



Public Health
England

Health Protection Report

weekly report

Volume 10 Number 7 Published on: 19 February 2016

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News

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Group A streptococcal infections: update on seasonal activity, 2015/16 (in summary)

Public Health England continues to monitor notifications of scarlet fever cases in England following the high levels recorded last spring. According to the second report on group A Streptococcus activity for the current 2015/16 season [1], typical seasonal increases in scarlet fever activity are being reported across England and, as of early-February 2016, activity remains elevated suggesting this may be the third year in a row with high levels of scarlet fever incidence. Invasive disease rates are above average, but remain within the upper bounds of normal seasonal levels for this time of year.

Reference

1. Group A streptococcal infections: update on seasonal activity 2015 /2016.
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Behavioural techniques and antimicrobial stewardship

A PHE-funded study has indicated the potential for behavioural techniques to be used in antimicrobial stewardship activity: specifically demonstrating, in a nation-wide randomised trial, that providing feedback to high-prescribing GPs – about their divergence from “social norms” – was a more successful means of reducing unnecessary prescribing of antibiotics than a patient-focussed intervention [1].

The study, triggered by a campaign developed to coincide with European Antibiotic Awareness Day 2014, involved two mail-based interventions targeting 1581 practices across England that had antibiotic prescribing rates in the top 20% for their area. In one half of the trial, GPs were sent a letter – signed by the Chief Medical Officer – saying that, “80% of practices in your local area prescribe fewer antibiotics per head than yours”, with suggestions on how to reduce unnecessary prescriptions. The second half of the trial tested the effect of an education campaign, targeted at patients, that promoted reduced use of antibiotics by means of posters and leaflets displayed in GP practices.

The results showed that intervention involving feedback from a high-profile messenger (in this case the CMO) to high-prescribing GPs significantly cut their prescribing over a six month period, leading to 73,000 fewer prescriptions and direct savings of over £92,000 in prescription costs. In contrast, there was no evidence of the patient-focussed intervention having a significant effect. The trial was a collaboration between PHE and the Department of Health.

That such ‘feedback interventions’ can complement conventional approaches to antibiotic stewardship is acknowledged in a Comment article associated with the study report [2]; however, this sets the effect achieved in context: “The investigators highlight that their feedback intervention could reduce primary-care prescribing in England by 0.85%, against a five-year aim [in the UK antimicrobial resistance strategy 2013-2018] of reducing prescribing in primary care by 4%. Between 2000 and 2014, UK primary-care antibiotic use expanded by 46%, from 14.3 to 20.9 defined daily doses per 1000 inhabitant days. During the same period, antibiotic use fell in several European countries, and UK consumption is now twice that of the Netherlands. Inpatient consumption also continues to increase.”

References

1. Hallsworth M, Chadborn T, Sallis A, Sanders M, Berry D, Greaves F, *et al* (2016). [Provision of social norm feedback to high prescribers of antibiotics in general practice: a pragmatic national randomised controlled trial](#). Lancet Online First, 18 February.
 2. Gould IM, Lawes T (2016). [Antibiotic stewardship: prescribing social norms](#). Lancet Online First, 18 February.
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ECDC opinion on antivirals for treatment and prophylaxis of influenza

Current recommendations on the use of the neuraminidase inhibitors oseltamivir and zanamivir for the treatment and prophylaxis of influenza disease are appropriate, according to an expert opinion developed and published for public consultation by ECDC [1,2].

ECDC notes a significant variation in use of antivirals across the EU, and an under-utilisation that may be partly explained by continued debate about their effectiveness and safety. But having reviewed three large systematic reviews and meta-analyses on their use the European centre concludes that potential public health benefits are being missed. The meta-analyses supported the use of antivirals for both treatment and the prevention of influenza. Two of the main reviews found they reduced the amount of time until the first relief of symptoms while one also found that all symptoms were alleviated more than one day earlier with antiviral use. When administered early, antivirals were proven useful as prophylaxis and in reducing the effects of the disease on those already exposed.

References

1. [“Recommendations on antivirals in European countries are appropriate, but remain underutilised in practice: new ECDC report published”](#). ECDC press release, 17 February 2016.
 2. ECDC (17 February 2016). [Public consultation: Expert Opinion on neuraminidase inhibitors for prevention and treatment of influenza](#).
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Infection report

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Group A streptococcal infections: update on seasonal activity, 2015/16

Following the substantial elevation in scarlet fever notifications in the last two seasons, indications from the early part of this 2015/16 season continue to show elevated levels with current weekly totals exceeding the record levels seen at this point last season (2014/15) [1]. Steep increases in scarlet fever activity have been noted in a number of areas in England since the beginning of 2016. 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, obtaining throat swabs (prior to commencing antibiotics) when there is uncertainty about the diagnosis, and exclusion from school/work until 24 hours of antibiotic treatment has been received [2].

