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Towards ending epidemics

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Gender differences in HIV, HCV risk and prevention needs among people who inject drug in Haiphong, Vietnam

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INTRODUCTION



- UNODC 2019: 11 M of PWID, of whom 1.4 M HIV (+) and 5.6 M HCV (+)
- Female PWID : 10-30%
 - Higher risk of HIV, HCV, STIs, violence, mental health
 - Poor access to treatment and prevention services
- PWID in Vietnam: 189.000 PWID
 - HIV prevalence: 12.7% (UNAIDS 2021)
 - High morbidity and mortality rate among PWID event ART since 2005 and MMT program (2008)
 - DRIVE data (Vu Hai Vinh et al, 2020):
 - Crude mortality rates : 4.3/100 PYFU (95% CI: 3.3-5.4) among HIV (+) PWID and 1.9/100 PYFU (CI: 1.4-2.6) among HIV (-) PWID.
 - The main causes of death are tuberculosis and HIV-related diseases in the HIV (+) group, while the main causes of death are liver-related diseases and overdose in the HIV (-) group

Female PWID (FWID) in Vietnam



- Intersecting stigmas (*Do M et al 2021, Le LT et al 2015*)
- *Pham MK et al 2016*: FWID were more likely than males to have at least one psychiatric disorder, a major depressive disorder, or an anxiety disorder
- *J.Pièrre Moles et al 2018*: low HIV incidence (0 - 1.8/100 PY, high HCV incidence (19.4/100 PY, 95% CI:11.5-30.7)

=> **Aim: Assess the HIV, HCV risk and prevention and treatment needs of FWID in comparison to male PWID in Haiphong city**

METHODS (1)



- **Study population:** Secondary analysis of DRIVE RDS survey data in Haiphong city
- **Sample size:** 1 FWID (case group) vs 4 MWID (control group)

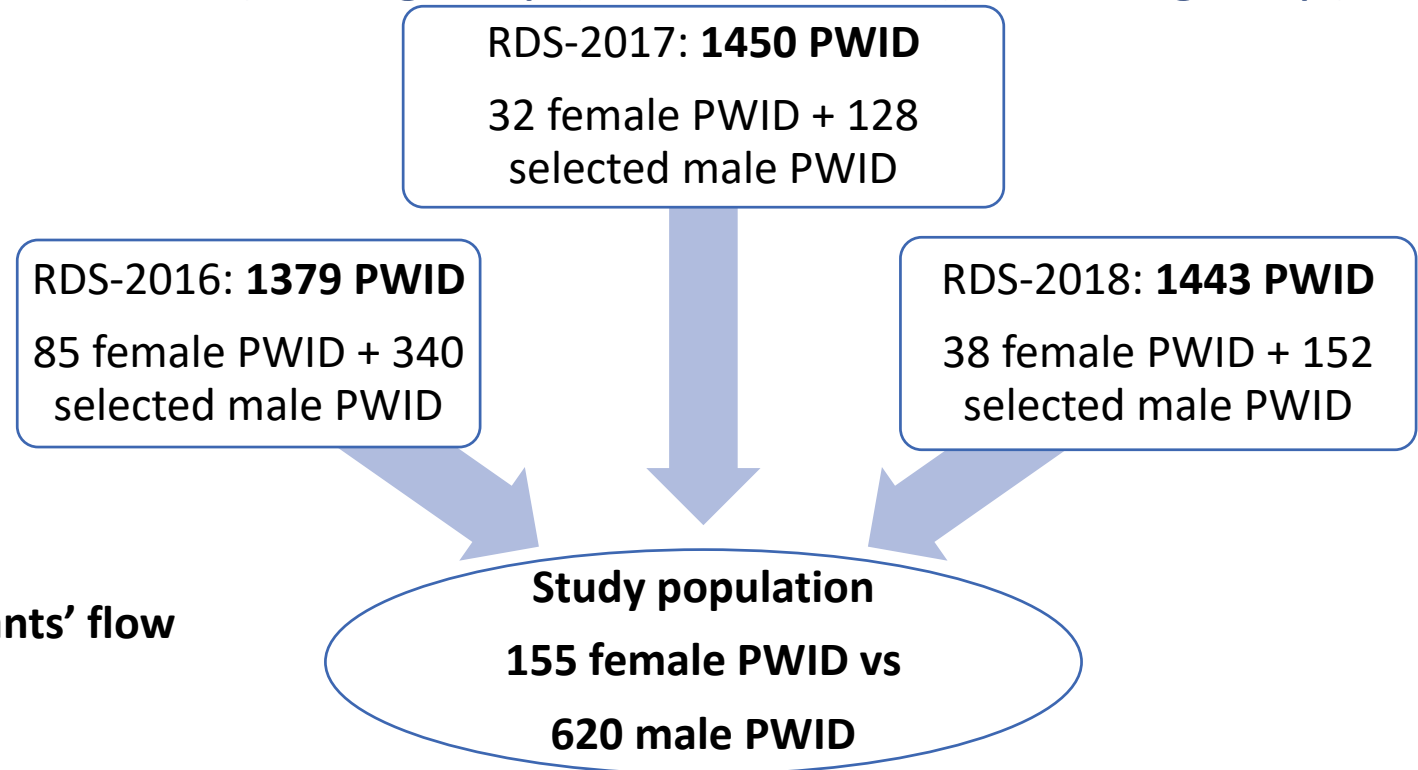


Figure 1. Participants' flow chart



- **Timing and setting:** 2016-2018 in Haiphong, two community study sites (Friendship Arms and Lighthouse)
- **Inclusion criteria:**
 - Being 18 years old and older,
 - Living in Haiphong, Vietnam during the study period
 - Urine positive test for heroin and/or methamphetamine and recent injection marks on the skin examined by CBO members
 - Willing to provide a written consent form

