



Public Health
England

Protecting and improving the nation's health

Group A streptococcal infections: seasonal activity, 2017/18: first report

Health Protection Report Advanced Access report
Volume 12 Number 5
9 February 2018

Group A streptococcal infections: first report on seasonal activity in England, 2017/18

Early indications suggest the 2017/18 scarlet fever season will be the fifth elevated season in a row. Current weekly notifications are higher than those reported at this point in the last four seasons (weeks 37 to 04, 2013/14 to 2016/17) [1].

GPs, microbiologists and paediatricians are reminded of the importance of prompt notification of cases and outbreaks to local Public Health England (PHE) Health Protection Teams (HPTs), obtaining throat swabs (prior to commencing antibiotics) when there is uncertainty about the diagnosis, and exclusion of cases from school/work until 24 hours of antibiotic treatment has been received [2].

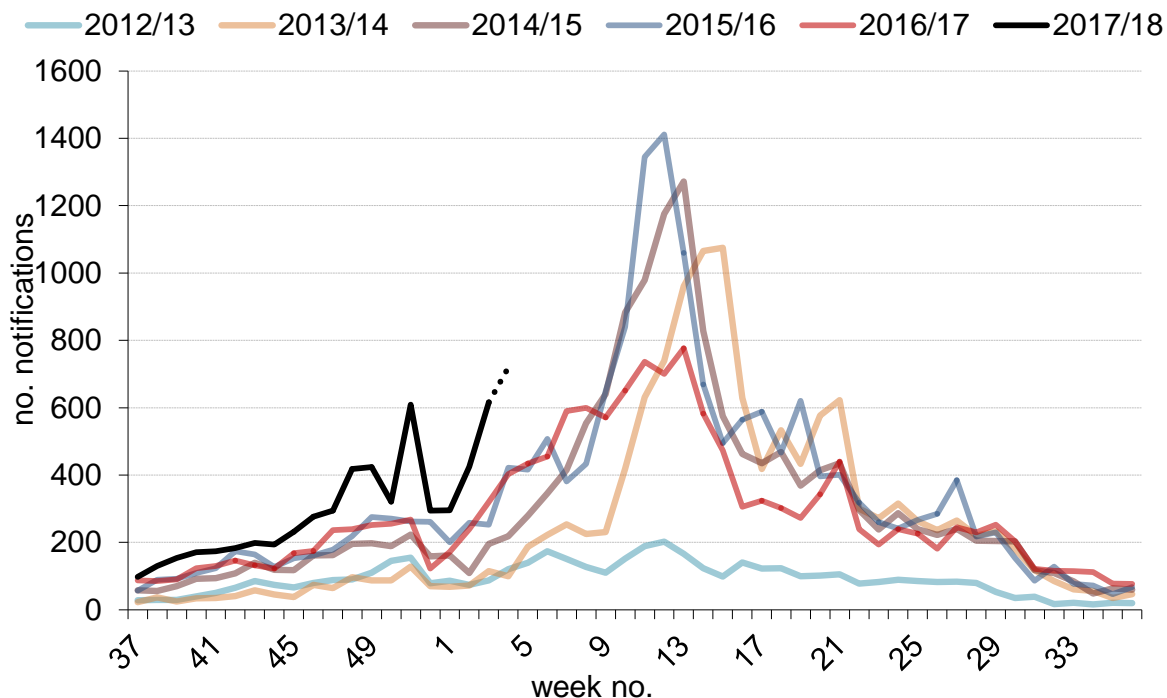
The numbers of laboratory notifications of invasive group A streptococcal (iGAS) disease are also elevated compared to this point last season. Due to rare but potentially severe complications associated with GAS infections, clinicians and HPTs should continue to be mindful of potential increases in invasive disease and maintain a high degree of clinical suspicion when assessing patients.

Scarlet Fever

Following the substantial increase in scarlet fever during the 2013/14 season, the number of notifications has remained elevated across most parts of England. Weekly increases in numbers are currently being seen in line with the usual seasonal pattern, but substantially higher than those reported last season (figure 1). A total of 6,225 notifications of scarlet fever between weeks 37 to 04 of 2017/18 were made to PHE compared to 3,764 for this period last season, with 719 notifications received for the most recent week (week 4, 22-28 Jan).

