



# CDR WEEKLY

*the Communicable Disease Report Weekly*

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## News

Last updated: **2 March 2006**, Volume 16, No.9

Next update due: **9 March 2006**

▣ [Scarlet fever outbreak in two nurseries in south west England](#)

▣ [Isoniazid mono-resistant TB outbreak in north London](#)

### ▣ [Scarlet fever outbreak in two nurseries in south west England](#)

Fifty cases of scarlet fever were reported from Wiltshire in January and February 2006. There were clusters of cases in two nurseries (16 and four cases respectively) about 45 km apart. Six of the 50 cases were in adults aged 18 years and over, and the remainder were children aged between 8 months and 10 years. The 50 cases include 13 confirmed, 27 probable, and 10 possible cases, according to previously defined clinical and microbiological case definitions (1). Eleven cases were reported during the same period in 2004, with only four reported in the same period of 2005. Cases presented with symptoms which included fever, sore throat, skin rash, strawberry tongue, and flushing of cheeks.

On 23 January 2006, the local health protection team were informed of an outbreak of scarlet fever in a nursery attended by 57 children and staffed by 11 adults. The nursery initially reported three cases. In total, 15 children (26%) and one member of staff fell ill. Four of these were later classified as confirmed cases, six as probable cases and six as possible cases. All symptomatic children were excluded from the nursery for five days after the start of treatment with penicillin. On advice from the local education authorities, the nursery was closed between 6 and 7 February and again for the half-term holidays between 13 and 18 February. The onset of symptoms of the last case was on 8 February. Two other cases of scarlet fever were diagnosed in children in the same town during this time period, but no connection with the nursery could be found.

On 26 January 2006, the local health authority became aware of a second outbreak in a nursery in west Wiltshire. Four cases were reported among the 32 children attending this nursery, classified as one confirmed case, one probable case, and two possible cases. No new cases have been diagnosed in the nursery since 31 January.

On 6 February a letter was sent by the health protection team to all general practitioners (GPs) in Wiltshire, alerting them to the increase in scarlet fever cases in two nurseries, and requesting rapid notification of new cases. The letter also recommended that throat swabs be taken from all suspected cases. As a result, 30 further cases were reported around Wiltshire; in two towns in west Wiltshire, at an air force base in north Wiltshire, and a town in east Wiltshire. None of these cases is known to be linked to the outbreaks in the two nurseries.

A second letter was sent out by the health protection team to the parents of the children attending both nurseries, giving information about the outbreak and the symptoms of scarlet fever. The letter also asked parents to consult their GP if their children developed any of these symptoms. At a meeting of the health and education authorities on 10 February, it was decided that screening of asymptomatic children at the nursery and subsequent treatment of group A streptococcal throat carriage would only be undertaken if a case of more serious invasive streptococcal infection were found.

All samples were analysed in the local hospital laboratories for Wiltshire, and eight isolates in total were sent to the national reference laboratory at the Health Protection Agency Centre for Infections for further typing. The laboratory tests from three isolates from cases at both nurseries (two from the same town as the first nursery and one from the same town as the second) gave the same typing results (M-type 12, T-type 12, Opacity Factor negative). Of the five isolates not associated with the nurseries, two were also M-type 12 and the others were M-types 1, 75 and 89.

Severe forms of scarlet fever are now extremely rare in developed countries. In nursery outbreaks there are potential risks of more serious immune-mediated outcomes if cases are untreated, so outbreak management must include communications with medical practitioners and parents to emphasise the importance of adequately treating cases. In these two outbreaks, consideration was given to screening and treating children who were carriers, in an attempt to interrupt transmission. There are, however, no evidence-based guidelines in the United Kingdom to support these actions. Existing guidelines only cover the management of close community contacts of invasive group A streptococcal disease (2). As antibiotics can have undesirable side effects it was decided to use

them only if a case of invasive disease were found, because this could indicate enhanced virulence of the outbreak strain.

