## **ABSTRACT**

There is a dearth of evidence on injection drug use and associated HIV infections in Kenya. To generate population-based estimates of characteristics and HIV/STI prevalence among people who inject drugs (PWID) in Nairobi, a cross-sectional study was conducted with 269 PWID using respondent-driven sampling. PWID were predominantly male (92.5 %). An estimated 67.3 % engaged in at least one risky injection practice in a typical month. HIV prevalence was 18.7 % (95 % CI 12.3–26.7), while STI prevalence was lower [syphilis: 1.7 % (95 % CI 0.2–6.0); gonorrhea: 1.5 % (95 % CI 0.1–4.9); and Chlamydia: 4.2 % (95 % CI 1.2–7.8)]. HIV infection was associated with being female (aOR, 3.5; p = 0.048), having first injected drugs 5 or more years ago (aOR, 4.3; p = 0.002), and ever having practiced receptive syringe sharing (aOR, 6.2; p = 0.001). Comprehensive harm reduction programs tailored toward PWID and their sex partners must be fully implemented as part of Kenya's national HIV prevention strategy.