

**Results** The application was developed in the Engine Unity that allows platform portability and friendly interactions from the definition of visual contexts aligned with the target audience, adolescents and young Catholics. The contents selected to be placed in the mobile application were selected from the contents of the Adolescent Chat site, and focus on the themes of Sexuality, STD/HIV/AIDS and STD Prevention. The contents were developed and validated in a previous study. In addition to the presentation of explanatory content, the adolescent has the option of interacting through illustrations, animations and quizzes.

**Conclusion** The relevance of this study is therefore acknowledged, since it is focused on the development of an educational technology in health in the virtual format, aimed at adolescents, using recreational methods that favour critical reflection and, consequently, adoption of safe sexual behaviours. The importance of the application as an instrument of health education is highlighted, enhancing the actions of STD/HIV/AIDS prevention, solidifying the interdisciplinary practice, mainly aimed at improving the care of adolescents.

#### P4.82 MOBILE APPLICATIONS FOR ADOLESCENTS AVAILABLE ON VIRTUAL PLATFORMS: HEALTH PROMOTION POSSIBILITIES

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10.1136/sextrans-2017-053264.577

**Introduction** Children and adolescents constitute population connected to screens and digital technologies. They invest in the interactive process, periods of time that would be available for leisure, entertainment, study, school tasks, social and family relationships and other daily activities. In this context, this study aims to relate the mobile applications on sexuality and STD/HIV/AIDS prevention available on the main existing platforms.

**Methods** The list of applications was based on the Google Play (Android), App Store (iOS) and Marketplace (Windows Phone) search terms: Adolescent/teenager, sexuality, isolated and associated STD/HIV prevention, on both platforms, in the period between March and April 2016. Subsequently, the five most popular applications were identified from the identification of the available note and the number of evaluators. To analyse the data the main characteristics of the applications aimed at adolescents and discussed with the relevant literature were identified. The study obeyed the ethical aspects related to research involving human beings.

**Results** The research revealed that the most popular applications were games and erotic content, it is noted that no applications were found that contemplated adolescence and disease prevention. The most popular applications had scores ranging from 4.0 to 4.7 from a maximum score of 5.0 points. Of the five most popular, three belonged to the Android operational system and two to the Windows Phone operational system, of these, two propose to follow menstrual cycle, thus contemplating aspects of health promotion, and the others were games.

**Conclusion** The increasing use of information and communication technologies in the health area raises the need to include the concept of health care promotion using features such as mobile applications developed for smartphones and tablets.

Therefore, the importance of adapting the contents of mobile devices is extended, extending its use to information and health education.

#### P4.83 HIGH RISK BEHAVIOUR AND DETERMINANTS OF PATRONAGE OF HIV COUNSELLING AND TESTING AMONG BROTHEL-BASED FEMALE SEX WORKERS IN LAGOS, NIGERIA

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10.1136/sextrans-2017-053264.578

**Introduction** Sex workers are heightened risk of HIV/AIDS because of their risky sexual behaviour. In Nigeria, the number of sex workers living with HIV is eight times higher than the general population. HIV counselling and testing (HCT) is important in reducing spread of HIV and serves as an entry point to care. The study aimed at understanding the factors that influences sex workers patronage of HCT services in the study area.

**Methods** The study was conducted in October 2016 among 150 brothel-based Female Sex Workers (FSWs) purposively selected across three randomly selected local government areas representing the three senatorial districts in Lagos, Nigeria. The result was processed through SPSS 16.0. A binary logistic regression model was used in understanding the predictors of HIV testing among the sex workers.

**Results** The mean age of sex workers was 28 years. Findings showed a high prevalence of risky behaviour with about two-third (65.3%) consumed alcohol and 42% sometimes engaged in unprotected sex. Majority (86%) had gone for HIV testing prior to the survey but only seven in every ten went for HCT within six months prior to the study. Results from the binary logistic regression showed that sex workers education and length of practicing sex work exert a statistical significance on the patronage of HIV testing ( $p < 0.05$ ). Sex workers that do not engage in unprotected sex are less likely to patronise HCT (OR 0.53) than those that sometimes have unprotected sex while sex workers that are not aware of HCT centres are less likely (OR 0.85) to patronise HCT services.

