



Public Health
England

Group A streptococcal infections: third report on seasonal activity in England, 2019/20

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Group A streptococcal infections: third report on seasonal activity in England, 2019/20

Notifications of scarlet fever have dropped to a record low during the COVID-19 lockdown period. The number of laboratory notifications of invasive group A streptococcal (iGAS) disease have also fallen below what is normally reported at this time of year.

Scarlet fever

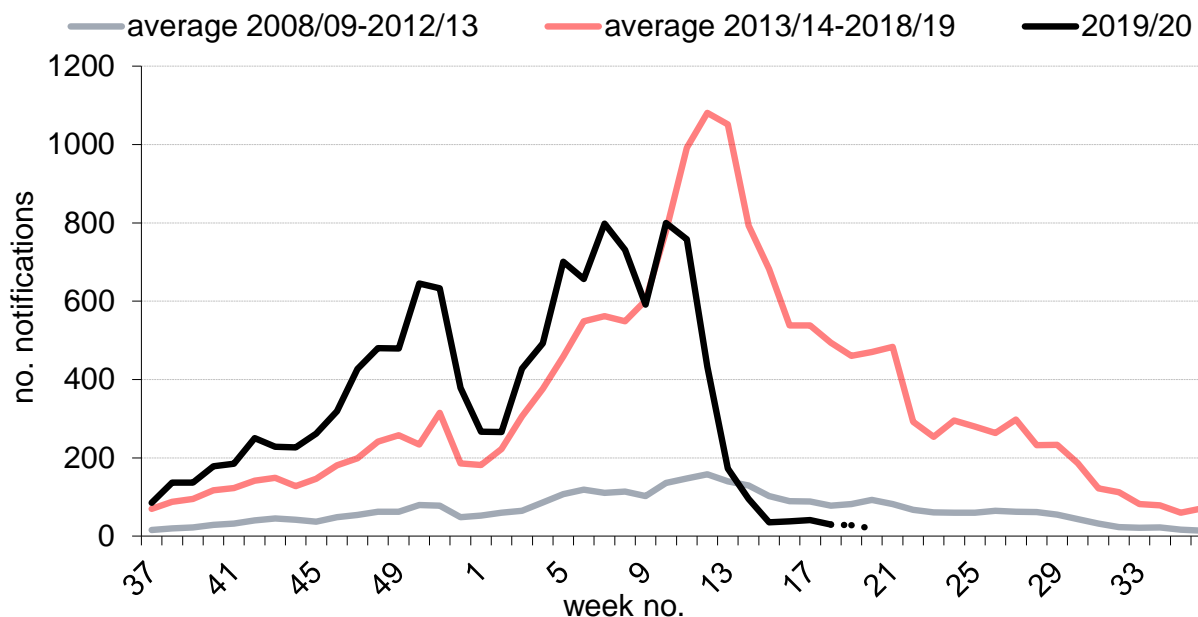
A total of 12,433 notifications of scarlet fever have been received to date this season in England (weeks 37 to 20, 2018/19), compared to an average of 15,251 for the same period in the last five seasons (2014/15 to 2018/19). Notifications peaked in week 7 of 2020 with 798 notifications, and then again in week 10 with 800 notifications, after which there has been a rapid decline to 20 notifications in week 20 (figure 1). Whilst weekly notification rates in the early part of the season were above average for the seasons since the upsurge in scarlet fever was first noted (2013/14), they have subsequently decreased to levels lower than recorded in any preceding seasons since 1982¹ (comparing notifications for week 19). GP consultations showed a similar pattern of seasonal decline [1].

Scarlet fever notifications showed some variation across England, with all areas except for the North West reporting lower rates of scarlet fever compared with the last 5 years. Rates of notified scarlet fever cases so far this season were highest in the North West at 38.1 per 100,000 population, followed by Yorkshire and the Humber (29.1), the East Midlands (25.4) and the North East (23.3). The London region had the lowest rate at 16.3/100,000.

