

Many UK patients with gonorrhoea are being prescribed antibiotics that are no longer recommended for treating the infection by their family doctor (GP), reveals research published in the online journal *BMJ Open*.

This failure to keep abreast of national clinical guidance is of concern, given the global threat of antibiotic resistance, say the researchers.

They base their findings on an analysis of electronic health records entered anonymously into the Clinical Practice Research Datalink— a large database containing the health records of around 5.5 million patients registered with 680 general practices around the UK—as well as information from anonymous monitoring of sexually transmitted infections in England.

They looked particularly at how doctors in general practice had treated the two most commonly diagnosed bacterial sexually transmitted infections in England, Chlamydia and gonorrhoea, between 2000 and 2011.

GPs diagnosed an estimated 193,000 people with Chlamydia and nearly 17,000 with gonorrhoea during this period, accounting for between 9% and 16% of all Chlamydia cases and between 6% and 9% of all gonorrhoea cases in England.

The number of diagnoses GPs made for Chlamydia rose substantially from 22.8/100,000 of the population in 2000 to 29.3/100,000 of the population in 2011. And the proportion of patients treated for this infection rose from around six in every 10 (60%) to almost eight out of 10 (78%).

Most (90%) were prescribed an antibiotic recommended in national clinical guidance. But this was not the case for gonorrhoea.

The number of diagnoses fluctuated between 3.2 to 2.4/100,000 of the population, while the proportion treated ranged between a third (just under 33%) and just over half (54%).

Despite being discontinued as a recommended treatment for the infection in 2005, ciprofloxacin continued to be prescribed. This antibiotic accounted for more than four out of 10 prescriptions (42%) in 2007, and one in five in 2011.

The bacterium that causes gonorrhoea, *Neisseria gonorrhoeae*, is adept at developing resistance to the antibiotics used to treat it, and the evidence from other research shows that over a third of gonorrhoea infections treated at sexual health clinics were resistant to ciprofloxacin, for example, while up to one in five cases may be resistant to penicillin.

The researchers conclude that GPs make an important contribution to the diagnosis and treatment of bacterial sexually transmitted infections, but while most patients with Chlamydia are treated appropriately, “significant numbers” of those infected with gonorrhoea are not.

“Treatment of infections with reduced susceptibility or resistance to the prescribed therapy may inadvertently facilitate onward transmission and risks infection complications,” they write.

“Antimicrobial resistance in gonorrhoea is a global problem and may become an issue for Chlamydia in future,” they warn. “Practitioners should be alert to the likelihood of revisions to national treatment guidelines and of treatment failure in their patients.”