eSTI2 being embedded within NHS services, incorporating personal support from clinicians when necessary.

Conclusions Concern around long waits and lack of privacy within traditional settings created a barrier to STI testing for these young people. Electronic self-testing for STIs, linked to Internet/mobile-App based clinical management and support (eSTI2) and embedded within NHS services appears highly acceptable to this group of high-risk young people and could increase their access to STI testing and care.

022.5 PROVIDING DISCRETE AND RELIABLE STD TESTING IN ALASKA VIA A WEB-BASED AT-HOME SERVICE

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Background Alaska has one of the highest rates of *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC) in the United States. Alaska Native people, women and youth (ages 15–29) are disproportionately affected. Alaska Native health organisations have jurisdictions over large geographic areas, containing small isolated communities where a perceived lack of confidentiality and privacy is an identified barrier to accessing Sexually Transmitted Disease (STD) testing. The Alaska Native Tribal Health Consortium (ANTHC) has partnered with the *"I Want the Kit"* programme (IWTK) at Johns Hopkins University (JHU) to provide a discrete and reliable STD testing alternative.

Methods Alaska residents 14 years of age and older can request a no-cost STD testing kit online or by phone, which is mailed via U.S. Postal Service. After collection, the kit is returned in a prepaid envelope to JHU where it is tested for Chlamydia, gonorrhoea and Trichomonas. JHU reports all testing results to ANTHC, where a nurse notifies all participants of their results and refers positive cases for treatment. IWTK Alaska focuses its advertising efforts in rural Alaskan areas where the disease burden can be high and the barriers to accessing confidential healthcare are greatest.

Results In 2012, JHU received a total of 439 home testing kit requests from Alaska of which 161 (37%) were returned. Alaska Native and/or American Indian participants comprised 30% and Whites 53% of kits tested; other minority groups made up the remaining 17% of kits tested. The ages of individuals who returned kits ranged from 16 to 63 years, with a median age of 28 years. Among the 161 kits tested, 14 (8.6%) tested positive for Chlamydia, two of these also tested positive for gonorrhoea, and four kits were positive for Trichomonas.

Conclusion This web-based STD testing option increases access to STD testing by alleviating privacy and confidentiality concerns.

022.6 FIELD EVALUATION OF THREE POINT-OF-CARE TESTS FOR CHLAMYDIA AND GONORRHOEA IN REMOTE HEALTH SERVICES IN AUSTRALIA

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Introduction Control of sexually transmissible infections (STIs) can be compromised by delays in time to diagnosis and treatment. Point-of-care (POC) tests can provide results at time of consultation. We conducted field evaluations of three POC tests (one new molecular-based and two best-performing immunochromatographic tests [ICT] identified from preliminary laboratory evaluations) for diagnosis of gonorrhoea (NG) and chlamydia (CT) at selected remote health services in Australia to identify the most suitable device for a larger randomised trial.

Methods Urine specimens collected from patients attending health services for routine STI screening were aliquotted and tested onsite with: GeneXpert® CT/NG (simultaneous detection of CT and NG), Diaquick CT (CT only), and Gonorrhea Card (NG only). We compared results to routine laboratory reference results (commercial nucleic-acid amplification test) and calculated sensitivity (Sn) and specificity (Sp) by standard methods. We assessed selected operational characteristics.

Results For GenXpert (n = 99): Sn and Sp for CT were: 100% (95% confidence interval [CI]: 56.1–100) and 98.9% (CI: 93.1–99.9); for NG: 100% (CI: 56.1–100) and 100% (CI: 95.0–100). For Diaquick (n = 50), Sn and Sp were: 42.9% (CI: 11.8–79.8) and 97.7% (CI: 86.2–99.9). For Gonorrhea Card (n = 15), Sn and Sp were: 66.7% (CI: 12.5–98.2) and 75.0% (CI: 42.8–93.3). Urine volume required: GeneXpert = 1ml; both ICTs = 15ml. Mean preparation time: GeneXpert = 1 minute and ICTs = 18 minutes. Time to result: GeneXpert = 88 minutes, Diaquick = 10 minutes and Gonorrhea Card = 15 minutes. Results from additional evaluation sites occurring in early 2013 will also be presented.

Conclusions The GeneXpert is highly accurate for detection of CT and NG from urine in these field settings. Similar performance has been reported from the laboratory. Despite longer time to results than traditional ICTs, the exceptional accuracy and operational benefits makes the GeneXpert device appealing for use where delays to treatment are frequent. This device will be further evaluated in a cluster-randomised controlled trial (TTANGO) to commence mid-2013.

022.7 HOME-BASED SAMPLE COLLECTION INCREASES CHLAMYDIA RETESTING AND DETECTS ADDITIONAL REPEAT POSITIVE TESTS: A RANDOMISED CONTROLLED TRIAL IN THREE RISK GROUPS

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Background Chlamydia retesting at three months after treatment is recommended to detect reinfections, but retesting rates are low. We assessed the impact of combining home-collection with SMS reminders on retesting rates in three risk groups.

Methods A randomised controlled trial was undertaken, involving 600 participants diagnosed with chlamydia: 200 men who have sex with men (MSM), 200 women and 200 heterosexual men. Participants were recruited from two Australian sexual health clinics and randomised to the home group (3-month SMS reminder and home-collection) or the clinic group (SMS reminder). The mailed

home-collection kit included a self-collected vaginal swab (women), UriSWAB (Copan) for urine collection (heterosexual men), and UriSWAB plus rectal swab (MSM). The primary outcome was the proportion retested at 1–4 months after chlamydia diagnosis, and the secondary outcome was the proportion with repeat positive results at the 1–4 month retest. Any testing outside the study sites was collected and included in the outcomes. An intention to treat analysis was conducted.

