



## News

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- ▶ **The prevention and control of air travel associated tuberculosis**
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### **The prevention and control of air travel associated tuberculosis**

The World Health Organization (WHO) has published the 3rd edition of its guidelines *Tuberculosis and air travel: guidelines for prevention and control* [1]. The guidelines aim to provide greater clarity for public health authorities, passengers and airlines.

Air travel has become increasingly common over the last few decades resulting in greater risk of the spread of infectious diseases. The risk of transmission in an enclosed environment is particularly important with regard to diseases involving airborne transmission such as tuberculosis (TB). Although no case of clinical or culture-confirmed TB attributable to exposure during air travel has been established, several studies have published evidence supporting the transmission of TB during air travel [2,3]. Such risk of transmission raises concern among passengers, public health authorities and airlines. The WHO first published guidelines regarding the prevention and control of air travel related TB in 1998, which were revised in 2006.

The emergence of extensively drug-resistant TB (XDR-TB), the revision of the International Health Regulations [4] and the experiences of public health authorities involved in investigating increasing numbers of incidents highlighted the need for updated international guidelines. The 3rd edition of *Tuberculosis and air travel* was prepared by the WHO in collaboration with national public health authorities, including the Health Protection Agency (HPA), and international experts in travel medicine and the prevention and control of TB. The latest edition provides greater clarity in the definition of index cases considered to be infectious and more detail regarding the roles and responsibilities of the agencies involved in the follow-up of contacts. The guidelines also allow greater flexibility for following national recommendations and recognise that further research is needed to improve our understanding of the transmission of TB during air travel and the effectiveness of contact investigation.

The release of the new guidelines by the WHO coincides with the publication of an HPA study which highlights the difficulties for public health authorities investigating contacts of air travel-associated cases of TB [5].

The study, published in *Eurosurveillance*, identified 24 air travel-related TB incidents, reported between January 2007 and February 2008, which required follow-up of passenger contacts in accordance with the WHO guidelines. In 17 incidents, no further investigation of contacts was possible other than obtaining passenger lists due to a lack of information available from airlines. In the remaining incidents, variable quality of contact information was obtained; no further cases of TB infection or disease were identified. The findings of the study suggest that the process of investigating contacts of air travel-associated TB cases is complicated and usually unsuccessful without dedicated resources and the availability of good quality contact information from airlines. In view of this, the approach to contact investigation recommended in UK guidelines published by the National Institute for Health and Clinical Excellence [6] provides a pragmatic way to respond to these incidents.

## References

1. World Health Organization. Tuberculosis and air travel: guidelines for prevention and control. 3rd Edition. WHO/HTM/TB/2008.399. Geneva, World Health Organization, 2008.
2. Driver CR, Valway SE, Morgan WM, Onorato IM, Castro KG. Transmission of Mycobacterium tuberculosis associated with air travel. *JAMA*. 1994;272(13):1031-5.
3. Kenyon TA, Valway SE, Ihle WW, Onorato IM, Castro, KG. Transmission of multidrug-resistant *Mycobacterium tuberculosis* during a long airplane flight. *N Engl J Med*. 1996;334(15):933-938.
4. World Health Organization. International Health Regulations (2005). Available online: [http://www.who.int/gb/ebwha/pdf\\_files/WHA58/WHA58\\_3-en.pdf](http://www.who.int/gb/ebwha/pdf_files/WHA58/WHA58_3-en.pdf).
5. Abubakar I, Welfare R, Moore J, Watson, JM. Surveillance of air-travel-related tuberculosis incidents, England and Wales: 2007-2008. *Euro Surveill*. [serial online] 2008 [accessed 12 June 2008];13(23): pii18896. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=18896>.
6. National Collaborating Centre for Chronic Conditions. *Tuberculosis: clinical diagnosis and management of tuberculosis, and measures for its prevention and control*. London, Royal College of Physicians, 2006.

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## Epidemiological investigation of hepatitis E on a cruise ship (update 3)

The on-going cross Agency investigation [1,2,3] into hepatitis E among passengers on a cruise ship has now identified a total of 36 positive individuals of whom 11 are classed as cases (symptomatic), 16 are recent acute infections and nine are possible recent infections.

