

(323/931) in 2009. The majority of Ng isolates were susceptible to Cef and Spe. However, 7/110 isolates showed decreased susceptibility to Cef in one country in 2007 and 2/25 isolates showed intermediate susceptible to Spe in another country in 2009.

Conclusions Cip for primary treatment of uncomplicated gonococcal infections is currently recommended in 10 of the 11 countries, 1 country recommended Cef in 2007. The emergence and spread of resistance to Cip and Azi, indicate that current treatment guidelines be reviewed using respective national antimicrobial surveillance data. The emergence of a few strains with reduced susceptibility to third-generation cephalosporins indicates that on-going GASP surveillance is warranted.

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Epidemiology poster session 1: STI trends: Syphilis

P1-S1.46 SYPHILIS TRENDS IN ZAMBIA - A 14-YEAR OBSERVATION

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Background Syphilis and other STIs are prevalent in sub-Saharan Africa, perhaps due to lack of effective curative services. Estimates among pregnant women and in the general population in Zambia range from 6% to 18%, with maternal syphilis contributing to a high number of mid-trimester abortions, still births, prematurity, and morbidity and mortality of the child. Existing evidence suggests that control of syphilis and other ulcerative and non-ulcerative STIs remains one of the key strategies for HIV control. There are no recent studies from Zambia comparing syphilis prevalence with HIV trends.

Objectives To investigate trends in syphilis prevalence using Antenatal Clinic (ANC) sentinel surveillance data, and to validate the findings with population-based data.

Methods The analyses are based on ANC data from 1994 to 2008 from 22 sites. Estimates are compared with data from Zambia Demographic and Health Surveys (ZDHS) 2001/2002 and 2007. Analyses were restricted to women aged 15–49 years and 15–24 years. ORs with 95% CIs were used to test whether the prevalence trends were significant.

Results The overall syphilis prevalence dropped during the period 1994–2008 among both urban and rural women aged 15–49 years from 9.8% to 2.8% and 7.5% to 3.2%, respectively. Provincial variation was observed with a tendency towards a reduction. A sharper decline in syphilis prevalence was observed among women with more years in school than among those with fewer schooling years. A declining trend was also seen among young primi gravid women aged 15–19 years. A comparison of ZDHS 2001/2002 and 2007 findings also showed an overall reduction in syphilis prevalence in the general population.

Conclusions There was an overall reduction in syphilis prevalence and this decline was sharper than the decline in HIV during the same period. In part this could be attributed to the revamping of STI services in the country. Reduction in both HIV and syphilis prevalence could also suggest a reduction in the disease incidence and is likely to partially reflect positive sexual behaviour changes. Provincial variations were striking and need to be further studied to better guide specific STI prevention and control programmes in different geographical settings.

P1-S1.47 MEASURING AND PRIORITISING CONGENITAL SYPHILIS CONTROL IN GUANGDONG CHINA - A MARKOV MODEL TO INFORM POLICY IMPLEMENTATION

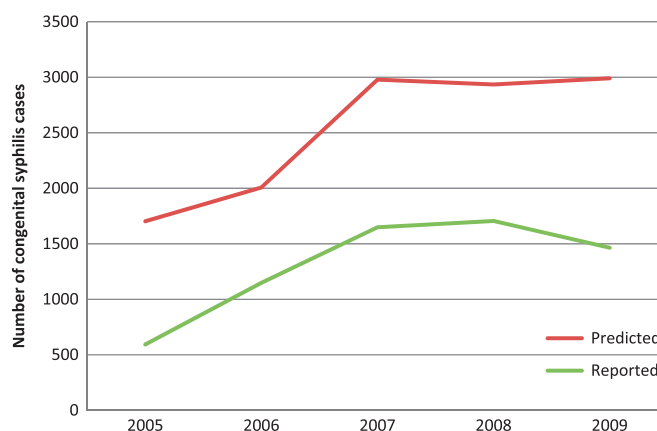
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Background Syphilis is a major public health problem in many regions of China, with increases in congenital syphilis (CS) cases causing particular concern. Precisely determining the extent of CS burden has been challenging given incomplete prenatal screening coverage and limited CS diagnostic capacity. As a result, both net under and over-reporting are plausible. In addition, there are a range of policies that could be expanded as part of the new National Syphilis Control Plan. This paper uses a Markov model to estimate the number of CS cases and other adverse outcomes and prioritise control measures in Guangdong Province, China.