Scarlet fever results from infection with a beta-haemolytic streptococcus (usually group A) which produces erythrogenic toxin. The disease is characterised by sore throat, a skin rash which does not normally involve the face, and flushing of the cheeks, pallor around the mouth, and high fever. Patients with severe infections often have nausea and vomiting. The incubation period is short, usually between 1 and 3 days. If left untreated, the infectious period ranges between 10 and 21 days, but is considerably shorter with adequate penicillin treatment (3).

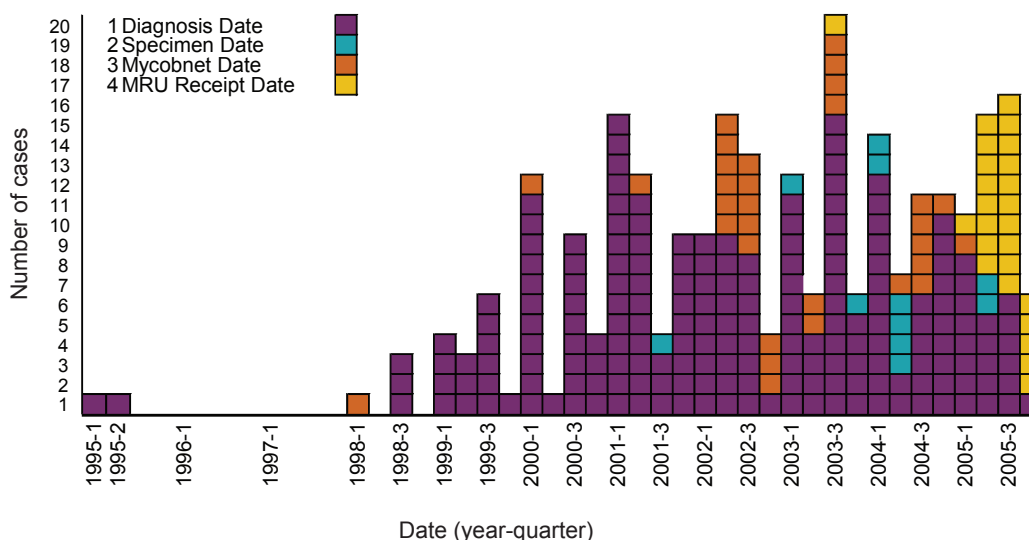
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2. Health Protection Agency, Group A Streptococcus Working Group. Interim UK guidelines for management of close community contacts of invasive group A streptococcal disease. *Commun Dis Public Health* 2004; **7**:354-61.
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**Isoniazid mono-resistant TB outbreak in north London**

An outbreak of isoniazid mono-resistant tuberculosis (TB) in north London was first recognised in 2000, when four cases were diagnosed in a single week. The earliest case, which was diagnosed retrospectively, was in 1995. Out of a total of 261 cases to date, 222 cases have been diagnosed in London, and 39 cases diagnosed outside London, 18 of which can be linked with the outbreak through contact with a case, previous residence in London, or imprisonment in London (figure).

**Figure Isoniazid resistant TB outbreak cases by quarter: 1995 to 2005 (261 cases represented)**



The outbreak continues to be focused in north London, with over half of the cases resident in four Local Authority areas (Enfield, Hackney, Haringey, and Islington) at the time of diagnosis. Seventy-two per cent of cases are male, and over half were aged between 25 and 39 years at diagnosis. Fifty-one per cent of cases were born in the United Kingdom, and the most frequently seen ethnic groups were White (32%) and Black-Caribbean (27%).

One hundred and ninety-seven (75%) of the cases are confirmed to have a unique genetic fingerprint on restriction fragment length polymorphism (RFLP) typing, and 64 cases are considered probable on the basis of rapid epidemiological typing (RAPET) or mycobacterial interspersed repetitive units (MIRU) typing. The typing has been carried out at the Health Protection Agency Mycobacterium Reference Unit (HPA MRU) and this has allowed tracking of the strain.

Many of the cases are from high risk populations including the homeless, problem drug users, and prisoners. Fifteen per cent of cases are known to be homeless and approximately one-third have been in prison. Class A drugs (cocaine, crack, or heroin) are used by at least 12% of cases (with some injecting). Cannabis use and alcohol abuse are also common among cases. Forty per cent of the outbreak cases use illegal drugs or abuse alcohol.