The age distribution of scarlet fever cases notified so far this season remains similar to previous years, with 90% being children under 10 years (median 4y; range <1y to 78y) and an equal split between males (50%) and females overall.

¹ 1982 is the earliest time point for weekly level notification data

Figure 1. Weekly scarlet fever notifications in England, 2019/20 *



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

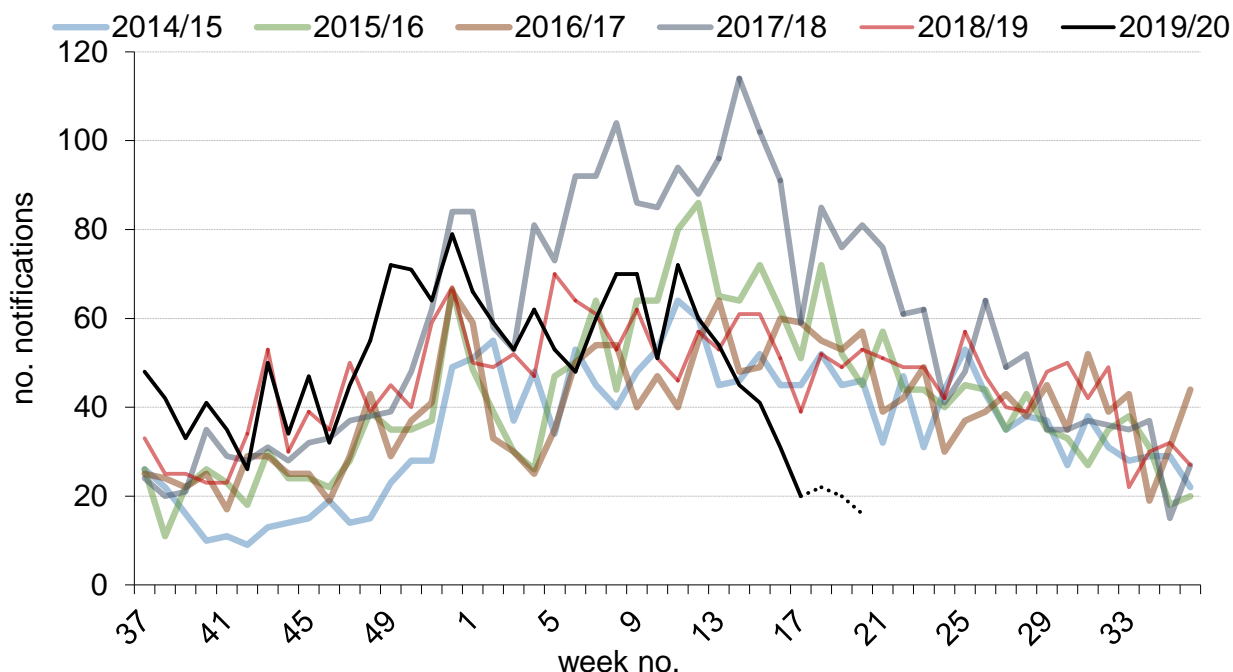
Invasive group A streptococcal infection

So far this season (week 37 to 18 2018/19), 1,747 notifications of iGAS disease have been reported through laboratory surveillance in England, 5% higher than the average (1,661) for the previous five years (range 1,276 to 2,283) (figure 2). A steep decline in laboratory notifications has been seen since week 11, from 72 notifications to around 20 in from week 17.

The highest rates this season were reported in the Yorkshire and Humber region (4.6 per 100,000 population), followed by the North West (4.0), South East (3.7) and West Midlands (3.4/100,000). The lowest was reported by the East of England and London regions at 1.9/100,000.

