Public Health England

Health Protection Report
weekly report

This is a PDF consolidation of the news items and infection reports published in HPRs 9(35) and 9(36), on 2 and 9 October 2015, respectively

Volume 9 Numbers 35-36 Published on: **2 and 9 October 2015**

Current News

Infection Reports

Respiratory *

Enteric **

* Published in *HPR* **9**(35) on 2/10/2015.
** Published in *HPR* **9**(36) on 9/10/2015.

News

Volume 9 Number 35/36 Published on: **2 and 9 October 2015**

Annual report on tuberculosis in England

The Collaborative Tuberculosis Strategy for England, published in January 2015, outlined the improvements needed to achieve a sustained decline of TB in England [1]. PHE's latest annual report, 'Tuberculosis in England, 2015 report (presenting data to end of 2014)', provides an overview of the epidemiology of the disease in England prior to implementation of the strategy [2].

In 2014, 6,520 cases were notified in England, a rate of 12.0 per 100,000, which was the lowest rate in England since 2000. The number of cases and the rate of TB in England have shown a year-on-year decrease over the past three years, with a 10% to 11% reduction in the rate annually from 2012. Despite this, the number of cases notified in England is still the highest in Western Europe [3].

The decline in the number of new cases, and in the incidence rate in the past three years in England is due to a reduction in the number of cases born outside the UK, which make up nearly three-quarters (71%) of TB cases in England (see figure below). In 2014, 4,610 of cases were born outside the UK, a rate of 60.3 per 100,000. There have been particularly large reductions in the numbers of cases born in India, Pakistan and Somalia, which accounts for 71% of the reduction in non-UK born cases since 2012.

The reduction in TB cases in the non-UK born population is likely to reflect recent declines in the number of migrants from high-TB burden countries and the impact of pre-entry TB screening. The majority of non-UK born cases (86%) are now notified more than two years after entering the UK, and are likely to be reactivation of latent TB infection. The roll out of latent TB testing and treatment, and further strengthening of TB services is required to ensure that the decline in non-UK born cases is sustained.

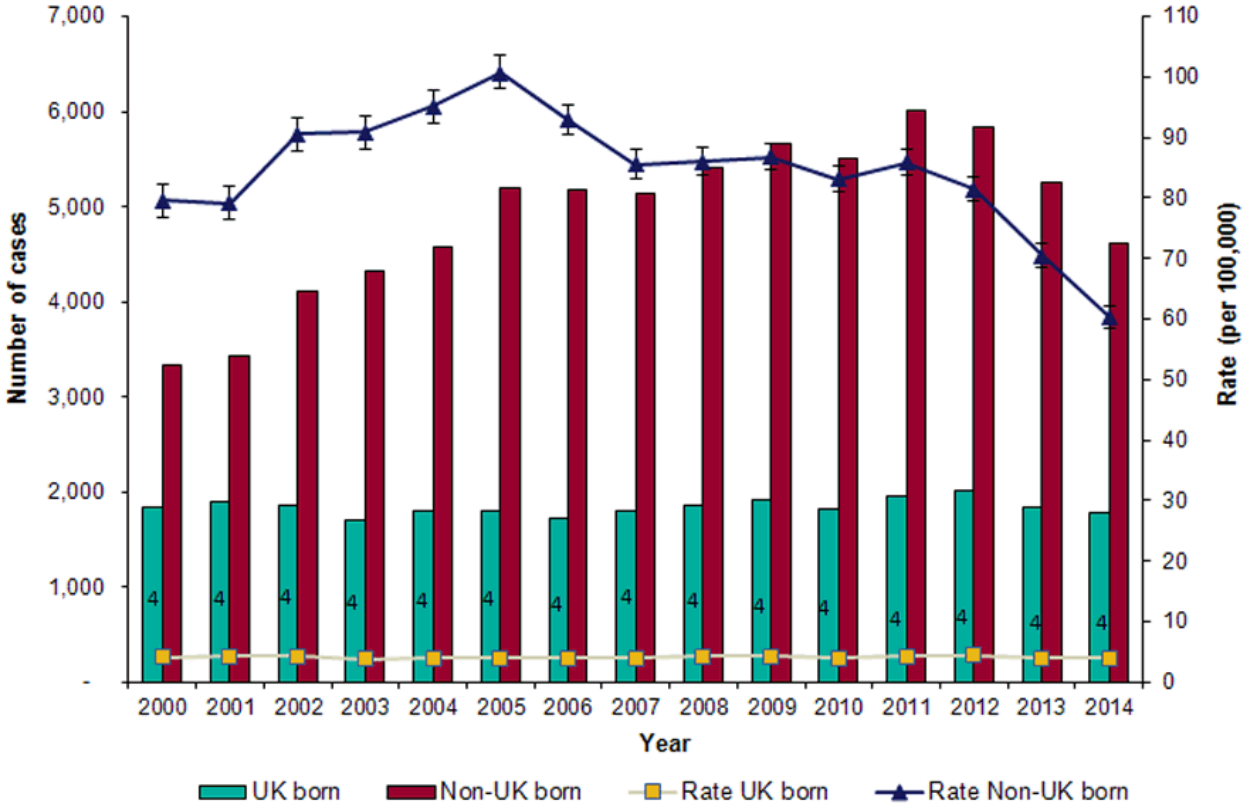
The rate and number of cases born in the UK have not shown a decrease over the past decade. In 2014, 1,774 cases were born in the UK, a rate of 3.9 per 100,000. This is three times higher than the rate in the native born population in the United States [4]. However, the rate of TB in UK born children aged less than 15 years, a proxy for TB transmission, has shown a steady decrease over the past three years, at 2.1 per 100,000 in 2014. This suggests a reduction of recent TB transmission in England.