**Conclusion** Findings demonstrate high risky sexual behaviour that exposes the FSWS to HIV infection. While a significant number of the sex workers have accessed HCT services at some point, many did not patronise within six months to the study. Though many attested to regular visit of NGOs involved in HCT testing in their brothels, there is still need for these NGOs to work with brothel managers. There is also an imperative for sexuality education to reduce high risky behaviour such as unprotected sex.

#### P4.84 HOW MANY ACCOUNT FOR HOW MUCH? LORENZ CURVES AND THE CONCENTRATION OF CONDOMLESS SEX PARTNERSHIPS

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10.1136/sextrans-2017-053264.579

**Introduction** Lorenz curves, while developed to measure income inequality, can describe the unequal distribution of sexual contacts in a population. Sexual partnerships are typically skewed with most individuals reporting few and some reporting many, but the degree of concentration is poorly understood. A better understanding has important implications for HIV and STI prevention, care and research, notably targeted PrEP and test-and-treat.

**Methods** We analysed data collected from an ongoing national HIV behavioural surveillance programme among gay and bisexual men (GBM) conducted in offline and online community settings in 2014. Participation was voluntary, anonymous and self-reported. Data were collected on the number of condomless anal intercourse partnerships (CAIPs) in the previous six months. We aimed to (i) describe the distribution of CAIPs; (ii) measure the concentration of CAIPs using Lorenz curves; (iii) identify potential “core” groups and compare their characteristics to other GBM.

**Results** Of 3027 GBM responding, 1575 (52%) reported at least one CAIP. Of these 1575, the median, mean and range was 1, 3.5 and 1–250 CAIPs, and the distribution was skewed with 90%, 95% and 99% percentiles being  $\leq 6$ ,  $\leq 10$  and  $\leq 39$  CAIPs respectively. An aggregate 5525 CAIPs were reported, with 9% of GBM accounting for 52% of all CAIPs (those reporting  $> 6$  CAIPs); 5% accounting for 40% of all CAIPs (those reporting  $> 10$  CAIPs); and 1% accounting for 19% of all CAIPs (those reporting 40+ CAIPs). The Gini index was 0.59 indicating high inequality. GBM in these three “cores” were more likely to be older, diagnosed HIV positive, have recent STI diagnoses and negative attitudes towards condoms and safe sex obligations.

**Conclusion** A large volume of condomless sex partnerships in this community sample was generated by a small proportion of GBM representing highly sexually connected nodes. Clinically, interventions with these GBM such as PrEP and early diagnosis and treatment can disrupt transmission of HIV and STIs across sexual networks and must be attractive and accessible to them.

#### P4.85 YOUNG FEMALE GARMENT WORKERS IN MIGRATION, SEX WORK AND HIV: A STUDY OF MUMBAI CITY

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10.1136/sextrans-2017-053264.580

**Introduction** HIV/AIDS has become a major public health problem in India. Garment industry is one of the fastest growing industries attracting adolescents and young women. Since many risk behaviours, associated with transmission of HIV, are adopted in young age, it is very important to target the prevention efforts in the young age group. One of the major obstacles in conducting any health education campaign in this industries that, many workers shift from factory for better facilities. Hence governments as well as NGOs have failed to conduct HIV/AIDS awareness programmes in these industries. This has created a situation where in young workers lack proper knowledge about of HIV/AIDS, and also risky behaviour associated with it. To evaluate awareness and attitude regarding HIV/AIDS and high risk behaviour.

**Methods** Primary data has been collected from selected garment unit in Mumbai city. In-depth interviews and focus

group discussion have been conducted using semi structured questionnaire to among women garment worker in Mumbai.