METHODS (3)



- HIV and HCV rapid test: SD Bioline HIV1/2 3.0 and SD Bioline HIV1/2 3.0 at study site
- HIV confirmation: Determine™ HIV-1/2 (Alere™ , Waltham, USA) + the VIKIA® HIV1/2 test at Provincial AIDS Control Centre
- HIV viral load: COBAS HIV-1 test (Roche) at NIHE
- Data analysis: Bivariate and multivariable logistic regression analysis were performed to explore the factors associated with gender

RESULTS (1)



Demographic characteristics	Male n = 620	Female n = 155	P value
Age (years) (mean \pm SD)	36.8 \pm 7.1 [36.2-37.4]	36.3 \pm 7.2 [35.1-38.4]	
High school graduate and more	166 (26.8)	14 (9.1)	<0.001
Having ID card	371 (59.8)	86 (55.5)	0.324
Having insurance health card	234 [37.7]	61 [39.4]	0.711
Total monthly income \geq \$250	253 (40.8)	78 (50.3)	0.032
Unemployed	194 (31.3)	79 (51.3) ^a	<0.001
Sex worker	9 (1.5)	36 (23.2)	<0.001
Unstable housing last 6 months	23 (3.7)	15 (9.7)	0.002

RESULTS (2)



Drug use behaviors	Male n = 620	Female n = 155	P value
Heroin injecting time <5 years	162 (26.1)	59 (38.1)	0.003
Number of injections per month	26.9 ± 6.3	27.3 ± 6.4	0.568
Number of injections per day	2.2 ± 0.9	2.5 ± 1.0	<0.001
Multi - drug use	452 (72.9)	123 (79.4)	0.101
Non-injection drug use, last 6 months:			
Methamphetamine	440 (71.0)	121 (78.1)	0.077
Cannabis	73 (11.8)	22 (14.2)	0.411
Ketamine	28 (4.5)	9 (5.8)	0.500
Ecstasy	25 (4.0)	10 (6.5)	0.194
Amphetamine	18 (2.9)	8 (5.2)	0.162
Cocaine	6 (1.0)	3 (1.9)	0.314
Methamphetamine positive in urine	225 (36.3)	71 (45.8)	0.029
Ever overdosed	27 (4.4)	10 (6.5)	0.273

RESULTS (3)



Psychosocial, risky practice and HIV, HCV	Male n = 620	Female n = 155	P value
Psychosocial characteristics			
Depressive/anxiety symptoms within the last 2 weeks (PHQ4 scale, total score ≥ 6)	52 (8.4)	18 (11.6)	0.210
Thought of harming oneself	60 (9.7)	27 (17.4)	0.006
Risky practices			
Unsafe sex activity	75 (12.1)	44 (28.4)	<0.001
Partner ever injected drugs	14 (2.3)	59 (38.1)	<0.001
Sharing needles/syringes/water	105 (16.9)	27 (17.4)	0.886
HIV seroprevalence	174 (28.1)	47 (30.3)	0.577
VL < 1000 copies/mL	140 (81.9) ^b	33 (71.7) ^c	0.129
HCV seroprevalence	433 (69.8)	104 (67.1)	0.508
Methadone detected in urine	318 (51.3)	57 (36.8)	0.001
Contact with peer-group	62 (10.0)	21 (13.6)	0.201

RESULTS (4)



Logistic models of factors associated with being female

	Adjusted factors associated with being female aOR, [95%CI] ^a	P value
High school graduate and more	0.2 [0.1 - 0.4]	<0.001
Total income ≥ \$250	1.2 [0.7 – 1.9]	0.529
Unemployed	1.9 [1.2 - 3.0]	0.008
Sex worker	23.1 [9.2-57.8]	<0.001
Unstable housing last 6 months	2.6 [1.2 – 6.0]	0.020
Heroin injecting time <5 years	1.6 [1.1 – 2.7]	0.050
Multi - drug use	0.8 [0.4-1.4]	0.449
Methamphetamine positive in urine	1.8 [1.1 – 3.1]	0.021
Thought of harming oneself	1.4 [0.7-3.0]	0.334
Unsafe sex activity	0.9 [0.5 – 1.7]	0.715
Partner ever injected drugs	34.1 [16.2 – 71.9]	<0.001
Methadone detected in urine	0.5 [0.3-0.8]	0.008



- First study examining differences in gender among PWID in a high HIV and HCV burden setting in Asia
- FWID in our study had clear differences compared to men, which could potentially increase risk for health damage and HIV/HCV transmission
- No difference in HIV/HCV prevalence among FWID and MWID, but the difference of the risk can effect on the incidence
- Lower percentage of FWID accessing MMT program while high coverage of MMT in Haiphong since 2008

CONCLUSION



- In the Vietnamese context, compared to MWID, FWID have:
 - less access to MOUD including methadone,
 - limited effectiveness of ARV treatment,
 - higher risk for methamphetamine use and sexual risk,
 - more need for mental health care
- Interventions targeting this vulnerable population are needed, possibly through community organizations and peer educators.

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