

Introduction HPV causes ~90% of anal cancers, with HPV16 predominating. Gay men, particularly HIV-positive men, are at greatly increased risk of anal cancer. We describe prevalence and predictors of anal canal detection of any HPV, high-risk (hr) HPV and HPV16, in a cohort of Australian gay men.

Methods SPANC is a 3-year community-recruited, prospective study of HIV(+) and HIV(-) gay men aged ≥35 years. At 6-monthly visits participants complete questionnaires, undergo high resolution anoscopy and anal swabs for cytology and HPV genotyping (Roche Linear Array).

Results By December 2014, 482 participants (median age 49.5 years; 31% HIV positive) had attended a baseline visit. The majority (87%) had ≥1 HPV genotype detected, with ~ two thirds (65%) having ≥1 hrHPV detected. HPV16 was detected in 31% of participants. HIV positive participants and younger participants were more likely to have any HPV detected ($p = 0.001$ and $p = 0.033$ respectively). The detection of hrHPV in univariate analyses was significantly associated with positive HIV status ($p = 0.001$), currently smoking ($p = 0.014$), younger age ($p = 0.012$), more lifetime male sexual partners ($p = 0.003$), more lifetime receptive (RAI) and insertive (IAI) anal intercourse ($p = 0.037$ and $p = 0.002$ respectively) history of anal chlamydia ($p = 0.003$), more receptive anal behaviours in the last 6 months, including RAI ($p < 0.001$); rimming ($p < 0.001$); fingering ($p < 0.001$). More frequent recent RAI and rimming and more lifetime IAI with condoms remained significant in multivariate analyses. HPV16 detection among HIV positive participants was four times more likely among men with a last CD4 cell count < 350 (OR 4.00, $p = 0.008$) and twice as likely among men with a nadir CD4 cell count < 200 (OR 2.12, $p = 0.033$).

Conclusion Anal HPV was extremely common in this cohort of homosexual men. Prevalent HPV16 was related to low CD4 count in HIV positive men. Receptive anal sexual practices, including rimming and fingering were predictors of hrHPV detection.

Disclosure of interest statement AEG has received honoraria and research funding from CSL Biotherapies, honoraria and travel funding from Merck, and sits on the Australian advisory board for the Gardasil HPV vaccine. CKF has received honoraria, travel funding and research funding from CSL and Merck, sits on the Australian advisory board for the Gardasil HPV vaccine, and owns shares in CSL Biotherapies. SMG has had grant support from CSL Bio and GlaxoSmithKline, and lecture fees from Merck, GlaxoSmithKline and Sanofi Pasteur; in addition, has received funding through her institution to conduct HPV vaccine studies for MSD and GlaxoSmithKline and is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. RJH has received support from CSL Biotherapies and MSD. All other authors declare that they have no conflicts of interest.

P10.14 FACTORS ASSOCIATED WITH HPV VACCINATION COVERAGE AT SCHOOL LEVEL DURING HPV VACCINE INTRODUCTION IN THAILAND

¹P Pensuk*, ¹N Wihantong, ¹W Klinsupa, ²L Wechakul, ²S Pankhun, ¹S Jiamsiri. ¹Expanded Program on Immunization, Ministry of Public Health of Thailand; ²Bureau of General Communicable Disease, Ministry of Public Health of Thailand

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Introduction In 2014, HPV vaccination program was launched to fifth grade female students in Phra Nakhon Si Ayutthaya province in Thailand. The overall HPV vaccination coverage was

91%, but sub-provincial HPV vaccination coverage varied due to multiple factors. This study aimed to explore factors associated with HPV vaccination coverage at school level during the introduction of HPV vaccine to the national immunisation program.

Methods A retrospective cohort study was conducted in Phra Nakhon Si Ayutthaya province, 613 fifth grade female students from 47 schools were surveyed to determine HPV vaccination coverage at school level. Teachers, healthcare workers (HCWs) and students were interviewed using standardised questionnaire to assess their knowledge and attitude about cervical cancer, HPV vaccine and HPV vaccination program. Furthermore, we explored programmatic activities that might affect HPV vaccination performance then conducted the multiple linear regression analysis to determine their relationship to HPV vaccination coverage at school level.