**Results** Interviews with migrant garment workers confirmed that poverty was the primary motivator for migration. Women and key informants reported awareness that some migrants had sexual relationships with local men or engaged in sex work to supplement their income. Factory restrictions limited women’s ability to access health care services and health education programs. Majority of the women had heard about HIV/AIDS and knew some aspects of it; the knowledge about it was very sparse. Migrant women and adolescent girls are more vulnerable to multiple partner sexual behaviour may be due to many reasons like poverty, harassment etc. Women involving in multiple partner sexual relations, which put them at greater health risk like RTI/STI/HIV.

**Conclusion** It is really a matter of concern as these women are highly vulnerable and can easily be infected with the HIV, considering the fact that they are not well aware about safe sexual practices. Adequate measures needs to be taken at various levels to address this issue more seriously.

#### P4.86 WORKPLACE AND HIV-RELATED SEXUAL BEHAVIOURS AND PERCEPTIONS AMONG FEMALE MIGRANT WORKERS: A STUDY OF MUMBAI CITY

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10.1136/sextrans-2017-053264.581

**Introduction** HIV/AIDS has become a major public health problem in India. Its prevalence among young people aged 15–24 years is high. Migrant workers have been identified as a population at risk for acquiring and transmitting HIV in many countries. For several reasons female migrants are believed to be more vulnerable than their male counterparts. Several studies have established that high risk sexual behaviours are related to the working environment. So it is important to identify the relationship between the workplace and HIV risk this may help researchers to develop appropriately targeted prevention intervention strategies among this vulnerable subpopulation. To evaluate awareness and attitude regarding HIV/AIDS and high risk behaviour related to HIV infection among garment workers.

**Methods** Primary data has been collected from selected garment unit in Mumbai city. In-depth interviews and focus group discussion have been conducted using semi structured questionnaire among women garment worker in Mumbai.

**Results** Interviews with migrant garment workers confirmed that poverty was the primary motivator for migration. Mostly migrated to the urban settlements from rural areas. This has significantly changed their socio-economic behaviour and livelihoods; They mostly belong to diversified poor socio-economic background; The workers are very young, having poor knowledge of personal hygiene, sexual and reproductive health, safer sex practices, STI and HIV/AIDS. They have limited access to reproductive and sexual health care and preventive measures. Factory restrictions limited women’s ability to access health care services and health education programs. Women involving in multiple partner sexual relations, which put them at greater health risk like RTI/STI/HIV.

**Conclusion** It is really a matter of concern as these women are highly vulnerable and can easily be infected with the HIV, considering the fact that they are not well aware about safe

sexual practices. Adequate measures need to be taken at various levels to address this issue more seriously.

#### P4.87 SHOULD WE BE USING TECHNOLOGY FOR PARTNER SERVICES?

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10.1136/sextrans-2017-053264.582

**Introduction** Since 2000, health departments throughout the US have used new technologies, such as the internet and mobile phones, to enhance the provision of services to persons with a sexually transmitted infection, including HIV, and their sex partners, also known as partner services (PS). This study reviewed the published literature to assess changes in partner service outcomes as a result of using technology for PS (tPS) and to calculate cost savings through cases averted.

**Methods** A systematic literature review of all US studies assessing tPS was conducted in June 2016. Outcome measures were captured and cost savings were calculated, when data were available.

**Results** Eight studies were identified, published between the years of 2000–2015. The most frequently used measures to evaluate tPS included the number of partners notified, evaluated, screened or tested; and new infections identified. Percentage of partners notified using technology ranged from 17%–64% and percentage evaluated ranged from 18%–26%. Number of new infections identified ranged from 2–19. Total costs saved through new cases averted ranged from US \$21 120 to US\$42 223. Where calculated, percentage of partners who otherwise would not have been notified was 50%. Texting resulted in more contacts (77%, 69%, 41%,  $p < 0.0001$ ) and quicker median response times (57.5 min - 1 day) than traditional partner services or using the internet.

**Conclusion** Data and outcome measures across the studies were not standardised, making it difficult to make generalizable conclusions. Where tPS was used, programs found increases in the number of partners notified, including those who otherwise would not have been notified, tested and treated. New infections were also identified. Improved response times and time to treatment were also seen as was re-engagement into care for previous HIV positive patients. Although not a replacement for traditional PS, tPS enhances PS outcomes.

