

prevents HIV, STIs, and other STI-related sequelae, including infertility. Furthermore, when couples attempt pregnancy, the unique characteristics of the condom allow it to be used in conjunction with safer conception interventions during the fertile period of the menstrual cycle. The condom may be used with the following: timed intercourse and self-vaginal insemination with or without pre-exposure prophylaxis. Therefore, HIV-affected couples with an immediate desire for a child may use the condom as an MPT, and during the fertile period, the couples may choose either a clinical or pharmacological method in their attempts to achieve pregnancy. Innovative MPTs need to combine methods and technologies in order to assist HIV-affected couples in maintaining their reproductive health, to prevent HIV/STI transmission, and to achieve their reproductive goals of having healthy children when desired. The traditional view of the condom serving only as dual prevention of pregnancy and HIV/STIs needs to be reconsidered, and instead expanded to include its ability to address all disease prevention and reproductive needs of HIV-affected couples. Future designs for MPT methodologies that do encompass the multiple aspects of HIV/STI prevention and reproductive needs may impact MPT demand, uptake, acceptability, and adherence.

#### S15.4 THE UNMET NEED AND POTENTIAL APPLICATION OF MPTS FOR RECTAL USE: IMPLICATIONS FOR WOMEN AND MSM AT RISK OF STIS AND HIV

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**Introduction** Both men and women and transgendered people practice receptive anal sex, and an act of anal intercourse is 10–20 times more likely to transmit HIV than an act of vaginal intercourse. Condoms are effective at preventing HIV acquisition through receptive anal sex, but many people do not use them perfectly for every sex act. Oral HIV pre-exposure prophylaxis is also effective at preventing HIV acquisition through receptive anal sex, but it does not prevent other sexually transmissible infections. Hence there is a need to develop a wider range of tools so that there are options for optimal protection of sexual health for men and women practicing receptive anal intercourse. **Methods** This paper reviews the pipeline of products in development that are designed to protect the sexual health of people practicing receptive anal intercourse.

**Results** A range of products are in development which are designed the rectal use. These products are ‘multipurpose’ technologies primarily as they aim to combine products frequently used prior to or during anal intercourse for ease and pleasure – such as sexual lubricants, and douche and enema products – for HIV and potentially sexually transmissible infection (STI) prevention purposes. Other products include suppositories and specifically designed applicators for rectal use. Currently research is focused on antiretroviral-based HIV prevention technologies, but there has also been some research on non-antiretroviral-based products. In addition, there are developments in oral pre-exposure prophylaxis for STIs other than HIV.

**Conclusion** Given that adherence to interventions is critical to the current HIV prevention tools, building preventative agents into products that people choose to use to enhance the experience of sex may help to optimize adherence.

**Disclosure of interest statement** No interests to disclose.

## S16 - STI and HIV in pregnancy

### S16.1 ELIMINATING MOTHER TO CHILD TRANSMISSION OF HIV AND SYPHILIS

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The Initiative for Global Elimination of Congenital Syphilis was launched in 2007, and the Global Plan towards the Elimination of New HIV Infections among Children by 2015 and Keeping Their Mothers Alive was launched in 2010. In 2014, the World Health Organization, jointly with UNAIDS, UNICEF, UNFPA, and other global partners released guidance on the processes and criteria for dual elimination of mother-to-child transmission (MTCT) of HIV and syphilis. Countries all over the world are now striving for dual elimination. This presentation will address recent successes like Cuba and current strategies and new tools that can help to overcome barriers in the dual elimination of MTCT HIV and syphilis with a particular focus on MTCT of syphilis.

### S16.2 POTENTIAL FOR UPTAKE OF DIAGNOSTIC TESTING SERVICES ALONG THE CONTINUUM OF CARE: LANDSCAPE ASSESSMENT OF COMMUNITY AND PROVIDERS

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**Introduction** Maternal infections continue to be a major contributor to maternal, perinatal, and neonatal morbidity and mortality. The use of diagnostic technologies for maternal infections in the developing world is poorly researched. The current study aimed to elucidate the provider- and patient-level factors that may act to inhibit or encourage timely and effective provision of diagnostic technologies during the pregnancy, intrapartum, and early postpartum periods for infections linked with poor outcomes for mothers and infants in the developing world.

**Methodology** This was an exploratory study that employed a socio-ecological framework. Using qualitative data collection methods, including focus group discussions (FGDs) with pregnant women, new mothers and their families, and in-depth interviews (IDIs) with lower-level providers, we examined health-seeking behaviours and perceptions of diagnostic testing during pregnancy with the aim of obtaining an in-depth understanding of factors related to the potential for uptake of new diagnostic technologies in two developing country settings (Bangladesh and Uganda).

