FISHERMEN AS A SUITABLE POPULATION FOR HIV INTERVENTION TRIALS

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Introduction Suitable populations to sustain continued evaluation of HIV and sexually transmitted infection (STI) prevention interventions are required. We sought to determine whether fishermen are a suitable population for HIV intervention trials.

Methods In a cross-sectional descriptive survey, we selected 250 fishermen from proportional to size sampled boats. We collected socioeconomic and behavioural information, and specimens for HIV, herpes simplex virus (HSV-2), syphilis, gonorrhoea, chlamydia and human papillomavirus (HPV) tests from consenting participants.

Results One third of the fishermen had concurrent sexual partnerships and two thirds were involved in transactional sex. About 70% were involved in extramarital sex with only one quarter using condoms in their three most recent sexual encounters. HIV prevalence was 26% and HSV-2 and HPV was 57%. Over 98% were willing to participate in a future HIV prevention clinical trial.

Conclusion Fishermen are a high-risk group for HIV/STI infections that may be suitable for HIV prevention trials. A cohort study would be useful to measure the incidence of HIV/STIs to ultimately determine the feasibility of enrolling this population in an HIV/STI prevention clinical trial.

THE IMPORTANCE OF HAVING AN ADOLESCENT HIV UNIT CASE REPORT AT JOS UNIVERSITY TEACHING HOSPITAL (JUTH), JOS PLATEAU STATE, NIGERIA

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Issue JUTH has one of the largest HIV treatment centres in North central Nigeria currently has 529 children enrolled into the program,498 on treatment. Since inception in 2004,92 children had virologic failure of their treatment and 45 transferred to the Adult ART program.I present the case of one of our children that have grown into Adulthood who defaulted her treatment,failed treatment regimen, got pregnant from HIV negative sex partner and had her baby is free of HIV.

Body: The child was enrolled into the program at age of 10 and she lost mother to HIV when she was 9 years old. Her 1st line drug regimen was Zidovudine, Niverapine and lamivudine which she was not adherent to. At age 17,she admitted that she had a sexual partner who was later invited counselled and tested, his HIV antibody test was negative.She was later transferred to the adult clinic at the age of 18 years with viral load of 52 68 copies/ml while CD4 count of 345 cells/mm. She got pregnant also immediately from another partner but failed to access Prevention of child transmission of HIV (PMTCT) for fear of being scoured by the health workers. She had a vaginal delivery at 39 weeks.

Intervention Baby was enrolled at the paediatric unit,had Niverapine prophylaxis for 6 weeks and was breastfed baby exclusively for 6 months.Condoms use was inconsistent and she was also on daily contraceptive. Her baby recorded HIV negative result for DNA PCR (Deoxyribonucleic acid polymerase chain reaction) results at week 6,12, and 24 and Post breast feeding DNA PCR test. Baby is still incare for followup. Sex partner was counselled,tested for HIV, antibody testing result was HIV negative, and he was subsequently enrolled for the prevention program (PrEP).

Lessons learnt There is need to establish an Adolescent ART clinic where reproductive health can be discussed freely and healthworkers should encourage instead of being judgmental and also we need to educate them on HIV infection and reinfection,drug adherence and also encourage abstinence.

HOW MUCH CAN HIV TRANSMISSION BE REDUCED IN HIGH-RISK MSM BY TARGETING TESTING TO DETECT AND TREAT PRIMARY HIV INFECTION (PHI)? ANALYSIS OF A COHORT STUDY USING AN INDIVIDUAL-BASED MODEL

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Introduction HIV incidence remains high in UK MSM, and cost-effective combination prevention is needed. We estimated numbers of infections averted by targeting testing for highly-infectious primary HIV infection (PHI) in high-risk MSM.

Methods A cohort study of 98 MSM (participation rate 94%; zero loss to follow-up) recently infected with HIV recorded sexual behaviour in the 3 months pre- and post-HIV diagnosis. A stochastic individual-based model calculated numbers of HIV-transmission events expected to occur with and without the effects of (i) immediate ART in those who chose to receive it and (ii) behavioural changes reported post-diagnosis by those who did and did not receive ART. The model incorporates different types of sex-act, condom use, and distinguishes between regular and casual partners.

Results If PHI lasts for 3 months, testing is monthly, and viral load is suppressed by ART after 3 months with an initial rapid decline in the first 2 weeks, then from the 73 patients who took ART the reduction in transmission would be ~75%, from 22–33 to 5–8 events, and in the remaining 25 patients...
the reduction (due to behaviour change only) would be ~50%, from 8–12 to 5–7. If the duration of PHI is shorter, or testing frequency is lower frequency, and/or viral-load suppression is slower then the number of infections averted is reduced.

Conclusion Diagnosing HIV during PHI can markedly reduce transmission because its high infectivity and short duration make treatment and even short-term behaviour change effective in reducing transmission. Cost-effectiveness would be increased by efficient approaches to identifying PHI (e.g. encouraging HIV testing after episodes of high-risk behaviour and intensive contact tracing from recently-infected individuals, since PHI cases are likely to be clustered). Our quantification of the number of infections averted is an essential component of assessment of the cost-effectiveness of strategies to increase diagnoses of PHI.

**P5.24** DRUG RESISTANCE AMONG WOMEN ATTENDING ANTENATAL CLINIC IN GHANA

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*Abstract* Initial evidence from resource-limited countries using the WHO HIV drug resistance (HIVDR) threshold survey suggests that transmission of drug-resistant strains is likely to be limited. However, as access to ART is expanded, increased emergence of HIVDR is a potential concern. We have performed a surveillance survey of transmitted HIVDR among recently infected persons in the geographic setting of Accra, Ghana.

**Methods** As part of a cross-sectional survey, 2 large voluntary counselling and testing centres in Accra enrolled 50 newly HIV-diagnosed, antiretroviral drug-naïve adults aged 18 to 25 years.Virus from plasma samples with >1,000 HIV RNA copies/mL (Roche Amplicor v1.5) were sequenced in the pol gene. Transmitted drug resistance-associated mutations (TDRM) were identified according to the WHO 2009 Surveillance DRM list, using Stanford CPR tool (v. 5.0beta). Phylogenetic relationships of the newly characterised viruses were estimated by comparison with HIV-1 reference sequences from the Los Alamos database, by using the ClustalW alignment program implemented.

**Results** Subtypes were predominantly D (39/70, 55.7%), A (29/70, 41.4%), and C (2/70; 2.9%). Seven nucleotide sequences harboured a major TDRM (3 NNRTI, 3 NRTI, and 1 PI-associated mutation); HIVDR point prevalence was 10.0% (95%CI 4.1% to 19.5%). The identified TDRM were D67G (1.3%), L210W (2.6%); G190A (1.3%); G190S (1.3%); K101E (1.3%), and N88D (1.3%) for PI.

**Conclusion** In Accra the capital city of Ghana, we found a rate of transmitted HIVDR, which, according to the WHO threshold survey method, falls into the moderate (5% to 15%) category. This is a considerable increase compared to the rate of among women attending an antenatal clinic in mamobi. As ART programs expand throughout Africa, incident infections should be monitored for the presence of transmitted drug resistance in order to guide ART regimen policy.