To date 707 completed questionnaires and 757 blood samples have been received. So far 621 of the participants have provided both sample and questionnaire. Of the 757 blood samples tested, 36 (5%) were positive (as described above). A further 149 (20%) were positive for IgG antibodies only, indicating past infection which is unlikely to have occurred during the cruise, and 572 (75%) were negative with no indication of hepatitis E infection.

Participants have been notified of their results and those who were reactive for IgG with other markers compatible with possible infection have also been followed up. The analysis of the questionnaires will commence once data entry is completed and a summary of the findings will be sent to all participants.

## References

1. Hepatitis E in passengers on a cruise ship, <http://www.hpa.org.uk/hpr/archives/2008/news1408.htm#hepE>
2. Update on the investigation of Hepatitis E on a cruise ship, <http://www.hpa.org.uk/hpr/archives/2008/news1908.htm#hepE>
3. Epidemiological investigation of Hepatitis E on a cruise ship (update 2), <http://www.hpa.org.uk/hpr/archives/2008/news2008.htm>

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## Infection reports

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### Enteric infections

- ▶ **General outbreaks of foodborne illness in humans, England and Wales: weeks 18-22/08**
- ▶ **Salmonella infections (faecal specimens), England and Wales: reports to the HPA (Salmonella data set), April 2008**
- ▶ **Common gastrointestinal infections, England and Wales: laboratory reports, weeks 18-22/08**
- ▶ **General outbreaks of foodborne illness in humans, England and Wales: quarterly report, October to December 2007**
- ▶ **Salmonella serotypes recorded in the Health Protection Agency salmonella data set: January to March 2008 (provisional)**

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### General outbreaks of foodborne illness in humans, England and Wales: weeks 18-22/08

Preliminary information has been received about the following outbreak.

Health Protection Unit	Organism	Location of food prepared or served	Month of outbreak	Number ill	Cases positive	Suspect vehicle	Evidence
West Yorkshire	S. Stanleyville	Retailer	May	>10	>10	-	-

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## Salmonella infections (faecal specimens), England and Wales: reports to the HPA (Salmonella data set), April 2008

Details of serotypes of Salmonella infections recorded in April 2008 are given in the table below. In May 2008, 520 Salmonella infections were recorded and preliminary information was received about one outbreak (see table above).

Organism	Cases April 2008
S. Enteritidis PT4	101
S. Enteritidis (other PTs)	150
S. Typhimurium	125
S. Virchow	11
Others (typed)	291
<b>Total Salmonella</b> (provisional data)	<b>678</b>

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## Common gastrointestinal infections, England and Wales: laboratory reports, weeks 18-22/08

Laboratory reports	Number of reports received					Total reports 18-22/08	Cumulative total	
	18/08	19/08	20/08	21/08	22/08		01-22/08	01-22/07
<i>Campylobacter</i>	772	712	1053	982	519	4038	14979	16436
<i>Escherichia coli</i> O157 *	-	-	-	-	-	-	-	-
<i>Salmonella</i> †	166	164	146	80	74	630	2922	3851
<i>Shigella sonnei</i>	15	16	6	5	5	47	199	389
Rotavirus	570	351	306	207	107	1541	11723	11510
Norovirus	110	105	64	40	32	351	3552	3261
Cryptosporidium	79	53	58	47	17	254	887	917
Giardia	63	44	41	32	26	206	1093	1055

\*Vero cytotoxin-producing isolates (data from Health Protection Agency's Laboratory of Enteric Pathogens (LEP)).

