Egypt has the greatest HCV prevalence worldwide at 15%. The concentrated HIV epidemic in male people who inject drugs (PWID) is at 6.8%. Injection drug use is criminalized in Egypt, and there are limited harm reduction programs. Previous studies in Egypt found 53% of male PWID used needles that had been used by others and 89% had a regular female sex partner. This is the first study examining the sexual links between PWID and the general population in Egypt.

Methods

Study Design:
- Cross-sectional study of 632 consenting injection drug users in Cairo and Alexandria seeking harm reduction services.

Hypothesis:
- PWID who share needles are at an increased odds of HIV and HCV seropositivity compared to those who do not share needles.
- PWID who share needles have both high and low-risk sexual partners.

Analysis:
- Examined the links between needle-sharing PWID’s sexual practices and the general population.
- Multiple logistic regression evaluated the associations between high-risk injection drug use and sexual practices and HIV/HCV status using SAS 9.4.

Partners:
- Conducted in partnership with Freedom Drugs and HIV Programme, Egypt.
- Funded by NIH/National Institute of Allergy and Infectious Diseases (Project Number 5R21DA03388-02).

Table 1: Summary of demographic indicators by HIV/HCV status and unadjusted odds ratios (UOR).

Table 2: Multiple logistic regression models of HIV and HCV.

Table 3: Marginal difference in probability of testing HIV+ for change in the number of people PWID shared needle with*, keeping all other model indicators at their most frequent value in the study population.

Table 4: Marginal difference in probability of testing HCV+ for change in duration of injection drug use*, keeping all other model indicators at their most frequent value in the study population.

Figure 1: Venn-diagrams A-C summarize the overlap between behavioral indicators known to contribute to the spread of HIV in the general population, where high-risk sex partners include men who have sex with men (MSM), sex-workers, and drug dealers, and low-risk sex partners are those of steady relationships or spouses.

Conclusions

Among PWID in Egypt:
- More than half of PWID who have a high-risk sex partner, share needles with >10 people, and frequently share needles also have a low-risk sex partner.
- The general population is at risk of HIV/HCV primarily through sexual contact.
- Those who shared needles with >10 people had higher odds of testing positive for HIV.
- Those more years of injection drug use had higher odds of testing positive for HIV.
- In agreement with the literature, higher education is associated with lower odds of HIV/HCV, and older age is associated with higher odds of HIV/HCV.

Significance:
- In Egypt repressive policies that include low education and lack of harm reduction programs may place the general population at risk for HIV/HCV.
- In Russia, repressive policies toward PWID allowed HIV to spread to the general population and the country has seen a 49% increase in HIV prevalence 2005-2015. Egypt could see a similar trajectory in HIV prevalence.
- Common-sense harm reduction programs like clean needle exchanges and decriminalization of injection drug use are needed to control the spread of HIV and HCV in Egypt.