P143 MEDICATION REVIEWS FOR PEOPLE LIVING WITH HIV (PLWHIV)

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Background As people are living longer with HIV, patients present with multi-morbidities and polypharmacy. To reduce the risk from drug-drug interactions, the multi-disciplinary team within our large city centre sexual health centre, carry out medication reviews for patients with polypharmacy (classed as >5 drugs excluding anti-retrovirals) on an ad-hoc basis. This audit aims to identify the proportion of HIV patients who have had a documented medication review (DMR) in the past 15 months and to re-audit following introduction of a service improvement to ensure that 90% of our patients have a DMR prior to clinician appointments.

Methods Study samples were obtained from a randomly selected week of booked HIV clinic appointments. Data was collected from electronic patient records for a look back period of 15 months.

Results In the initial audit, from a study sample of 203 PLWHIV, 29% of the total population and 21% of those with polypharmacy had a DMR. 39 interactions were identified, three minor and 36 significant. All 39 interactions required an intervention. The re-audit had a study sample of 180 PLWHIV, 94% of the total population and 97% of those with polypharmacy had a DMR. 135 interactions were identified, 113 minor and 21 significant. 121 of these interactions required an intervention.

Conclusion The combination of anti-retroviral treatment with polypharmacy significantly increases the chance of potentially serious drug-drug interactions. To deliver safe and effective patient care and to ensure we are minimising the risk of adverse drug events as a result of these interactions, it is essential that a medication review is carried out for all our patients, ideally with every change in treatment but at the very least, every 15 months to meet national standards. Subsequently, our pharmacy team are completing medication reviews for each patient, prior to clinician appointments, supporting patients to get the most from their medicines.

Disclosure No significant relationships.

P145 AN INTRA-FAMILIAL TRANSMISSION OF HIV-1 CRF02_AG WAS RECONSTRUCTED BY MOLECULAR EPIDEMIOLOGY

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Background Mother to child transmission (MTCT) plays an important role in children HIV infection, and in China, about 0.1% to 0.4% individuals were infected through MTCT. Nucleic acid amplification testing was powerful tool to assess the effect of prevention of MTCT, mainly by qualification NAT. Here, we described an intrafamilial transmission event by molecular epidemiology.

Methods A pregnant woman with seroconversion during pregnant healthcare was followed up by epidemiology

survey, together with her husband and newborn. Viral RNA was extracted for the amplification of HIV-1 gag gene and pol gene fragments with One-step RT-PCR. The positive PCR products were subject to DNA sequencing. The sequences of gag gene and pol gene were codon-based aligned and analyzed with MEGA 6.0 to construct neighbor-joining tree, respectively. The genotypic drug resistances were interpreted by Stanford University HIV drug resistance database.

Results The proband was the pregnant woman, with seroconversion of anti-HIV-antibody screening by Wantai HIV-1/2 Ab kit during pregnant healthcare. Afterward, her husband and son at age of eight months were diagnosed as HIV-1 infection by HIV-1 antibody screening and RT-PCR, respectively, although her son was RT-PCR negative one day after birth. Neighbor-joining (NJ) tree indicated that the three individuals were infected by HIV-1 CRF02_AG, forming a close subcluster with high genetic homogeneity (bootstrap value, 95%). The sequences from the husband were closer to the root or the ancestor of the tree, and the topology structure indicated the transmission timing and evolution relationship, from father to mother and child, as shown by seroepidemiology.

Conclusion An intra-familial transmission of HIV-1 CRF02_AG was reconstructed by molecular epidemiology and the possible transmission relationship was elucidated. Contagious diseases screening should be reinforced during healthcare before marriage or pregnancy-deliver. Prevention of mother-to-child transmission should be timely and efficiently administered upon diagnosis of infection in pregnant women, to avoid the secondary intra-familial transmission and improve the population quality at birth.

Disclosure No significant relationships.

P148 TRANSCONTINENTAL DISSEMINATION OF THE MAJOR HIV-1 CRF01_AE LINEAGES CIRCULATING IN CHINA

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Background While HIV-1 CRF01_AE has caused a large epidemic in Mainland China, and distinct lineages related to transmission among various high-risk populations have been identified, whether its transmissions have dispersal outside remains poorly understood. We aimed to characterize and quantify the genetic relationship of HIV-1 CRF01_AEs circulating in Mainland China and in other countries globally.

Methods Phylogenetic and molecular clock analyses were carried out for all available CRF01_AE pol sequences deposited in two databases (the Los Alamos HIV sequence database and the UK HIV Drug Resistance Database) to characterize the possible linkages between CRF01_AE variants in Mainland China and the rest of the world.

