Background Antenatal syphilis screening and treatment is an effective intervention to reduce perinatal, infant, and maternal morbidity and mortality. Prenatal syphilis screening increased in Manica and Sofala Provinces from <5% in 1993 to over 90% since 2005. This study aimed to (1) estimate the prevalence of congenital syphilis in the cities of Beira and Chimoio, (2) determine differences in congenital syphilis among women treated early in pregnancy, late in pregnancy, and not treated, and (3) identify factors associated with syphilis screening among pregnant women. Methods Pregnant women presenting at one of six maternities in Beira and Chimoio cities, were recruited and screened with rapid syphilis tests (RST) and, if positive, further screened using Rapid Plasma Reagin (RPR). All live newborns whose mothers tested positive at any point during pregnancy or at birth were RPR screened to detect congenital syphilis. A newborn subsample also had blood and tissue samples taken for IgM and PCR testing to validate the RPR results. Results Between March 5, 2012 and March 15, 2013, 16,812 women were recruited out of the 19,821 births registered at the participating maternities. Overall, 611 women (3.6% total) tested positive for syphilis; 498 were syphilis positive by RST at the maternity. An additional 113 women had tested positive at ANC, but were RST negative at delivery. Of the total 405 women who had tested syphilis positive (RST or RPR) and been treated in ANC, their syphilis results at delivery were the following: 286 (71%) were RST positive, 192 (47%) were both RST and RPR positive, and 35 (9%) were RPR positive and RST negative. There was no significant difference in RST/RPR rates between women treated before or after 28 weeks gestation. Of the 16,322 women who were syphilis negative at ANC, 211 (1.26%) were RPR positive at birth (suggestive of recent infection); of these women, 152 (54%) were RPR positive. Estimates of the prevalence of and factors associated with congenital syphilis and association with gestational age of treatment are pending, awaiting results of confirmatory testing. Conclusions The congenital syphilis prevalence rate is substantially lower in this region than in other regions of Mozambique, likely related to years of antenatal syphilis screening. Lifetime positivity of RST was variable, as nearly 30% of women with positive RST tests in pregnancy were RST negative at birth. In addition, nearly half of women treated adequately remained RPR positive at delivery after treatment.

Methods We tested the feasibility, performance, impact and cost-effectiveness of implementing RST in an underserved urban area at a biggest maternity hospital in Peru and a network of 16 peripheral health centres offering prenatal care in a periurban poor area in Callao-Ventanilla, Peru. RST (integrated with HIV rapid test: the “two for one”) were offered at the first prenatal visit (ANC), at delivery and within miscarriage-abortion services. Results Data from the baseline pre-implementation evaluation revealed limited coverage of screening and treatment services for maternal syphilis and a complex and inefficient system for ANC. RST was started in January 2010. Overall success of implementation was measured by rates of maternal syphilis screening and treatment coverage, partner treatment, and acceptability of RST among providers and patients. We also performed a cost-effectiveness analysis of RST against the Rapid Plasma Reagin (RPR). Attention was paid to the process of dissemination and transfer activities to the Ministry of Health of Peru, through the involvement of both the National Program of STIs and HIV and the Reproductive Health Program. National guidelines have been modified, and recommend the use of both tests, RST and rapid HIV testing in the screening of pregnant women. Conclusions RST implementation was feasible, successful, acceptable and cost effective. Its introduction catalysed improvements in the quality of care, and by the end of the project it has been introduced in the country as a National policy.