SOCIAL NETWORK METHODS FOR HIV CASE-FINDING AMONG PEOPLE WHO INJECT DRUGS IN TAJIKISTAN

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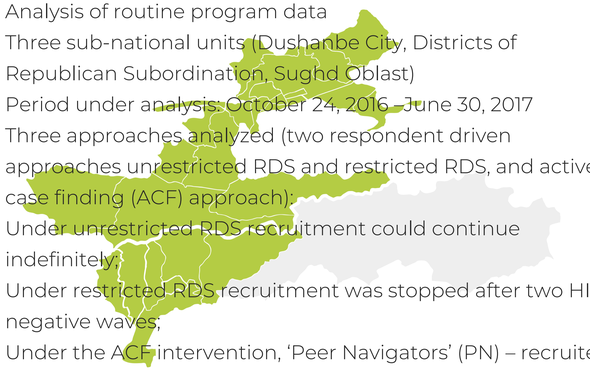
1. BACKGROUND

- National HIV prevalence in Tajikistan: 0.3%
- Prevalence among estimated 23,000 people who inject drugs (PWID): 13.5%.
- PWID represent <0.3% of the total population in Tajikistan
  - PWID make up ~19% of all PLHIV
- HIV test coverage among PWID remains inadequate to meet UNAIDS 90-90-90 goals.
  - Urgent need to expand testing services & treatment to PWID, who are disproportionately impacted by HIV

2. METHODS



- Analysis of routine program data
- Three sub-national units (Dushanbe City, Districts of Republican Subordination, Sughd Oblast)
- Period under analysis: October 24, 2016 – June 30, 2017
- Three approaches analyzed (two respondent driven approaches unrestricted RDS and restricted RDS, and active case finding (ACF) approach):
- Under unrestricted RDS recruitment could continue indefinitely;
- Under restricted RDS recruitment was stopped after two HIV-negative waves;
- Under the ACF intervention, 'Peer Navigators' (PN) – recruited their peers for HTS through direct outreach.

3. RESULTS

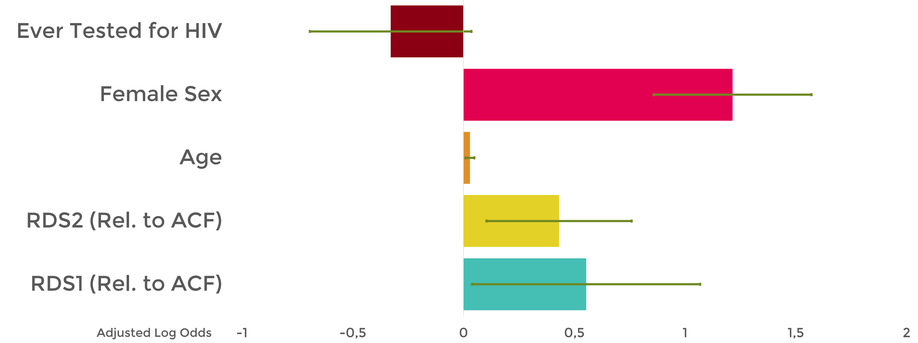
- Most clients were male (87.6%)
- Proportion of females was higher among those tested under unrestricted RDS (13.0%) compared to ACF (8.9%) and restricted RDS (8.8%) (p<0.001)
- Average age: 36.3 years
- Approximately 68% of clients reached through RDS were self-reported first-time testers, compared to 85% of ACF clients (p<0.001).

Table 1. Demographic and Clinical Characteristics of People who Inject Drugs Recruited to HIV Testing in Tajikistan

Variable	RDS1 (n=2,143, 20.8%)	RDS2 (n=3,517, 34.2%)	ACF (n=4,640, 45.1%)	P-value
	n (%)	n (%)	n (%)	
Female	279 (13.0)	311 (8.8)	411 (8.9)	<0.001
Age (Mean, Standard Deviation [SD])	37.9 (9.2)	36.1 (8.5)	35.8. (8.7)	<0.001
Never tested for HIV	1,448 (67.6)	2,420 (68.8)	3,950 (85.1)	<0.001
Shared needles with recruiter	620 (28.9)	778 (22.1)	-	<0.001
Had sex with recruiter	58 (2.7)	65 (1.9)	-	0.032
Migration experience	923 (43.0)	1,743 (49.6)	2,706 (58.3)	<0.001
Network size (mean, SD)	7.5 (6.4)	7.8 (6.5)	-	0.034
HIV positive	32 (1.5)	90 (2.6)	68 (1.5)	0.001

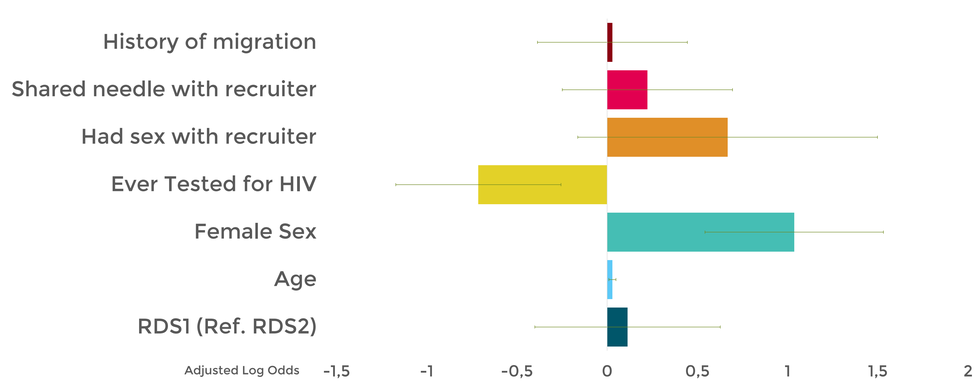
- Yield among females was higher than among males for both RDS (4.6% for females vs. 1.9% for males, p<0.001) and ACF (4.4% vs. 1.2%, p<0.001).
- Among self-reported new testers, testing yield was higher under RDS than ACF (2.4% vs. 1.4%, p=0.002)
- Yield was higher among RDS clients who reported having had sex with their recruiter (6.5% vs. 2.0%, p=0.001)
- or sharing a needle with their recruiter (3.7% vs. 1.5%, p=0.009)
- Yield was higher among clients testing under restricted RDS vs. unrestricted RDS across most demographic groups
- HIV-positive recruiters had a higher overall yield among those they directly recruited than HIV negative recruiters (5.3% vs. 2.6%, p=0.002).

FIG- 1 Predictors of New HIV Infection: 3 Approaches



Log odds of new HIV infection significantly higher for females and those recruited through RDS (1 or 2)

FIG-2 Predictors of New HIV Infection: unrestricted RDS vs. restricted RDS



- Log odds of new HIV infection higher among females and those never tested for HIV previously
- No significant differences between RDS1 & 2

4. CONCLUSION

- Flagship demonstrated feasibility of conducting RDS for HIV case-finding among PWID at scale
  - Tested >5,600 PWID in eight months.
- While yield from RDS-based approaches was greater than ACF approach, client profiles differed between strategies
  - Multiple case-finding approaches may be needed to reach first 90
- Variations on RDS implementation may increase testing yields, and should be considered by program implementers.
  - Differential distribution of coupons
  - Limiting recruitment after a number of HIV-negative waves
  - Utilizing technologies like recency assays
- Future research should explore
  - Cost per case-detected and cost-effectiveness
  - Ideal frequency of RDS-based methods over time
  - Costs and health impact of an ongoing vs. campaign-style approach