Health Protection Agency

CDR WEEKLY

the Communicable Disease Report Weekly

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News

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Next update due: **13 April 2006**

Avian influenza tests on a dead wild bird in Scotland

The Department for the Environment Food and Rural Affairs (Defra) and the Scottish Executive have announced that a mute swan (Cygnus olor) found dead in Cellardyke, Fife, on the east coast of Scotland, died of highly pathogenic H5N1 avian flu.
In accordance with a recent European Union decision, Defra has put in place a Protection Zone of a minimum of three kilometres radius and a Surveillance Zone of 10 kilometres. Keepers of birds in the protection zone are being instructed to isolate their birds from wild birds, by taking them indoors where ever possible. Measures to restrict the movement of poultry, eggs, and poultry products from these zones have been brought into effect.
More details can be found on the Defra website at <http://www.defra.gov.uk/news/latest/2006/index.htm>, and the Scottish Executive website at <http://www.scotland.gov.uk/Home>.

The current level of risk to the general public from avian flu is very low. H5N1 avian flu remains predominantly a disease of birds. A small number of human cases have been reported in south east Asia and eastern Europe, almost all of which have been associated with close contact with dead or dying poultry. In all human cases to date there has been no evidence of efficient human-to-human transmission. For further information see the World Health Organization at <http://www.who.int/csr/disease/avian_influenza/en/>.

European and UK veterinary experts have agreed that no extra precautionary steps for human health are required at the moment.

Influenza A in a north east Lincolnshire care home

The Humber Health Protection Unit (HPU) has been managing an outbreak of a respiratory illness in a care home in north east Lincolnshire. This has been confirmed as influenza A, following positive PCR in one of eight cases tested. The initial onset date was 23 March 2006, with the last known case having an onset of 1 April 2006. Symptoms lasted around four to five days and included fever, sweats, cough, headache, and sore throat, with a range of severity.

Naso-pharyngeal swabs were taken from eight symptomatic residents. Although national consultation rates for influenza-like illness had declined below 30 per 100,000 per week (the threshold for prescription of antiviral drugs), as the clinical illness was compatible with influenza, and influenza A had been identified in specimens from elsewhere in the region, unaffected residents were started on a ten day course of prophylactic oseltamivir, and residents with an onset in the preceding 48 hours were started on five days treatment. Staff in clinical high-risk groups were also given oseltamivir prophylaxis.

Thirty-four out of 54 exposed residents have been unwell, including two frail elderly residents who died and four others who were admitted to hospital. All residents were aged 65 years or over, with three-quarters aged 75 years or over. Sixteen of 55 staff have also had symptoms.

Eighty-one per cent of residents had received this season's flu vaccine. The attack rate in residents was 63% overall and 59% in those vaccinated.

Immunity from influenza wanes six to twelve months after vaccination (1). Also, vaccine protection in the elderly is known to be around 40% (2). Both of these factors may contribute to the likelihood of outbreaks late in the flu season. Where vaccine efficacy is in question, testing of acute sera will show if the population is susceptible to infection, and should be considered.

1. Nicholls S, Carroll K, Crofts J, Ben-Eliezer E, Paul J, Zambon M, *et al*. Outbreak of influenza A (H3N2) in a highly-vaccinated religious community: a retrospective cohort study. *Commun Dis Public Health* 2005; **7**(4): 272-7.

2. Nicholson KG, Wood JM, Zambon M. Influenza. *Lancet* 2003 **362**:1733-45

Respiratory

Last updated: **6 April 2006**, Volume 16, No. 14 (PDF file)
Next update due: **5 May 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 09-13/06

Laboratory reports of respiratory infections made to the Health Protection Agency Centre for Infections from HPA and NHS laboratories in England and Wales: weeks 09-13/06

Table 1 Reports of influenza infection made to HPA Centre for Infections, by week of report: weeks 09-13/2006

Week	Week 9	Week 10	Week 11	Week 12	Week 13	Total
Week ending	**05/03/06**	**12/03/06**	**19/03/06**	**26/03/06**	**26/04/06**	
Influenza A	4	20	34	49	34	**141**
Isolation	–	10	6	6	1	**23**
DIF*	2	3	8	11	3	**27**
Four-fold rise in paired sera	–	–	–	–	–	**–**
PCR	1	2	1	9	5	**18**
Other†	1	5	19	23	25	**73**
Influenza B	30	79	47	58	27	**241**
Isolation	18	31	18	33	2	**102**
DIF*	1	3	9	–	–	**13**
Four-fold rise in paired sera	–	–	–	–	–	**–**
PCR	2	24	6	3	2	**37**
Other†	9	21	14	22	23	**89**
Influenza (untyped)	–	–	–	–	–	**–**
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 09-13/2006

