

arbitrarily (yet purposefully) to yield illustrations of potential incongruities among disparity measures.

Results We found several hypothetical examples of incongruities among disparity measures. For example, the ID was about ten times higher when all STD cases occurred among AI/AN than when all cases occurred among non-Hispanic Blacks. As another example, the ID indicated that disparity was less when all STD cases occurred among non-Hispanic Blacks than when each of the five racial groups accounted for one fifth of all STD cases.

Conclusion Relative measures of racial disparity in STDs can be useful to illustrate the burden of disparity, to assess trends, and to inform the targeting of prevention resources. However, in some scenarios the disparity measures can be incongruous with reasonable, practical assessments of disparity, such as when the ID is biased against non-Hispanic Blacks. The ID is more prone to these incongruities than measures which account for population size, such as the Gini coefficient or the weighted ID.

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S06 - STI vaccines: Advancing the global agenda

S06.1 THE GLOBAL ROADMAP FOR STI VACCINE DEVELOPMENT: MOVING FORWARD

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The global STI vaccine roadmap outlines critical next steps to accelerate development of new STI vaccines according to nine priority action areas: 1) obtaining better epidemiologic data; 2) improving the understanding of STI natural history and the burden of sequelae; 3) modelling the theoretical impact of STI vaccines; 4) advancing basic science research for STI vaccines; 5) conducting basic and translational studies in human clinical settings as soon as possible; 6) defining preferred product characteristics for 1st generation vaccines; 7) expediting clinical development and evaluation; 8) planning for vaccine introduction in advance; and 9) encouraging investment in STI vaccine development. This presentation will review the global roadmap for STI vaccine development, discuss key ongoing activities to implement the roadmap and advance the global STI vaccine agenda, and important next steps to continue to catalyse STI vaccine development.

S06.2 HERPES SIMPLEX VIRUS VACCINE DEVELOPMENT: PIPELINES AND POSSIBILITIES

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Genital herpes simplex virus (HSV) infection causes recurrent genital ulcers, neonatal herpes, and increases the risk of HIV acquisition. HSV-2, the most common cause of genital herpes, is highly prevalent worldwide, with an estimated 417 million people infected between the ages of 15–49. The urgent need for a prophylactic vaccine against genital HSV has been long recognized. Multiple glycoprotein subunit vaccines candidates have

been tested but none have successfully prevented HSV-2 genital ulcer disease in phase III trials. Despite these findings, there is strong interest in pursuing novel vaccine platforms to induce immune responses to protect against HSV acquisition. Therapeutic vaccines to reduce genital symptoms and viral shedding in persons already infected with HSV-2 are also being tested in early phase clinical trials. The global STI vaccine roadmap provided a framework for research priorities to move the HSV vaccine field forward. This presentation will review 1) lessons from prior clinical trials of HSV vaccines, 2) new insights into immunology of HSV infection, 3) current status of HSV vaccine pipeline, with an emphasis on candidates currently in clinical trials and 4) discussion of clinical trial design issues unique to HSV.

S06.3 CHLAMYDIA TRACHOMATIS VACCINE DEVELOPMENT: NEW TOOLS BRING NEW HOPE

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Despite decades of research, progress towards a vaccine for genital *Chlamydia trachomatis* infection and disease has been slow, with only modest levels of protection being achieved to date. In the last three years in particular, there have been several significant advances that give renewed optimism for an effective vaccine. In 2014, the WHO published a Road Map for STI vaccine development, listing a range of key objectives that need to be addressed. This presentation will discuss several of these objectives and the recent progress being made, including (a) understanding the relationship between pathogen genomes and disease severity, (b) use of non-mouse models for evaluating vaccines, (c) better understanding of disease pathogenesis using a rapidly expanding genetic toolbox, (d) recent promising vaccine trials.

S06.4 APPROACHING THE APEX: TECHNOLOGY INNOVATIONS FACILITATING THE DEVELOPMENT OF A GONOCOCCAL VACCINE

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Despite remaining as one of the leading causes of sexually transmitted infections, with sequelae ranging from ectopic pregnancy and infertility caused by scarring of the reproductive tract to blindness of children born to infected mothers, *Neisseria gonorrhoeae* has become a forgotten plague. This status has begun to change as multidrug resistant strains of *N. gonorrhoeae* have emerged, raising the frightening prospect of untreatable infections. Fortunately, as a renewed sense of urgency for the development of a prophylactic gonococcal vaccine has arisen, there have been several great strides made that will facilitate the development of a gonococcal vaccine. First, a new appreciation of the value of phenotypic and genome-based analyses of *N. gonorrhoeae* variants has led to increased recovery and characterization of bacteria from clinical specimens rather than simple PCR-based molecular diagnosis. Second, new insights regarding immune responses that facilitate *N. gonorrhoeae* persistence suggest immunological correlates that might afford protective memory. Third, the development of vaginal and transcervical uterine

infection in 'humanized' mouse models provides an unprecedented ability to study this exquisitely host-adapted pathogen *in vivo*, facilitating efforts to define the contribution of virulence factors to infection and immunopathogenesis, and providing a tractable model in which to test vaccine candidates. Finally, the re-establishment of human male volunteer urethral challenge models provides a clear path for the definitive validation of high priority vaccine formulations. The material nature of these advances has energized the community to coordinate efforts in the common goal of developing a vaccine to defeat this relentless pathogen.

