



## Infection reports

Volume 8 Number 43 Published on: 14 November 2014

### Enteric

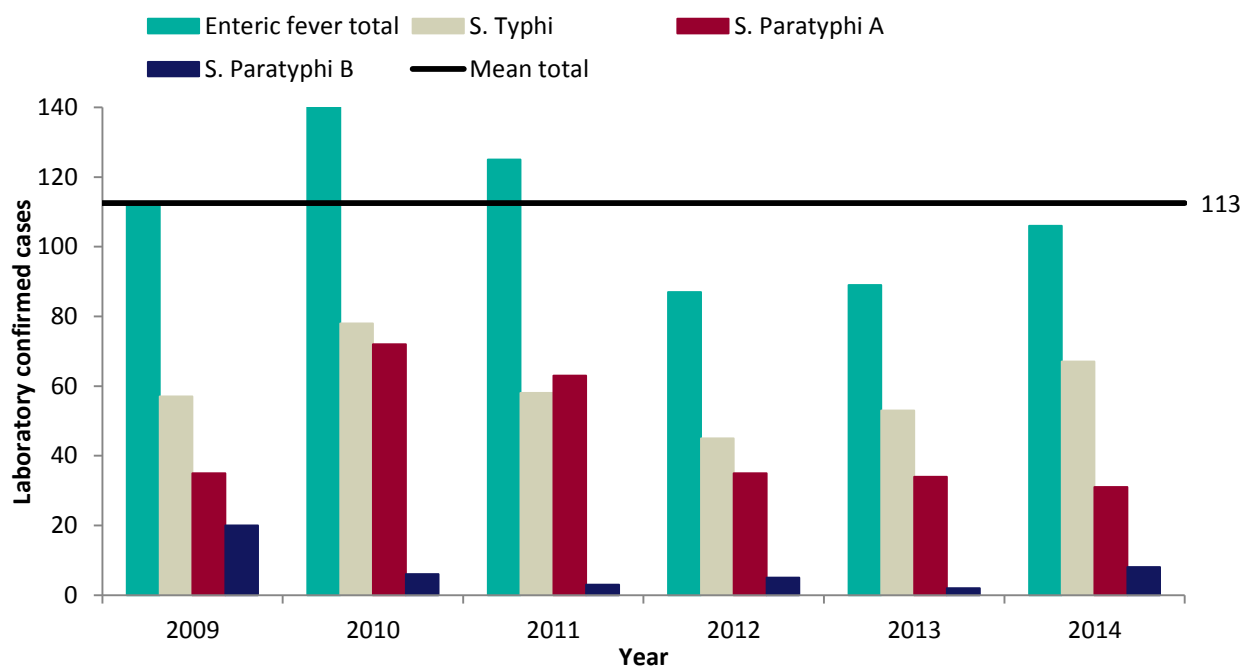
## Enteric fever surveillance quarterly report (England, Wales and Northern Ireland): third quarter 2014

*This quarterly report summarises the epidemiology of laboratory confirmed cases of typhoid and paratyphoid reported in England, Wales and Northern Ireland between July and September 2014. It includes both reference laboratory and enhanced enteric fever surveillance data. All data for 2014 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 PHE website [1].*

### National summary

In the third quarter (Q3) of 2014, 106 laboratory confirmed cases of enteric fever were reported in England, Wales, and Northern Ireland (Table 1), 19.1% higher than the third quarter of 2013 and 6.19% below the rolling mean (113) for Q3 2009 to 2014 (figure 1). An increase in case numbers has been seen for *S. Typhi* and *S. Paratyphi B* (*S. Typhi*; 67 in Q3 2014 compared to 53 in Q3 2013, 26.4% higher. *S. Paratyphi B*; 8 in Q3 2014 compared to 2 in Q3 2013 ) (table 1).

