HEPATITIS B, HEPATITIS C AND HIV-1 COINFECTION IN TWO INFORMAL URBAN SETTLEMENTS IN NAIROBI, KENYA

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Background
HIV-1 and Hepatitis B and C viruses coinfection is common in Sub-Saharan Africa due to similar routes of transmission and high levels of poverty. Most studies on HIV-1 and Hepatitis B and C viruses have occurred in hospital settings and blood transfusion units. Data on Hepatitis B and C viruses and HIV-1 coinfection in informal urban settlements in Kenya are scanty, yet they could partly explain the disproportionately high morbidity and mortality associated with HIV-1 infections in these slums.

Objectives
The objective of this study was to determine the prevalence of HIV and Hepatitis B and C dual infection in urban slums in Nairobi.

Methods
Blood samples were collected from residents of Viwandani and Korogocho between 2006 and 2007. A structured questionnaire was used to obtain socio-demographic data from participants. Samples were screened for Hepatitis B surface antigen (HBsAg), anti-HCV and anti-HIV-1. Statistical analysis was done using STATA.

Results
Samples were successfully collected from 418 (32%) men and 890 (68%) females. The HIV-1, HBV and HCV prevalence was 20.4%, 13.3% and 0.76% respectively at the time of the study. Of the 268 (20.4%) HIV-1 positive participants, 56 (4.26%) had HBV while 6 (0.46%) had HCV. Of the 1041 HIV-1 negative participants, 117 (8.9%) had HBV while 4 (0.31%) had HCV. Only two people (0.15%) were co-infected with all the three viruses together.

Discussion
The odds of getting hepatitis infection were higher in HIV-1 participants (for HBV OR 2.08,$p<0.005$ and for HCV OR 5.93, $p<0.005$). HIV prevalence rates were similar in both informal settlements. HIV infection was highest in age group 35-39 years and among the divorced/separated or widowed. Prevalence of all viruses was highest in those who did not have any formal education.

Conclusion
The HIV prevalence in these informal settlements suggests a higher rate than what is observed nationally. The prevalence rates of HBV are significantly higher in the HIV-1 positive and negative populations. HCV as well as triple HIV-1, HBV and HCV coinfection are uncommon in Korogocho and Viwandani. This clearly indicates the need for HIV-1 control programmes and hepatitis B virus vaccination to be promoted through public awareness as preventive strategy.

Disclosure of interest: None