

Syphilis screening and treatment in pregnancy may be cost-effective in sub-Saharan Africa

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Screening and treating pregnant women in sub-Saharan Africa for syphilis* may be a cost-effective use of resources, according to a study published in this week's *PLOS Medicine*. The study by Mohammed Lamorde from Uganda's Makerere College of Health Sciences and colleagues at Pfizer and the John Hopkins School of Medicine in the USA, suggests that screening pregnant women for syphilis using immunochromatographic strip (ICS) point-of-care tests, and subsequent treatment with benzathine penicillin, could efficiently reduce the burden of congenital syphilis (syphilis passed from mother to baby during childbirth), a condition which can have devastating consequences such as stillbirth and birth defects.

The authors developed a model using information from 43 countries in sub-Saharan Africa, to determine whether the benefits of health improvements resulting from the [universal screening](#) for, and subsequent treatment of syphilis in [pregnant women](#) during antenatal visits would outweigh the related financial costs to countries with limited resources. They found that at current syphilis prevalence rates, the intervention could prevent up to 25,000 newborn deaths of and 64,000 stillbirths in sub-Saharan Africa every year. After including the effects of syphilis on surviving babies, the authors found that screening and subsequent treatment could prevent a total of 2.6 million disability-adjusted life years (DALYs)**.

Importantly, although estimated costs varied between countries, on average the cost of each DALY averted was only \$11, much less than interventions to prevent mother-to-child transmission of HIV. The authors suggest that an integrated approach to the prevention of mother-to-child transmission of HIV and syphilis combined, as has been introduced in Asia and South America, might further improve cost-efficiency.

However, although data-based, these findings come from a theoretical model, and therefore the actual costs may differ.

The authors say: "Use of ICS tests for antenatal [syphilis](#) screening is highly cost-effective in SSA."

They add: "Substantial reduction in DALYs can be achieved at a relatively modest budget impact."

More information: *Syphilis is a sexually-transmitted bacterial disease. In sub-Saharan Africa, where it is estimated that up to 17% of pregnant women are infected and risk passing the bacterium to their fetus, currently screening only achieves 40% coverage. Congenital syphilis is not trivial: infected babies may be stillborn, or may suffer birth defects and longer-term complications such as brain damage.

**DALYs are a widely-recognised WHO measure which describes the number of life years lost as a result of disability or death due to a specific disease.

Kuznik A, Lamorde M, Nyabigambo A, Manabe YC (2013) Antenatal Syphilis Screening Using Point-of-Care Testing in Sub-Saharan African Countries: A Cost-Effectiveness Analysis. *PLoS Med* 10(11): e1001545. [DOI: 10.1371/journal.pmed.1001545](https://doi.org/10.1371/journal.pmed.1001545)

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