These factors, in addition to drug resistance, present substantial challenges to management of cases and create obstacles to completion of treatment. All outbreak cases are recommended to receive directly observed therapy (DOT) unless adherence is confirmed. Of the 222 London cases, 57% of cases are reported to have completed treatment, with two of these cases relapsing. Twelve per cent are currently lost to follow-up, and 22% are still on treatment. In the remaining 9%, nine patients have died (TB caused or contributed in two cases), seven have refused treatment or had treatment stopped, three have transferred overseas, and two cases have unknown outcome.

Adherence to treatment has been poor in a sizable number of cases and at least four patients have acquired multi-drug resistant TB (MDRTB) as a result. In addition, there is evidence of primary acquisition of MDRTB in the community. Four patients have an MDRTB strain with the same rare genetic pattern of one of the early outbreak cases. There are no known direct links between these cases.

The outbreak demonstrates that active transmission can be sustained in London and that there is an indigenous population at risk of new infection. The outbreak is not yet under control and there are important lessons not only for the outbreak, but for TB control in general in London including the need to reach out to the hard to manage patients and improve their social support. Prompt access to healthcare, and early diagnosis and culture are essential. Many recommendations have been made and are being implemented within NHS Trusts as well as in prisons and in the HPA.

The Incident Control Committee (ICC) is working with north London TB networks to identify additional measures and to allocate the resources necessary to achieve treatment completion in complex patient groups. The ICC is also working with hospital and primary care trusts, prisons, and Health Protection Units, to ensure prompt identification of cases (case finding/symptoms screening) and close management of these and other challenging cases in London (contact tracing, DOT, and surveillance).

For further information, please contact Dr Helen Maguire, Regional Epidemiologist, HPA London (tel: 020 7759 2791, email: [helen.maguire@hpa.org.uk](mailto:helen.maguire@hpa.org.uk)).

# Respiratory

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Next update due: **6 April 2006**

## Respiratory Routine Data Reports

📄 Laboratory reports of respiratory infections made to the Health Protection Agency Centre for Infections from HPA and NHS laboratories in England and Wales: weeks 05-08/06

📄 Laboratory reports of respiratory infections made to the Health Protection Agency Centre for Infections from HPA and NHS laboratories in England and Wales: weeks 05-08/06

**Table 1 Reports of influenza infection made to HPA Centre for Infections, by week of report: weeks 05-08/2006**

Week	Week 5	Week 6	Week 7	Week 8	Total
Week ending	05/02/06	12/02/06	19/02/06	26/02/06	
<b>Influenza A</b>	7	6	13	20	<b>46</b>
Isolation	–	1	4	5	<b>10</b>
DIF*	–	1	3	3	<b>7</b>
Four-fold rise in paired sera	–	–	–	–	–
PCR	–	2	–	–	<b>2</b>
Other†	7	2	6	12	<b>27</b>
<b>Influenza B</b>	11	43	31	178	<b>263</b>
Isolation	1	13	11	60	<b>85</b>
DIF*	2	13	5	4	<b>24</b>
Four-fold rise in paired sera	–	–	–	–	–
PCR	–	12	1	76	<b>89</b>
Other†	8	5	14	38	<b>65</b>
<b>Influenza (untyped)</b>	–	–	–	–	–
Isolation	–	–	–	–	–
DIF*	–	–	–	–	–
Four-fold rise in paired sera	–	–	–	–	–
PCR	–	–	–	–	–
Other†	–	–	–	–	–

\*DIF = Direct Immunofluorescence.

†'Other' = 'Antibody detection – Single high titre' or 'method not specified'.