**Figure 1. Laboratory confirmed cases of enteric fever by organism, England, Wales and Northern Ireland: third quarter 2009-2014**



**Table 1. Laboratory confirmed cases of enteric fever, England, Wales and Northern Ireland: third quarter 2009-2014**

| Organism                                | Laboratory confirmed cases |           |           |            |            |            |
|---|----------------------------|-----------|-----------|------------|------------|------------|
|   | 2014                       | 2013      | 2012      | 2011       | 2010       | 2009       |
| <i>Salmonella</i> Typhi                 | 67                         | 53        | 45        | 58         | 78         | 57         |
| <i>Salmonella</i> Paratyphi A           | 31                         | 34        | 35        | 63         | 72         | 35         |
| <i>Salmonella</i> Paratyphi B           | 8                          | 2         | 5         | 3          | 6          | 20         |
| <i>Salmonella</i> Paratyphi C           | –                          | –         | 2         | –          | –          | –          |
| <i>Salmonella</i> Typhi and Paratyphi A | –                          | –         | –         | 1          | –          | –          |
| <b>Enteric fever total</b>              | <b>106</b>                 | <b>89</b> | <b>87</b> | <b>125</b> | <b>156</b> | <b>112</b> |

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

| Phage type   | S. Typhi  | Phage type   | S. Paratyphi A |
|--------------|-----------|--------------|----------------|
| PT E1        | 25        | PT 1         | 11             |
| Untyp.VI     | 11        | PT 13        | 9              |
| PT E9 Var.   | 10        | PT 1a        | 3              |
| Untyp.VI 2   | 5         | PT 4         | 3              |
| Degr.VI      | 4         | PT 6a        | 2              |
| VI Neg.      | 3         | PT 14        | 1              |
| PT 28        | 2         | PT 2         | 1              |
| Untyp.VI 1   | 2         | PT 3         | 1              |
| PT B2        | 1         | <b>Total</b> | <b>31</b>      |
| PT D1        | 1         |              |                |
| PT D2        | 1         |              |                |
| PT M1        | 1         |              |                |
| PT O         | 1         |              |                |
| <b>Total</b> | <b>67</b> |              |                |

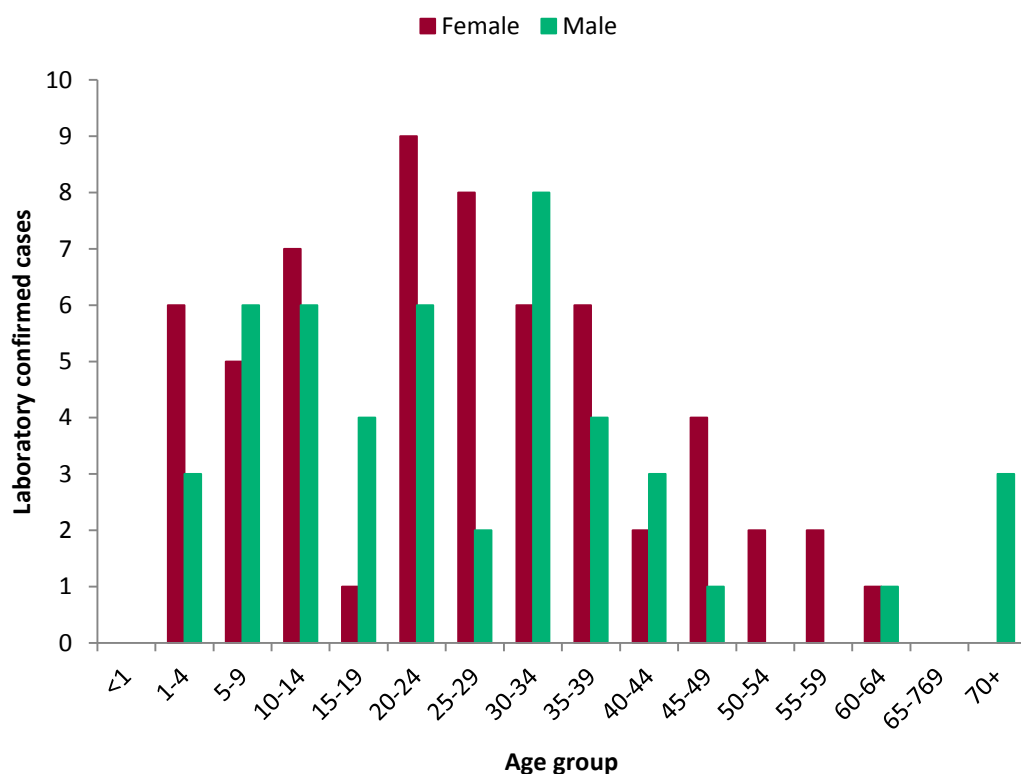
| Phage type   | S. Paratyphi B |
|--------------|----------------|
| Taunton      | 5              |
| Dundee V2    | 1              |
| PT1 Var 10   | 1              |
| RDNC         | 1              |
| <b>Total</b> | <b>8</b>       |

In general, *S. Typhi* phage types E1, Untyp. VI and E9 and *S. Paratyphi A* phage types 1, and 13 occur most frequently (table 2) [2].

