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Contact tracing following a case of MERS-CoV in an airline passenger

PHE recently undertook a contact tracing exercise involving selected individuals who had travelled on a flight from Riyadh through London en route to the USA on 24 April 2014, after a diagnosis of MERS-CoV was confirmed in a passenger after disembarkation [1].

The risk of the infection being passed to other passengers on the flight was deemed extremely low. However, UK passengers who had been sitting in the vicinity of the affected individual were contacted, as a precautionary measure, to determine whether any had become unwell or had experienced respiratory symptoms. PHE had been contacted about the putative risk by the US Centers for Disease Control and Prevention (CDC) after the infected individual had been hospitalised.

MERS-CoV, first identified in 2012 [2], continues to be reported from the Middle East, with imported cases having been reported in several European countries (France, Germany, Italy, UK, Greece), other parts of the Middle East (Egypt, Jordan, Qatar, Kuwait and Oman) and elsewhere (Malaysia, Phillipines, Tunisia).

There is wide variation in officially quoted global case numbers (official estimates of confirmed cases vary from between 250 and 450 worldwide). However, there is agreement that since the middle of March this year, and throughout April, there has been a significant upsurge in reported cases; also a reduction in the case fatality rate and an increase in the number of asymptomatic cases. A number of factors could be responsible for these developments. Genetic analysis of the virus from a number of the most recent cases does not suggest that any major change in the virus itself has occurred; the increase in cases reported may, however, be a consequence of more active surveillance, infection control failures or, possibly, a seasonality associated with incidence of the new form of coronavirus infection.

References

1. "Case of suspected MERS-CoV detected on flight through London", Public Health England press release, 2 May 2014.
 2. UK response to novel coronavirus, *HPR* 6(39), September 2012.
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UK HIV/AIDS reporters' seminar proceedings available

Public Health England's 2014 HIV/AIDS Reporters' Meeting was held on Monday 14 April in London. This annual event brings together, from across the country, stakeholders in PHE's HIV-AIDS surveillance activities, providing an opportunity to review the overall HIV picture for the previous year and to discuss important issues arising. Among the themes covered by the 2014 event were: current epidemiology of HIV in the UK; updates on GUMCAD and GUM anonymous survey data; TB among people living with HIV; phylogenetics; continuing reduction in mother to child HIV transmission rates; the changing pattern of injecting drug use; and chem-sex among MSM.

A suite of presentations from the meeting have been uploaded to the PHE's health protection website [1].

For any further information on the event or these materials, please contact: PHE HIV/STI Department on 020 8327 7921.

Reference

1. PHE health protection website. [HIV/STI Reports and Meetings](#).
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Public Health
England

Health Protection Report

weekly report

Infection reports

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Respiratory

Laboratory reports of respiratory infections made to CIDSC from HPA and NHS laboratories in England and Wales: weeks 14-17/2014

Enteric

General outbreaks of food-borne illness, laboratory reports of common gastro-intestinal infections and hospital norovirus outbreaks (England and Wales, weeks 14-17/2014); and salmonella infections (March 2014)

Enteric fever surveillance quarterly report (England, Wales and Northern Ireland): first quarter 2014

Respiratory

Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: weeks 14-17/2014

Data are recorded by week of report, but include only specimens taken in the last eight weeks (i.e. recent specimens)

Table 1. Reports of influenza infection made to PHE Colindale, by week of report

Week	Week 14	Week 15	Week 16	Week 17	Total
Week ending	06/04/14	13/04/14	20/04/14	27/04/14	
Influenza A	96	94	53	63	306
Isolation	6	5	6	3	20
DIF *	18	9	4	14	45
PCR	64	67	37	39	207
Other †	8	13	6	7	34
Influenza B	3	5	4	12	24
Isolation	–	–	–	–	–
DIF *	–	–	1	5	6
PCR	3	5	3	7	18
Other †	–	–	–	–	–

* DIF = Direct Immunofluorescence. † Other = "Antibody detection - single high titre" or "Method not specified".