Almost a third (30%) of pulmonary TB cases notified in 2013 experienced a delay from symptom onset to treatment start greater than four months, an increase in the proportion since 2011. In

2013, 41% of pulmonary TB cases aged 65 years and older experienced this delay, the highest proportion compared to other age groups.

Encouragingly, the proportion of drug sensitive cases expected to complete treatment within 12 months that have completed by this time has continued to increase, with 85% of cases notified in 2013 completing treatment by 12 months. The proportion of all drug sensitive cases that died at the last reported outcome has continued to decrease, with only 5% of cases notified in 2013 reported to have died.

TB case notifications and rates (95% confidence intervals) by place of birth, England, 2000-2014.



Note: confidence intervals around the UK born population rate are small and therefore not visible.

Drug resistance

As in earlier years, approximately 6% of cases had initial resistance to isoniazid without MDR-TB, which occurred most frequently in cases with a previous history of TB or at least one social risk factor. In contrast, the number and proportion of initial MDR/RR-TB cases has decreased since 2011 (88 cases, 1.8%), with 56 MDR/RR-TB cases (1.4%) notified in 2014; the most frequent countries of birth of MDR/RR-TB cases were Lithuania (11 cases) and India (10 cases). Only 56% of drug resistant cases notified in 2012 expected to complete treatment within 24 months completed treatment. The proportion of drug resistant cases known to have died at last reported outcome was similar to the drug sensitive cases at 4%.

Health inequalities, social risk factors and co-infections

TB remains concentrated in the most deprived communities; in 2014, the rate of TB was nearly seven times higher in those living in the most deprived areas (26 per 100,000) compared to those living in the least deprived areas (4 per 100,000). Almost one in 10 TB cases notified in 2014 had at least one social risk factor (past or current history of homelessness, drug or alcohol misuse or imprisonment), and the proportion of cases with a social risk factor was more than double in the UK born population (15%) compared with the non-UK born population (7%). Drug sensitive TB cases with at least one social risk factor were more likely to die or be lost to follow up than those without a social risk factor (5% versus 3%; 8% versus 3%, respectively) and treatment outcomes were also worse for MDR/RR-TB cases with at least one social risk factor.

Of cases notified in 2013, 3% of TB cases aged 15 years and above were co-infected with HIV, a continuation of the downward trend since the peak of 8% in 2004; 84% of TB-HIV co-infected cases were born outside the UK, with the majority born in Africa.

Next steps

In summary, the latest report on the epidemiology of TB in England before the implementation of the Collaborative TB Strategy for England 2015-2020 demonstrates encouraging trends in the overall rate of TB and the number of cases, and ongoing improvements in some indicators of service quality. However, it is important to be aware that reductions in the number of cases, and the rate, have been limited to the non-UK born population, particularly new migrants, and some indicators of service quality have not improved.

To achieve reductions in TB in England over the next five years, including in both new and settled migrants, in the UK born population and among the most vulnerable groups, will require us to build upon existing achievements and address gaps in current service provision. This will require the sustained and co-ordinated action of all key stakeholders, supported and overseen by the newly established TB control boards and national TB programme office.

References

1. PHE (January 2015). Collaborative tuberculosis strategy for England 2015-2020.
2. PHE (29 September 2015). Tuberculosis in England: 2015 report (presenting data to end of 2014).
3. World Health Organization Global Tuberculosis Report 2014.
4. CDC (October 2014). Reported tuberculosis in the United States 2013.

Ebola virus disease: international epidemiology summary (at 27 Sept 2015)

