



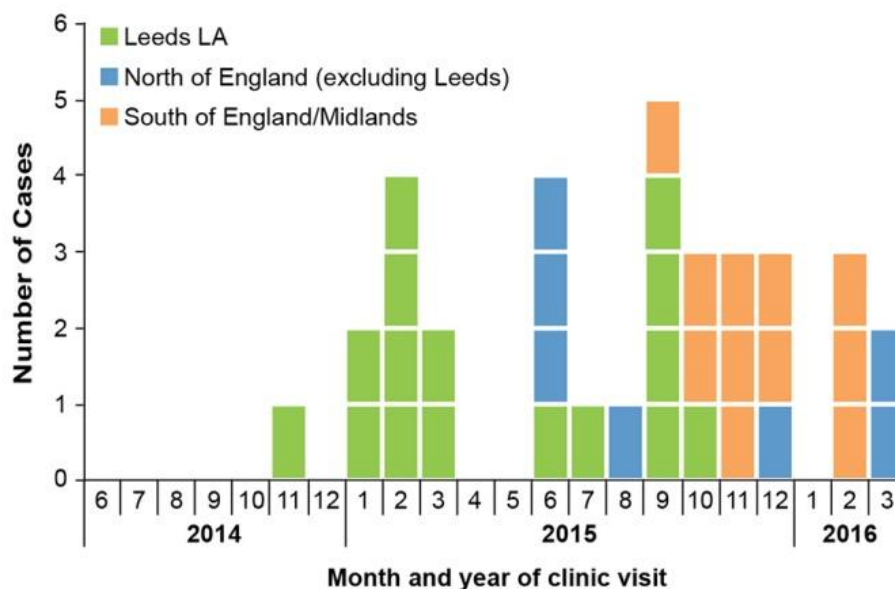
## Infection report

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### Outbreak of high level azithromycin resistant gonorrhoea in England

There have been 34 cases of high level azithromycin resistant gonorrhoea (HL-AziR) (MIC >256 mg/L) diagnosed amongst residents of England between November 2014 and April 2016 (see figure). HL-AziR has previously been observed only sporadically in the UK and elsewhere.

#### Cases of highly azithromycin-resistant *Neisseria gonorrhoeae* 2014 to February 2016



The outbreak first emerged in residents of Leeds and the north of England [1]. The outbreak has since spread to the West Midlands and south of England, including London. Initial cases were among heterosexuals but more recent evidence suggests HL-AziR is now spreading among men who have sex with men. Partner notification has been of limited success: of 50 partners thus far reported, only 22 (44%) were successfully contacted, 18 (82%) of which were tested; 17 (94%) tested positive for gonorrhoea. Whole genome sequencing of a subset of the isolates indicates that many of the isolates were clonal, consistent with recent transmission, and the remainder are closely related and share a more distant common ancestor.

Few antimicrobials remain effective in the treatment of gonorrhoea. Current recommended therapy involves intramuscular ceftriaxone 500mg in combination with azithromycin 1g orally [2]. Gonorrhoea can develop resistance rapidly, therefore dual therapy is recommended because simultaneous development of resistance to both drug types is unlikely, and first-line treatment will remain effective [3,4]. If azithromycin becomes ineffective against gonorrhoea, there is no “second lock” to prevent or delay the emergence of ceftriaxone resistance, and gonorrhoea may become untreatable.

In September 2015 PHE alerted clinicians in order to raise awareness of HL-AziR gonorrhoea via the British Association for Sexual Health and HIV network [5]. A National Resistance Alert was issued to all microbiologists in October 2015 to ensure all gonococcal samples are tested for azithromycin resistance and resistant isolates referred to PHE’s Sexually Transmitted Bacteria Reference Unit (STBRU). As the outbreak has spread, further reminders to raise awareness among clinicians and microbiologists are being issued.

PHE is leading a national incident response. PHE Centres and health protection teams will be supporting local work to prevent further dissemination of HL-AziR gonorrhoea, including enhanced data collection and interventions and communications to raise awareness among the local communities affected. Centres will also support local sexual health commissioners and sexual health clinics to raise awareness of antimicrobial resistance in gonorrhoea, and ensure that all cases of HL-AziR gonorrhoea and their sexual partners are thoroughly investigated, treated according to national guidelines and reported to PHE [2].

## References

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3. Fifer H, Hughes G, Radcliffe K (2015). Gonorrhoea treatment position statement. *Sex Transm Infect* (Aug) **91**(5): 307. <http://sti.bmj.com/content/91/5/307.full?sid=9bc7052b-7128-479c-ac58-b658b5bda200>
4. PHE (2015). *Surveillance of Antimicrobial Resistance in Neisseria gonorrhoeae. Key findings from the Gonococcal Resistance to Antimicrobial Surveillance Programme (GRASP) and related surveillance data: 2014.*
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