## Age/sex distribution

In the third quarter of 2014, the median age of cases was 24.5 years and 33% (36% for males and 31% for females) were aged 16 years and under. Females represented 56% of all cases and males 44%, which is unusual as typically there are slightly more males with typhoid consistent with the proportion who travel (figure 2).

**Figure 2. Laboratory confirmed cases of enteric fever by age and sex (N=106): third quarter 2014**



## Geographical distribution

London PHE Region reported 38% of the total cases during the third quarter of 2014 (table 3). Only regions are shown in this report as the numbers are too small to disaggregate by PHE Centre; between one and twenty cases were reported by each of 13 PHE Centres during the third quarter in 2014. PHE Centre data is available for local PHE teams on request.

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

| Region                       | Q3 2014    | Q3 2013   | % change     |
|------------------------------|------------|-----------|--------------|
| London                       | 40         | 32        | 25.0%        |
| North of England             | 28         | 14        | 100%         |
| South of England             | 20         | 19        | 5.00%        |
| Midlands and East of England | 16         | 22        | -27.3%       |
| Wales                        | 1          | 2         | 50.0%        |
| Northern Ireland             | 1          | –         | N/A          |
| <b>Grand Total</b>           | <b>106</b> | <b>89</b> | <b>19.1%</b> |

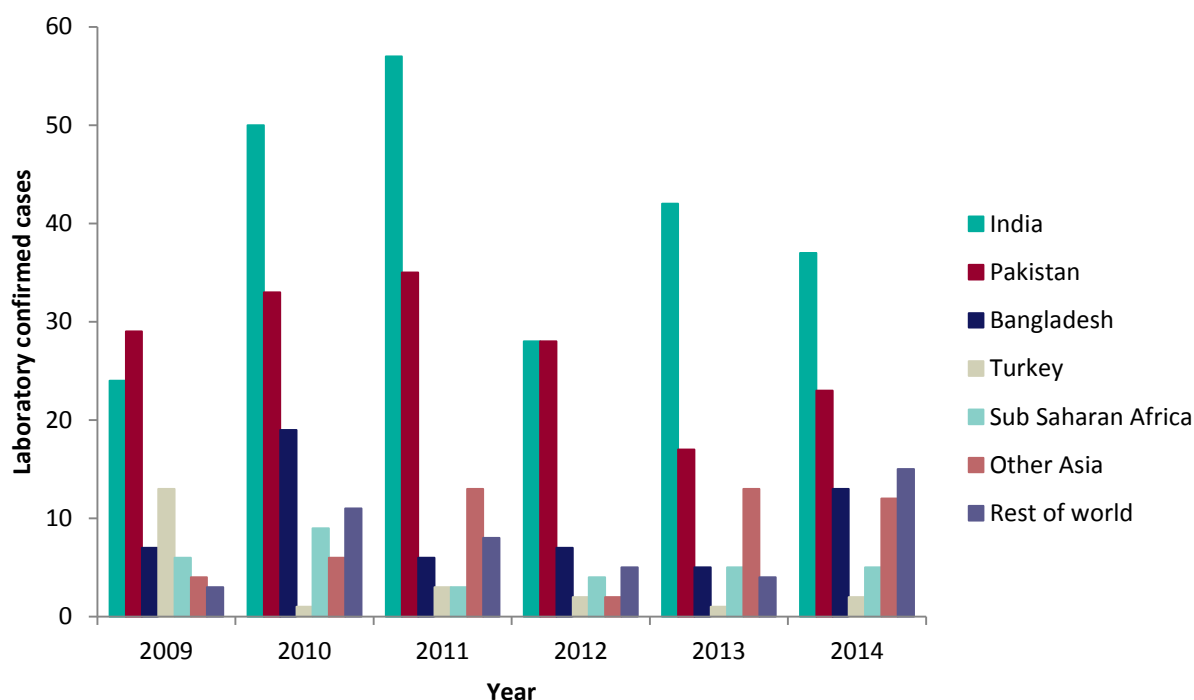
## Travel history

In the third quarter, travel history was known for 104 (98.1%) cases; of which 100 cases were presumed to be acquired abroad and four had not travelled outside the UK in the 28 days prior to symptoms. Three of the travel-associated cases had travelled to countries that are not typical risk countries as defined by NaTHNaC (one to Spain, Croatia, Italy and France; one to Greece; and one to Hong Kong); these were designated as travel-associated in the absence of any other identified source of infection within the UK.