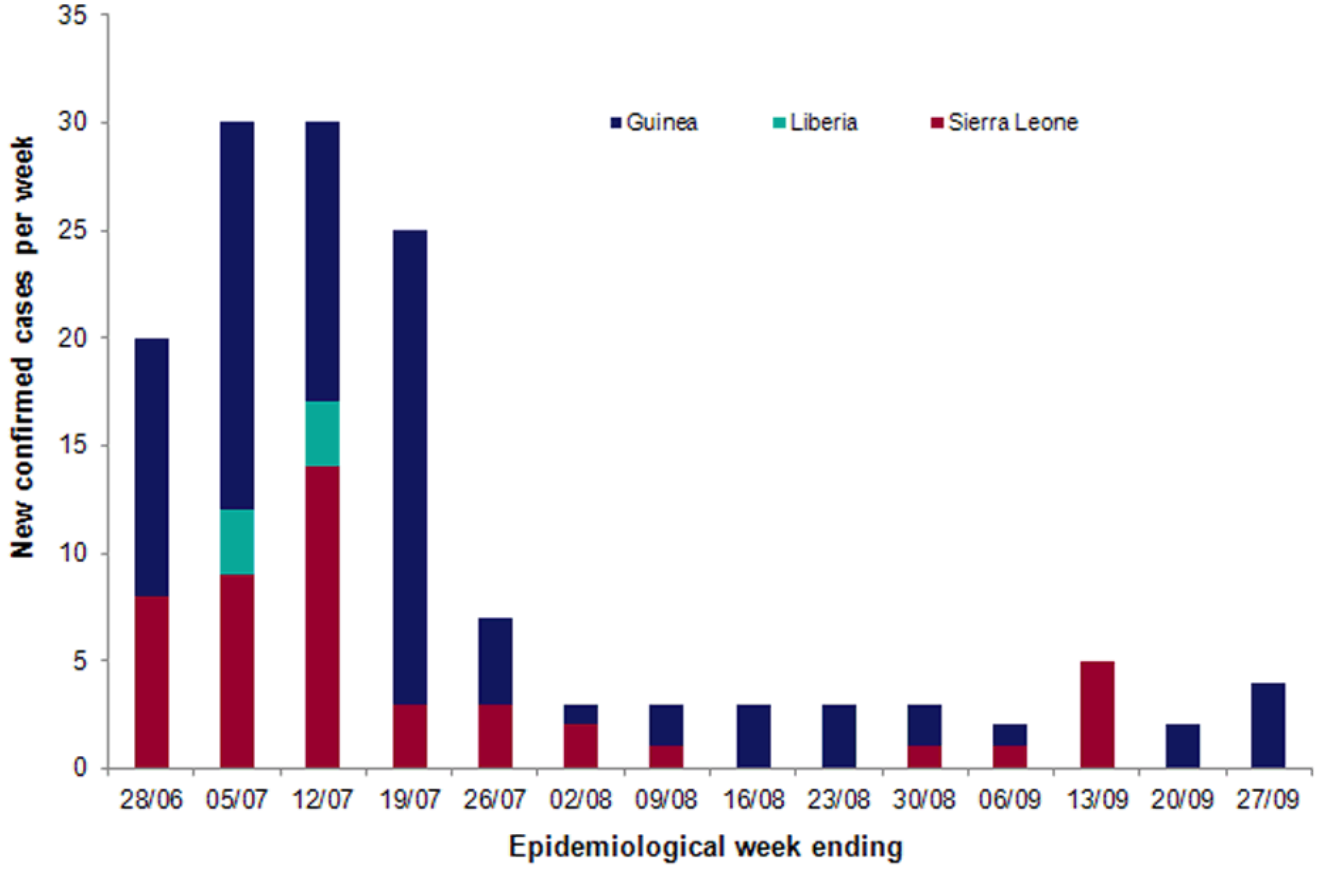
At 27 September 2015. the West African Ebola virus disease (EVD) outbreak was continuing with a total of 28,424 clinically compatible cases (15,239 confirmed) reported at that time, 11,306 of which had died.

In the previous two weeks, a total of six confirmed cases had been reported in West Africa, all in Guinea. All six cases were associated with a single chain of transmission which originated in the Ratoma area of the capital city, Conakry. Only one of these recent cases was diagnosed in Conakry, the other five were reported in the prefecture of Forécariah after a symptomatic individual travelled to this area for treatment before being diagnosed. Over 450 contacts remained under follow up in Guinea, all related to this chain of transmission.

At 27 September 2015 it had been two weeks since the last case was reported in Sierra Leone and the country had begun a 42-day countdown to being declared EVD-free, as it discharged its last two known patients. A total of 795 contacts remained under follow up in Sierra Leone.

Liberia remained within a 90 day period of heightened vigilance having been declared EVD transmission free on 3 September 2015.

Number of new confirmed cases reported per week (28 June to 27 September 2015) in affected countries in West Africa



Data source: WHO Ebola Situation Report 1 October 2015.

PHE reminder on salmonella hazard associated with reptiles

PHE's National Infection Service is investigating a number of cases of gastroenteritis caused by *Salmonella* Enteritidis PT8 – linked to exposure to reptiles, in particular snakes – and a reminder of the hazard intrinsic to the keeping of reptiles as pets has been published on the GOV.UK website [1]. As at 29 September 2015, 70 cases of *S.* Enteritidis PT8 had been identified across England since the start of the year.

The risk of salmonella infection for those handling reptiles is well established [2] and the raw or frozen mice used as snake feed are thought to be the principle route of disease transmission in the current outbreak. A reptile-associated outbreak involving a different salmonella strain was investigated in 2009 when such "feeder mice" were found to have been the source of infection [3].

