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THE IMPACT OF SCREENING ON CHLAMYDIA TRANSMISSION IN AUSTRALIA — A MATHEMATICAL MODELLING STUDY

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Background Repeat chlamydia infection following treatment is common among young people and is associated with increased risk of pelvic inflammatory disease. Retesting and providing treatment to infected partners can reduce the reinfection rate. Both strategies have their own merits and limitations. Here we present a comparison of the impact of these two strategies on population prevalence through the use of modelling.

Methods An individual-based model was developed to represent the transmission of chlamydia in a heterosexual population. A proportion of the modelled population is tested for chlamydia and treated annually under the testing coverage achieved in ACCEPt. We estimate the additional reduction in chlamydia prevalence achieved by retesting individuals who were infected with chlamydia and compare with the estimated reduction achieved by treating the partners of infected individuals.

Results Preliminary results suggest that retesting at the rate achieved in ACCEPt would yield an additional 0.7% to 1.0% reduction in chlamydia prevalence. This reduction is greater than would be achieved by treating 10% of infected partners of index cases alone, which only yields an additional 0.5% to 0.8% reduction in chlamydia prevalence. If 10% of infected partners are treated in addition to retesting, the model predicts a further 0.6% to 0.7% reduction in chlamydia prevalence.

Conclusion Both retesting and partner treatment can result in reductions in chlamydia prevalence in the population. Assuming that the retesting rate achieved in ACCEPt can be extended to the general Australian heterosexual population, this strategy should result in a greater reduction in prevalence than treating 10% of infected partners. More substantial reductions can be achieved by combining both strategies.

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WHAT DOES ACCEPT MEAN FOR CHLAMYDIA CONTROL POLICY?

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Chlamydia infection is endemic among sexually active young adults. A recent systematic review of chlamydia prevalence in young adults in Europe and other high income countries estimated a pooled point prevalence of 3.6% (95% CI 2.4, 4.8) in women and 3.5% (95% CI 1.9, 5.2) in men. These levels of infection have remained stubbornly persistent in many countries despite major investments in sexual health programmes. This leaves policy makers with a challenge: what can we do to control chlamydia?

Existing evidence underpinning chlamydia control policy comes from (a) observational studies showing the incidence of sequelae, (b) a small number of trials showing a reduction in PID following a single offer of a chlamydia test to asymptomatic women, (c) ecological studies suggesting a decline in chlamydia following the introduction of widespread testing in some countries, (d) a small number of (inconclusive) studies the impact of testing interventions on population prevalence, (e) mathematical models estimating that screening programmes could have an impact on transmission and therefore prevalence if they achieve high coverage and repeated rounds of testing.

Overall there is a lack of a robust evidence base for the development of control policy.

The Australian Chlamydia Control Effectiveness Pilot (ACCEPt) promises to add to the evidence base by explicitly testing the effectiveness of an intervention in terms of changes in chlamydia prevalence. The results of the pilot will be discussed in relation to the wider evidence briefly described above.

S10 - Promoting STI control policies and programmes post-2015: lessons for the future from Iran and China

S10.3

STI CONTROL IN CHINA: WHAT ACCOUNTS FOR POLITICAL PRIORITIES?

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Introduction Despite a large and growing burden of mother-to-child transmission (MTCT) of syphilis in China over the past 20 years, the issue received far less attention and fewer resources than prevention of MTCT (PMTCT) of HIV, which has a substantially lower burden. China's Ministry of Health issued the first national plan for syphilis control in 2010, aiming to integrate PMTCT of syphilis and HIV. Our study aimed to identify: 1) why PMTCT of syphilis had a lower political/resource priority than PMTCT of HIV before 2010; and 2) what actions would improve the prospects of successful implementation of dual PMTCT.

Methods A comparative policy analysis was undertaken, based on informant interviews, documentation review, and nonparticipant observation of relevant meetings/trainings, to investigate priority-setting prior to 2010. Policy data were analysed by using a nine-factor framework which assesses political prioritization across three categories: transnational influence; domestic advocacy; and national political environment.

Results Several factors contributing to the lower priority accorded to PMTCT of syphilis were identified: 1) relative neglect at a global level; 2) dearth of international financial and technical support; 3) poorly unified national policy community with weak accountability mechanisms; 4) insufficient understanding of the epidemic and policy options; and 5) a prevailing negative framing of syphilis that resulted in significant stigmatization. Conclusion The goal of dual PMTCT of syphilis and HIV will only be achieved when equal priority is accorded to both infections. This will require stronger cohesion and leadership from the syphilis policy community. The community will also need to reframe the issue so as to overcome stigmatization against those affected by the illness, organize focusing events to attract political attention, and work more closely with the HIV policy community in order to enhance the recognition of the need to control syphilis on both the national and sub-national agendas.