The median age of patients with iGAS infection to date this season is 56 years (range <1y to 100y), within the range seen at this point in the preceding five seasons (55y to 60y). Fifty-four per cent of infections were in females, slightly above what has been seen in recent seasons (range 50% to 53%), and 14% of infections were in children (<10y), within range of what we have seen at this point for the previous 5 seasons (range 11% to 16%).

Figure 2. Weekly laboratory notifications of invasive GAS infection, England, 2014/15 onwards*



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

Analysis of reference laboratory iGAS isolate submissions indicates a diverse range of *emm* types identified in 2020 (January to May 2020) with a continued dominance of *emm* 1 (28% of referred isolates). Other frequently identified types this season are *emm* 12 (9%), *emm* 89 (7%), *emm* 108 (7%) *emm* 4 and *emm* 28 (both 5%), the latter two being very uncommon historically.

Antimicrobial susceptibility results from routine laboratory surveillance indicate tetracycline resistance in 21% of GAS sterile site isolates between September 2019 and May 2020, higher than at the same point last season (17%), continuing the increasing trend in resistance over the last five years. Susceptibility testing of iGAS isolates against erythromycin indicated 8% were found resistant (compared with 10% last season), and for clindamycin, 7% were resistant at this point in the season (compared with 8% last season). Isolates remained susceptible to penicillin.

Discussion

The scarlet fever activity for the early part of the season was elevated compared to recent 'upsurge' years, however as the season progressed a steep decline was noted to weekly notification levels below what has been noted since 1982, the earliest date weekly notification data are available. The reduction in scarlet fever activity this season is further supported by lower rates of GP consultations [1]. There are challenges in fully interpreting the latter part of the season, with the sudden decline preceding the lockdown introduced to combat the COVID-19 pandemic (in weeks 12 and 13) [2,3]. Possible explanations include limited spread following school and nursery closures (week 13), misdiagnosis or altered health seeking behaviour given overlapping clinical presentation with scarlet fever (sore throat, fever), and possible delays in notification with the change in priorities for the health system.

While scarlet fever notifications remain low, GPs, microbiologists and paediatricians are reminded of the importance of prompt notification of scarlet fever cases and outbreaks to local Public Health England (PHE) Health Protection Teams (HPTs). Early treatment of scarlet fever is vital, especially given the potential for complications associated with GAS infections. [4,5,6]

The number of iGAS cases notified through routine laboratory surveillance in England is lower than normally seen for this time of year. Clinicians, microbiologists and HPTs should maintain a high index of caution at this time of widespread respiratory infection as early recognition and prompt initiation of specific and supportive therapy for patients with iGAS infection can be life-saving.

The reduction in iGAS activity this season is particularly notable in the period post introduction of the COVID-19 lockdown, there are many potential explanations for this observation, including reduction in opportunities to spread, due to the introduction of social distancing measures, increased used of personal hand hygiene measures, increased focus on infection prevention control in community settings, and possible delays in seeking healthcare and delayed notification to HPTs.

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>

Weekly notifiable disease reports are published each week for a timelier update, these can be found at: <https://www.gov.uk/government/collections/notifications-of-infectious-diseases-noids>

References

1. PHE (2020). [GP in-hours consultations bulletin: 13 May, week 19.](#)
2. PHE (2020). [Coronavirus \(COVID-19\): What is social distancing?](#) [Updated 4 March 2020].
3. PHE (2020). [\[Withdrawn\] Guidance on social distancing for everyone in the UK.](#)
4. PHE (2018). [Guidelines for the public health management of scarlet fever outbreaks in schools, nurseries and other childcare settings.](#)
5. Lamagni T, *et al* (2018). Resurgence of scarlet fever in England, 2014–16: a population-based surveillance study. *The Lancet Infectious Diseases* **18**(2): 180-187.
6. Watts V, *et al* (2019). Increased risk for Invasive Group A Streptococcus disease for household contacts of scarlet fever cases, England, 2011–2016. *Emerging Infectious Diseases* **25**(3): 529-537.

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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.

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