Rates of notified scarlet fever cases so far this season were highest in the North East at 19.0 per 100,000 population, followed by the North West (14.6), East Midlands (14.4) and Yorkshire & Humber (14.4) regions. The East of England had the lowest rate at 6.1/100,000 (Table 1). All regions have higher notifications than for the same point last season.

Figure 1. Weekly scarlet fever notifications in England, 2012/13 onwards*



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

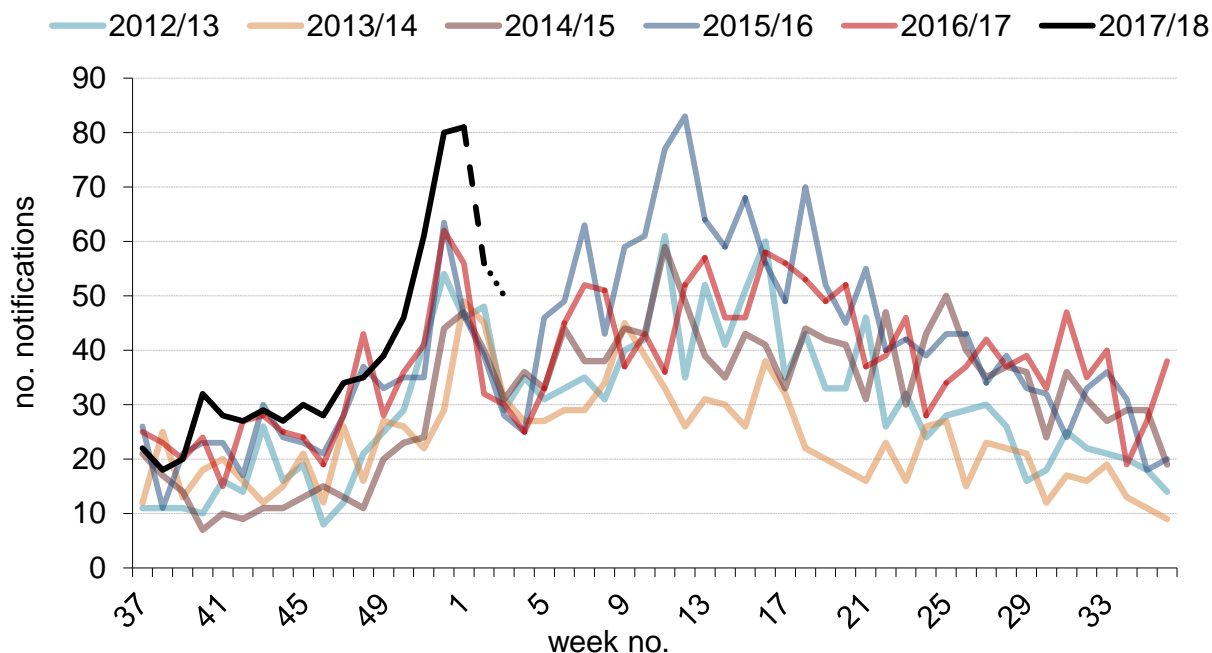
The age distribution of cases notified so far for this season remains similar to previous years (median 4y; range <1y to 96y), with 89% being children under 10 years and 5% being adults (≥18y).

Antimicrobial susceptibility tests on GAS identified from throat swabs (a common GP test for confirmation of scarlet fever) in December 2017 and January 2018 indicates that 7%, 4%, 7% and 0% are non-susceptible to erythromycin, clindamycin, tetracycline and penicillin respectively. This is in line with what is expected for GAS.

Invasive Group A streptococcal infection

So far this season (week 37 to 03 2017/18), laboratory notifications of iGAS disease reported through routine laboratory surveillance in England total 744 cases, higher than the average for the previous five years (483 notifications) and above the range seen since 2012 (381 to 586; figure 2). All of the nine English regions have higher rates of iGAS infection compared with the same point last season. The highest rates being reported in the Yorkshire & Humber and North East regions (both 1.7 per 100,000 population), followed by the North West (1.6/100,000) and South West (1.6) regions (Table 1).