**Table 2 Respiratory viral detections by any method (culture, direct immunofluorescence, PCR, four-fold rise in paired sera, single high serology titre, genomic, electron microscopy, other method, other method unknown), by week of report: weeks 05-08/2006**

Week	Week 5	Week 6	Week 7	Week 8	Total
Week ending	05/02/06	12/02/06	19/02/06	26/02/06	
Adenovirus*	28	19	19	20	86
Coronavirus	–	–	–	–	–
Parainfluenza†	2	5	14	8	29
Rhinovirus	1	4	4	8	17
Respiratory syncytial virus (RSV)‡	229	182	118	177	706

\*Respiratory samples only. Excludes diagnoses made by electron microscopy (EM).

†Includes parainfluenza types 1, 2, 3, 4, and untyped.

‡ Excludes diagnosis made by electron microscopy (EM).

**Table 3 Respiratory viral detections by age group: weeks 05-08/2006**

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Unknown	Total
Adenovirus*	16	8	8	40	14	–	–	86
Coronavirus	–	–	–	–	–	–	–	–
Influenza A	10	–	2	17	8	9	–	46
Influenza B	9	23	95	104	27	4	1	263
Parainfluenza†	14	2	3	1	6	3	–	29
Rhinovirus	13	1	1	2	–	–	–	17
Respiratory syncytial virus (RSV)‡	552	52	18	31	16	20	17	706

\*Respiratory samples only.

†includes parainfluenza types 1, 2, 3, 4, and untyped.

‡ Excludes diagnoses made by electron microscopy (EM).

**Table 4 Laboratory reports of infections associated with atypical pneumonia, by week of report: weeks 05-08/2006**

Week	Week 5	Week 6	Week 7	Week 8	Total
Week ending	05/02/06	12/02/06	19/02/06	26/02/06	
<i>Coxiella burnetii</i>	1	–	–	–	1
Respiratory <i>Chlamydia</i> sp*	1	1	3	5	10
<i>Mycoplasma pneumoniae</i>	16	23	16	44	99
<i>Legionella</i> sp	5	3	3	4	15

\*Includes *Chlamydia psittaci*, *Chlamydia pneumoniae*, and *Chlamydia* sp detected from blood, serum, and respiratory specimens.

**Table 5a Reports of legionnaires' disease cases in England and Wales, by week of report: weeks 05-08/2006**

<b>Week</b>	<b>Week 5</b>	<b>Week 6</b>	<b>Week 7</b>	<b>Week 8</b>	<b>Total</b>
<b>Week ending</b>	<b>05/02/06</b>	<b>12/02/06</b>	<b>19/02/06</b>	<b>26/02/06</b>	
Nosocomial	–	–	–	–	–
Community	3	1	2	–	<b>6</b>
Travel abroad	2	2	1*	4	<b>9</b>
Travel UK	–	–	–	–	–
<b>Total</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>15</b>
<b>Male</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>12</b>
<b>Female</b>	<b>–</b>	<b>–</b>	<b>1</b>	<b>2</b>	<b>3</b>

\*Pneumonic and non-pneumonic cases.

Fourteen cases were reported with pneumonia – twelve males aged between 28 and 78 years, and F 58y and F 72y. One 70-year-old female was reported without pneumonia. Six cases had community-acquired infection. There was one death. There were no outbreaks.

Nine cases were travel associated: Thailand (2), Austria (1), Belgium (1), Crete (1), Dubai (1), Italy/Sri Lanka (1), Ireland/Turkey (1), and Malta (1).

**Table 5b Reports of Legionnaires' disease (pneumonic and non-pneumonic\*) cases by region of report in England and Wales: weeks 05-08/2006**

<b>Region</b>	<b>Nosocomial</b>	<b>Community</b>	<b>Travel (Abroad)</b>	<b>Travel (UK)</b>	<b>Total</b>
North East	–	–	1	–	<b>1</b>
Yorkshire & the Humber	–	–	–	–	–
East Midlands	–	1	1	–	<b>2</b>
East of England	–	–	1	–	<b>1</b>
London	–	3	2	–	<b>4</b>
South East	–	–	1	–	<b>1</b>
South West	–	–	–	–	–
West Midlands	–	1	1	–	<b>2</b>
North West	–	1	1	–	<b>2</b>
Wales	–	–	1	–	<b>1</b>
<b>Total</b>	<b>–</b>	<b>6</b>	<b>9</b>	<b>–</b>	<b>15</b>

\*Including case who travelled both abroad and to UK.