Results Overall 61% (183/300) of home group participants retested within 1–4 months of chlamydia diagnosis compared with 39% (118/300) in the clinic group ($p < 0.001$). According to risk group, the differences were: 62% vs 45% (MSM); 65% vs 38% (women); and 55% vs 34% (heterosexual men); all $p < 0.05$. Overall the proportion with a repeat positive result at the 1–4 month re-test was 16% (95% CI: 11–23) (30/183) in the home group compared with 10% (95% CI: 5–17) (12/118) in the clinic group: 26% (95% CI: 16–39) vs 11% (95% CI: 4–24) MSM; 12% (95% CI: 5–22) vs 5% (95% CI: 1–18) women; and 11% (95% CI: 4–22) vs 15% (95% CI: 5–31) heterosexual men.

Conclusion SMS reminders combined with home-based collection was a very effective strategy to increase chlamydia retesting in all three risk groups, and also detected additional repeat infections in MSM. The acceptability to patients and health care provider costs are currently being evaluated.

O.23 - Risk behaviours and preventive interventions

023.1 SEXUAL RISK TRAJECTORIES AMONG MSM IN THE UNITED STATES: IMPLICATIONS FOR PREP DELIVERY

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Background CDC guidelines state that men who have sex with men (MSM) at ongoing high risk of HIV infection should be targeted for pre-exposure prophylaxis (PrEP). Longitudinal data can inform the implementation of these guidelines.

Methods HIV-seronegative MSM enrolled in the Multicenter AIDS Cohort Study at 4 U.S. sites completed ACASIs at semi-annual visits. Behaviors since the last visit from 10/1/2003–9/30/2011 were used to assign participants sexual risk behaviour (SRB) scores ranking their risk level at each visit: (0) no insertive and/or receptive anal intercourse (IAI/RAI), (1) no unprotected IAI and/or RAI (UIAI/URAI), (2) only UIAI, (3) URAI with 1 HIV-negative partner, (4) condom-seropositioning, (5) condom-serosorting, and (6) no seroadaptive behaviours. Group-based trajectory modelling was used to examine SRB scores (< 4 vs. ≥ 4) and identify groups with distinct patterns of sexual risk.

Results The sample (N = 430) was 38.4% White, 42.3% Black, 14.9% Hispanic and had a median age of 39.1 years (IQR = 31.3–44.3). Three trajectory groups were identified: no risk (N = 286; 66.5%), low risk (N = 89; 20.7%), and high risk (N = 55; 12.8%). Compared to the no risk group, high risk group membership was negatively associated with older age (adjusted odds ratio [AOR] for 5-year age difference = 0.68, 95% CI: 0.56–0.84) and positively associated with being White (AOR = 2.12, 95% CI: 0.97–4.62), earning an income ≥$20,000 (AOR = 4.96, 95% CI: 2.10–11.71), depression (CESD≥ 16) (AOR = 2.06, 95% CI: 0.98–4.31), and stimulant use (AOR = 2.37, 95% CI: 1.18–4.78) at the index visit. Adjusted group membership probabilities for a 30 year-old, White male reporting an income ≥$20,000, depression, and stimulant use at the index visit were 0.15 (no risk), 0.39 (low risk), and 0.46 (high risk).

Conclusion Findings suggest MSM following high risk trajectories could be identified by the socio-demographic and behavioural factors described above, thus enabling PrEP programmes to target those at ongoing high risk of HIV infection.

023.2 CORRELATES OF INCONSISTENT CONDOM USE DURING ANAL SEX WITH FEMALE SEX WORKERS (FSWS) AMONG MALE CLIENTS: SURVEY FINDINGS FROM THREE HIGH PREVALENCE STATES OF INDIA

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Background Recent studies from India show that self-reported anal sex increased from 3% to 22% among female sex workers. However, comparable data from male clients' of FSWs are lacking. Using data from a bio-behavioural survey (2009–2010), we examined correlates of male clients' self-reported inconsistent condom use during anal sex with FSWs in Andhra Pradesh, Maharashtra and Tamil Nadu.

Methods Using a two-stage time-location cluster sampling, we recruited 4,803 men aged between 18 and 60 years who purchased sex from FSWs in the past month. After obtaining informed consent, respondents were interviewed and tested for HIV and STIs (Syphilis, Gonorrhea and Chlamydia). Logistic regression analysis was used to identify factors associated with inconsistent condom use during anal sex (in the past six months) with FSWs controlling for socio demographics and other contextual characteristics.

Results Overall, 12.4% clients reported anal sex in the past 6 months and nearly half (48.4%) used condoms inconsistently. Majority of these inconsistent users solicited FSWs from public places (77%), consumed alcohol (50%), had unprotected vaginal sex (99%) and also reported anal sex with other men (19%). Factors associated with increased odds for inconsistent condom use were being aged above 25 years (AOR:3.38, $p = 0.012$), occupation as manual labourer (AOR:2.05, $p = 0.029$) and perceiving to be at risk of HIV (AOR:10.2, $p = 0.000$). Those literate (AOR:0.40, $p = 0.033$) and currently married (AOR:0.41, $p = 0.056$) were at decreased odds and being STI/HIV positive was not significantly associated with inconsistent condom use.

Conclusion Results suggest that a relatively high proportion of clients were not using condoms consistently during anal and vaginal sex with FSWs which implies a greater risk of acquiring HIV and its further transmission to their male and female sexual partners (including spouses). Given the multidirectional risk, safer sex messages addressing heterosexual anal sex needs to be incorporated into HIV prevention interventions.

023.3 PREDICTORS OF SELF-ASSESSED RISK OF *CHLAMYDIA TRACHOMATIS* INFECTION AMONG ADOLESCENTS IN NORWAY

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