Table 2. Respiratory viral detections by any method, by week of report

Week	Week 14	Week 15	Week 16	Week 17	Total
Week ending	06/04/14	13/04/14	20/04/14	27/04/14	
Adenovirus †	60	65	48	80	253
Coronavirus	58	17	14	19	108
Parainfluenza †	68	61	59	98	286
Rhinovirus	191	169	166	187	713
RSV*†	47	18	32	20	117

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

† Includes parainfluenza types 1, 2, 3, 4 and untyped. *† Respiratory Syncytial Virus.

Table 3. Respiratory viral detections by age group: weeks 14-17/2014

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Unknown	Total
Adenovirus †	2	147	27	38	23	16	–	253
Coronavirus	1	27	8	20	25	27	–	108
Influenza A	–	56	7	101	78	61	1	304
Influenza B	–	1	4	10	4	5	–	24
Parainfluenza †	5	171	12	31	42	24	1	286
Rhinovirus	21	345	48	125	94	80	–	713
Respiratory syncytial virus	6	65	2	10	19	14	1	117

* Respiratory samples only.

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

Table 4 Laboratory reports of infections associated with atypical pneumonia, by week of report

Week	Week 14	Week 15	Week 16	Week 17	Total
Week ending	06/04/14	13/04/14	20/04/14	27/04/14	
<i>Coxiella burnettii</i>	–	–	1	–	1
Respiratory <i>Chlamydia</i> sp.	5	3	–	4	12
<i>Mycoplasma pneumoniae</i>	9	13	10	11	43
<i>Legionella</i> sp.	11	7	3	6	27

*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

Week	Week 14	Week 15	Week 16	Week 17	Total
Week ending	06/04/14	13/04/14	20/04/14	27/04/14	
Nosocomial	–	–	–	–	–
Community	8(1*)	5	1	3	17
Travel Abroad	3	1	2	3	9
Travel UK	–	1	–	–	1
Total	11	7	3	6	27
Male	8	7	2	3	20
Female	3	–	1	3	7

Twenty-seven cases were reported with pneumonia. Twenty males aged 34 - 78 yrs and seven females aged 37 - 89 yrs. Seventeen cases had community-acquired infection. Two deaths were reported in males aged 47 yrs and 68 yrs.

Ten cases were reported with travel association: Antigua (1), Argentina/Cruise/United Kingdom (1), Barbados (1), India (3), Spain (2) United Arab Emirates (1), United Kingdom (1).

Table 5b. Reports of Legionnaires Disease cases by region of report in England and Wales: weeks 14-17/2014

Region/Country	Noso-comial	Community	Travel Abroad	Travel UK	Total
North East	–	–	1	–	1
Yorkshire & Humber	–	–	–	1	1
East Midlands	–	4	–	–	4
East of England	–	–	–	–	–
London	–	–	–	–	–
South East	–	3	1	–	4
South West	–	–	–	–	–
West Midlands	–	–	–	–	–
North West	–	2	–	–	2
Wales	–	–	1	–	1
Unknown	–	–	1	–	1
Total	–	9	4	1	14

Enteric

General outbreaks of foodborne illness in humans, England and Wales: weeks 14-17/2014

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
North East	Not known	Restaurant	April	23	Not known	Sunday roast	D

D = Descriptive epidemiological evidence: suspicion of a food vehicle in an outbreak based on the identification of common food exposures, from the systematic evaluation of cases and their characteristics and food histories over the likely incubation period by standardised means (such as standard questionnaires) from all, or an appropriate subset of, cases.

Common gastrointestinal infections, England and Wales: laboratory reports: weeks 14-17/2014

Laboratory reports	Number of reports received				Total reports	Cumulative total	
	14/14	15/14	16/14	17/14	14-17/14	01-17/14	01-17/13
<i>Campylobacter</i>	913	915	687	755	3270	15027	14175
<i>E. coli</i> O157 *	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Salmonella</i> †	81	75	27	9	192	1308	1619
<i>Shigella sonnei</i>	24	23	13	12	72	340	232
Rotavirus	214	203	168	155	740	2231	11527
Norovirus	150	98	74	94	416	2381	4230
Cryptosporidium	60	66	67	73	266	780	1131
Giardia	64	51	61	45	221	1085	1033

† Data from CIDSC-LGP.