Methods We developed a Markov model that incorporated age-stratified fertility rates, female adult syphilis reported cases, and empirical syphilis transmission rates to estimate the number of adverse pregnancy outcomes associated with prenatal syphilis infection on a yearly basis from 2005 to 2009. Guangdong Province was the focus of this analysis given access to high quality demographic and public health data required for model inputs. Adverse outcomes examined included CS, stillbirth, neonatal death, and low birth weight. Sensitivity analyses were performed to identify variables most influential for achieving WHO and Chinese program benchmarks.

Results Our model estimates 264 CS cases per 100 000 live births in Guangdong during 2009, substantially greater than the 129 reported CS cases per 100 000 live births. This is consistent with a net 49% under-reporting of CS cases in 2009. Higher syphilis prevalence among women in their peak childbearing years (20–30 years old) is closely related to greater numbers of CS cases see Abstract P1-S1.47 Figure 1. Expanding prenatal screening coverage was the single most important mechanism for preventing CS cases; increasing prenatal screening from 50% to 100% coverage would be associated with 98 CS cases averted per 100 000 live births. Alternatively, a comprehensive syphilis control strategy including 100% prenatal screening, 100% treatment completion, and 100% early screening in pregnancy would be associated with 212 CS cases averted per 100 000 live births.



Abstract P1-S1.47 Figure 1 Predicted and reported CS cases in Guangdong Province, China, from 2005 to 2009.

Conclusions Our analysis illustrates the limitations of relying on CS reported cases alone to accurately track adverse pregnancy outcomes associated with syphilis infection in pregnant women. A comprehensive syphilis control strategy targeting universal prenatal screening coverage, treatment completion, and early screening in pregnancy is essential for successful achievement of overall WHO and Chinese CS objectives.

P1-S1.48 PREVALENCE OF SYPHILIS IN ANTENATAL CLINIC ATTENDERS AND ASSOCIATED RISK FACTORS

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Background Maternal syphilis can adversely affect pregnancy outcomes. This can be averted if women are tested and treated adequately during pregnancy. As part of a programme towards the introduction of routine syphilis testing and treatment in pregnancy in Ghana, the prevalence of syphilis in pregnant women attending a tertiary facility (also used as primary facility by pregnant women) was carried out. Associated risk factors for syphilis seropositivity was also determined.

Methods 841 pregnant women were tested for syphilis using a Rapid Plasma Reagin kit (Immutrep Carbon Antigen, Omega Diagnostics, UK). All sero-reactive samples were confirmed with a TPHA assay (Immutrep TPHA, Omega Diagnostic, UK). A questionnaire seeking socio-demographic information, history of previous pregnancy outcomes, and history sexually transmitted infections was administered to the enrolled women.

Results 6 out of the 841 (0.71%) women were seropositive for syphilis (RPR reactive, TPHA positive), out of which one had a high RPR titre (1:8), one a RPR titre of 1:4 and four had low RPR titres of 1:2. None of the risk factors studied were associated with syphilitic infection.

Conclusion A low prevalence of maternal syphilis was found in this urban population. This is low in comparison with a national prevalence of 6.5% among pregnant women, and high prevalences in rural settings in Ghana. This may be due to a low prevalence of syphilis in this urban area or better access to STI testing and treatment in this area which the women take advantage of due to the National Health Insurance Policy. Even with this low prevalence, studies indicate that testing and treatment is still cost-effective.

