Assessment of the feasibility, acceptability and preferences for the use of multiplex (dual and triple) self-tests for HIV, hepatitis B and C in Kyrgyzstan and Indonesia (LIVES study)

Objective

To explore how **feasible, acceptable, and understandable multiplex self-tests (STs)** are for potential users (people who inject drugs (PWIDs(and healthcare workers (HCWs(). The multiplex STs studied were:

- **Dual ST (HIV and Hepatitis C)**
- **Triple ST (HIV, hepatitis B and hepatitis C)**

Methods

Design	This mixed-methods study used various data collection approaches in both countries.
1) Focus group discussions and semi-structured interviews	To gather overall opinions on the acceptability of the multiplex self-test. In Kyrgyzstan 56 participants were involved: 27 PWIDs (including 11 women), 24 HCWs (11 women) and 5 stakeholders (2 women). 

2) One-on-one cognitive interviews	To obtain feedback on the instructions for using the multiplex self-test. In Kyrgyzstan a total of 60 participants were involved: 30 PWIDs (including 9 women) and 30 HCWs (including 10 women). 
3) Surveys	To assess how participants interpret the results of 4 to 5 different multiplex self-tests with pre-set results. Participants did not test themselves. They were provided with "mock ST kits" with different results (i.e.: HIV positive, and HBV, HCV negative, etc.). In Kyrgyzstan, a total of 222 participants were involved: 118 PWIDs (including 31 women) and 104 HCWs (including 51 women). 

Key findings

- ST was perceived as a **convenient and private tool** to be used. There was interest in multiplex ST that could be used to screen several infections.
- **Video instructions** could be used to disseminate information about how to test, interpret results, and to provide specific actions on what to do after results, including updated local guidelines.
- **Most participants correctly interpreted all STs.**
    - Dual STs were well interpreted 90% of the times by PWIDs and HCWs.
    - Triple STs were well interpreted more than 88% of times by PWIDs and 96% of times by HCWs.
- The results that were worse interpreted were the ST containing:
    - **faint positive lines**
    - **invalid results**

Acknowledgements

We would like to acknowledge all study participants, country partners (GLORI, Attika), donors: NIH via CRDF, Dr Aibek Bekbolotov of the Republican Center for Control of Bloodborne Viral Hepatitis and Human Immunodeficiency Virus under the Ministry of Health of the Kyrgyz Republic and FIND colleagues: Sonjelle Shilton, Elena Marbán, Olga Denisiuk, Mikaela Watson, Maia Japaridze and Laureanne Putallaz for their generous support and sharing scientific and practical ideas.