Salmonella is found naturally in the gut of many animals, including reptiles. The bacterium can spread from the animals to cause infection in humans, in most cases causing only mild illness – diarrhoea, fever, abdominal pain or nausea. Children and babies can develop more serious illness. Estimates of reptile ownership in England vary between approximately one and five per cent of the population.

References

1. "Reptiles pose a risk of salmonella infection", PHE website news story, 29 September 2015.
2. Reducing the risks of salmonella infection from reptiles, PHE factsheet.
3. Ongoing investigation into reptile associated salmonella infections, *HPR* 3(14): news, 9 April 2009.

Alert on 2,4-dinitrophenol deaths

A reduction in reported cases of poisoning associated with the industrial chemical 2,4-dinitrophenol (DNP) – often illegally marketed as a weight-loss and body-building food supplement – were achieved after warnings were issued by the FSA (in 2012 and 2013), and the CMO in 2013. However, ongoing surveillance by the PHE-commissioned National Poisons Information Service (NPIS) has indicated a resurgence of such poisonings, including an increase in fatal cases, continuing into 2015.

According to the latest NPIS annual report for 2014/15 [1], the rate of enquiries from health professionals to NPIS about DNP fell from peaks of more than 150 per quarter in 2013/14 (for both online enquiries to the NPIS TOXBASE database, and for telephone enquiries to NPIS

toxicology specialists, respectively) to below 30 per quarter in late-2013/early-2014 in each case [1].

The most recent surveillance data, however, indicate that more than 30 complex cases were referred to NPIS specialists between 1 January and 17 September 2015, compared with nine such cases during the whole of 2014. Five of the cases in 2015 were fatal.

Those affected have been for the most part teenagers and young adults. Symptoms of poisoning include high fever, gastro-intestinal disturbances, chest and abdominal pain, headache, confusion and convulsions. PHE has issued a new alert advising general practitioners to refer suspect cases to hospital for assessment and observation, and accident and emergency departments to obtain further information from TOXBASE or from NPIS specialists.

Reference

1. PHE (September 2015). National Poisons Information Service annual report 2014/2015, ISBN 978-0-85951-774-4.

MERS, influenza and respiratory illness in travellers returning from the Hajj

Following the recent Hajj annual pilgrimage to Mecca in the Kingdom of Saudi Arabia (KSA), UK clinicians have been reminded to be vigilant for suspect Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV) cases among returning travellers presenting to hospital with acute respiratory symptoms – so as to ensure early detection, respiratory isolation and testing with the aim of limiting onward spread [1].

The Hajj festival, a mass gathering that draws more than two million pilgrims from around the world, is well recognised as an amplifying event for respiratory pathogens [2]. Respiratory illness is common amongst travellers returning from the Hajj, with increased rates of acute respiratory illness and infection observed in previous studies [2,3,4].

Since the first recognition of MERS in September 2012, there have been concerns about transmission of this infection linked to this mass gathering event, and of associated exportations as pilgrims return home. No Hajj-related MERS cases have been reported over the seasons since [5]. Taking account of recent reports of MERS transmission in Riyadh, however, the UK has raised awareness of the potential of MERS acquisition [1].

The UK has an established enhanced surveillance system for suspect MERS cases in travellers returning from the Middle East and hospitalised with an acute respiratory illness [6]. In the period 1 September 2015 to 7 October 2015, there have been a total of 19 possible MERS cases reported in travellers returning from KSA, who required admission to hospital with acute

respiratory illness. All cases were tested and were negative for MERS-CoV. To date nine (47%) have been diagnosed as influenza A positive (including one co-infection with RSV, one with paraflu-3 and one with rhinovirus), four (21%) as rhinovirus positive (single infection) and one (5%) adenovirus positive.

The picture in 2015 is very similar to that seen in the two previous Hajj/Umrah periods during which MERS surveillance has been operational in the UK. In 2013, from 1 September until 1 November, a total of 24 possible cases were reported and investigated. All were negative for MERS-CoV on laboratory investigation, but 11 (46%) were positive for influenza A and seven (29%) for rhinovirus (although six of these were co-infections with influenza). Similarly in 2014, in the period from 1 September until 1 November, a total of seven MERS-CoV cases were investigated. All were negative for MERS-CoV, but three (43%) were positive for rhinovirus, three (42%) for influenza. All cases were hospitalised, including admissions to critical care units. Information on influenza vaccine status and antiviral treatment of these cases are not known.

Clinicians should remain vigilant for MERS-CoV in travellers returning from the Middle East and who present with a recent acute respiratory illness that has resulted in hospitalisation. It is important that strict respiratory infection control measures are put in place and MERS-CoV testing is expedited [7]. However, particularly for Hajj returnees, clinicians should be aware that influenza may be a more likely explanation for the patient's symptoms and they should not hesitate to start empirical antiviral treatment for influenza on admission if indicated, pending the results of laboratory investigations for influenza, MERS-CoV and other respiratory pathogens. In addition, these findings reinforce the KSA ministry of health recommendation that pilgrims be vaccinated against seasonal influenza, especially those at increased risk of severe disease.