P1-S1.49 SYPHILIS PREVALENCE AND RISK FACTORS IN BRAZILIAN ARMED FORCES CONSCRIPTS, 2007

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The aim of this study was to describe the syphilis prevalence by geographic region and frequency of behaviours and symptoms related to STDs. A cross-sectional study was performed with Brazilian Armed Forces draftees in 2007. They answered a self-administered questionnaire on sociodemographic issues, sexual practice and condom use, STD symptoms and had a blood sample collected for syphilis test. A total of 35 460 draftees answered the questionnaire and 75.5% of these had already had sexual intercourse.

Overall syphilis prevalence was 0.53% (95% CI 0.45% to 0.61%). By geographic region—North (0.85%), Northeast (0.82%), being almost double the Midwest region (0.49%) and more than double the Southeast (0.34%) and Southern region (0.26%). Being 17 years old [OR=1.3 (95% CI 1.05 to 1.73)], having completed primary education [OR=1.5 (95% CI 1.03 to 2.22)], living in the North/Northeast region of the country [OR=1.2 (95% CI 1.04 to 1.36)], reporting a history of STD [OR=2.7 (95% CI 1.03 to 6.99)], being MSM [OR=4.5 (95% CI 2.59 to 7.81)], and reporting genital ulcer disease [OR=2.6 (95% CI 1.59 to 4.26)] were associated with syphilis. Addressing the young at the time of military enlistment may be a good moment to consider new strategies for accessing and counselling this population, thus allowing the implementation of a more appropriate healthcare policy.

P1-S1.50 A DECADE OF EARLY SYPHILIS IN EAST AND INNER CITY LONDON

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Background Following a rise in cases of early syphilis in the UK, a programme of national enhanced surveillance (ES) was commenced in 2001 by the Health Protection Agency with the aims of establishing case distribution and trends in behaviour groups. Local analysis of data acquired via the ES has led to changes to our services in targeting specific high risk groups through increased outreach and community based screening and improvement in health promotion interventions. These include screening for syphilis in all patients attending STI/HIV clinics, dedicated MSM and CSW clinics and outreach work to gay saunas and CSW. The purpose of this study is to look at the epidemiology of infectious syphilis in East and Inner City London over the past decade to provide data on the burden of infection and to further inform local strategy as a measure of outbreak control.

Methods Data were obtained from patients with infectious syphilis attending the Royal London and St Bartholomew's Hospitals in the City and East London from 2001 to 2010. The data were collated and analysed from the ES form.

Results Of 778 patients, 39% had primary syphilis, 37% secondary syphilis and 24% had early latent syphilis; 94% were male, 6% female, 51% white British and 12% were Afro-Caribbean. Of the male, 85% were MSM. Three cases were age <16, 27% 17–30 years and 34% were >40 years of age. 257 (32%) were HIV positive. The main reasons for attendance at clinic were for routine screen (24%), symptom management (46%), consequent of partner notification (6%). 18% had one partner, 58% had 2–9 partners, 19% had 10–99 partner, and 2% had ≥100 partners past 3 months. 82% acquired their syphilis in London, 4% acquired elsewhere in UK, and 8% in Europe. 4% were female sex workers and 6% acquired their infection through sex workers. 10% acquired their infection in gay saunas, 21% acquired through clubs and 14% via the internet. There were 21 cases in 2001, 115 in 2006 and 44 cases in 2010.

Conclusions (1) The syphilis outbreak peaked in 2006 and has decreased by 62% in 2010 indicating that intervention strategy which is still in place, is having an effect. (2) More preventive work need to be done in clubs and on internet dating. (3) HIV coinfection is common and is a cause for concern as syphilitic ulcers enhanced transmission of HIV and HIV coinfection can lead to more severe syphilis manifestation. (4) 21% had 10 partners past 3 months, mainly untraceable, and sex abroad will continue to fuel the outbreak.