#### P4.88 WHEN KNOWING IS NOT ENOUGH TO PREVENT: RISK AND INFORMATION SUCH AS YOUNG ACTIVISM IN HIV/AIDS

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10.1136/sextrans-2017-053264.583

**Introduction** Understand the circularity of information and its role or relation with the advancement of the HIV/AIDS epidemic among young people in Brazil; Discuss the role of

knowledge in this context of great access and circulation of information, especially among young people.

**Methods** From authors such as Giddens, Casttels, Spink and Goffman, we discuss the circularity of networked knowledge and its implications and influence on the behaviour of young people in vulnerability. From the theoretical discussion, interviews were conducted with 8 HIV positive and seronegative youths with the objective of identifying the sources of information they access about HIV/AIDS, in order to answer the following questions: What knowledge circulates? Where do they come from? Where are they going? How do they circulate? What is the purpose? What is the real impact of the information? What subjects add to it? Subsequently, the interviews were transcribed and submitted to the Thematic Content Analysis.

**Results** We identified three themes addressed by young people when questioned about information and knowledge they have about HIV/AIDS: the exchange of information in network media (internet, smartphones) as the main way of circulating knowledge; The discourse of risk and its weight in the decisions taken (whether they are to "risk" or "protect"); And the idea of vulnerable youth and youth empowered by accessible and available information. Knowing is not enough to prevent, because several other factors interfere in the decision to adopt a protective attitude towards the infection. Information can also contribute to the inverse effect; by the sense of empowerment it gives the youth.

**Conclusion** It is necessary to understand, create and/or identify new ways of "taking care", that consider the dynamics of the circularity of knowledge and undo the myth that "knowing is sufficient to prevent", from the identification of other factors circulating in the dynamics.

#### P4.89 GENDER AND THE AIDS EPIDEMIC IN ITS FOURTH DECADE: ARE THE SCIENTIFIC KNOWLEDGE INCREASING THE QUALITY OF SEXUAL LIFE OF WOMEN LIVING WITH HIV?

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10.1136/sextrans-2017-053264.584

**Introduction** Since the beginning of the AIDS epidemics, the prevention of MTCT has imprinted the directions of the debates on women's sexual and reproductive rights. The emphasis on the use of condom as the unique way of preventing sexual transmission, together with gender/sexual norms, has undermined women's ability to make sense of the latest scientific knowledge on their own benefit. This paper seeks to shed light on this issue by analysing the relationship between the acquisition of up-to-date information regarding HIV prevention and the use of condom.

**Methods** A cross-sectional study (GENIH study) was conducted between 2013 and 2014 in São Paulo with a probabilistic sample of 975 WLHIV aged 18 to 49. We applied weighted descriptive techniques and logistic regression to identify factors associated with the knowledge of new forms of HIV prevention among WLHIV such as the relationship between viral load (VL) and HIV transmission, and with condom use.

**Results** Although the great majority of women have correct information on the effects of HAART on VL and CD4 count,

only 35% are aware that undetectable viral load is associated with a decreased risk of sexual transmission. The knowledge that HIV transmission decreases with low VL is higher among women with higher level of education (OR=1.72), women diagnosed for at least two years (OR=1.91) and among discordant couples (OR=2.56). And, the non-use of condoms in the last sexual intercourse is higher among those who know that HIV transmission decreases with low VL and among those with HIV+ partner (OR=1.69 and 2.56, respectively), regardless level of schooling.

**Conclusion** Women can take advantage of up-to-date information on HIV prevention once they have it. Meaningful information is a critical piece to ensure a pleasurable and safe sexual life of WLHIV, free of constraints for not using condoms 100% of the time. Sexuality and its constraints are always changing. New challenges are placed in the fourth decade of the AIDS epidemic; some of them refer to gender and social inequalities in the access to information.