Results HPV vaccination coverage at schools range from 61.5 to 100 percent. Multiple linear regression analysis revealed that “HCWs knowledge that HPV vaccine safety and efficacy was carefully reviewed prior to registration” ($B = 42.2$, p -value < 0.01) and “HCWs supported HPV vaccine introduction in the national immunisation program” ($B = 8.9$, p -value = 0.01) related to increasing HPV vaccination coverage, while “providing vaccine information statement (VIS) to parent” shown a negative relationship ($B = -7.6$, p -value = 0.04). However, there was no evidence that teacher or student knowledge and attitude were related to HPV vaccination coverage at school level.

Conclusion HCWs’ confidence in HPV vaccine efficacy and safety and their support to HPV vaccine as a part of national immunisation program related to better HPV vaccine coverage, however, providing VIS to parents prior to HPV vaccination shown negative impact on HPV vaccination coverage at school level during HPV vaccine introduction.

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P10.15 THE EPIDEMIOLOGY OF HEPATITIS C VIRUS IN AFGHANISTAN: A SYSTEMATIC REVIEW AND META-ANALYSIS

¹H Chemaitelly*, ¹S Mahmud, ^{1,2}LJA Abu-Raddad. ¹Infectious Disease Epidemiology Group, Weill Cornell Medical College - Qatar, Cornell University, Qatar Foundation - Education City, Doha, Qatar; ²Department of Healthcare Policy & Research, Weill Cornell Medical College, Cornell University, New York, USA

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Background Our study aims to characterise hepatitis C virus (HCV) epidemiology in Afghanistan, as part of the Middle East and North Africa (MENA) HCV Epidemiology Synthesis Project. The MENA HCV Epidemiology Synthesis Project is an ongoing effort to characterise HCV epidemiology and inform research, policy, and programming priorities in MENA countries.

Methods We systematically reviewed and synthesised HCV prevalence and incidence data following PRISMA guidelines. Meta-analyses using DerSimonian-Laird random effects model with inverse weighting were implemented to estimate HCV prevalence among populations at various risk of HCV infection. A risk of bias assessment was incorporated.

Results Our search identified 48 HCV prevalence and one HCV incidence measures. Our meta-analyses estimated HCV prevalence at 0.7% among the general population (range: 0.0–4.0%; 95% CI: 0.3–1.3%), 31.8% among people who inject drugs

(PWID; range: 9.5–70.0%; 95% CI: 24.1–40.1%), and 2.5% among populations at intermediate risk (range: 0.0–8.3%; 95% CI: 1.4–3.9%). Among PWID, HCV incidence at 6 months was assessed at 66.7 per 100 person-years in one study. Geographic and temporal variations in HCV prevalence among PWID and prisoners appear to be present. While prevalence among PWID appeared to decline over few years from 36.0% to 27.6% in Kabul, from 12.5% to 9.5% in Jalalabad, and from 24.1% to 18.8% in Mazar-i-Sharif, it increased from 49.1% to 70% in Herat. Among prisoners, HCV prevalence appeared to increase from 1.7% to 4.6% in Kabul and declined from 4.1% to 1.4% in Herat. Risk factors among PWID included a range of injecting behaviours and socio-demographic characteristics.

Conclusions HCV prevalence among the general population in Afghanistan is comparable to developing and developed countries globally. There is an immediate need for increasing access to harm reduction programs among specific populations at risk, specifically PWID and prisoners.

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P10.16 FACTORS ASSOCIATED WITH ACCEPTANCE OF GENITAL HERPES TESTING FOR BLACK PATIENTS PRESENTING FOR CARE AT AN STD CLINIC

L Elope*, N Van Wagoner, B Van Der Pol, M Whitfield, E Hook. *Division of Infectious Diseases, Department of Medicine, University of Alabama at Birmingham, Birmingham AL*

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Background 15.5% of the population in the United States is infected with herpes simplex virus-type 2 (HSV-2). HSV-2 rates are disproportionately high in black Americans, with seroprevalence approaching 50% in some communities. Knowledge of infection status is an important prevention tool. We evaluated barriers to acceptance of serological testing for HSV-2 in black patients presenting to an STD clinic.