Week	Week 9	Week 10	Week 11	Week 12	Week 13	Total
Week ending	05/03/06	12/03/06	19/03/06	26/03/06	26/04/06	
Adenovirus*	13	20	29	23	11	**96**
Coronavirus	1	–	–	–	–	**1**
Parainfluenza†	3	7	2	6	3	**21**
Rhinovirus	2	1	–	1	3	**7**
Respiratory syncytial virus (RSV)‡	69	74	26	44	26	**239**

*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 09-13/2006

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Unknown	Total
Adenovirus*	10	14	8	44	14	5	1	**96**
Coronavirus	9	1	1	6	2	2	–	**21**
Influenza A	15	14	20	36	22	30	4	**141**
Influenza B	15	11	76	99	32	6	2	**241**
Parainfluenza†	9	1	1	6	2	2	–	**21**
Rhinovirus	4	3	–	–	–	–	–	**7**
Respiratory syncytial virus (RSV)‡	168	18	4	19	18	11	1	**239**

*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 09-13/2006

Week	Week 9	Week 10	Week 11	Week 12	Week 13	Total
Week ending	05/03/06	12/03/06	19/03/06	26/03/06	26/04/06	
Coxiella burnettii	1	–	–	–	–	**1**
Respiratory *Chlamydia* sp*	–	1	1	1	1	**4**
Mycoplasma pneumoniae	11	19	6	20	22	**78**
Legionella sp	8	1	4	5	6	**24**

*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 09-13/2006

Week	Week 9	Week 10	Week 11	Week 12	Week 13	Total
Week ending	**05/03/06**	**12/03/06**	**19/03/06**	**26/03/06**	**26/04/06**	
Nosocomial	1	–	–	–	–	**1**
Community	3	–	2	3	5	**13**
Travel abroad	4	1	2	2	1	**10**
Travel UK	–	–	–	–	–	**–**
Total	**8**	**1**	**4**	**5**	**6**	**24**
Male	**6**	**1**	**4**	**4**	**6**	**21**
Female	**2**	**–**	**–**	**1**	**–**	**3**

*Pneumonic and non-pneumonic cases.

Twenty-four cases were reported with pneumonia – 21 males aged between 42 and 80 years, and three females aged between 37 and 66 years. Thirteen cases had community-acquired infection. One case had a possible nosocomial association. No deaths were reported.

Ten cases were travel associated: India (2), Thailand (2), Antigua (1), Kenya (1) Malaysia (1), Spain (1), United Arab Emirates (1), and United States (1).

Table 5b Reports of Legionnaires' disease (pneumonic and non-pneumonic*) cases by region of report in England and Wales: weeks 09-13/2006

Region	Nosocomial	Community	Travel (Abroad)	Travel (UK)	Total
North East	–	–	3	–	**3**
Yorkshire & the Humber	–	1	–	–	**1**
East Midlands	–	5	1	–	**6**
East of England	1	1	1	–	**3**
London	–	2	–	–	**2**
South East	–	–	1	–	**1**
South West	–	1	1	–	**2**
West Midlands	–	1	2	–	**3**
North West	–	–	1	–	**1**
Wales	–	2	–	–	**2**
Total	**1**	**13**	**10**	–	**24**

*Including case who travelled both abroad and to UK.