References

1. CMO alert to the NHS (21 September 2015). Middle East Respiratory Syndrome coronavirus (MERS-CoV) in the Kingdom of Saudi Arabia and the upcoming Hajj pilgrimage.
2. Memish ZA, Assiri A, Turkestani A, Yezli S, Al Masri M, Charrel R, et al (2015). Mass gathering and globalization of respiratory pathogens during the 2013 Hajj. Clin Microbiol Infect. Jun 21(6): 571.
3. Gautret P, Yong W, Soula G, Gaudart J, Delmont J, Dia A, et al (2009). Incidence of Hajj-associated febrile cough episodes among French pilgrims: a prospective cohort study on the influence of statin use and risk factors. Clin Microbiol Infect. Apr. 15(4): 335-40.
4. Rashid H, Shafi S, Booy R, El Bashir H, Ali K, Zambon MC, et al (2008). Influenza and respiratory syncytial virus infections in British Hajj pilgrims. Emerg Health Threats J. 1: e2.
5. Gardner LM, MacIntyre CR (2014). Unanswered questions about the Middle East respiratory syndrome coronavirus (MERS-CoV). BMC Res Notes. June 7: 358.
6. Thomas HL, Zhao H, Green HK, Boddington NL, Carvalho CF, Osman HK, et al (2014). Enhanced MERS coronavirus surveillance of travelers from the Middle East to England. Emerg Infect Dis. Sept. 20(9): 1562-4.
7. PHE guidance for management of a possible case of MERS

Defra consultation on air quality (nitrogen dioxide) improvement plans

The Department for Environment, Food and Rural Affairs (Defra), which has lead responsibility for air quality in the UK, has published a public consultation document setting out draft plans to improve air quality in England, Wales and Northern Ireland [1]. The document is specifically concerned with compliance with EU limit values for nitrogen dioxide (NO_2) and sets out actions being planned or implemented at local, regional and national levels in the UK to move towards compliance. The consultation document invites comments – before 6 November 2015 – particularly from local authorities (who have statutory duties for managing local air quality), environmental groups, those operating in the transport and public health sectors, and other organisations with an interest in air quality.

Following the consultation – and after the independent Committee on the Medical Effects of Air Pollutants (COMEAP) publishes its assessment of how reductions in NO_2 concentrations could impact on mortality in the UK, due in December – an Air Quality Plan for the UK will be submitted to the European Commission before the end of 2015.

Of the 43 zones and agglomerations into which the UK is divided for monitoring and reporting purposes, 38 do not currently comply with EU NO_2 limit values, including eight that are projected to still be non-compliant in 2020.

Defra's proposed air quality action plans focus on reducing NO_2 levels in towns and cities and include measures that primarily target urban road traffic because, on average, around 80% of emissions of oxides of nitrogen in areas where the UK is exceeding NO_2 limits is due to transport (although non-transport sources are also significant). The largest source is emissions from diesel light duty vehicles (cars and vans) where emissions standards have had least impact and there has been significant growth in vehicle numbers over the last 10 years.

Levels of action included in Defra's draft Air Quality Plans include the following:

- local action, ie: "Interventions identified seek to improve air quality by promoting a modal shift from private cars to active travel and integrated public transport; reducing congestion and employing restrictions to change fleet mixes in cities via Low Emissions Zones and parking restrictions";
- national action, ie: "The plans propose that cities consider the role of access restrictions for certain types of vehicles on the basis of a national framework for new Clean Air Zones. Other actions include electrification of the vehicle fleet and other ultra-low emission technologies";

- international action, ie: “While the UK is taking action locally, regionally and nationally to reduce NO2 concentrations, there is also a need for action at European level to ensure that relevant standards and regulations support reductions in NO_2 concentrations …”

The Defra consultation has particular significance for local authorities in England, Wales and Northern Ireland whose statutory duties include assessing priority health issues for their local communities. PHE Centres are being actively encouraged to liaise with their LAs to raise local awareness of air pollution, promote local action to improve air quality and respond to the Defra consultation.

Reference

1. Defra (September 2015). Consultation on draft plans to improve air quality: tackling nitrogen dioxide in our towns and cities website.

Antimicrobial resistance testing included in SMIs

In order to support antimicrobial stewardship programmes in healthcare, PHE is increasingly including testing for antimicrobial susceptibility as a component of new (and newly updated) microbiological laboratory test procedures promulgated by its Microbiology Services Standards Unit. Two recently promulgated Standards for Microbiology Investigations (UK SMIs) – covering test methods for investigation of skin and superficial soft tissue infections (B11) [1], and for urinary infections (B41) [2] – were the first to include recommendations on AMR testing.

(Consultations on the new these two SMIs is now closed; however, the documents can be viewed on the gov.uk website [1,2], where a Review of Users’ Comments will published in due course.)

Antimicrobial testing and reporting tables included in the SMIs indicate which “drug-bug” combinations are recommended for testing: in all cases for some antimicrobials, only in specific clinical scenarios for others, taking account of local circumstances.

Recommendations on antimicrobial testing in SMIs are drafted in conjunction with the British Society for Antimicrobial Chemotherapy. They are intended to support and complement local antimicrobial testing guidance.