Figure 2. Weekly laboratory notifications of invasive GAS infection, England, 2012/13 onwards*



* Dashed line indicates that numbers may increase as further isolates expected

The median age of patients with iGAS infection so far this season is 60 years (range <1y to 100y), which is higher than the same point last season (51y) but within the range seen at this point in the preceding five seasons (56y to 64y). Nine per cent of infections reported so far this season are in children (<10y), lower normally reported at this point in the season (range 11% to 17%).

Table 1. Counts and rate per 100,000 population of scarlet fever and iGAS in England, 2017/18 season

PHE Centre Name	Scarlet Fever weeks 37 to 04		iGAS weeks 37 to 03	
	No. cases	Rate	No. cases	Rate
East of England	388	6.1	78	1.2
East Midlands	678	14.4	57	1.2
London	603	6.9	81	0.9
North East	502	19.0	44	1.7
North West	1053	14.6	118	1.6
South East	1119	12.8	111	1.3
South West	473	8.6	86	1.6
West Midlands	630	10.9	78	1.3
Yorkshire and the Humber	779	14.4	91	1.7
England	6225	11.3	744	1.3

Analysis of reference laboratory sterile site (iGAS) isolate submissions indicates a diverse range of *emm* types so far this season (1st August 2017 to 28th January 2018) with a continued dominance of *emm* 1 (24% of referred isolates) as per last season. Other common types this season are *emm* 89 (10%) and *emm* 12 (8%).

Antimicrobial susceptibility results from routine laboratory surveillance indicate erythromycin non-susceptibility in 8% of GAS sterile site isolates, which is slightly higher than at the same point in the last few seasons (5-7%). The susceptibility testing of iGAS isolates against other key antimicrobials (tetracycline, 14%; clindamycin, 6%; and penicillin, 0%) indicates no changes in resistance patterns.

Discussion

There has been a steep increase in scarlet fever notification in early 2018, slightly earlier in the season than in recent seasons. GP consultations for scarlet fever also suggest elevated levels in early 2018 [3]. Since the peak reported in the 2013/14 season, levels of scarlet fever have remained elevated, possibly reflecting heightened awareness and improved diagnosis and/or notification practices.

The number of cases of scarlet fever notified in England and Wales last season (2016/17) was slightly lower than in previous two seasons, even though the incidence during the early part of the season matched that in the previous two seasons. As such, it may be that this season will have an extended but lower peak of the season, as per last year.

Nevertheless it remains that the high number of cases being currently notified is of concern. Close monitoring, rapid and decisive response to potential outbreaks and early treatment of scarlet fever is vital, especially given the potential complications associated with GAS infections.

The number of cases of iGAS disease notified through routine laboratory surveillance in England at the start of 2018 is of concern, with 26 per cent more iGAS cases being notified at this point in the season compared with levels normally seen in recent years. Whether this increase is related to the heightened scarlet fever activity, or influenza activity, a known predisposing factor, is unknown. Clinicians, microbiologists and HPTs 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/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/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>
- 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. PHE. [Group A streptococcal infections: third update on activity during the 2016 to 2017 season](#). *Health Protection Report* 2016; **11**(18): infection (news) report.
2. PHE. [Guidelines for the public health management of scarlet fever outbreaks in schools, nurseries and other childcare settings](#).
3. PHE. [GP in-hours consultations bulletin: 30 January 2018 week 4](#)

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and are a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

About Health Protection Report

Health Protection Report is a national public health bulletin for England and Wales, published by Public Health England. It is PHE's principal channel for the dissemination of laboratory data relating to pathogens and infections/communicable diseases of public health significance and of reports on outbreaks, incidents and ongoing investigations.

Public Health England, Wellington House, 133-155 Waterloo Road, London SE1 8UG Tel: 020 7654 8000 www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk) Facebook: www.facebook.com/PublicHealthEngland

Queries relating to this document should be directed to:

HCAI-AMR Department: hcai.amrdepartment@phe.gov.uk

National Infection Service, PHE Colindale,
61 Colindale Avenue, London NW9 5EQ.



© Crown copyright 2018

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](http://www.ogil.gov.uk). Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published February 2018

PHE publications

gateway number: 2017766

PHE supports the UN

Sustainable Development Goals

