



Volume 9 Numbers 19 Published on: 5 June 2015

Current News

- ▶ **Group A streptococcal infections: fifth update on seasonal activity, 2014/15**
- ▶ **PHE issues seasonal tick-bite reminder**

Infection Reports

Respiratory infections

- ▶ **Laboratory reports of respiratory infections from PHE and NHS laboratories in England and Wales: weeks 18-22/2015**

News

Volume 9 Number 19 Published on: 5 June 2015

Group A streptococcal infections: fifth update on seasonal activity, 2014/15

Scarlet fever surveillance continues to show elevated levels of notified cases across England. Although substantial declines have been noted since Easter, there have been marked fluctuations in disease incidence since then [1]. Routine invasive GAS (iGAS) disease reports are slightly elevated compared with normal seasonal levels. Due to rare but potentially severe complications associated with GAS infections, clinicians, microbiologists and health protection teams should continue to be mindful of potential increases in invasive disease and maintain a high degree of suspicion in relevant patients.

Schools and GPs are reminded of actions to be taken for every case of scarlet fever, including: prompt notification to local health protection teams; swabbing when there is uncertainty about a diagnosis or when a case is part of an outbreak and exclusion of the patient from school/work for 24 hours after antibiotic treatment has been started [2].

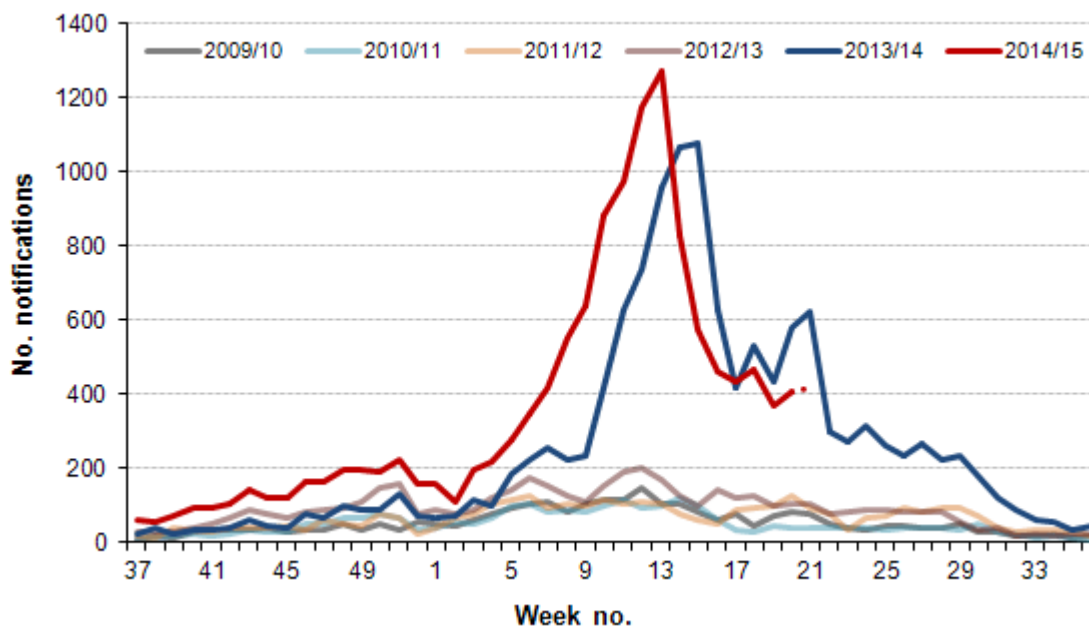
Scarlet fever

A total of 13,316 scarlet fever notifications have been made in England so far this season (weeks 37 2014 to 21 2015). Scarlet fever notifications peaked in week 13 2015 with over 1200 notifications, after which there has been an unsteady decline with 420 notifications in week 21 (figure 1).

Scarlet fever notifications remain elevated in all areas in England compared with the same period last year, although the scarlet fever season appears to have peaked in all parts of England in the last two weeks of March. The areas with the highest notification rates so far this season are Yorkshire and the Humber (40.0 per 100,000 population), East Midlands (39.3), Wessex (32.5) and Cumbria and Lancashire (32.0). London has the lowest scarlet fever notification rate (14.7/100,000).

The age distribution of scarlet fever cases remains similar to previous years, with 89% of cases reported in children under 10 years of age (median 4y; range <1y to 87y).

Figure 1. Weekly scarlet fever notifications in England, 2009/10 onwards*



* Dashed line indicates that numbers may increase as further notifications expected.