References

1. SMI B 11: Investigation of skin, superficial and non-surgical wound swabs.
2. SMI B 41: Investigation of urine.

Eleventh World Rabies Day

The eleventh annual World Rabies Day was held on 28 September 2015 [1,2]. The aim is to raise awareness about the impact of human and animal rabies, and to highlight initiatives aimed at preventing and subsequently eliminating the disease. The World Health Organization estimates that rabies causes 55,000–70,000 deaths per year worldwide, many of these in children.

Rabies is an acute viral infection that is almost universally fatal, however prompt post-exposure prophylaxis (PEP) with rabies vaccine and human rabies immunoglobulin (HRIG) is highly effective at preventing disease. The infection is transmitted to humans mainly by bites, but exposure may also occur through scratches, contamination of broken skin or mucous membranes with saliva from an infected animal or bat.

The UK has been free of rabies in terrestrial animals since 1922, however UK bats may carry a rabies-like virus, European Bat Lyssavirus 2 (EBLV2).

Currently more than 1000 people in England and Wales, annually, are treated with PEP following possible rabies exposure, mainly travellers. Over half of putative rabies exposures to UK travellers occur in Asia and in particular India, Thailand and Turkey; the most common exposure resulting in PEP involves dogs, followed by bats, cats and monkeys. Since 2000 there have been five human deaths from rabies in UK citizens; four of these in travellers following exposure in rabies endemic countries, and the fifth in a bat handler infected in Scotland. None of these individuals had received post-exposure prophylaxis.

References

1. WHO rabies factsheet (updated September 2015).
1. "PHE in support of World Rabies Day", PHE website news story.

Public Health England

Health Protection Report
weekly report

Infection Reports

Respiratory *

- **Laboratory reports of respiratory infections made to CIDSC from PHE and NHS laboratories in England and Wales: weeks 36 to 39, 2015**

Enteric **

- **General outbreaks of foodborne illness in humans, England and Wales: weeks 36-39, 2015**
- **Common gastrointestinal infections, England and Wales: laboratory reports: weeks 36-39, 2015**
- **Less common gastrointestinal infections, England and Wales: laboratory reports: weeks 37-39, 2015**
- **Salmonella infections (faecal specimens) England and Wales, reports to Public Health England (salmonella data set): August 2015**
- **Suspected and laboratory-confirmed reported norovirus outbreaks in hospitals: weeks 36 to 39, 2015**

* Published in *HPR* **9**(35) on 2/10/2015.
** Published in *HPR* **9**(36) on 9/10/2015.

Infection reports / Respiratory

Volume 9 Number 35 Published on: 2 October 2015

Laboratory reports of respiratory infections made to PHE from PHE and NHS laboratories in England and Wales: weeks 36 to 39, 2015

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 CIDSC, by week of report

Week	Week 36	Week 37	Week 38	Week 39	Total
Week ending	6/9/15	13/9/15	20/9/15	27/9/15	
Influenza A	3	4	17	8	32
Isolation	–	–	–	1	1
DIF *	–	–	–	–	–
PCR	2	2	5	7	16
Other †	1	2	12	–	15
Influenza B	3	2	4	3	12
Isolation	–	–	–	–	–
DIF *	–	–	–	–	1
PCR	2	2	1	3	8
Other †	–	–	3	–	3

* 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

Week	Week 36	Week 37	Week 38	Week 39	Total
Week ending	6/9/15	13/9/15	20/9/15	27/9/15	
Adenovirus*	37	42	35	63	177
Coronavirus	2	1	2	1	6
Parainfluenza†	24	37	35	51	147
Rhinovirus	128	133	241	313	815
RSV	25	24	38	67	154

* Respiratory samples only. † Includes parainfluenza types 1, 2, 3, 4 and untyped.

Table 3. Respiratory viral detections by age group: weeks 36-39/2015

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Un-known	Total
Adenovirus *	25	42	18	65	16	11	–	177
Coronavirus	1	–	1	1	1	2	–	6
Influenza A	3	1	2	8	15	6	–	35
Influenza B	–	2	2	3	2	4	–	13
Parainfluenza †	30	36	12	14	31	24	–	147
Respiratory syncytial virus	71	28	9	22	15	9	–	154
Rhinovirus	238	170	67	143	113	83	1	815

* 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 36	Week 37	Week 38	Week 39	Total
Week ending	**6/9/15**	**13/9/15**	**20/9/15**	**27/9/15**	
Coxiella burnettii	–	–	–	–	–
Respiratory *Chlamydia* sp.*	–	1	1	–	2
Mycoplasma pneumoniae	7	3	3	2	15
Legionella sp.	15	11	18	10	54

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

Table 5 Reports of Legionnaires Disease cases in England and Wales, by week of report

Week	Week 36	Week 37	Week 38	Week 39	Total
Week ending	**6/9/15**	**13/9/15**	**20/9/15**	**27/9/15**	
Nosocomial	–	–	–	1	1
Community	7	6	9	3	25
Travel Abroad	7	4	7(1*)	4(1*)	22
Travel UK	1	1	2	2	6
Total	15	11	18	10	54
Male	13	8	14	8	43
Female	2	3	4	2	11

* Non-pneumonic case.