Travel health

Last updated: **6 April 2006**, Volume 16, No. 14
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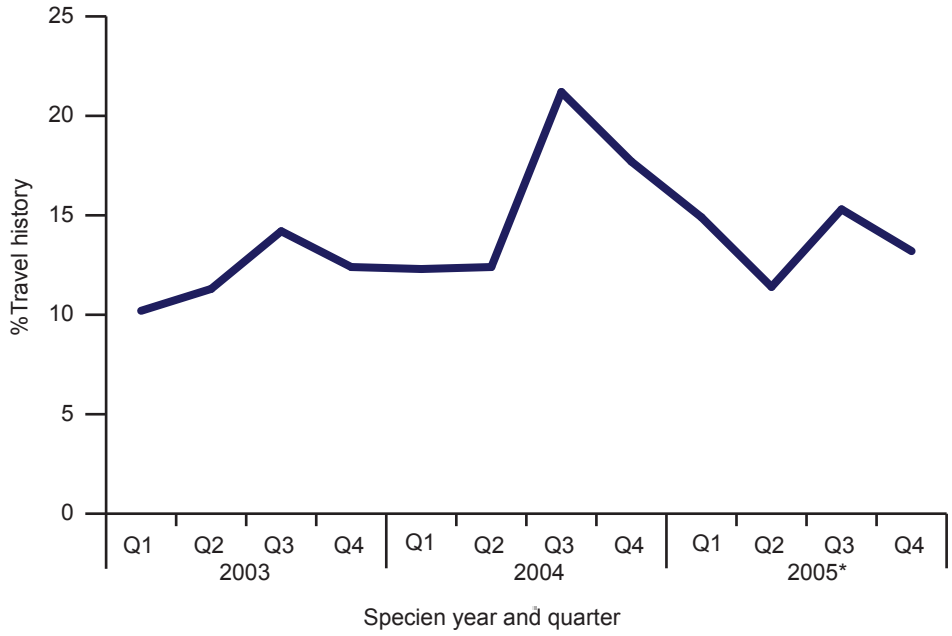
Links to travel health websites

Imported infections, England and Wales: October to December 2005

The data presented in this report should be interpreted in conjunction with the report *illness in England, Wales, and Northern Ireland associated with foreign travel – a baseline report to 2002* (1), especially the content under the section 'Sources of data on travel-associated illness and their limitations for analysis'. Please note that all data presented here are provisional and subject to change; the confirmed final data will be presented annually.

Of the infections in table 1 that were reported via Labbase2*, there were 15.2% more infections reported in England and Wales in the third quarter of 2005 (16,726)† compared with the same period in 2004 (14,513). Travel history reporting has decreased to 13.2% compared to the third quarter of 2005 (15.3%) and is 4.5% lower than the fourth quarter of 2004. There has been a small overall increase in travel history reporting since the beginning of 2003 (figure 1), however, the proportion of reports with travel history information remains low, and limits the interpretation of the following data.

Figure 1 Travel history reporting for laboratory reports by quarter, England and Wales: 2003 to 2005



There is a clear seasonal pattern of infection reporting in England and Wales including reporting of travel-associated infections (figure 2). The number of infections reported increases in the summer months and, although this may reflect several factors, this period does coincide with the time when more people travel, both abroad and within the UK (2). During the winter months there has been no significant variation between years in the number of travel-associated infections reported, but in the summer months there has been a reduction between 2003 and 2005. A large outbreak of cryptosporidium occurred in Majorca in 2003 which may partially explain this (3), but there has also been a general decrease in the number of salmonella and campylobacter infections (4, 5) which may also be a contributory factor.

Table Imported infections in England and Wales: October to December 2005

	Total reports for Oct - Dec				Cumulative totals for Oct - Dec			
	2005*		2004		2005*		2004	
Organism	**Travel-related**	**All reports**	**Travel-related**	**All reports**	**Travel-related**	**All reports**	**Travel-related**	**All reports**
Gastrointestinal Infections								
Bacterial								
Salmonella spp	631	3213	581	2858	2441	11,279	2369	12,985
Campylobacter spp	232	10,327	253	9207	1094	43,664	1256	44,151
Shigella flexneri	5	81	13	84	39	307	40	263
Shigella dysenteriae †	6	12	12	15	35	58	38	54
Shigella sonnei	27	155	43	239	113	847	112	806
Shigella boydii †	18	24	14	31	67	110	62	112
Other (species unknown)	2	20	2	25	6	99	6	130
Salmonella Typhi	25	67	31	43	111	219	120	198
Salmonella Paratyphi (A,B,C)	28	56	37	59	123	223	137	218
Vibrio cholerae O1 †	1	1	2	2	16	18	7	9
Vibrio parahaemolyticus	1	3	1	4	4	22	10	24
Protozoal								
Entamoeba histolytica	10	36	9	70	29	167	41	287
Entamoeba coli	2	18	1	17	7	65	10	81
Giardia lamblia	59	781	80	810	229	2715	312	3164
Cryptosporidium	28	1875	19	983	124	4274	115	3598
Cyclospora spp	1	4	8	12	13	47	24	63
Endolimax nana	1	13	–	8	2	45	5	38
Helminths								
Strongyloides stercoralis	1	4	1	3	2	12	4	31
Strongyloides spp	–	1	–	1	1	5	1	7
Ancylostoma duodenale	–	–	–	–	–	–	–	1
Necator americanus	–	–	–	–	–	–	–	–
Hookworm unspec	3	6	3	9	4	13	8	29
Ascaris lumbricoides (round worm)	2	15	1	16	5	58	8	84
Trichuris trichiura (whip worm)	–	4	2	6	2	27	11	52
Hymenolepis diminuta	–	–	–	–	–	–	–	–
Hymenolepis nana	–	–	–	–	–	4	1	5
Hymenolepis spp	–	–	–	–	–	–	–	–
Taenia saginata	1	6	3	14	6	29	13	69
Taenia spp	–	6	–	9	1	29	1	34
Gnathostoma spp	–	1	–	–	–	3	–	3
Diphyllobothrium latum (fish tape worm)	–	–	–	2	1	1	–	2

