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Response letter to T Fowler and co-authors – estimating the positive predictive value of opportunistic population testing for gonorrhoea as part of the English Chlamydia Screening Programme

Dear Editor,

Fowler et al.[1] discuss the inclusion of gonorrhoea screening alongside the National Chlamydia Screening Programme (NCSP) in one part of the UK and the calculation of positive predictive values (PPVs) to guide commissioning decisions. This is a timely and welcome contribution given the increased deployment of 'dual testing' – where nucleic acid amplification tests (NAAT) simultaneously test for chlamydia and gonorrhoea using the same sample.

However, we have concerns about some of the assumptions used when estimating PPVs, particularly the assertion that sensitivity and specificity may vary by prevalence, which is not substantiated in the context of asymptomatic gonorrhoea testing. Although some studies have shown that sensitivity and specificity may vary by prevalence, this relates to differing disease severity and diagnostic definitions.[2] In most disease processes, diagnosis becomes more certain as the disease progresses and it is intuitive that diagnostic test performance should improve with progression, the so-called spectrum bias.[3] However, opportunistic testing in non-symptomatic individuals is different; this represents a homogenous group. There is no reason to believe that the sensitivity and specificity will systematically vary with the underlying prevalence of an asymptomatic sexually transmitted infection (STI). Furthermore, the absolute difference in diagnosed gonorrhoea prevalence quoted is small; 35 per 100,000 in Greater Manchester versus 28 per 100,000 in England, and any difference in PPV is unlikely to make testing in one area viable and not in another.

We agree with the authors' emphasis on the importance of confirmatory NAAT testing following a reactive screen for gonorrhoea, which supports current national gonorrhoea testing guidance.[4] They also suggest restricting gonorrhoea testing in low prevalence areas to those with a positive chlamydia test. However, where dual testing is used in the NCSP, the chlamydia test result would be unknown at the point of gonorrhoea testing, and it is already the case that the NCSP core requirements recommend a full STI screen (including gonorrhoea, syphilis and HIV testing) for all patients diagnosed with chlamydia as part of routine clinical management.[5]

References

1. Fowler T, Edeghere O, Inglis N, et al. Estimating the positive predictive value of opportunistic population testing for gonorrhoea as part of the English Chlamydia Screening Programme. *Int J STD AIDS* 2013; 24: 185–191.
2. Leeflang MMG, Bossuyt PMM and Irwig L. Diagnostic test accuracy may vary with prevalence: implications for evidence-based diagnosis. *J Clin Epidemiol* 2009; 62: 5–12.
3. Ransohoff DF and Feinstein AR. Problems of spectrum and bias in evaluating the efficacy of diagnostic tests. *N Engl J Med* 1978; 299: 926–930.
4. Health Protection Agency and BASHH. Guidance for gonorrhoea testing in England and Wales, http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1267550166455 (2010, accessed 23 April 2014).
5. National Chlamydia Screening Programme & Health Protection Agency. *National Chlamydia Screening Programme Standards*. 6th ed., http://www.chlamydiascreening.nhs.uk/ps/resources/core-requirements/NCSP%20Standards%206th%20Edition_October%202012.pdf (2012, accessed 23 April 2014).

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