

New chlamydia test offers rapid, pain-free test for men

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This image shows the Chlamydia Rapid Test for men. Credit: Wellcome Images

A new urine test developed with funding from the Wellcome Trust will allow doctors to diagnose Chlamydia infection in men within the hour, improving the ability to successfully treat the infection on the spot and prevent re-transmission.

Chlamydia, caused by the bacterium <u>Chlamydia trachomatis</u>, is the most common sexually-transmitted bacterial infection in the UK, particularly



amongst sexually active men and women aged 16-24 years.

In the majority of cases, the disease is asymptomatic in both men and women. If symptoms show, they may include discharge or pain when passing urine for men. Recent research suggests that, if untreated - even when no symptoms show - it may be a cause of reduced fertility. In women, it can lead to even more serious complications, such as pelvic inflammatory disease, chronic pelvic pain and ectopic pregnancy.

In 2008, young people accounted for two thirds of all new episodes of uncomplicated Chlamydia infections diagnosed in genitourinary medicine clinics. In England, as many 68 young men in every 1,000 carry the infection; the figure is nearly 84 out of 1,000 for young women. Since the mid-1990s, the number of diagnosed infections has risen an average of 7,500 per year to over 123,000.

Once diagnosed, Chlamydia can be treated easily with a one-off antibiotic pill. However, until now, male rapid tests for Chlamydia have been relatively inaccurate and involved urethral swabs, which can cause discomfort.

"Horror stories about painful swabs have put men off getting tested for Chlamydia, and other non-invasive tests are expensive, technically complex and take days to obtain the result," explains Dr Helen Lee from the University of Cambridge. "This has led to many cases of infection in men going undiagnosed and being transmitted to their female partners, with potentially more serious complications."

The Chlamydia Rapid Test, a urine test developed by Dr Lee and colleagues at Diagnostics for the Real World (DRW) and the University of Cambridge, can be used with minimal training. It is designed to be used in conjunction with FirstBurst, a device for collecting the first voided urine from men. FirstBurst collects six times the amount of



Chlamydia bacteria compared to a standard urine sample. The test then uses a unique signal amplification system developed by DRW to boost the test's sensitivity and gives the results in less than an hour.

Today, the *British Medical Journal* publishes an evaluation† of the test, which shows that it is significantly more accurate than existing urine-based rapid tests. The researchers took samples from over 1,200 men at two clinical sites. They found that the test correctly identified Chlamydia infection in 84.1% of samples, more accurate than the nearest competitor rapid tests for men.

"Without an effective and rapid testing programme for men, we are unlikely to succeed in efforts to control Chlamydia infection," says Dr Lee. "This new test is both accurate and swift, allowing men attending the clinics to be tested and treated on site in one visit."

The researchers also questioned participants about their willingness to wait for the test result. The vast majority - 96% - said they were willing to wait an hour or more.

The Chlamydia Rapid Test has received regulatory approval and is on the market in France, where it is used in clinics, and will shortly come onto the market in Spain, Portugal, Italy and a number of other European countries.

"If we are to stem the tide in the spread of Chlamydia, we have to step up a gear in our ability to diagnose and treat this infection," says Dr Ted Bianco, Director of the Wellcome Trust's Technology Transfer Division, which funded the development of the test. "Right now, our tests are too slow to permit on the spot treatment or too insensitive to detect an adequate proportion of cases. The new assay offers a way forward. Health authorities everywhere that are serious about tackling Chlamydia need to put this 'test to the test' in the context of their national



programmes of control."

It is hoped that the new test will also be of particular use in the developing world, where management of Chlamydia in men is often based on self-diagnosis and specific diagnostic tests are rarely available. A high prevalence of Chlamydia infection amongst sex workers in these countries means that male customers are likely to transmit infection to other sexual partners. The Chlamydia Rapid Test requires minimum instrumentation and does not need to be carried out by a medically-trained professional.

Source: Wellcome Trust (<u>news</u>: <u>web</u>)

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