Fifty-two cases were reported with pneumonia and two had non-pneumonic infection. Forty-three males aged 33 – 89 years and 11 females aged 44 to 85 years. Twenty-five cases had community-acquired infection and one case was reported to be associated with a hospital/healthcare facility.

Twenty-eight cases were reported with travel association: Bulgaria (3), France (3), France (3), France/United Kingdom (1), Greece (2), Italy (4), Spain (3), Spain/United Kingdom (1), Thailand (1), United Arab Emirates (1), United Kingdom (6) and United States of America (3).

Table 6. Reports of Legionnaires Disease cases in England and Wales, by PHE Centre: weeks 36-39/2015

Region/Country	Nosocomial	Community	Travel Abroad	Travel UK	Total
North of England					
North East	–	1	3(1*)	–	4
Cheshire & Merseyside	–	2	1	–	3
Greater Manchester	–	–	1	1	2
Cumbria & Lancashire	–	1	1	–	2
Yorkshire & the Humber	–	1	3(1*)	–	4
South of England					
Devon, Cornwall & Somerset	–	–	–	–	0
Avon, Gloucestershire & Wiltshire	–	2	–	–	2
Wessex	–	–	–	–	0
Thames Valley	–	1	1	–	2
Sussex, Surrey & Kent	1	1	2	3	7
Midlands & East of England					
East Midlands	–	–	1	1	2
South Midlands & Hertfordshire	–	1	–	–	1
Anglia & Essex	–	–	–	–	0
West Midlands	–	7	3	–	10
London Integrated Region					
London	–	6	2	–	**8**
Public Health Wales					
Mid & West Wales	–	1	–	–	1
North Wales	–	–	–	–	0
South East Wales	–	–	1	–	1
Miscellaneous					
Other	–	1	1	–	2
Not known	–	–	2	1	3
Total	**1**	**25**	**22**	**6**	**54**

* Non-pneumonic case.

Infection reports / Enteric

Volume 9 Number 36 Published on: 9 October 2015

General outbreaks of foodborne illness in humans, England and Wales: weeks 36-39/2015

Preliminary information has been received about the following outbreaks.

PHE Centre/ Health Protect'n Team	Organism	Location of food prepared or served	Month of outbreak	Number ill	Cases positive	Suspect vehicle	Evidence
Cheshire and Merseyside	Norovirus	Function/party	August	91	3	Not known	Not known
West Midlands	*Salmonella typhimurium*	Hospital	September	3	3	Not known	Not known

Common gastrointestinal infections, England and Wales, laboratory reports: weeks 36-39/2015

Laboratory reports	Number of reports received				Cumulative totals		
	36/15	37/15	38/15	39/15	36-39/15	1-39/15	1-39/14
Campylobacter	1026	1042	994	956	4018	46498	46418
Escherichia coli O157 *	21	16	41	20	98	546	496
Salmonella †	154	150	68	9	381	5937	5168
Shigella sonnei	30	31	26	10	97	930	796
Rotavirus	31	22	28	23	104	4914	3955
Norovirus	34	36	41	23	147	6048	4078
Cryptosporidium	173	281	253	175	882	3470	2654
Giardia	82	104	82	81	349	3215	2809

*Vero cytotoxin–producing isolates: data from PHE's Gastrointestinal Bacteria Reference Unit (GBRU).
† Data from GBRU.

Less common gastrointestinal infections, England and Wales, laboratory reports: weeks 37-39/2015

Laboratory reports	Total reports 37-39/2015	Cumulative total 1-39/2015	Cumulative total 1-39/2014
Astrovirus	2	240	177
Sapovirus	15	201	108
Shigella boydii	9	46	43
Shigella dysenteriae	3	19	21
Shigella flexneri	26	693	515
Plesiomonas	2	49	28
Vibrio spp.	3	63	48
Yersinia spp	0	11	33
Entamoeba histolytica	1	54	34
Blastocystis hominis	5	110	141
Dientamoeba fragilis	0	4	36

Note: Following the introduction of a new laboratory reporting system (SGSS) in December 2014, direct comparisons with data generated by the previous system (LabBase2) may not be valid.

Salmonella infections (faecal specimens) England and Wales, reports to Public Health England (salmonella data set): August 2015

Details of 894 serotypes of salmonella infections recorded in August are given in the table below. In September 2015, 377 salmonella infections were recorded.

Organism	August 2015
S. Enteritidis PT4	25
S. Enteritidis (other PTs)	316
S. Typhimurium	189
S. Virchow	33
Others (typed)	331
Total salmonella (provisional data)	**894**

Note: Following the introduction of a new laboratory reporting system (SGSS) in December 2014, direct comparisons with data generated by the previous system (LabBase2) may not be valid.