Arthropod borne infections								
Malaria	NA	NA	NA	NA	NA	NA	NA	NA
Arboviruses								
Dengue virus	1	11	–	4	2	32	2	17
Chikungunya virus	–	–	–	–	–	–	–	–
Ross river virus	–	–	–	–	–	–	–	1
Sandfly fever virus	–	–	–	–	–	1	–	–
Unspecified	–	1	–	3	–	4	–	11
Leishmaniases								
Cutaneous	1	1	–	1	5	7	20	25
Visceral	–	–	3	3	1	1	5	6
Unspecified	–	2	–	4	1	12	7	18
Filariases								
Loa loa	–	–	–	–	–	–	2	6
Wucheria bancrofti	–	–	–	–	–	–	–	–
Mansonella perstans	–	–	–	–	–	–	1	1
Onchocerca vulvulus	–	–	1	1	–	–	1	1
Unspecified	–	–	–	–	–	1	–	1
Miscellaneous								
Schistosome infections								
Schistosoma mansoni	2	3	–	–	2	9	9	16
Schistosoma haematobium	2	9	2	8	7	27	7	31
Schistosoma intercalatum	–	–	–	–	–	–	–	–
Schistosoma spp	1	3	1	5	4	14	5	26
Other infections								
Legionnaires' disease §	47	77	42	68	159	330	137	273
Coxiella burnetii (Q fever)	–	3	–	5	–	21	1	39
Rickettsia spp	–	1	–	–	–	11	–	2

NA= Data not available at time of publication.

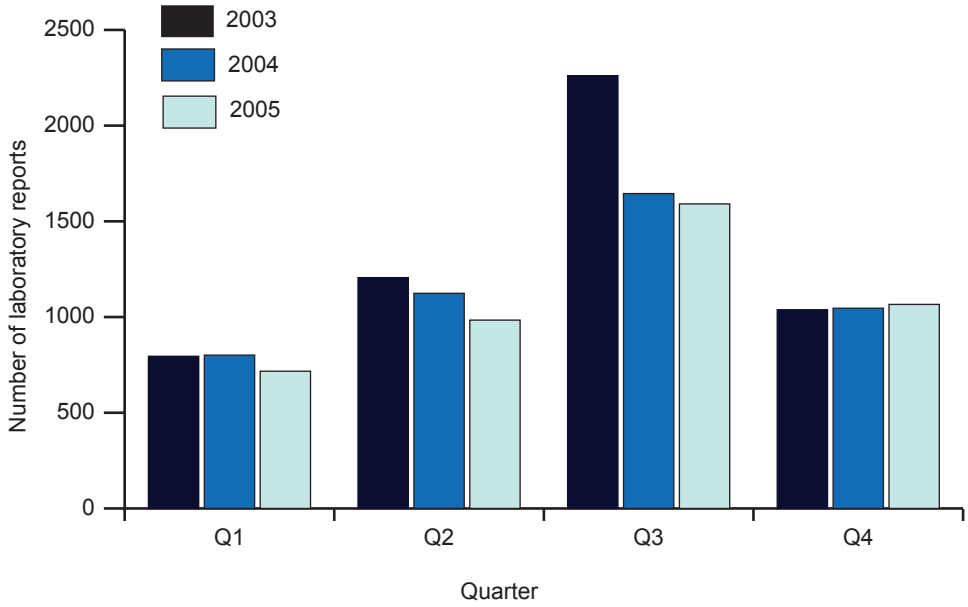
*Provisional data, and may be subject to change.