Invasive Group A Streptococcus

The total number of routine laboratory notifications of iGAS infection in England received so far this season stands at 1222 (weeks 37 to 21), slightly above average for the same period over the last five years (1049) but within the previous range for the period (900 to 1265 reports; figure 2). The median age of patients with iGAS infection so far this season is 63 years (range <1y to 105y).

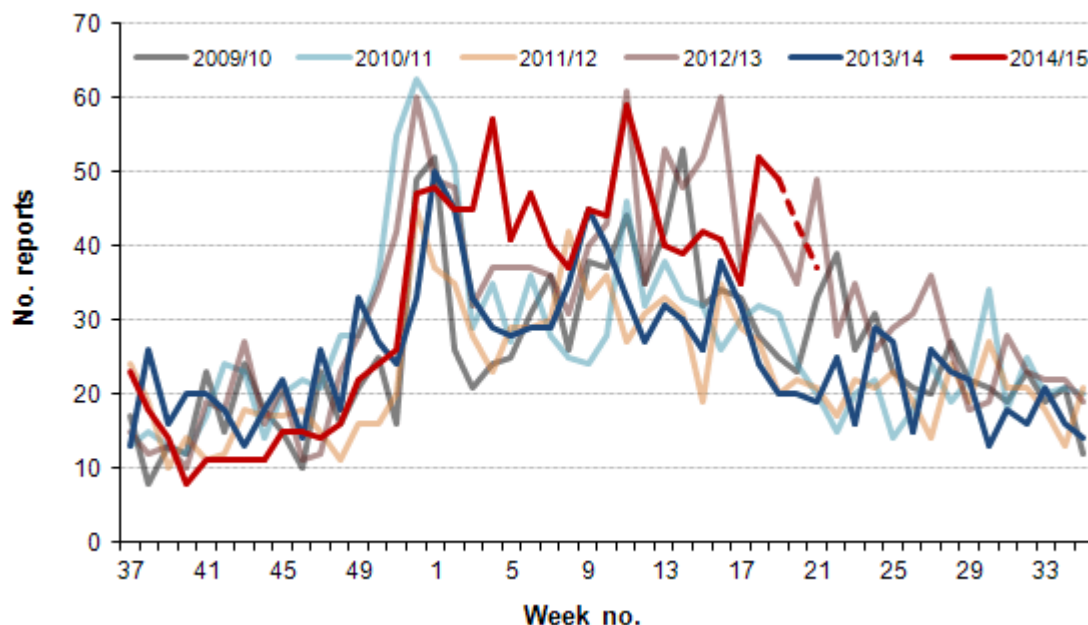
Geographical variation in iGAS infection reports is noted across England, with 13 out of the 15 English regions reporting slightly above average rates of reports so far this year (weeks 1 to 21; table 1) compared to the past five years. The areas with the highest reporting rates so far this year are the North East (2.4 per 100,000 population), Cumbria and Lancashire (2.2), East Midlands (2.0) and Greater Manchester (2.0).

Antimicrobial susceptibility results from laboratory notifications of iGAS infection for the season so far indicate erythromycin non-susceptibility is within the usual range at 5%. The susceptibility testing of iGAS isolates against other key antimicrobials indicate no changes in resistance (tetracycline, 11%; clindamycin, 4%; and penicillin, 0%) although susceptibility reporting remains low (<50% isolates).

There have been 894 iGAS isolates sent to the national reference laboratory for emm strain diversity testing so far this year (January to May 2015), the results indicate that emm st1 is the most common (31% of referrals) followed by emm st3 (13%), emm st12

(10%) and emm st89 (8%). No identification of novel strains or unusual increases in specific strain types has been seen.

Figure 2. Weekly routine laboratory reports of iGAS infection, England, 2009/10 onwards*



* Dashed line indicates that numbers may increase as further notifications expected.

Table 1. Invasive GAS infection reports and rate per 100,000 population by PHE Centre (weeks 01 to 21)

PHE Centre Name	5 year average weeks 1 to 21 (2010-2014)		2014/15 season weeks 1 to 21		Rate Ratio
	No. cases	Rate	No. cases	Rate	
Anglia and Essex	61	1.5	66	1.6	1.1
Avon, Gloucestershire and Wiltshire	33	1.4	46	1.9	1.4
Cheshire and Merseyside	34	1.4	43	1.8	1.3
Cumbria and Lancashire	26	1.3	43	2.2	1.7
Devon, Cornwall and Somerset	41	1.8	37	1.7	0.9
East Midlands	53	1.4	76	2.0	1.4
Greater Manchester	42	1.6	54	2.0	1.3
Kent, Surrey and Sussex	59	1.3	75	1.6	1.3
London	86	1.0	117	1.4	1.3
North East	35	1.3	63	2.4	1.8
South Midlands and Hertfordshire	37	1.4	28	1.0	0.7
Thames Valley	24	1.2	36	1.7	1.5
Wessex	33	1.2	47	1.8	1.4
West Midlands	74	1.3	104	1.8	1.4
Yorkshire and the Humber	72	1.4	101	1.9	1.4
England	710	1.3	936	1.7	1.3