Results We found that all five major lineages associated with the transmission in Mainland China were detected in the rest of the world, as following the Vietnam (n=228), Kingdom (n=48), Japan (n=18), Hong Kong (n=6), Czech Republic

(n=4), Thailand (n=3), Australia (n=1), Russia (n=1), Sweden (n=1) and Malaysia (n=1). Therein, 84% sequences mixed among CN.01AE.HST/IDU-2, most of which were sampled before 2010 and born in Southeast Asia. 14% sequences clustered with CN.01AE.MSM-4 and -5. A distinct sub-cluster with small divergence that consisted of 15 Japanese variants was formed inside CN.01AE.MSM-4 and the tMRCA of CN.01AE.MSM-4 and the latter sub-cluster were around 1996 and 2006. For other four major lineages, we have not found any significant transmission cluster structure for specific geographical regions.

Conclusion This results demonstrated the Chinese CRF01_AE variants have disseminated to other countries but have not scaled, and the immigrant modes of CRF01_AE variants from Asia to global has changed. Our study provided the evidences of regional and global dissemination of Chinese CRF01-AE lineages and highlighted the importance of shaping the newest global landscape of HIV and the necessity to implement the effective measures to reduce global spread of HIV.

Disclosure No significant relationships.

P149 EVOLUTION: A TEXT MESSAGING POWERED INTERVENTION FOR CONNECTION, SUPPORT AND HIV ERADICATION

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Background To reach the UNAIDS goal of 90–90–90, young people worldwide must experience improved linkage to care, retention in care and viral load suppression (VLS). This goal highlights needs for accessible mHealth approaches. The EVolution intervention is one such approach with automated and live text-messaging and a triggered alert system for timely support. Our goals included: 1) address concerns in young people's lives (housing, utilities, and mood); 2) increase appointments kept; 3) improve VLS rates.

Methods HIV positive youth at clinic sites with access to a mobile texting device, and at least one additional criterion: newly diagnosed; not linked to care; out of care for at least six months; viral load greater than 200 copies/mL were recruited. The intervention uses automated two-way text messages for HIV-specific medication/appointment reminders, monthly housing/utilities needs assessment and semi-weekly mood checks. Self-reported client challenges trigger action alerts and timely live two-way text messaging with case management. Results were examined over 6-months.

Results 102 youth enrolled. 89 participated in the program for ≥ 6 months. Most participants were young, average age 22.33 (SD=2.08), male (91%), Black (93%) and men who have sex with men (MSM) (82%). Eighty-one percent of youth responded to at least one text in 89,120 total exchanges. Texts triggered 395 alerts, most often for missed medication, housing issues and missed appointments. Seventy-nine youth kept at least one appointment for HIV medical care. Twenty-five participants newly achieved VLS and 35

maintained VLS during the 6 months. A significantly greater proportion of participants were virally suppressed at 6 months versus baseline ($p=0.18$).

Conclusion This text messaging intervention, which could be replicated in diverse settings, led to improved health and communication in a sample of young people at-risk or experiencing poor HIV outcomes. This presentation introduces an innovative streamlined communication approach with HIV positive youth, which addresses important health and social needs.

Disclosure No significant relationships.

P151 HIV EPIDEMIC AMONG CRACK USERS IN CENTRAL BRAZIL: EPIDEMIOLOGICAL BASIS FOR INTERVENTIONS

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Background Global strategies have been discussed and implemented worldwide to reduce the number of new HIV infections among key populations. In Brazil, there is a large lack of knowledge about groups that are highly vulnerable to this infection, such as drug users. Therefore, this study aimed to investigate the epidemiological profile of HIV infection in institutionalized crack users in the Central Region of Brazil.

Methods Between 2012 and 2013 we conducted a cross-sectional study of 919 crack users who were being treated at mental health referral institutions in two major cities located in the Central-West Region of Brazil. All were interviewed and tested for anti-HIV by the enzyme-linked immunosorbent assay (ELISA). Univariate and multivariate Logistic regression were done to identify the association of HIV and behaviors variables. This study was approved by the Research Ethics Committee of the Federal University of Goiás.

Results Of the total number of individuals recruited, 85.2% were male (84.5%), young (median: 30 years old, IQR: 18–68) and basic schooling (median: 8 years of study, IQR: 0–18). Of the total, 2.6% (95% CI: 1.7%–3.8%) were anti-HIV positive, ranging from 2.2% (95% CI: 1.4%–3.6%) in men and 4.4% (95% CI: 2%–9.2%) in women. Logistic regression analysis revealed that the antecedent of life on the street (adjusted OR: 4.0, $p = 0.023$), sexually transmitted infection (adjusted OR: 4.4, $p = 0.014$), use of improvised pipe for crack use (adjusted OR: 7.9; $p = 0.010$) and having sex in the last year with a partner known to have HIV/AIDS (adjusted OR: 8.7; $p = 0.001$) were predictors of HIV infection.

Conclusion Effective HIV prevention and control strategies should be implemented for this specific group including the community-based and community-led programs, with an emphasis on health education, harm reduction measures, and control of sexually transmitted infections, especially among homeless people.

Disclosure No significant relationships.