† Data on cholera, *S .boydii* and *S .dysenteriae* supplied by the HPA Centre for Infections Laboratory of Enteric Pathogens.

§ Data on legionnaires' disease supplied by the Legionella Section of the Respiratory Diseases Department of CfI.

All data extracted from Labbase2 on 28 March 2006 unless otherwise specified.

Figure 2 Laboratory reports associated with recent travel abroad, by quarter, England and Wales: 2003 to 2005*



Provisional data and may be subject to change.

Gastrointestinal infections

Bacterial infections

In the fourth quarter of 2005, *Salmonella* spp (non-typhoidal) were the most frequently reported infections associated with recent travel abroad (631 travel associated cases among 3213 total cases) even though more campylobacter infections are reported in England and Wales in general (10,327 in total of which 232 reported recent travel abroad). Travel history reporting is usually more complete for *Salmonella* spp than for *Campylobacter* spp, with 52.3% of *Salmonella* spp reports having any information about travel history compared with only 2.8% for *Campylobacter* spp.

Of the *Salmonella* spp reports that stated recent travel abroad, 36% (228/631) reported recent travel abroad to Europe, 21% (135/631) to north Africa and the middle east, 13% (84/631) to the Indian sub-continent (ISC), 7% to south east Asia and the far east, 6% to the Caribbean, 8% to other regions, and for 9% of reports the country of travel was not stated. The most reported country of travel was Spain followed by India, Greece, Turkey, Tunisia, and Egypt .

Of campylobacter reports that stated recent travel abroad, 38% (87/232) reported travel to Europe, 17% (39/232) to the Indian sub-continent, 16% (36/232) to north Africa and the middle east, 20% to other regions, and for 9% of reports the country of travel was not stated. The most frequently reported countries of travel were Spain and India .

In the fourth quarter of 2005, there were 292 reports of Shigella infection, 24 due to *S. boydi* i and 12 due to *S. dysenteriae,* the organisms that cause dysentery-like (bloody diarrhoea) illness. Twenty per cent of all *Shigella* spp reported recent travel abroad, the majority having travelled to northern Africa and the middle east (26 reports (45%), mainly to Egypt (ten reports), Tunisia (eight), and Morocco (six). Eleven reports stated travel to the ISC, seven to India, and four to Pakistan .

There was one report of *Vibrio cholerae* O1 in October 2005, which stated travel to India.

Protozoal infections

During the fourth quarter, there were 1875 reports of cryptosporidiosis (2% with travel history) in England and Wales, of which 28 reports stated recent travel abroad. The most frequently reported regions of travel were Europe and north Africa and the middle east (eight reports each). There were 781 reports of *Giardia lamblia* (8% with travel history), of which 59 had stated recent travel abroad. The most frequently reported regions of travel were the ISC (20 reports) and north Africa and the middle east (ten reports). Other infections reported in this category included *Entamoeba histolytica* (36 reports, of which ten reported recent travel abroad; three each to ISC and sub Saharan and southern Africa, and the remainder to other countries), *Ent. coli* (18 reports, of which two reported recent travel, one to Cuba and one to Mexico), *Cyclospora* spp (four reports, of which one reported recent travel

with no country stated), and *Endolimax nana* (13 reports, of which one report stated recent travel to Africa).

Enteric fever

Fifty-nine per cent of all enteric fever reports had some information about travel history compared to 80% in the third quarter of 2005 and 75% in the fourth quarter of 2004. In the fourth quarter of 2005, there were 67 reports of *Salmonella* Typhi, of which 25 reported recent travel abroad. Twenty-three reports stated recent travel to the ISC (11 to Pakistan, nine to India, and three to Bangladesh), one travelled to Nigeria, and one had no country stated. There were 51 reports of *S* . Paratyphi A, of which 26 stated recent travel abroad (22 to ISC 12 to India, five to Pakistan, four to Nepal, and one to Bangladesh), with one each to Sudan, Malawi, and Myanmar, and one with no country stated). Of four reports of *S* . Paratyphi B, one stated travel to Peru, and one report of *S* . Paratyphi C stated travel to Oman.