S07 - Hooking up with new technology: influences on young people's sexual health

S07.1 NEW TECHNOLOGIES AND SEXUAL HEALTH PROMOTION

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New technologies have changed the way we communicate; we have 108 mobile subscriptions for every 100 Australians, 89% of adults own a smartphone, and more than 13 million Australians use Facebook. The popularity, low-cost, and scalability of these new media are ideally suited to sexual health promotion. There are numerous examples of innovations in sexual health promotion using mobile phones, social networking sites, apps and games. Programs have ranged from mass broadcasting of social marketing messages to highly individualised interventions. This presentation will provide an overview of some of these and will present the evidence for their success.

This presentation will also discuss evaluation practices used in sexual health promotion via new technologies. There is little guidance about methodology in this emerging field; measuring the true impact of a program, beyond counting 'likes,' is difficult. Opportunities to utilise the technologies themselves in evaluation are sometimes missed.

Finally, challenges in scale-up and translation of programs from research settings to the real world will be discussed. Successful and unsuccessful examples, and the lessons we can learn from these, will be examined. Common pitfalls in the field, such as confusing medium and message, assuming that newer is better, and mistaking reach for impact will be discussed.

S07.2 DR GOOGLE, PORN OR FRIEND OF A FRIEND? WHERE DO YOUNG MEN GET THEIR SEXUAL HEALTH INFORMATION?

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Background Young people are vulnerable in relation to sexual health. Young men are especially so as they attend the general practitioner less often than females and are less likely to be offered testing for sexually transmitted diseases. Access to good quality health information and education is a cornerstone of primary prevention yet we know very little about how, where and why young people obtain information about sexual health.

Methods One-on-one semi-structured interviews were conducted with 35 male students aged 16–19 years from at one regional and one metropolitan Victorian educational institution for trade skills until data saturation was reached. Interviews were audio-recorded, transcribed and thematically analysed.

Results The young men were generally poorly informed about sexual health. Their existing knowledge mainly came from school based sexual health education, which while valued, was generally poorly recalled and provided only a narrow scope of physiological information. Young men seek sexual health information from various sources including family, the Internet, friends, and pornography, with information from the latter three sources perceived as unreliable. GPs were seen as a source of trustworthy information but were not accessed for this purpose due to embarrassment. Young men preferred the GP to initiate such conversations. A desire for privacy and avoidance of embarrassment heavily influenced young men's preferences and behaviours in relation to sexual health information seeking.

Conclusions The current available sources of sexual health information for young men are failing to meet their needs. Results identify potential improvements to school based sexual education and online resources and describe a need for innovative technology based sources of sexual health education.

S07.3 FACILITATING SEXUAL HEALTH: WHY DO 12–16 YEAR OLDS ATTEND A RURAL SEXUAL HEALTH CLINIC?

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Introduction Chlamydia is the most commonly diagnosed bacterial STI in Australia and is asymptomatic in approximately 80% of people. If untreated, potential consequences include pelvic inflammatory disease, ectopic pregnancy and infertility. Those experiencing recurrent infections are more likely to experience these unwanted complications, and as such consideration must be given to those who are very young when first infected.

Methods In 2014 we undertook a retrospective audit at a rural sexual health service to determine what proportion of patients attending the clinic were aged 12–16 years, tested for and infected with chlamydia and their reasons for attending the clinic.

Results There were 595 consultations for patients aged 12–16 years during the study period, with a total of 111 individual patients attending the clinic, 104 (95%) were female. 194 chlamydia tests were conducted with the proportion of individual patients having at least one test per year being 100% in 2011, 81% in 2012, 72% in 2013 and 78% in 2014. There was no difference in the proportion tested by age over the study period ($p = 0.59$). 46 tests were positive for chlamydia (23.7%; 95% CI: 17.8%, 30.9%) with the proportion decreasing with increasing age from 46.7% (95% CI: 16.4%, 79.5%) in those aged 12 or 13 years to 15.5% (95% CI: 9.4%, 24.2%) in those age 16 years ($p = 0.02$). The reasons for attending the clinic when a chlamydia test was ordered included i) pregnancy testing, request for emergency contraception and/or termination of pregnancy (18.3%, 34/185), ii) symptoms of anything (16.7%, 31/185), iii) a request for STI screening or treatment (32.4%, 60/185) and presenting for contraception (32.4%, 60/185). Only 29.7% (33/111) of these patients would have tested for chlamydia if