Salmonella infections (faecal specimens) England and Wales, reports to Public Health England (salmonella data set): March 2014

Details of 958 serotypes of salmonella infections recorded in March are given in the table below. In April 2014, 89 salmonella infections were recorded.

Organism	Cases: March 2014
S. Enteritidis PT4	7
S. Enteritidis (other PTs)	233
S. Typhimurium	156
S. Virchow	20
Others (typed)	542
Total salmonella (provisional data)	958

Suspected and laboratory-confirmed reported norovirus outbreaks in hospitals, with regional breakdown: outbreaks: weeks 14-17/2014

The hospital norovirus outbreak reporting scheme (HNORS) recorded 29 outbreaks occurring between weeks 14 and 17, 2014, 26 of which (90 per cent) led to ward/bay closures or restriction to admissions. Fifteen (52 per cent) outbreaks were recorded as laboratory confirmed due to norovirus.

From week 01 (January 2014) to week 17 (week beginning 21 April 2014) 310 outbreaks have been reported. Ninety-two per cent (285) of reported outbreaks resulted in ward/bay closures or restrictions to admissions and 68 per cent (212) were laboratory confirmed as due to norovirus.

Suspected and laboratory-confirmed reported norovirus outbreaks in hospitals, with regional breakdown: outbreaks occurring in weeks 14-17/2014

Region/PHE Centre	Outbreaks between weeks 14-17/2014			Total outbreaks 1-17/2014		
	Outbr/ks	Closures	Lab-confirmed	Outbr/ks	Closures	Lab-confirmed
Avon, Gloucestershire and Wilts	1	1	–	35	35	21
Beds, Herts and Northants	–	–	–	–	–	–
Cheshire and Merseyside	–	–	–	1	1	1
Cumbria and Lancashire	1	1	1	11	11	7
Devon, Cornwall and Somerset	2	2	1	27	26	14
Greater Manchester	–	–	–	5	5	4
Hampshire, IoW and Dorset	1	1	1	16	16	9
Lincs, Leicestershire, Notts, Derbyshire	7	7	3	28	27	19
London	–	–	–	6	6	5
Norfolk, Suffolk, Camb. and Essex	–	–	–	–	–	–
North east	9	7	5	34	28	23
Sussex, Surrey and Kent	1	1	–	12	12	7
Thames Valley	–	–	–	7	7	3
West Midlands	5	5	3	48	47	26
Yorkshire and the Humber	2	1	1	80	64	73
Total	29	26	15	310	285	212

Seasonal comparison of laboratory reports of norovirus (England and Wales)

In the current season to date † (from week 27, 2013, to week 17, 2014), there were 4140 laboratory reports of norovirus. This is 48 per cent lower than the average number of laboratory reports for the same period in the seasons between 2007/08 and 2011/2012 (7926)*. The number of laboratory reports in the most recent weeks will increase as further reports are received.

† The norovirus season runs from July to June (week 27 in year one to week 26 in year two) in order to capture the winter peak in one season.

* Last season – 2012/2013 – the season began earlier than normal so comparisons between this current and last season would not be valid.

Figure 1. Seasonal comparison of laboratory reports of norovirus (England and Wales)

