

murine strain compared to wild-type mice. Further experiments are necessary to further elucidate the kinetics of *T pallidum*-infected Myd-88  $-/-$  mice (relative DNA burden in tissue compartments, carrying out infection to 3 and 6 months and beyond to assess chronicity). MyD-88 deficient mice may hold the promise of serving as one of the first useful murine models to study immunopathogenesis of *T pallidum* infection. Abstract O4-S2.05 figure 1: representative epididymus sections from Day 21 sacrifice. Formalin-fixed tissues were stained with H&E as well as *T pallidum*-specific immunohistochemical stain (IHC).

# **04-S2.06 A PRIMATE MODEL OF MYCOPLASMA GENITALIUM CERVICAL INFECTION**

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**Background** *Mycoplasma genitalium* (MG) is a newly recognised pathogen associated with acute and persistent reproductive tract infection in men and women. Understanding of the disease mechanisms, persistence and immune avoidance of this organism is hampered by the lack of a suitable animal model.

**Methods** Female pigtail macaques (*Macaca nemestrina*) were inoculated cervically with  $\sim 109$  genome equivalents ( $\sim 108$  ccu's) of MG strain G37, then assessed at intervals over 8 weeks for the persistence of MG in lower tract specimens. Fallopian tube biopsies were collected via laparotomy at Weeks 4 and 8. Specimens were assessed for the presence of MG DNA by qPCR and for viable MG by growth in H broth and Vero cell co-cultures. Serum collected at intervals was evaluated by immunoblot and ELISA for reactivity to MG antigens. Finally the variable regions of the immunodominant surface antigens, MgpB and MgpC, were analysed by PCR cloning and sequencing to evaluate sequence variation during infection.

**Results** Of the five primates inoculated cervically with MG, three were infected throughout the 8 weeks of the study, one maintained infection for 4 weeks and one resisted infection. Recovery of viable MG from lower reproductive tract sites was improved by co-culture in Vero cells followed by qPCR to measure an increase in MG genomes during culture. Growth in H broth, as determined by colour change proved an unreliable indicator of the presence of viable MG in the specimen possibly due to the presence of primate microorganisms that inhibit the growth of MG. No viable MG or MG DNA was detected in upper tract tissues in any of the primates perhaps suggesting that longer infection times or repeated inoculations are needed to achieve ascension in this model. Analysis of mgpB variable regions B and G indicated that after 8 weeks of infection the predominant expressed sequence changed from that of the G37C inoculum to 1 to 5 novel sequences consistent with recombination between the expression site and the MgPars. In contrast, no sequence variation was observed in the inoculum grown in vitro for a similar duration. Antibodies reactive with MG antigens, including the variable regions of MgpB and MgpC, were detected by immunoblot and ELISA in serum and cervical exudates.

**Conclusions** The cervical inoculation model of pigtail macaques results in long-term infection and can be used to study the persistence of MG, development of antibodies and antigenic variation.

## Health services and policy oral session 1—Innovation technology

### **05-S1.01 EMPLOYING SCHOOL NURSES AS A HEALTHCARE POINT OF CONTACT FOR MALE HIGH SCHOOL STUDENTS: A SCHOOL-BASED INTERVENTION TO PREVENT STD, HIV, AND TEEN PREGNANCY**

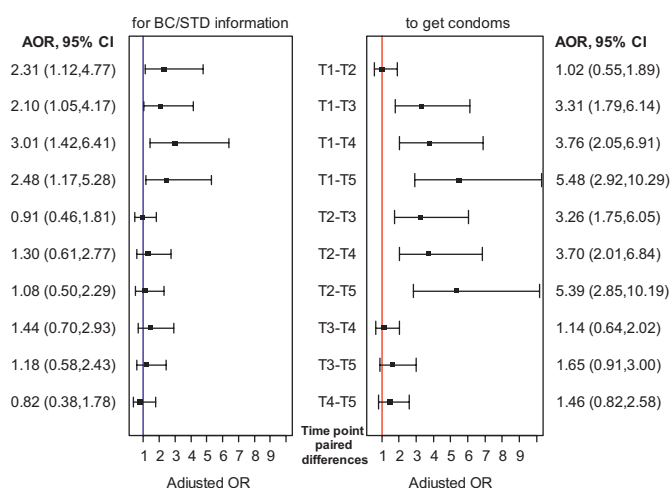
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**Background** Adolescent males tend to have lower levels of knowledge about sexual and reproductive health (SRH), and access health care less frequently than adolescent females. Innovative strategies are needed to reach males with accurate information and resources regarding their SRH needs. Such strategies may improve adolescent males' access to SRH services, including STD screening, treatment, and contraception.

**Methods** A multi-level intervention was delivered and evaluated across 5 years in a large public school district in Los Angeles, California. One intervention component sought to improve students' awareness and utilisation of condom availability programs (CAPs) in schools by working with key school personnel, particularly nurses, to more effectively implement district CAP policies. Six intervention and six control high schools participated in the study. Analyses included survey data from 13 733 high school males across 5 years (T1–T5). A mixed model logistic regression analysis was used to test for an intervention effect on males' reports of services sought from the school nurse. Random effects on the student level were included to control for repeated measures on the same student.

**Results** The sample was 80% Latino and 9% African American; the mean age was 16.3. In the intervention as compared to the control condition, statistically significant increases were observed across 5 years of intervention in respondents' reports of going to the school nurse for information about birth control, STDs, pregnancy, or sex (see Abstract O5-S1.01 figure 1), as well as reports of going to the school nurse for condoms. For example, 5.4% of intervention school males reported going to the nurse for condoms at T1; reports increased to 9.6% at T5 for this group, whereas an opposite trend was observed for control school males.