Levels of scarlet fever are declining but remain elevated. In some areas a small resurgence in disease incidence was seen following the Easter school holidays, however declines are again being seen in recent weeks. It is of concern that there was a slight elevation of invasive disease in May 2015 compared with recent years and continued vigilance is recommended. Clinicians, microbiologists and Health Protection Teams should continue to be mindful of potential increases in invasive disease and maintain a high index of suspicion in relevant patients as early recognition and prompt initiation of specific and supportive therapy for patients with iGAS infection can be life-saving.

Levels of scarlet fever are declining but remain elevated. In some areas a small resurgence in disease incidence was seen following the Easter school holidays, however declines are again being seen in recent weeks. It is of concern that there was a slight elevation of invasive disease in May 2015 compared with recent years and continued vigilance is recommended. Clinicians, microbiologists and Health Protection Teams should continue to be mindful of potential increases in invasive disease and maintain a high index of suspicion in relevant patients as early recognition and prompt initiation of specific and supportive therapy for patients with iGAS infection can be life-saving.

Invasive disease isolates and those from suspected clusters or outbreaks should be submitted to the Respiratory and Vaccine Preventable Bacteria Reference Unit at Public Health England, 61 Colindale Avenue, London NW9 5HT. Relevant guidelines and FAQs are available on the PHE website, as follows:

- Guidelines on infection control in schools and other childcare settings, including recommended exclusion periods for scarlet fever and guidelines on management of scarlet fever outbreaks, can be found at:
<https://www.gov.uk/government/publications/scarlet-fever-managing-outbreaks-in-schools-and-nurseries>;
<https://www.gov.uk/government/publications/infection-control-in-schools-poster>;
- FAQs on scarlet fever can be found at:
<https://www.gov.uk/government/collections/scarlet-fever-guidance-and-data>
- Guidelines for the management of close community contacts of invasive GAS cases and the prevention and control of GAS transmission in acute healthcare and maternity settings are also available here: <https://www.gov.uk/government/collections/group-a-streptococcal-infections-guidance-and-data>

References

1. Group PHE (May 2015). [Group A streptococcal infections: fourth update on seasonal activity, 2014/15](#). *Health Protection Report* 9(16): Infection (News) Report.
2. PHE. [Interim guidelines for the public health management of scarlet fever outbreaks in schools, nurseries and other childcare settings](#).

PHE issues seasonal tick-bite reminder

Anticipating the increased risk of tick-associated diseases during springtime, and the fact that untreated infections can result in serious illness, PHE recently issued a seasonal warning for the general public, referring to the latest guidance on prevention [1, 2].

Lyme disease is the most significant tick-borne infection in the UK. Although recorded incidence is low compared to some other European countries and North America, the most meaningful trend data available to PHE suggests that case numbers tripled between 2001 and 2012 to between 1000 and 2000 cases a year [1].

However, members of the public often remain unfamiliar with ticks, the associated disease risk and tick bite prevention measures. PHE is working with local councils to raise awareness of ticks and the risks to health.

A collection of up-to-date guidance on diagnosis, management and treatment, surveillance and epidemiology of Lyme disease (or Lyme borreliosis) is available on the 'Lyme disease: guidance, data and analysis' PHE webpage [3]. This includes advice on case referral for health professionals [4].

References

1. Ticks and associated diseases: the dangers and reducing them, PHE news story, 22 May 2015 (<https://www.gov.uk/government/news/ticks-and-associated-diseases-the-dangers-and-reducing-them>).
2. Tick bite risks and prevention of Lyme disease: factsheet, March 2015 (<https://www.gov.uk/government/publications/tick-bite-risks-and-prevention-of-lyme-disease>).
3. Lyme disease: guidance, data and analysis, PHE health protection collection webpage (<https://www.gov.uk/government/collections/lyme-disease-guidance-data-and-analysis>).
4. Suggested referral pathway for patients with symptoms related to Lyme disease, January 2015 (<https://www.gov.uk/government/publications/health-protection-report-volume-9-2015/hpr-news-volume-9-issue-19-5-june#group-a-streptococcal-infections-fifth-update-on-seasonal-activity-2014-to-2015>).