Helminths

In the fourth quarter of 2005, there were 43 reports of helminth infection, of which seven stated recent travel abroad. There were three reports of hookworm infection, which stated travel to The Gambia, Nigeria, and Indonesia (one to each), two reports of *Ascaris lumbricoides* which stated travel to Malaysia and Peru (one to each), one report each of *Strongyloides stercoralis* with travel to Nigeria, and one of *Taenia saginata* with travel to Africa. Helminth infections can persist in the body for months and it may not be possible to say for certain where these infections were acquired.

Arthropod borne infections

Dengue

Eleven cases of dengue fever were reported through the routine laboratory reporting system compared to only four in the same period in 2004; one report stated recent travel to Singapore.

Leishmaniasis

There were three cases of leishmaniasis reported in the fourth quarter. Of those, one case of presumed cutaneous leishmaniasis had travelled to Bolivia .

Other infections

Schistosomiasis

Fifteen cases of schistosomiasis were reported in the fourth quarter of 2005, nine *S. haematobium,* and three *S. mansoni* compared to 13 in the same period in 2004. Five reports stated recent travel abroad, two to Ghana (one *S. mansoni* and one *S. haematobium*), one to Nigeria (*S. mansoni*), one to Malawi (*S. haematobium*), and one to India (*S. sp*). Of interest is that one case of *Schistosoma mekongi* was also reported; there was no travel history but this species of *Schistosoma* is primarily endemic in the Mekong river area of Laos, Cambodia, and Thailand (6).

Legionnaires' disease

There were 77 cases of legionnaires' disease reported in the United Kingdom (UK) with onset dates in the fourth quarter of which 47 were acquired abroad. One outbreak of note was associated with the Habaneras shopping centre in Torrevieja, Spain, where seven UK residents were affected.

References

1.Health Protection Agency. *Illness in England, Wales, and Northern Ireland associated with foreign travel – a baseline report to 2002* . London: HPA, 2004. Available at <http://www.hpa.org.uk/infections/topics_az/travel/pdf/full_version.pdf>.

2.Office for National Statistics. Travelpac 2004 [online]. London: ONS; 2005 [accessed 5 April 2006]. Available online at <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14013>.

3.Galmes A, Nicolau A, Arbona G, Gomis E, Guma M, Palmer Smith A, *et al* . Cryptosporidiosis outbreak in British tourists who stayed at a hotel Majorca, Spain. *Eurosurveillance Weekly* [serial online] 2003 [cited 3 March 2006]; **7(**33). Available at <http://www.eurosurveillance.org/ew/2003/030814.asp#3>.

4. Health Protection Agency. Salmonella in humans (excluding *S. Typhi* & *S. Paratyphi*) faecal and lower gastrointestinal isolates, England and Wales: 1981 to 2005 [online]. [Accessed on 5 March 2006]. Available at <http://www.hpa.org.uk/infections/topics_az/salmonella/data_human.htm>.

5. Health Protection Agency. *Campylobacter* spp Laboratory reports of faecal isolates, England and Wales: 1986 to 2005 [online].[Accessed 5 March 2006].Available at <http://www.hpa.org.uk/infections/topics_az/campy/data_ew.htm>.

6. In: Chin J, editor. Control of Communicable Diseases Manual (17 th ed). Washington: American Public Health Association; 2000.

Footnotes

*Labbase2 is the database that collects laboratory reports of all microorganisms isolated at nearly 400 NHS and other laboratories throughout England and Wales . The database is managed and accessed at the Centre for Infections.

†Note that these figures refer to data extracted from Labbase2 only, and do not include cholera, *S. dysenteriae*, *S .boydii*, and legionnaires' disease where data has been obtained from other sources.

National Standards Methods

Last updated: **2 March 2006**, Volume 16, No. 14
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Standard Method updates

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>.

Monthly content update – March 2006

National Standard Methods – Water

W 16 Detection of *Escherichia coli* O157 by automated immunomagnetic separation (re-issue)

<http://www.hpa-standardmethods.org.uk/documents/water/pdf/W16.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 to the MS Word versions, visit: <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.