

Mobile phone app to diagnose sexually transmitted infections

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(PhysOrg.com) -- An innovative plan in the UK aimed at cutting rising rates of sexually transmitted infections (STIs, also known as sexually transmitted diseases or STDs) such as herpes, gonorrhea, and chlamydia in young people will use mobile phones or computers to diagnose the diseases. The idea taps into the reluctance of many young people to seek help by conventional means because of their embarrassment, and their love of technology.

Small devices similar to pregnancy testing kits are being developed that will allow people to test themselves privately for STIs. The kit will include a computer chip around the size of a USB chip, that can be plugged into a phone or computer. Software running on the phone or computer then analyzes a urine or <u>saliva</u> sample placed on the chip, and



provides a diagnosis within 5-15 minutes. It will recommend a course of action, such as seeking treatment, and may even make an appointment at the nearest sexual health clinic or doctor.

The kit will basically be a miniature laboratory using <u>nanotechnology</u> and microfluidics. Leader of the "eSTI2" project, Dr. Tariq Sadiq, of St. George's at the University of London, said the incidence of STIs has been rising, with Britain having one of the highest rates in Europe. He added that "there's a major embarrassment factor here, especially among young people, [which] makes the situation worse." People can remain infectious with some STIs even after the symptoms have disappeared. Undiagnosed <u>sexually transmitted infections</u> in women can also lead to infertility and pelvic inflammatory disease, which could both be avoided if the condition were diagnosed and treated early.

Development of the kit has been funded by a group of seven bodies jointly called the UK Clinical Research Collaboration, which includes the UK Medical Research Council among its members. Together, the group has made available £4 million for developing the technology. Also involved are mobile phone operators such as 02 and the National Institute of Health and Clinical Excellence.

STIs have been increasing in the UK in recent years, reaching a record of over 480,000 new infections reported in 2009, around 12,000 more than in the previous year. Over half of the males reporting a new infection were under 25, as were two-thirds of females. Many people, particularly those in the younger age groups, are reluctant to go to their local doctor or clinic for a diagnosis, which can mean they go undiagnosed and pass on their infection to others.

The testing kits could cost as little as $\pounds 1$ and would be available at pharmacies and probably also via vending machines similar to those for condoms. It is not known when they will become commercially available



since further development and testing are needed to ensure they will be sufficiently accurate, and there are privacy and confidentiality issues to be worked out. It is also uncertain at this stage whether or not the devices will test for HIV.

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