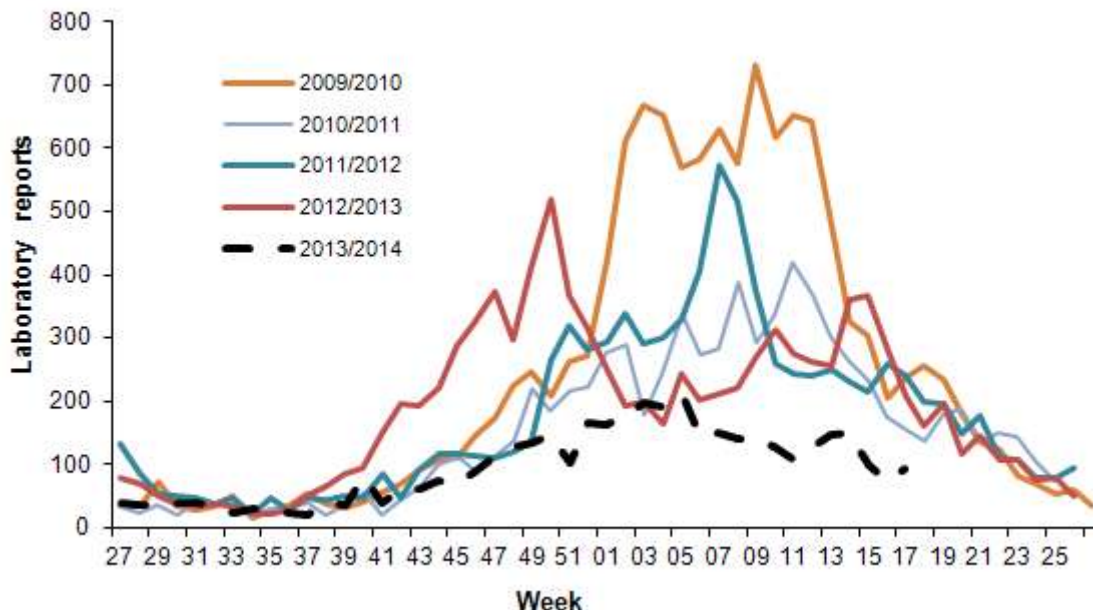
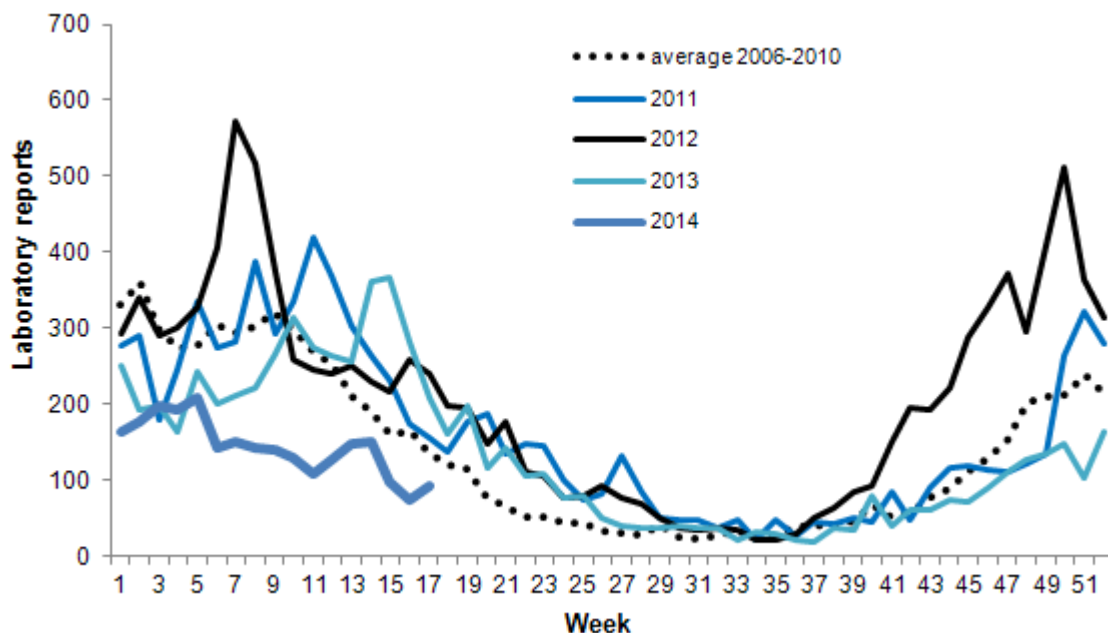


Figure 2. Current weekly norovirus laboratory reports compared to weekly average 2006/2010



Enteric

Enteric fever surveillance quarterly report (England, Wales and Northern Ireland): first quarter 2014

This quarterly report summarises the epidemiology of laboratory confirmed cases of typhoid and paratyphoid reported in England, Wales and Northern Ireland between January and March 2014. It includes both reference laboratory and some enhanced enteric fever surveillance data; although not all enhanced surveillance data was available for the first quarter of 2014 at the time of publishing. All data presented below are provisional; more detailed reports will be produced on an annual basis. More information about enteric fever surveillance, including previous reports, is available on the enhanced enteric fever surveillance page of the HPA legacy website [1].

