

New rapid Chlamydia test could enable 'test and treat' strategy

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Wellcome Trust-funded researchers have successfully completed the clinical trial for a new rapid test for the sexually transmitted infection Chlamydia. The researchers believe the test, which is able to detect Chlamydia in less than 30 minutes – and often much faster – could be a valuable addition to screening programmes already in place, as well as providing a crucial diagnostic test in the developing world.

The new rapid test for Chlamydia has been developed by a team of researchers led by Dr Helen Lee at the University of Cambridge. An evaluation of the test in three UK clinics is reported in today's *British Medical Journal*. Dr Lee's research teams at the university and their spin-out company Diagnostics for the Real World were recently awarded \$50,000 as the winner of the 2007 Tech Museum Awards (USA) in the Health Category for the Signal Amplification System they developed, technology that underpins and improves the sensitivity of rapid tests.

Chlamydia trachoma is the world's most prevalent sexually transmitted bacterial infection. According to the Health Protection Agency, the number of diagnoses in the UK has risen steadily since the mid-1990s, reaching 110,000 in 2005. If left untreated, the disease can result in complications such as pelvic inflammatory disease, ectopic pregnancy and infertility. However, as up to 70% of infected women do not show symptoms, the disease often goes undiagnosed.

The new rapid test was developed to allow detection of Chlamydia using self-collected vaginal swabs, which is much easier to obtain than the

cervical swabs required by existing rapid tests and is up to twice as accurate. The new Chlamydia rapid test detected infection in more than 4 out of 5 infected women, even though most showed no symptoms. This sensitivity is similar to some of the current gold standard nucleic acid amplification tests used in screening programmes, including in the UK. The rapid test can provide results in less than 30 minutes whilst the nucleic acid based tests can take weeks.

"The speed of the CRTs means that we can provide a 'test and treat' strategy, offering immediate clinical care to the patient," says Dr Lee. "This has the benefits of reducing the risk of complications and preventing onward transmission."

In addition to being a valuable addition to existing screening programmes, the new Chlamydia rapid test could be used in settings such as mobile clinics and outreach clinics to help improve the screening coverage of difficult-to-reach populations.

Penny Barber, Chief Executive of Brooks in Birmingham, a young people's sexual health clinic which participated in the evaluation of the new test says: "The Chlamydia Rapid Test is about more than speed of treatment for positive clients, vital though that is from a public health perspective. All clients, anxious about having Chlamydia, benefit from the relief a rapid result gives. For clinics, there is a strong business case for a method that cuts out the logistics and cost of transporting samples, sending results back and then contacting clients."

In developing countries, especially those with high-risk populations such as female sex workers, the availability of this simple and rapid test would also allow screening and treatment of more individuals.

Dr. Lourdes Mahilum-Tapay, who led the clinical trials, comments: "Because the test is easy to use and is robust, it can be used in a clinic in

London or the Philippines. The test can be implemented easily without the need for laboratory equipment or highly trained staff."

The Development of the test was made possible with funding from the Wellcome Trust's Technology Transfer Division. The test will be made available by the spinout company Diagnostics for the Real World in early 2008. They plan to provide the test at virtually cost price to public sections of the developing countries. This will be subsidised by charging the market price in the developed world.

Source: Wellcome Trust

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