\*Adjusted for Demographics and Confounders  
Odds Ratios for the intervention effect between time points are calculated as the change in intervention minus the change in control.

Abstract O5-S1.01 Figure 1 Adjusted ORs\* for the change between time points in males going to the school nurse.

**Conclusions** School district policy combined with promotion of a CAP increased the number of adolescent males who sought out SRH information and condoms from the school nurse. With few points of access to the healthcare system available to males, school nurses may be especially important in connecting males to the healthcare system for services such as STD screening and contraception. As budget shortfalls affect all areas of school administration, school nurses should be recognised and retained as key players in promoting access to SRH services.

# 05-S1.02 ACCEPTABILITY OF IN SPOT AND PATIENT-DELIVERED PARTNER THERAPY AMONG MEN WHO HAVE SEX WITH MEN SEEKING MEDICAL CARE

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**Background** Patient-delivered partner therapy (PDPT) and internet partner notification (PN) sites (eg, inSPOT) are being adopted in some areas to improve PN outcomes. Neither intervention has been well-studied in men who have sex with men (MSM). We evaluated the acceptability and potential efficacy of these PN strategies among MSM.

**Methods** We anonymously surveyed MSM seen in an STD clinic and a private medical practice in Seattle, WA, USA. The survey presented respondents with three scenarios in which they had oral or anal sex with a new partner and were then notified and offered PDPT. A fourth scenario described PN via an inSPOT ecard.

**Results** MSM completed 198 surveys. A total of 115 (58%) men reported ever being diagnosed with a bacterial STD, 100 (50%) had previously been notified by a partner of an STD exposure, and 27 (14%) reported being HIV positive. The percentage of men who indicated that they would seek medical care was higher when scenarios indicated that the respondent had symptoms of proctitis (97%–98%) than when they were asymptomatic (83%–89%) or had symptoms of pharyngitis (84%). Only 123 (62%) men said they would seek medical care if notified via an anonymous inSPOT ecard and were asymptomatic, though this rose to 98% when the question indicated that the respondent had rectal symptoms. Men were somewhat more likely to report that they would take medication given to them as PDPT if they had symptoms than if they were asymptomatic (52%–57% vs 48%–49%). The proportion of MSM who would seek medical care if asymptomatic was lower among men who said they would take PDPT (74%–84%) than among men who indicated that they would not (92%–94%,  $p<0.06$ ); this pattern was not observed when questions described rectal symptoms. When asked directly if they would use inSPOT to notify partners if they had an STD, 56% said they would. However, when given multiple options and asked how they would prefer to notify partners, only 38% chose an ecard. MSM were less likely to report that they would seek a medical evaluation if notified via an anonymous ecard than via email or a signed ecard (75% vs 94%–95%).

**Conclusions** These results suggest that substantial numbers of MSM are interested in using PDPT and internet partner notification sites. However, they also support concerns that PDPT may decrease recipient's likelihood of testing for HIV and syphilis, and that anonymous ecards may be less effective in prompting partners to seek medical care than other forms of PN.

# 05-S1.03 YOUNG ADULTS' VIEWS ON TELEMEDICINE CONSULTATIONS FOR SEXUAL HEALTH IN AUSTRALIA

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**Background** Young adults in Australia face barriers to accessing sexual health services including concerns over confidentiality and privacy, cost, lack of transportation and limited options around medical providers. A possible solution to decreasing these barriers is the use of telemedicine.

**Method** An online questionnaire examined young adults' (aged 16–24) views on using webcam and telephone consultations for sexual health in Australia. Descriptive statistics were used to describe the study sample and  $\chi^2$  was used to assess associations. Free text responses were analysed thematically.

**Results** 662 people completed the questionnaire. Overall, 23% (n=150) of participants were willing to have a sexual health consultation with a doctor using a webcam if no genital examination was necessary; this number decreased to 16% (n=105) if a genital examination over webcam was needed. Men were more willing than women to have a webcam consultation (28% vs 21%,  $p<0.01$ ). In addition, men with same sex partners were more willing to have webcam consultation, with an unknown doctor, than men without any same sex partners (48% vs 26%,  $p=0.04$ ). Participants' top preference for consulting a doctor if asymptomatic and living 2 h from a doctor was telephone (51%, n=340, compared with 10% for webcam); if symptomatic, participants' top preference was in person (62%, n=412, compared with 16% for webcam) instead of having the consultation over a webcam. While it was hypothesised that webcam consultations would decrease privacy and confidentiality concerns by preventing people from having to present at a sexual health clinic, preliminary results suggest that webcam consultations may instead augment such concerns. Free text responses suggest that this may be due to the fact that online consultations can be recorded, stored and potentially, if security measures are breached, be retrievable and searchable online.

**Conclusion** To our knowledge, no study has examined the use of webcam consultations between healthcare providers and clients for sexually transmitted disease care. Results suggest that webcam consultations are not yet an acceptable medium for sexual health consultations for youth in Australia. Concerns about trust, privacy and security around online medical consultations are likely to influence whether such technology is eventually adopted into routine medical care.

# 05-S1.04 SOCIAL MEDIA AND CHLAMYDIA TESTING BY UNIVERSITY STUDENTS: A PILOT STUDY

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**Background** Facebook is the world's largest social media site, and university students comprise one of the largest user groups. Sexually transmitted infections are also highly prevalent among university students in the USA. We evaluated a targeted Facebook advertisement for easy, inexpensive chlamydia testing at The Ohio State University (OSU), a public university with 55 000 students.

**Methods** Over 2 weeks in May 2010, our advertisement for \$25 chlamydia testing was displayed to Facebook users who had self-identified as OSU students between 19 and 28 years of age. Students provided a urine sample directly to the laboratory; a clinician visit was not required. To a separate convenience sample we administered