Infection report

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

Substantial declines in scarlet fever have been noted since Easter indicating that the season’s peak has passed [1]. Invasive GAS (iGAS) disease notifications remain elevated although similarly showing signs of seasonal decline.

Scarlet fever

A total of 12,906 scarlet fever notifications have been made in England so far this season (week 37 of 2015 to week 17 of 2016). Notifications peaked in week 12 of 2016 with 1400 notifications, after which there has been an unsteady decline with 477 notifications in week 17 (see figure). GP consultations showed a similar pattern with some recent elevation but a general pattern of seasonal decline [2].

Scarlet fever notifications remain elevated in most 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 East Midlands (39.3 per 100,000 population), Cheshire & Merseyside (32.5), Yorkshire & the Humber (31.2) and Wessex (31.0). London has the lowest scarlet fever notification rate (14.7/100,000).

The age distribution of scarlet fever cases notified this season remains similar to previous years, with 89% of cases reported in children under 10 years of age (median four years; range <1 year to 91 years). The incidence of scarlet fever in children ranged from 22.1 per 100,000 population in 10 to 14 year-olds to 244.3 per 100,000 population in 1 to 4 year-olds this season.

Invasive group A Streptococcus infection

A total of 1333 reports of iGAS disease have been notified through routine laboratory surveillance in England so far this season (weeks 37 to 16); this is 45% higher than the average for the same period in the previous five years (922 reports; range 770-1054; see figure).
Geographical variation in iGAS infection notification rates were seen across England, with all but one of 15 English regions reporting higher than average iGAS cases so far this season. The areas with the highest population rates, so far this season, are Devon, Cornwall & Somerset (3.9 per 100,000 population), Yorkshire & Humber (3.7/100,000), and the North East (3.4).

The rate of iGAS infection so far this season has been higher in all age groups except for those aged between 65 to 74 years compared with the same period last year. The highest rates were in the elderly (>75 years) at 7.7/100,000, and the lowest in 10 and 14 year-olds (0.7). Overall, 16% of infections reported in the season to date have been in children under 10 years, within the range for the previous five seasons (mean 15%; range 13% to 17%).

There have been 902 iGAS isolates sent to the national reference laboratory for *emm* strain diversity testing in the current season (September 2015 to March 2016) to date, the results indicating that *emm* st1 is the most common (30% of referrals) followed by *emm* st12 (12%) and *emm* st89 (11%). No novel strains or unusual increases in specific strain types have been seen to date.
Antimicrobial susceptibility results at this point in the season are within normal levels, with non-susceptibility to erythromycin and clindamycin seen in 5% of GAS sterile site isolates (normal range 2-5%) and non-susceptibility to tetracycline seen in 11%. All isolates remain susceptible to penicillin.

**Discussion**

Levels of scarlet fever are declining but remain elevated, and in some areas a small resurgence in disease incidence has been seen following Easter and the school holidays. The continued elevation of invasive GAS disease in 2016 compared with recent years is of concern and continued vigilance is recommended.

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**

2. PHE. GP in-hours consultations bulletin: 5 May 2016 week 17.