Infection reports / Respiratory

Volume 9 Number 19 Published on 5 June 2015

Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: weeks 18-22/2015

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 18	Week 19	Week 20	Week 21	Week 22	Total
Week ending	3/5/15	10/5/15	17/5/15	24/5/15	31/5/15	
Influenza A	8	11	23	13	8	63
Isolation	3	1	2	–	3	9
DIF *	–	2	2	1	–	5
PCR	2	8	14	8	2	34
Other †	3	–	5	4	3	15
Influenza B	57	48	83	40	13	241
Isolation	8	3	9	–	2	22
DIF *	7	8	7	5	–	27
PCR	39	33	60	33	8	173
Other †	3	4	7	2	3	19

* 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 18	Week 19	Week 20	Week 21	Week 22	Total
Week ending	3/5/15	10/5/15	17/5/15	24/5/15	31/5/15	
Adenovirus †	140	67	111	89	79	486
Coronavirus	28	20	16	13	4	81
Parainfluenza †	169	70	106	82	69	496
Rhinovirus	248	155	202	246	143	994
RSV	72	50	53	68	40	283

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

Table 3. Respiratory viral detections by age group: weeks 18-22/2015

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Un-known	Total
Adenovirus [*]	80	116	35	170	63	22	–	486
Coronavirus	11	11	4	14	17	24	–	81
Influenza A	4	4	1	16	13	22	–	60
Influenza B	7	18	19	85	84	63	–	276
Parainfluenza [†]	112	78	18	65	84	138	1	496
Respiratory syncytial virus	104	43	21	44	36	35	–	283
Rhinovirus	358	214	100	106	115	100	–	993

* 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 18	Week 19	Week 20	Week 21	Week 22	Total
Week ending	3/5/15	10/5/15	17/5/15	24/5/15	31/5/15	
<i>Coxiella burnetii</i>	–	–	–	–	–	0
Respiratory <i>Chlamydia</i> sp. [*]	5	3	–	1	–	9
<i>Mycoplasma pneumoniae</i>	12	8	11	2	–	33
<i>Legionella</i> sp.	1	5	9	7	5	27

* 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 18	Week 19	Week 20	Week 21	Week 22	Total
Week ending	3/5/15	10/5/15	17/5/15	24/5/15	31/5/15	
Nosocomial	–	1	–	–	–	1
Community	–	–	3	2	2	7
Travel Abroad	1	4	6	4	3 (1*)	18
Travel UK	–	–	–	1	–	1
Total	1	5	9	7	5	27
Male	1	4	7	7	3	22
Female	–	1	2	–	2	5

* Cases with onset of symptoms in 2015.

Twenty-six cases were reported with pneumonia and one case had non-pneumonic infection. Twenty-two males aged 41 - 91 years and five females aged 47 - 60 years. Seven cases had community-acquired infection and one case was reported to be associated with hospital/healthcare facility. One death was reported in a male aged 66 years.

Nineteen cases were reported with travel association: Belgium/France/Turkey/United Kingdom (1), Cuba (1), Cruise (1), France/Cruise/United Kingdom (1), Greece (1), India (1), Israel (1), Italy (2), Sierra Leone (1), Spain (2), Thailand (2), Tunisia/United Kingdom (1), Turkey (1), United Kingdom (1) and United States of America (2).

Table 6. Reports of Legionnaires Disease cases in England and Wales, by PHE Centre: weeks 18-22/2015

Region/Country	Nosocomial	Community	Travel Abroad	Travel UK	Total
North of England					
North East	–	3	1	–	4
Cheshire & Merseyside	–	1	–	–	1
Greater Manchester	–	–	1	–	1
Cumbria & Lancashire	–	–	1	–	1
Yorkshire & the Humber	–	1	6 (1*)	1	8
South of England					
Devon, Cornwall & Somerset	–	–	1	–	1
Avon, Gloucestershire & Wiltshire	–	–	–	–	0
Wessex	–	–	1	–	1
Thames Valley	–	1	–	–	1
Sussex, Surrey & Kent	–	1	–	–	1
Midlands & East of England					
East Midlands	–	–	2	–	2
South Midlands & Hertfordshire	–	–	1	–	1
Anglia & Essex	–	–	–	–	0
West Midlands	–	–	–	–	0
London Integrated Region					
London	–	–	2	–	2
Public Health Wales					
Mid & West Wales	–	–	1	–	1
North Wales	–	–	–	–	0
South East Wales	–	–	–	–	0
Miscellaneous					
Other	1	–	1	–	2
Not known	–	–	–	–	0
Total	1	7	18	1	27