† Data from Health Protection Agency's Laboratory of Enteric Pathogens

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**General outbreaks of foodborne illness in humans, England and Wales:  
quarterly report, October to December 2007**

Health Protection Unit	Organism	Location of prepared or served food	Number ill	Cases positive	Suspect vehicle	Evidence
South West Peninsula	Clostridium perfringens	Club	25	6	Cooked mince	M
National	Salmonella Anatum	National outbreak	102	102	-	-
National	S. Enteritidis PT1E	National outbreak	47	37	Liquid pasteurised egg	M
Greater Manchester	S. Enteritidis PT8	Restaurant	21	21	Tiramisu	M, S, D
South East London	S. Enteritidis PT8	Café	16	8	Chicken	M, D
Cheshire & Merseyside	S. Enteritidis PT8	Restaurant	3	3	Chicken	M
Humber	S. Enteritidis PT14B	Shop	14	11	Various foods	M, S
Cumbria & Lancashire	S. Typhimurium DT104	School	12	12	Roast turkey	D
County Durham & Tees Valley	S. Typhimurium U313	Shop	21	6	Sponge cake	S
Northumberland, Tyne & Wear	Scombrototoxin	Residential Institution	5	0	Tuna	D

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## Salmonella serotypes recorded in the Health Protection Agency salmonella data set: January to March 2008 (provisional)

All serotypes recorded in the Health Protection Agency salmonella data set in the first quarter of 2008 are listed below. There were more than 10 reports of 19 serotypes, two to 10 reports of 62 serotypes, and one report of 49 serotypes

More than 10 reports of the following Salmonella serotypes were received: January to March 2008

S. Agona	17
S. Anatum	72
S. Arizonae	20
S. Braenderup	12
S. Colindale	13
S. Enteritidis	498
S. Give	15
S. Hadar	13
S. Infantis	16
S. Java	17
S. Kentucky	20
S. Montevideo	16
S. Newport	40
S. Saint-Paul	16
S. Schwarzengrund	12
S. Stanley	36
S. Typhimurium	424
S. Unnamed	88
S. Virchow	51

Between two and 10 reports of each of the following serotypes were received: January to March 2008

S. Abony	2	S. Kottbus	3
S. Agama	9	S. Lanka	3
S. Alachua	2	S. Litchfield	2
S. Albany	7	S. Livingstone	3
S. Amager	2	S. Manhattan	2
S. Arechavaleta	2	S. Mbandaka	9
S. Bareilly	8	S. Miami	2
S. Blockley	8	S. Mikawasima	3
S. Bovis-Morbificans	5	S. Mississippi	4
S. Brandenburg	3	S. Monschau	4

S. Bredeney	4	S. Muenchen	8
S. Cerro	3	S. Nairobi	2
S. Chester	9	S. Nima	6
S. Corvallis	8	S. Oranienburg	10
S. Cotham	2	S. Oslo	5
S. Derby	3	S. Panama	7
S. Durham	5	S. Pomona	4
S. Eastbourne	2	S. Poona	6
S. Emek	3	S. Reading	5
S. Grumpensis	2	S. Richmond	4
S. Haifa	7	S. Rissen	9
S. Havana	5	S. Rubislaw	2
S. Heidelberg	5	S. San-Diego	3
S. Houten	2	S. Senftenberg	7
S. Hull	2	S. Singapore	3
S. Hvittingfoss	2	S. Stanleyville	8
S. Indiana	3	S. Tennessee	3
S. Javiana	4	S. Virginia	2
S. Kedougou	2	S. Vitkin	2
S. Kiambu	2	S. Wassenaar	3
S. Kisangani	2	S. Weltevreden	7

One report for each of the following serotypes was received: January to March 2008

S. Aberdeen	S. Gombe	S. Onderstepoort
S. Ajiobo	S. Irumu	S. Potsdam
S. Altona	S. Istanbul	S. Stockholm
S. Apapa	S. Jangwani	S. Stourbridge
S. Baildon	S. Kaapstad	S. Takoradi
S. Bardo	S. Karamoja	S. Tel-El-Kebir
S. Blijdorp	S. Kibi	S. Thompson
S. Bonn	S. Kua	S. Tilene
S. Bournemouth	S. Leopoldville	S. Uganda
S. Brazzaville	S. Liverpool	S. Weston
S. Butantan	S. Lohbruegge	S. Widemarsh
S. Chomedy	S. Mishmar-Haemek	S. Yaba
S. Drypool	S. Molade	S. Zehlendorf
S. Dublin	S. Muenster	S. Herston
S. Elisabethville	S. New-Brunswick	S. Hindmarsh
S. Freetown	S. New-Haw	
S. Gaminara	S. Newington	