there could be more collaborative working to communicate the same information to all healthcare staff. In hindsight the briefing to Acute Trust staff could have been shared with the Primary Care Trust for wide circulation within their organisation.

Mr Tector reiterated the need for a Legionella Outbreak Control Plan for the Service.

The following other issues arose in the course of the Committee's observations:

- The Committee was reassured that the approach to dealing with the media had been both proactive and reactive and noted the arrangements for issuing twice daily bulletins at regular times. It was confirmed that, to avoid any uncertainty, bulletins had been issued confirming there was nothing to report if that was the case.
- The Committee was informed that whilst wet-cooling systems had to be registered this did rely on the Council being kept informed and it was difficult to ensure that the register was up to date. As a consequence of the outbreak the Council had an improved database which would save time in the event of another outbreak. The Committee suggests that a mechanism should be put in place to ensure that the registers are reviewed at least every three years.
- The Committee sought to clarify the capacity of the Hereford Hospitals NHS Trust to deal with the incident and any future, greater emergency. The Committee was assured that Major Incident Plans were in place and there were a number of ways in which additional beds could be made available, including making use of capacity within the NHS as a whole. The Committee welcomed the fact that the Plans were being reviewed and made more user friendly.
- The Committee also welcomed the responses from the Chairman of the Primary Care Trust's Professional Executive Committee and the Secretary to the Local Medical Committee, which commented favourably on the information provided to them by the Primary Care Trust during the outbreak.
- The Committee noted the demands which the outbreak had placed upon staff and the need to ensure that there was a sufficient reserve of appropriately trained staff.
- The Committee noted the importance of the Environmental Health Service's local knowledge in addition to its professional expertise in dealing with the outbreak. Whilst recommending that representations be made resisting any reduction in the Service's powers it suggests that, if these prove unsuccessful, a request be made for a protocol to be put in place with the Environment Agency to enable any response to an incident to draw on local knowledge.

Recommendations

- a) **That first and foremost the consensus of the agencies involved that the outbreak had essentially been well handled be welcomed and those involved be congratulated on their professionalism;**

- b) That the agencies involved give further consideration to identifying appropriate accommodation for an Outbreak Team;**
- c) That a protocol for managing outbreaks clearly defining the respective roles of agencies involved be developed and implemented;**
- d) That the Health Protection Agency be requested to confirm that mechanisms have been put in place to ensure that the changes to a number of systems and practices identified by Dr Kirrage are implemented;**
- e) That Cabinet be recommended to make arrangements to ensure that, as recommended in the report by the Environmental Health Service: current emergency plans are revisited to establish whether one or more cover adequately the actions to be followed, roles to be adopted etc, in the case of another such outbreak or incident;**
- f) That Cabinet be recommended to make representations to Government to address concerns in the report by the Environmental Health Service that changes relating to certain industrial processes will remove some powers from the Service, hampering future responses;**
- g) That Cabinet be recommended to make representations to Government requesting that the disease be made notifiable and brought into the scope of the Public Health (Control of Disease) Act and make available powers contained therein;**
- h) That Cabinet be recommended to make arrangements and set milestones to ensure that, as recommended in the report by the Environmental Health Service: the learning points that emerged from review of actions etc carried out by EHTS along with other learning points produced by the HPA be carefully considered, prioritised, resource need identified, action plan developed and actioned;**
- i) That the appropriateness or otherwise of issuing joint press releases should be borne in mind in any future incident;**
- j) That Dr Kirrage's comments that systems are now in place to detect and respond to a slowly emerging threat and funding earmarked to enhance early warning surveillance systems be welcomed;**
- k) That the need for regular training sessions with local emergency services including Herefordshire Council be noted;**
- l) That the Primary Care Trust and the NHS Hospitals Trust note the scope for collaborative working in communicating with Health staff;**
- m) That the Council's Environmental Health Service should review its registers of wet cooling systems at least every three years; and**
- n) That representations be made resisting any reduction in the Environmental Health Service's powers suggesting that if these prove unsuccessful a request be made for a protocol to be put in place with the Environment Agency to enable any response to an incident to draw on local knowledge.**

**SUMMARY OF LESSONS LEARNED AND OUTCOMES PRESENTED TO
THE HEALTH SCRUTINY COMMITTEE BY DR KIRRAGE – 28TH JUNE 2004**

The lessons learned included:

- Outbreaks can become big very quickly and result in extensive media coverage.
- Demand for media coverage will impede the investigation unless media support is available.
- Such situations will generate a high level of political interest.
- The respective responsibilities of the Health Protection Agency and the Primary Care Trust had initially been uncertain although this had been very quickly resolved.
- There had been issues about protecting patient confidentiality particularly from the national press.
- The separation of the strategic management of the incident from the investigation and management of the outbreak had worked well.
- Experienced media support was essential.
- The economic impact could influence the respective responses of the Local Authority and the Primary Care Trust.
- There had been very good working relationships within the Outbreak Control Team.
- The investigation could be left to the Outbreak Control Team but there was a need to be aware of the effect on other Primary Care Trust Staff and keep them fully up to date.
- Every outbreak of legionnaires disease is different, so that expert advice applicable to one outbreak may not be relevant to a different outbreak. It had been expected that employees where the source was located would have been affected but this had not proved to be the case.
- Good resources had been available both at national level and locally where there had been excellent support from an extremely able Environmental Health Team. The use of the GIS software package to map the outbreak had been very helpful.

The outcomes included the use of new techniques and agencies; new information about Legionnaires disease; the preparation by the Health Protection Agency of new Legionnaires disease guidance; and the introduction of Health Protection Agency regional press officers. Root Cause Analysis methodology had been used to identify and explore strengths and weaknesses in managing the outbreak and establish best practice that could be applied to other outbreaks. Dr Kirrage noted that the Chief Medical Officer had been supportive of the findings and had approved a plan for their dissemination. This included a national conference in September 2004. Dr Kirrage believed that the lessons learned would prove beneficial in managing any future incidents of this nature.