## Travel-associated cases

Travel-associated cases were likely to have acquired their infection in: India (37); Pakistan (23); Bangladesh (13); Iraq, Bolivia and Nepal (three each); Afghanistan, Indonesia, Peru, Turkey, Zimbabwe and Sri Lanka (two each); Cambodia, Croatia, France, Greece, Hong Kong, Italy, Ivory Coast, Myanmar, Nigeria, Philippines, Spain, Tanzania, Thailand and Uganda (one each). For one case, country of travel was not stated. Some cases travelled to more than one country so totals will not equal the number of total cases that travelled. Where multiple countries of travel have been stated by the case, only risk countries, as identified by the National Travel Health Network and Centre [3], were included for analysis. If a case travelled to multiple risk countries each country was counted individually. India and Pakistan continue to be the most frequently reported countries of travel for the third quarter (figure 3).

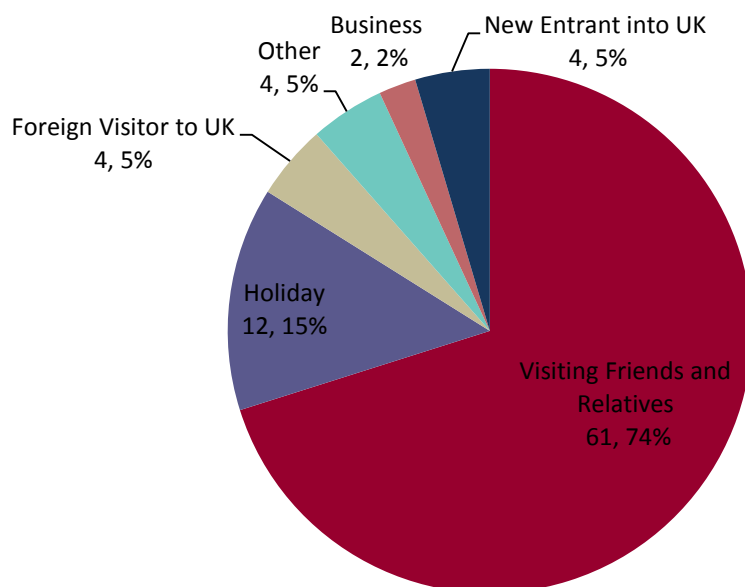
**Figure 3. Laboratory-confirmed cases of enteric fever, England, Wales and Northern Ireland by country of travel: third quarter 2009-2014**



## Reason for travel

Of the 100 cases that had travelled abroad, reason for travel was known for 87. Among those, 74% of cases travelled to visit friends and relatives, 15% travelled abroad for a holiday and 4 were foreign visitors to the UK (figure 4).

**Figure 4. Laboratory-confirmed cases of enteric fever that have travelled abroad (N=87) by reason for travel: third quarter 2014**



## Non-travel-associated cases

Three cases in the third quarter had enhanced information available stating they had not travelled abroad within 28 days of developing symptoms. One case had family visiting from Nigeria who brought sweets, but all visitors were asymptomatic. Neither of the other two cases had links to known cases or travellers from endemic countries and no other possible sources have been identified. There was a fourth case who did not travel abroad, but additional details were not available.

## 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. GOV.UK website. Enhanced surveillance of enteric fever [online]. Accessed 4 November 2014. Available at: <https://www.gov.uk/government/collections/typhoid-and-paratyphoid-guidance-data-and-analysis>
2. GOV.UK. Typhoid and paratyphoid: laboratory confirmed cases in England, Wales and Northern Ireland. Available online at: <https://www.gov.uk/government/publications/typhoid-and-paratyphoid-laboratory-confirmed-cases-in-england-wales-and-northern-ireland>
3. National Travel Health Network and Centre (NaTHNaC) website [online] [accessed 4 November 2014]. Available at: <http://www.nathnac.org/>.