**Results** Diagnostic testing during ANC was generally viewed positively. Findings suggest that women and their families would prefer any proposed diagnostic tests be administered by skilled and trained providers. Communities expressed reservations in providing biological specimens during labour and the immediate postpartum period with discomfort and pain during labour and postpartum confinement cited as reasons for these preferences. Blood and urine were deemed the most acceptable specimens, and vaginal swabs were generally not viewed favourably. While providers were familiar with the concept of diagnostic testing, there is limited use of diagnostics in maternal health care, with HIV testing in Uganda being a notable exception. While

providers saw definite advantages of diagnostic testing in terms of patient management, they also expressed reservations about the additional work load this would necessitate.

**Conclusions** There are high levels of receptivity for diagnostic testing among providers and communities with certain caveats regarding specimens and timing.

### S16.3 CLINICAL MANAGEMENT OF STI IN PREGNANCY

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Sexually transmitted infections (STIs) in pregnancy prevalent in many resource limited settings are associated with adverse pregnancy outcomes that include spontaneous abortion, stillbirths, preterm rupture of membranes, premature delivery and postpartum endometritis. Antenatal clinic attendance provides opportunity to screen the women for STIs, offer prompt treatment for curable STIs or prophylaxis for viral infections such as HIV and to promote prevention. Although routine screening for syphilis and HIV is recommended as part of antenatal care (ANC), optimal screening rates have not been achieved. This is due antenatal clinic non-attendance, non-availability of screening tests and where available, health system inefficiencies such long wait time before test results are available or need for women to make return visits to receive results. Use of point-of-care tests that detect syphilis and HIV have been shown to increase the number of women tested for HIV and syphilis, are inexpensive, easy to use and do not require sophisticated laboratory. In resource limited settings, prompt detection and treatment of the other STIs is hampered by lack of screening tests. Often, health providers rely on syndromic approach to diagnose and manage STIs. This approach alleviates need for laboratory services but misses women with asymptomatic infections and has poor diagnostic performance. Pregnant women with STIs are at an increased risk of acquiring HIV and transmitting the infection to their infants. Increased availability of HIV testing and provision of effective PMTCT regimens has dramatically reduced the number of new paediatric HIV infections. However, STIs, apart from HIV, have not been viewed as a public health priority and adequate resources allocated to combat them. To optimise maternal and infant outcomes, there is need to prioritise development of low cost tests to detect STIs during pregnancy and to ensure women are provided with effective treatment promptly.

### S16.4 POINT-OF-CARE TESTING AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS TO IMPROVE PREGNANCY OUTCOMES IN HIGH-BURDEN SETTINGS

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*Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Trichomonas vaginalis* and bacterial vaginosis are highly prevalent among pregnant women in many low- and middle-income countries, and have been associated with increased risk of adverse maternal and neonatal health outcomes, particularly preterm birth and low

birth weight. In a majority of women, these curable genital infections are asymptomatic and therefore remain undiagnosed and untreated in pregnancy because of a lack of suitable diagnostic technologies. Newly available, easy to use and highly accurate point-of-care assays for chlamydia, gonorrhoea, trichomonas and bacterial vaginosis are now available for use in routine clinical settings. A large-scale field trial to evaluate antenatal point-of-care testing and immediate treatment of curable sexually transmitted and genital infections to improve pregnancy outcomes in high-burden low-income settings will start recruitment in Papua New Guinea in early 2016.

## S17 - HPV and HIV: new evidence on the infection risks and strategies to prevent HPV-related disease among HIV-infected people

### S17.1 CERVICAL CANCER PREVENTION IN HIV-INFECTED WOMEN

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HIV-infected women are living longer and are at a higher risk of acquiring cervical cancer. More data comparing cervical cancer screening and treatment strategies in these women are urgently needed. WHO guidelines on optimal methods to screen and treat cervical cancer are available, but there are limited data to inform their potential modification for HIV-infected women. Even fewer data are available which compare the efficacy of treatment methods (loop electrosurgical excision procedure (LEEP) and cryotherapy) and differences in cervical disease recurrence between HIV-infected and HIV-uninfected women.

HPV testing appears to be the most sensitive, although less specific for CIN-2+ detection than either VIA and cytology screening. Several studies of HIV-infected women have shown equivalent sensitivity of VIA and of cytology screening for CIN-2+, although there is variation in results. Consistently across studies, the specificity of cytology appears higher than either VIA or for high-risk HPV testing. Two studies in South Africa and Kenya have suggested that the specificity of HPV testing and VIA for detection of high grade lesions is lower in HIV-infected women with lower CD4 counts; more research is needed to examine if screening test performance varies for HIV-infected women with higher versus lower CD4 counts.

More research in HIV-infected women is needed to examine if LEEP and cryotherapy treatment methods are associated with differences in HIV-viral shedding and in HIV transmission during or shortly after treatment.

HIV-infected adolescents have found to induce high-levels of neutralizing antibody titers following prophylactic HPV vaccination in bridging studies. Studies are not yet available on HPV vaccine efficacy in HIV infected women against either HPV-infection or clinical disease endpoints.