were used to measure the odds of acquiring syphilis with greater number of CT and/or GC reinfections, adjusted for age, ethnicity and population (e.g., men who have sex with men).

Results Of 1 03 115 people having a CT infection, 11 458 (11.1%) had CT reinfection; of 14 713 people with a GC infection, 1514 (10.3%) had GC reinfection. Overall, 4989 individuals had CT/GC reinfection. Among these three reinfection groups (CT, GC, CT/GC), 80.9%/72.9%/63% had 2 infections, 14.4%/15.9%/19.5% had 3 infections, 3.2%/6.1%/8.9% had 4 infections and 1.6%/5.1%/8.6% had 5+ infections. Of all syphilis cases in BC, 7.4%/9.4%/12.3% were diagnosed among individuals with CT reinfection, GC reinfection and CT/GC reinfection. The odds of syphilis increased with greater number of infections, which persisted after adjustment in all three groups. Among the group with CT/GC reinfection, individuals with 3, 4 and 5+ infections had increased odds of syphilis compared to individuals with 2 infections (OR=2.2 (95%CI 1.6, 3.0), OR=2.5 (95%CI 1.7, 3.6) and OR=4.1 (95%CI 3.0, 5.7) respectively).

Conclusion Increasing number of CT and/or GC reinfections is strongly and independently associated with a syphilis diagnosis. Targeting public health interventions to a core group of individuals with CT/GC reinfections may be an effective syphilis prevention strategy.

013.6 UNDERSTANDING HEALTH FACILITY BARRIERS TO THE IMPLEMENTATION OF OPTION B+ GUIDELINES IN AN URBAN HOSPITAL IN GHANA: A QUALITATIVE ANALYSIS OF VIEWS AND PERSPECTIVES OF HEALTH PROVIDERS

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Introduction Full implementation of Option B+ guidelines in line with the World Health Organisation's recommendation could avert as many as 3 million AIDS-related deaths and 3.5 million new HIV infections by 2025. This study explored health providers' perspectives on health systems barriers affecting the implementation of Option B+ at the health facility level in Ghana.

Method A total of 17 in-depth interviews and two focus groups were conducted with health providers providing (prevention of mother to child transmission (PMTCT) services at Greater Accra regional hospital between April and May 2016. The Health providers were interviewed to obtain their perspectives on barriers for delivering Option B+ services. Interviews were tape-recorded and analysed using a thematic framework approach.

Results The findings highlight health system barriers that hinder optimal implementation of Option B+ guidelines. These comprise: inadequate work space for the provision of PMTCT services; limited laboratory capacity (lack of certain equipment for results confirmation); inadequate staff; lack of transport (for follow ups on defaulters) and training to upgrade staff knowledge. The supply of antiretroviral drugs was however not seen to be a challenge in this study.

Conclusion There are still some health system gaps that need to be addressed and strengthened to improve initiation, adherence and retention of clients in Option B+ care. Tackling these specific challenges will contribute towards the elimination of mother to child transmission (MTCT) of HIV, and improve maternal and child health outcomes in Ghana and the world at large.

Oral Presentation Session 14
STI/HIV Epidemiology and Prevention

014.1 RISK OF HIV FOLLOWING REPEAT SEXUALLY TRANSMISSIBLE INFECTIONS AMONG MEN WHO HAVE SEX WITH MEN IN VICTORIA, AUSTRALIA

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Introduction HIV notifications have increased significantly in Victoria since 2000. The majority of these are among men who have sex with men (MSM). Chlamydia, gonorrhoea and syphilis notifications have also increased among MSM in Victoria and reinfection occurs in approximately 15%–30% of MSM retested after a positive diagnosis of syphilis, chlamydia or gonorrhoea. Sexually transmissible infections (STI) have been associated with an increased risk of HIV acquisition. We aimed to test whether repeat infection increased the risk of HIV infection among MSM.

Methods A retrospective analysis of sentinel surveillance data was conducted. HIV negative MSM who attended three high case load clinics in Victoria from 2007 to 2014 with two or more HIV tests were eligible for inclusion. STI diagnosis and behavioural exposures were lagged to a patient's prior test event and an individual level discrete-time survival analysis using generalised linear modelling estimated the cumulative effect of repeat STI diagnoses on HIV diagnosis risk.

Results 8941 individuals were included in the analysis among whom 2.5% (n=227) were diagnosed as HIV positive. After adjustment for number of sexual partners and condom use in the previous six months, repeat rectal gonorrhoea infection (adjusted hazard ratio [aHR]: 6.24, 95% confidence interval [95% CI]: 2.68–14.50), single-event rectal gonorrhoea (aHR: 2.09, 95% CI: 1.15–3.79), rectal chlamydia (aHR: 1.89, 95% CI: 1.12–3.18) and syphilis (aHR: 1.99, 95% CI: 1.00–3.96) infections were associated with an increased risk of HIV diagnosis. Repeat rectal chlamydia infection (aHR: 1.62, 95% CI: 0.73–3.59) and repeat syphilis infection (aHR: 0.93, 95% CI: 0.11–7.65) were not associated with an accumulated increased risk of HIV diagnosis.

Conclusion In addition to increased risk due to a single STI, repeat rectal gonorrhoea infection was strongly associated with an accumulated increased risk of HIV diagnosis. These findings suggest MSM with repeat rectal gonorrhoea infection represent a higher risk group for whom preventive interventions are encouraged.