Routine laboratory reports of invasive group A streptococcal (iGAS) disease are currently within usual levels for this time of year. Due to rare but potentially severe complications associated with GAS infections, clinicians 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.

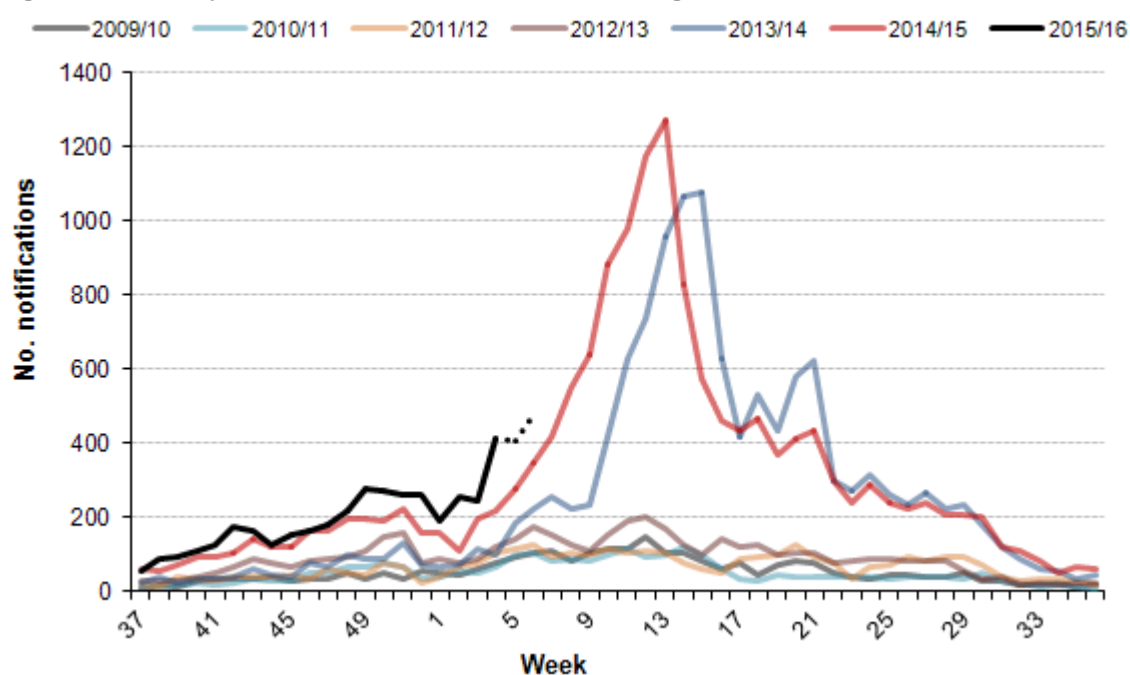
Scarlet fever

Following the substantial increase in scarlet fever during the 2013/14 and 2014/15 seasons, the number of notifications remains elevated across most parts of England into the 2015/16 season. The increasing numbers currently being seen are in line with the usual seasonal pattern (figure 1). A total of 4701 notifications of scarlet fever between weeks 37 to 6 of season 2015/16 were made to PHE compared to 3399 for this period last season, with 478 notifications received for the most recent week (week 6, 8-14 Feb).

Population rates of notified scarlet fever cases so far this season were highest in the East Midlands at 15.1 per 100,000 population, followed by Yorkshire & the Humber (12.3/100,000), the North East (12.1), Cheshire & Merseyside (11.9) and Thames Valley (10.7). The South Midlands & Hertfordshire area had the lowest rate at 4.7/100,000.

The age distribution of cases notified so far for this season remains similar to previous years, with 91% being children under 10 years (median 4y; range <1y to 91y).