National summary

In the first quarter (Q1) of 2014, 56 laboratory confirmed cases of enteric fever were reported in England, Wales and Northern Ireland (table 1), 24% lower than the first quarter of 2013 and 45% below the rolling mean (102) for Q1 2007 to 2014 (figure 1). A decrease in case numbers has been seen for *S. Typhi* (32 in Q1 2014 compared to 48 in Q1 2013, 33% lower) (table 1).

Figure 1. Laboratory confirmed cases of enteric fever by organism, England, Wales and Northern Ireland: first quarter 2007-2014

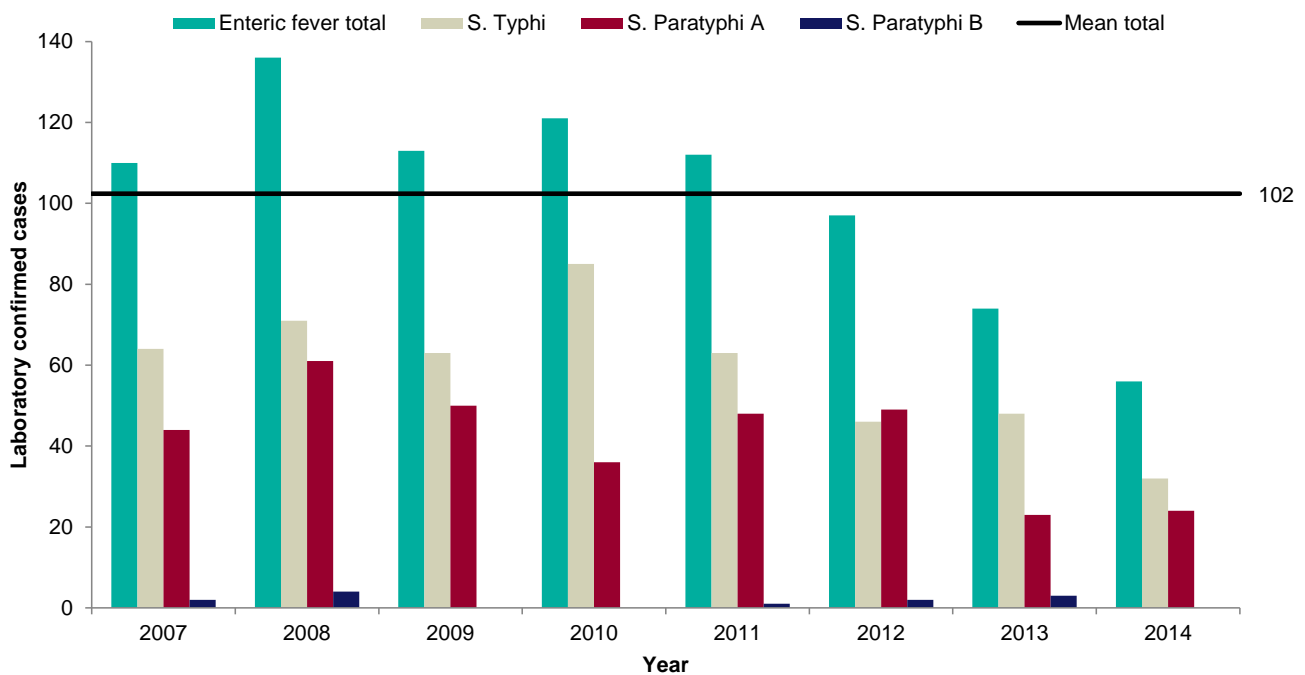


Table 1 Laboratory confirmed cases of enteric fever, England, Wales and Northern Ireland: first quarter 2007-2014

Organism	Laboratory confirmed cases							
	2014	2013	2012	2011	2010	2009	2008	2007
<i>Salmonella</i> Typhi	32	48	46	63	85	63	71	64
<i>Salmonella</i> Paratyphi A	24	23	49	48	36	50	61	44
<i>Salmonella</i> Paratyphi B	-	3	2	1	-	-	4	2
<i>Salmonella</i> Typhi and Paratyphi A		-	-	1	-	-	-	-
Enteric fever total	56	74	97	112	121	113	136	110

Table 2 Laboratory confirmed cases of enteric fever by organism and phage type, England, Wales and Northern Ireland: first quarter 2014