#### P4.90 WHICH SEXUALLY TRANSMITTED INFECTIONS DO GAY AND BISEXUAL MEN FIND MOST SCARY AND WHY? A QUALITATIVE STUDY

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10.1136/sextrans-2017-053264.585

**Introduction** As a result of high burden of infection, men who have sex with men (MSM) are a priority for sexually transmitted infection (STI) prevention interventions including promoting regular testing. Effective intervention design requires understanding of MSM's knowledge and perceptions of STIs and their social representations which may affect attitudes and behaviour related to risk, testing and treatment. To inform STI prevention interventions and development of questions inclusion in an online survey that would link with surveillance data on testing and diagnosis we assessed MSM's knowledge and attitudes towards STIs.

**Methods** We recruited a diverse sample of MSM in 4 English cities, through social networking and community organisations. 61 MSM attended one of eight 90 min focus group discussions. Topics included knowledge of, and attitudes towards STIs. We ran a discussion and ranking exercise in which names of 11 infections, specified below, printed in large font on separate sheets were laid out and respondents were asked what they knew about each and to rank them in order of most to least 'scary', giving reasons for their ranking. Infections included: HIV, syphilis, gonorrhoea, chlamydia, HPV/genital warts, genital herpes, *Shigella*, scabies, hepatitis A (HAV), B (HBV) and C (HCV). Discussions were audio recorded, transcribed and thematic data analysis conducted.

**Results** Participants demonstrated both wide and detailed knowledge as well as lack of awareness depending on individuals and infections. While the greatest knowledge and experience was of HIV, few had heard of or knew much about *Shigella*. No focus groups were unanimous in their ranking of infections and patterns were not the same across groups. HIV and HCV were ranked the two most 'scary' by all groups and

syphilis was among the three most scary. Herpes was also ranked highly by all but one group while scabies was similarly ranked least scary. Other infections ranked between with no clear patterning within or between groups. The exercise produced a complex range of explanations relating to fear of individual infections and of STIs in general. Participants weighed up the scary and less scary attributes of the infections depending on the extent of their knowledge about and experience of them, their prevalence among MSM, associated stigma, transmission mechanisms, contagiousness, symptoms, severity and the availability, effectiveness and ease of use of vaccines, treatment and/or cure.

**Conclusion** While knowledge of individual STI infections varies, knowledge and awareness about *Shigella* was particularly low. MSM expressed a range of nuanced concerns related to individual STI and STI testing and treatment. Fears influence and relate to each other e.g. considerable fear of a disfiguring infection may be reduced if the treatment is seen to be relatively easy, short and effective. MSM articulated a range of concerns which were subsequently used as categories in a self-completion survey to inform STI risk reduction, testing and treatment interventions.

#### P4.91 MONITORING ADHERENCE TO PRE-EXPOSURE PROPHYLAXIS: DEVELOPING, USING AND OPTIMISING AN ONLINE TOOL FOR DAILY AND EVENT-DRIVEN REGIMEN

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10.1136/sextrans-2017-053264.586

**Introduction** Oral Pre-Exposure prophylaxis (PrEP) with Truvada is a promising tool to reduce the number of HIV infections among men who have sex with men (MSM). With growing scientific interest in non-daily PrEP regimens (e.g. event-driven) assessing PrEP adherence has become more challenging. The aim was to develop, use and optimise an online tool to monitor PrEP adherence.

**Methods** In a first phase, an interdisciplinary team developed a secure web-based tool to collect data on adherence within a Belgian PrEP demonstration project (Be-PrEP-ared), involving 200 MSM using daily or event-driven PrEP or discontinuing PrEP use. The online diary was piloted before study implementation, and slightly adapted based on participant feedback. The use of the online diary tool by participants is closely monitored by study staff for completion. In a second phase, participative qualitative methods (i.e. co-creation sessions) were used to develop a smartphone application based on the diary aiming to support PrEP adherence. The efficacy of the adapted smartphone application is being tested.

**Results** The online diary is fully operational and being used by study participants of the PrEP demonstration project. Participants login into the secured platform on a daily base and fill in the number and timing of pills taken, whether they had sex that day and if so self-assessment of HIV risk self-assessment. The smartphone application is being finalised. Qualitative findings revealed that users prefer an application that provides scientific reliable information, is subtle and sensitive to privacy, can be used internationally, and has advanced

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