Methods This ongoing study evaluates factors associated with HSV-2 serological test acceptance in patients living in the Southeastern US. Participants did not report a history of genital herpes and data analyses were restricted to black patients (93.5% of the study population). Sera were tested with HerpeSelect® assays. χ^2 tests determined differences between groups based on testing. Univariate (UV) and multivariable (MV) analyses were performed to determine odds ratios (OR) for factors associated with test acceptance.

Results Of 112 participants, only 85 (75.9%) accepted HSV-2 testing. Although only one participant felt their test results would be positive, seroprevalence for HSV-2 was 31.7%. Test acceptance was more common in persons presenting for symptom evaluation (53.1%) than as contacts (17.2%) or for screening (29.7%). In UV analyses, participants who reported depression (OR 2.8; 95% CI 1.1, 8.3), previous HIV testing (OR 3.0; 95% CI 1.1, 7.9) and STI history (OR 5.8; 95% CI 1.5, 24.4) were more likely to accept testing. Only previous HIV

testing (AOR 7.4; 95% CI 1.2, 66.4) remained significant in MV analysis.

Conclusions While many participants accepted testing, the rate was lower than in previous studies with little perception of risk. Culturally tailored interventions are needed to enhance assessment of HSV risk and test acceptance.

Disclosure of interest statement No disclosures.

P10.17 INHIBITION OF HERPES SIMPLEX VIRUS 1 (HSV-1) REPLICATION BY INOSITOL-REQUIRING ENZYME 1 (IRE1) PATHWAY

¹AR Su*, ¹XH Wang, ^{1,2}ZW Wu. ¹Center for Public Health Research, Medical School, Nanjing University, Nanjing, PR China; ²State Key Lab of Analytical Chemistry for Life Science, Nanjing University, Nanjing, PR China

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Introduction Endoplasmic reticulum (ER) plays important roles in viral replication. Massive viral proteins entering the ER can trigger ER stress. The ER stress is marked by the activation of a series of signalling pathways, called the unfolded protein response (UPR), which consists of three distinct, yet related, signal pathways, PERK, IRE1 and ATF6. The PRKR-like ER kinase (PERK) signalling branch has been the focus of investigation on its roles during HSV gene expression. In contrast, there have been little studies on roles of the IRE1 branch of the UPR on HSV replication.

Methods Western blot, RT-PCR, RNA interference and in cell western method were used in the study.

Results We showed that HSV-1 replication was inhibited by the phosphorylation of the IRE1 (p-IRE1) pathway. We also detected the mRNA expression of spliced X box-binding protein 1 (XBP1_s), which was activated by p-IRE1. IRE1 mRNA was up-regulated by viral infection, but XBP1_s was not affected, which indicated that viral replication is not associated with spliced XBP1 signal pathway. It is known that cJUN NH2-terminal kinases JNK [JNKs; also known as stress-activated protein kinases (SAPKs)] is another downstream component of IRE1 and JNK is known to be activated by infected cell polypeptide 0 (ICP0), the immediate early protein of HSV-1. Our results revealed that the JNK activation was attenuated following the IRE1 inactivation. Inhibition of ire1 function by RNA interference (siRNA) could block the viral replication and JNK activation, suggesting that IRE1 pathway is required for facilitating viral gene expression and the inhibition of IRE1 activation blocks viral replication.

Conclusion The identification of roles of the IRE1 branch of ER stress in HSV-1 replication will provide new insight to the HSV-1 pathogenesis and may lead to new therapeutic targets.

Disclosure of interest statement No conflict of interest in the development of this study.

P10.18 ACYCLOVIR 1 GM TWICE A DAY FOR 3 DAYS FOR THE TREATMENT OF RECURRENT GENITAL HERPES

K Verma*, M Sonune, S Gupta. *Department of Dermatology and Venereology, All India Institute of Medical Sciences, New Delhi, India*

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Background Recurrent genital herpes is conventionally treated with acyclovir 200 mg 5 times a day orally which is inconvenient to take. We studied the effectiveness and safety of acyclovir 1 gm twice daily orally for 3 days in treatment of genital herpes.