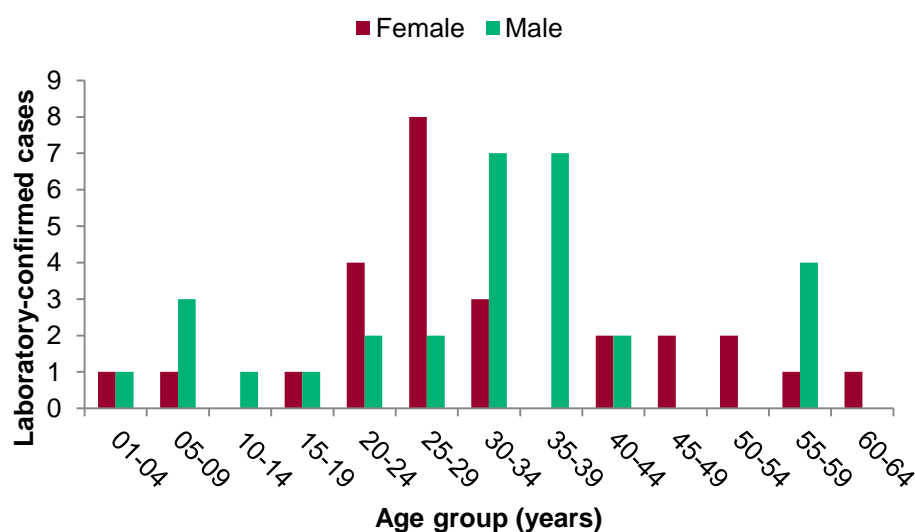
Phage type	S. Typhi	Phage type	S. Paratyphi A
PT E1	13	PT 2	7
PT E9 Var.	9	PT 13	6
PT O	3	PT 1	5
Untyp.VI	2	PT 1a	5
PT B2	2	PT 7	1
Untyp.VI 1	1	Total	24
Degr.VI	1		
PT A	1		
Total	32		

In general, *S. Typhi* phage types E9 var. and E1 and *S. Paratyphi A* phage types 13 and 1 occur most frequently [2]; however in Q1 2014, *S. Paratyphi A* phage type 2 was the most frequently reported (table 2), although numbers are small.

Age/sex distribution

In the first quarter of 2014, the median age of cases was 31 years [range 3-62 years] and 14% were aged 16 years and under; 54% of cases were male (figure 2).

Figure 2. Laboratory confirmed cases of enteric fever by age and sex (N=56): first quarter 2014



Geographical distribution

London PHE Region reported 46% of the total cases during the first quarter of 2014 (table 3). Only regions are shown in this report as the numbers are too small to break the data down into PHE Centres; between one and five cases were reported by each of 13 PHE Centres during the first quarter in 2014. PHE Centre data is available for local PHE teams on request.

Table 3. Laboratory confirmed cases of enteric fever by region: first quarter 2014

Geographic area	Q1 2014	Q1 2013	% change
London Region	26	28	-7%
Midlands and East of England Region	6	23	-74%
North of England Region	12	11	+9%
South of England Region	12	10	+20%
Wales	-	2	-
Total	56	74	-24%

Travel history

Full travel history for enteric fever reported during the first quarter of 2014 was not available at the time of publishing. Country of travel was, however, available for 41/56 cases and, as in previous quarters, India and Pakistan were the most frequently reported countries of travel.

Data sources and acknowledgements

Data were collated and analysed by the Travel and Migrant Health Section, Centre for Infectious Disease Surveillance and Control, Colindale. Laboratory data were provided by Gastrointestinal Bacterial Reference Unit, Microbiology Services, Colindale. Other surveillance data were provided by Environmental Health Officers and local health protection colleagues in PHE through enteric fever enhanced surveillance.

References

1. HPA health protection website. Enhanced surveillance of enteric fever, <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/TravelHealth/GeneralInformation/trav30Enhancedsurveillanceofentericfever/>
2. Health Protection Report. Archived enteric routine data reports, <http://www.hpa.org.uk/hpr/archives/Infections/2012/enteric12.htm>
3. National Travel Health Network and Centre (NaTHNaC) website, <http://www.nathnac.org/>.