Figure 1. Weekly scarlet fever notifications in England, 2010/11 onwards*



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

Invasive Group A Streptococcus

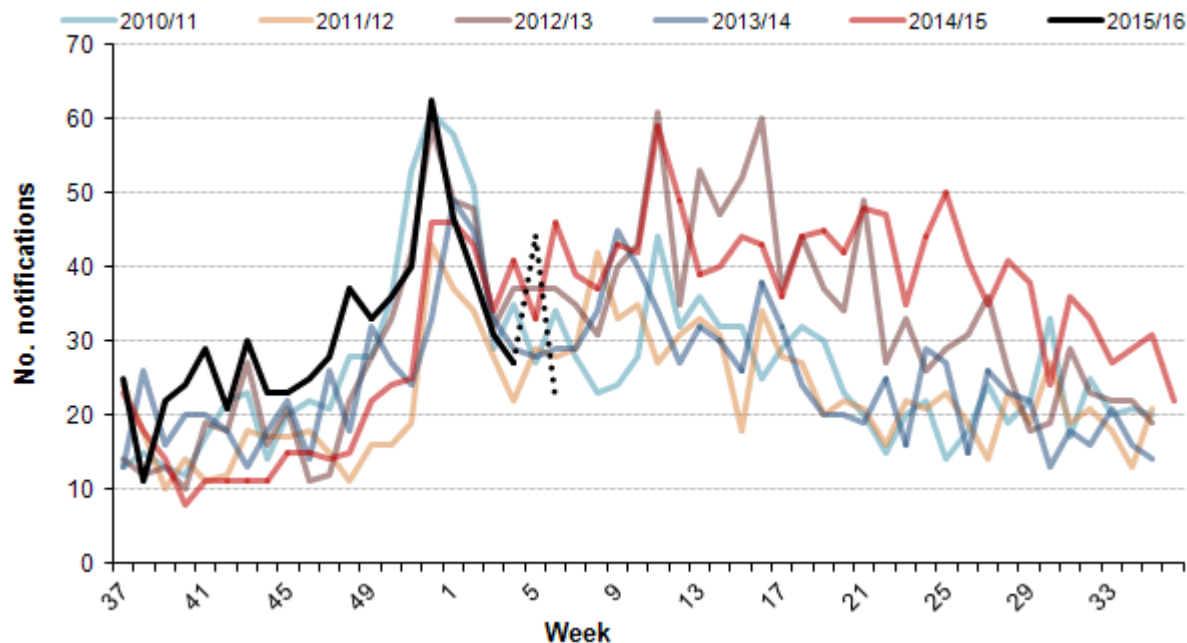
Laboratory reports of iGAS disease notified through routine laboratory surveillance in England total 679 cases so far this season (week 37 to 06 2015/16), higher than the average for the previous five years (553 reports) and just above the range seen during these years (457 to 632; figure 2). Nine of 15 English regions have reported higher than average iGAS cases so far this season: Yorkshire & the Humber (102), East Midlands (70), South Midlands & Hertfordshire (28), North East (42), Devon, Cornwall & Somerset (45), London (85), Cumbria & Lancashire (27) and East Midlands (70). This reflects the elevation in incidence of iGAS infection earlier in the season [1], with current weekly totals in line with the previous few years.

The median age of patients with iGAS infection so far this season is 52 years (range <1y to 102y), lower than the same point last season (63.5y) or the preceding five seasons (56y to 64y). Seventeen per-cent of infections reported so far this season are in children (<10y), which is within the range of what has been reported at the same point in the previous 5 seasons (mean 13%; range 11% to 18%).

Analysis of iGAS *emm* strain diversity remains similar to previous years with *emm* st1 and *emm* st12 and *emm* st89 the most common types identified so far this season (September to December 2015).

Antimicrobial susceptibility results indicate erythromycin non-susceptibility in 8% of GAS sterile site isolates, slightly higher than at the same point in the last five seasons (4-6%). The susceptibility testing of iGAS isolates against other key antimicrobials (tetracycline, 15%; clindamycin, 8%; and penicillin, 0%) indicate no changes in resistance.

Figure 2. Weekly count of invasive GAS laboratory reports, England, 2010/11 onwards*



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

This acceleration in scarlet fever notification is slightly earlier than observed in the last two seasons although in line with previous years. Since the unusual high levels of scarlet fever reported in 2014, levels of scarlet fever have remained elevated. Whilst this might reflect heightened awareness and improved diagnosis and/or notification practices, the high number of cases being currently notified is of concern as we potentially face the third season in a row of exceptionally high scarlet fever notifications. Over 17,000 cases of scarlet fever were notified in England and Wales last year (2015), the highest total since the late 1960s. Close monitoring, rapid and decisive response to potential outbreaks and early treatment of scarlet fever remains essential, especially given the potential complications associated with GAS infections.

Whilst the elevation in iGAS disease identified earlier in the season has reduced, frontline clinicians and microbiologists should be mindful of potential increases in invasive disease as the season progresses and maintain a high index of suspicion in relevant patients. 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>
 - <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. PHE. [Group A streptococcal infections: first report on activity during the 2015/16 season.](#) *Health Protection Report* 2015; **9**(45): infection report.
 2. PHE. [Interim guidelines for the public health management of scarlet fever outbreaks in schools, nurseries and other childcare settings.](#)
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