Suspected and laboratory-confirmed reported norovirus outbreaks in hospitals, with regional breakdown: outbreaks occurring in weeks 36-39/15

The hospital norovirus outbreak reporting scheme (HNORS) recorded six outbreaks occurring between weeks 36 and 39, 2015, all of which led to ward/bay closures or restriction to admissions. Three outbreaks were recorded as laboratory confirmed due to norovirus (see table). For the calendar year 2015 – between week 1 (January) and week 39 (week beginning 21 September) – 554 outbreaks were reported. Ninety-four per cent (524) of reported outbreaks resulted in ward/bay closures or restrictions to admissions and 66% (386) were laboratory confirmed as due to norovirus (see table).

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

In the current season to date† (from week 27, 2014, to week 39, 2015), the number of laboratory reports of norovirus is 34% higher than the average number of laboratory reports for the same period in the seasons between 2009/10 and 2013/2014. 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.

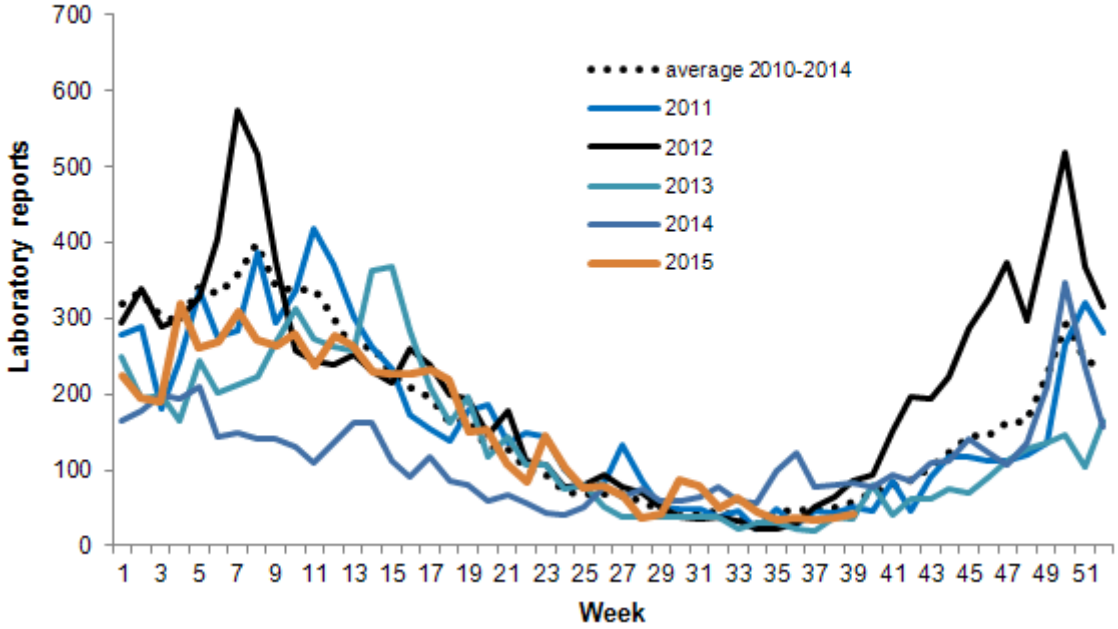
Note: A new laboratory reporting system was commissioned on 1 December 2014; as a result, direct comparisons between the earlier report (based on LabBase2) and the new system (SGSS) may not be valid.

Suspected and laboratory-confirmed reported norovirus outbreaks in hospitals, with regional breakdown: outbreaks occurring in weeks 36-39/2015

Region/ PHE Centre	Outbreaks between weeks 36-39/2015			Total outbreaks 1-39/2015		
	Outbreaks	Ward/bay closure*	Lab-confirmed	Outbreaks	Ward/bay closure*	Lab-confirmed
Avon, Gloucestershire and Wiltshire	–	–	–	61	60	48
Bedfordshire, Hertfordshire and Northamptonshire	–	–	–	7	7	6
Cheshire and Merseyside	–	–	–	8	6	8
Cumbria and Lancashire	1	1	–	39	38	20
Devon, Cornwall and Somerset	–	–	–	114	114	78
Greater Manchester	–	–	–	17	14	8
Hampshire, Isle of Wight and Dorset	–	–	–	25	24	20
Lincolnshire, Leicestershire, Nottinghamshire and Derbyshire	–	–	–	18	17	14
London	–	–	–	4	4	1
Norfolk, Suffolk, Cambridgeshire and Essex	–	–	–	–	–	–
North East	2	2	1	51	48	31
Sussex, Surrey and Kent	–	–	–	17	17	13
Thames Valley	1	1	–	7	5	1
West Midlands	2	2	2	112	109	58
Yorkshire and the Humber	–	–	–	74	61	62
Total	6	6	3	554	524	368

* Note: not all outbreaks result in whole wards closures, some closures are restricted to bays only.

Current season's laboratory reports (to week 39, 2015) compared to previous seasons' weekly average (England and Wales)



Calendar year 2015 (to week 39) norovirus laboratory reports compared to previous years' weekly mean (2010-2014)