# National Standards Methods

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Next update due: **6 April 2006**

 [Standard Method updates – Monthly content update: February 2006](#)

 [Standard Method updates – Monthly content update: February 2006](#)

The development of National Standard Methods and Algorithms is undertaken under the auspices of the Health Protection Agency (HPA) in conjunction with the NHS and the National Public Health Service for Wales (NPHSW), and with professional societies including the Association of Medical Microbiologists, Association of Clinical Microbiologists, Institute of Biomedical Science, Clinical Virology Network, and the Scottish Microbiology Association. Over 200 methods are available from the HPA Standards Unit website which covers bacteriology, virology/serology, food, water, and environmental microbiology.

National standard methods are educational and encourage participating laboratories to retain an enquiring attitude. In addition, they are designed to help ensure that laboratories provide a good clinical and public health microbiology service. Evidence of using standard operating procedures is an essential requirement of accreditation schemes. For more information, please contact the HPA Standards unit, email: <[standards@hpa.org.uk](mailto:standards@hpa.org.uk)>.

## Monthly content update – February 2006

### National Standard Methods - Virology

#### VSOP 23 Isolation of human herpes viruses (excluding herpes genitalis) (re-issue):

- <http://www.hpa-standardmethods.org.uk/documents/vsop/pdf/vsop23.pdf>

### National Standard Methods - Bacteriology Identification

#### BSOPID 2 Identification of *Corynebacterium diphtheriae* , *Corynebacterium ulcerans* and *Corynebacterium pseudotuberculosis* (re-issue):

- <http://www.hpa-standardmethods.org.uk/documents/bsopid/pdf/bsopid2.pdf>

## Access to the National Standard Methods website

The National Standard Methods are available in both PDF and Microsoft Word format, available at <<http://www.hpa-standardmethods.org.uk>>. Only the direct PDF file links are available below, and to access a complete list of all available standards including access to the MS Word versions, visit: <[http://www.hpa-standardmethods.org.uk/pdf\\_sops.asp#Notes](http://www.hpa-standardmethods.org.uk/pdf_sops.asp#Notes)>.

*On behalf of the Evaluations and Standards Laboratory and the National Working Groups developing SOPs, algorithms, and guidance note.*

# Diary

📅 *Recognition, investigation, and management of major infectious disease incidents, including deliberate release of biological agents*

## 📅 **Recognition, investigation and management of major infectious disease incidents, including deliberate release of biological agents**

The HPA Centre for Emergency Preparedness and Response is organising a two day course on 28 and 29 March to be held in Durham, on the recognition, investigation and management of major infectious disease incidents, including deliberate release of biological agents designed for consultant microbiologists, bio-medical scientists, infectious disease consultants and infection control nurses. The course will address incident management at local, regional and national level, patient management, and diagnostic services and the syndromes caused by a range of agents. A similar course is also being run over one day at the Royal College of Medicine, London, on 17 May.

By the end of the course the delegates will be able to:

- Recognise the features of deliberate release agents and list three possible methods of dissemination.
- Describe clinical symptoms of diseases caused by *Bacillus anthracis*, *Yersinia pestis*, *Francisella tularensis* and smallpox.
- Describe the procedures in place to deal with samples from an overt or covert incident.
- Demonstrate an understanding of the methods of decontamination of casualties.
- Demonstrate an understanding of patient management.
- Explain the difference between syndromes caused by a range of agents and management of the disease.
- Demonstrate an understanding of the procedures in place to respond to a deliberate release incident on a local, national and regional level.
- Demonstrate a wider appreciation of CBRN incidents.
- Successfully manage a theoretical incident, demonstrating knowledge

Delegates receive a certificate of attendance. Appropriate CPD credits will be awarded on completion of the course.

This course is free to delegates. For further information please contact: tel: 01980 612898; fax: 01980 612841; email: [src.training@hpa.org.uk](mailto:src.training@hpa.org.uk).