Objective Evaluate introduction of rapid syphilis tests (RSTs) into antenatal clinic (ANC) services at low-level health facilities in 2 rural districts in Nyanza Province, Kenya – assessing coverage, testing quality, treatment, data recording, and effect on HIV testing.

Methods From March 2011 - February 2012, RSTs were introduced into ANC services at 25 rural facilities. Before introduction, hands-on training was conducted for nurses on use of RSTs, results counselling, appropriate maternal treatment, documenting data and proficiency testing. During the programme, 3 proficiency testing rounds were done. After the programme, ANC log-books from 8 priority clinics were used to assess data reporting and compare coverage of syphilis and HIV testing and syphilis treatment for the 12-month intervals before and during the programme. Nurses and mothers were also interviewed.

Results Thirty-four nurses from 25 clinics were trained. Proficiency testing identified and corrected early RST problems. In the 8 priority clinics, syphilis testing at first ANC visit increased from 18% (279/1586 attendees) in the 12 months before to 70% (1123/1614 attendees) during the 12-month programme (p < 0.001); 35 women (3%) tested positive during the programme vs. 1 (< 1%) in the previous 12 months (p < 0.001). RST use and results were routinely documented, but no clinic recorded treatment per training. In 5 clinics, assessment of HIV test coverage was limited by lack of prior HIV-positivity data; however, records from 3 high-volume clinics suggested no difference in HIV testing rates before and during the programme. Interviews indicated many new nurses were not trained, while mothers reported limited counselling about testing or results.

Conclusions Introducing RSTs into rural ANC services greatly increased syphilis testing and detection without effects on HIV testing. We identified challenges in documenting treatment, counselling women appropriately, and adequate training. Amendments to existing and “refresher” training may improve services and documentation of treatment.

There were slight fluctuations in the proportion of pregnant women screened for syphilis, ranging from 87.16% in 2004 to 91.20% in 2008. However, nearly all the clinics demonstrated no trends in the proportion of pregnant women screened for syphilis for 2004–2008.

Conclusion Syphilis sero-positivity in pregnancy in Gaborone has been declining for the last five years, but is far more prevalent amongst pregnant women aged 26 to 30 years and the lowest age specific prevalence was 16 to 20 years for 2004 to 2008. This decline may be attributed to a number of factors and in particular, the adoption of syndromic approach for management of sexually transmitted infections in all clinics across the country. This study showed variations in the trend of syphilis prevalence by clinics and proportions of pregnant women screened for syphilis. However, a high proportion of pregnant women not screened for syphilis may have contributed to under-estimate syphilis prevalence rates.