

(probably unique) information needs of each possible emergency situation.

However, electronic patient records proposed as part of the UK government's national IT strategy 'Connecting for Health'⁹ are likely to be an advance in that the necessary clinical data should be routinely available and linked together. A vital aspect of emergency management will be to design plans, policies, and systems that permit scope for local knowledge and the improvisation born of human experience, and that permit the informal networks that contribute so much to clinical and organisational excellence to be supported and sustained.

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Incident planning

Community acquired legionnaires' disease: lessons for surveillance from recent outbreaks

M Regan, B Olowokure

Sharing of multi-agency intelligence on cooling towers is needed for better prevention and control of outbreaks

Ever since the recognition of the clinical syndrome of epidemic atypical pneumonia and the identification of the causative role of legionella organisms, legionnaires' disease has posed considerable logistical problems for public health services. Outbreaks continue to occur and may be explosive, high profile, and difficult to control despite appropriate tactical mobilisation and cooperation between the statutory organisations charged with surveillance and response.^{1,2}

Hospital water systems initially featured as important preventable sources of legionella and a risk to susceptible groups, but nosocomial cases are now uncommon in the United Kingdom because of the successful implementation of proactive control measures directed towards reducing the risk from hot water and cooling systems.³

More recently surveillance for legionnaires' disease has focused particularly on the rapid identification and alerting of travel associated cases supported by an extensive European surveillance

Authors' affiliations

D Telford, S Partridge, I Cumming, A F Smith, Morecambe Bay Hospitals NHS Trust, Kendal, UK

N Calvert, Health Protection Agency, Capital Building, Carlisle, UK

Correspondence to: Professor A Smith, Department of Anaesthesia, Royal Lancaster Infirmary, Ashton Road, Lancaster LA1 4RP, UK; andrew.f.smith@mbht.nhs.uk

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towers as significant exposure settings, particularly for vulnerable members of the local community.^{1,5,6}

The prevention of all sporadic cases of community acquired legionnaires' disease is arguably an unrealistic goal with a total of 2338 cases confirmed in England and Wales during the period 1980 and 2004.¹⁹ However, a further reduction in cases can be achieved through reducing the risk of exposure to significant community sources, such as wet cooling towers, that possess the potential for aerosol dispersal. In the United Kingdom this will require closer partnership working at local level between agencies such as the Health Protection Agency, local authority environmental health departments, and the Health and Safety Executive. Businesses are required to register cooling towers with the relevant local government authority in which the plant is situated. National guidance developed by the Health and Safety Executive clearly stipulates the responsibilities of businesses to ensure the appropriate maintenance and operation of wet cooling tower systems.²⁰ Compliance is monitored by local authorities and the Health and Safety Executive. Potential conflicts of interest can arise where a local authority may be expected to monitor compliance with maintenance standards for a cooling tower that it also owns. Memoranda of Understanding (MOU) may be able to address this by reciprocal agreements between neighbouring local authorities or with the Health and Safety Executive. This is widely accepted as good practice, but perhaps should be given further weight by being reflected more explicitly in codes of practice by the Health and Safety Executive.

The lesson that may be drawn from community outbreaks associated with cooling towers is that in retrospect these are often seen to have been potentially preventable if existing guidance on prevention and control had been appropriately implemented and monitored.¹ Surveillance data held by individual organisations can be pooled and shared within the agreement set out in advance within MOU. A prime focus for such an approach is better sharing of intelligence on the location, type, and state of maintenance of cooling towers as well as on the occurrence of apparently sporadic cases of community acquired legionnaires' disease. For local health protection teams perhaps the question needs to move on from passively receiving informal reports of suspected community acquired cases to proactively questioning local authorities and the Health and Safety Executive about where wet cooling towers are located and the date of the last satisfactory maintenance inspection.

The time is now right to build upon the lessons learned from surveillance and short term tactical responses to control community outbreaks, toward a greater emphasis on the use of multi-agency surveillance intelligence to develop more strategic policies for better long term prevention. Arguably the number of outbreaks of legionnaires' disease associated with cooling towers is small compared with the large numbers of wet cooling towers currently in operation. Furthermore, most seem to perform entirely satisfactorily for years without any apparent effect on the health of the local population provided that adequate maintenance arrangements are in place. None the less, although the risk of failure may be small the public health impact may be great.^{1,2} Perhaps there is further scope for adopting a more precautionary approach where wet cooling towers are to be sited in situations where there is the potential for large numbers of susceptible people to be exposed to legionella organisms in the event of

any failure of maintenance or operation of the system. Alongside the welcome development of MOU and sharing of surveillance intelligence, for some high risk locations a more preferable option for long term effective prevention may be for all public health agencies to promote the adoption of dry air cooling systems rather than wet cooling towers to protect the public. The goal of all statutory organisations with responsibility for protecting the public should be to ensure that as far as practically and cost effectively possible that susceptible and vulnerable groups in the community are not put at risk of being exposed to potentially serious biological hazards such as legionella organisms. Indeed much can be achieved by better organisation without additional costs to public administration.

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Authors' affiliations

M Regan, Health Protection Agency, North West Regional Epidemiology Service, Liverpool, UK

B Olowokure, Health Protection Agency, West Midlands Regional Surveillance Unit, Birmingham Heartlands Hospital, Birmingham, UK

Correspondence to: Professor M Regan, Health Protection Agency (North West), DBH House 105 Boundary Street Liverpool L5 9YJ, UK; martyn.regan@hpa.org.uk

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