

HIV prevention and treatment cascades among female sex workers (FSW) and men who have sex with other men (MSM) in Benin, West Africa

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Funder: CIHR (Canadian Institute of Health Research); I have no conflicts of interest

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Introduction & Objective

BENIN

- West African country
Population ~ 11.5 millions (2018)
- HDI (human development index):
Low, 0,520 in 2019 (163rd)
- Cotonou : Largest city
- HIV prevalence:
 - General population : 1.1%(0.7-1.8)
 - FSW : 8.5%
 - MSM : 7.0%



CASCADES

- Treatment cascade: 1) knowledge of HIV status among PLWHIV, 2) Use of ARV among those knowing their status, 3) Suppressed viral load among those on ARV

UNAIDS OBJECTIVE: 90-90-90

- Prevention cascade: Same concept, but on prevention issues; fairly new, few studies

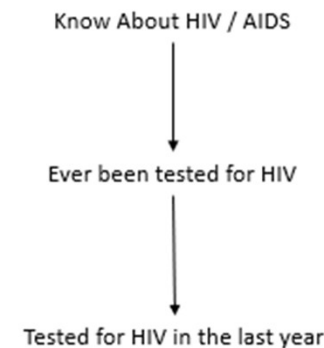
OBJECTIVE:

Assessing prevention and care cascades

A. Treatment cascade: FSW living with HIV



B. Prevention cascade – testing branch: All FSW



C. Prevention cascade – safer sex branch: All FSW



Methods

RECRUITMENT

- FSW : Cluster sampling of sex work sites
 - Inclusion : Present when the site is visited by the study team, ≥ 15 years old
- MSM : Respondent-driven sampling (RDS)
 - Inclusion : ≥ 18 years old, Had sexual relations with another man in the last 12 months, Reside in Benin for the last 6 months

TESTS

- HIV antibody testing
 - Sequential rapid tests using different principles: according to Beninese guidelines
- ARV quantification on DBS samples
 - Quantification of ARV's molecules (TDF-3TC): measure adherence
 - Reflects adherence in the last month for TDF
 - Reflects adherence in the last week for 3TC
- Viral load
 - RT-PCR: Quantification of ARN

METHOD

- 1st consent : Questionnaire + rapid HIV test (results were given back to participants)
- 2nd consent : HIV+ participants provided Dried-blood spots (DBS)
 - ARV
 - Viral load

RESULTS – Population portrait and cascades

FSW

- 1086 FSW recruited
- Mean age : 30 years
- 2/3 have a primary school education level or less
- 35% are Beninese
- HIV prevalence :
 - 7.7%
 - 84 FSW

MSM

- 359 MSM recruited
- Mean age : 26 years
- 91% went at least to high school
- 98% are Beninese
- HIV prevalence :
 - 8.1%
 - 29 MSM

Cascade	Steps	FSW (N=1086)		MSM (N=359)	
		Among those from the previous line % (95%CI)	Among all FSW % (95%CI)	Among those from the previous line % (95%CI)	Among all MSM % (95%CI)
Prevention cascade (testing branch)	Ever heard of HIV/AIDS	99.0 (98.3 - 99.5)	99.0 (98.3 - 99.5)	100.0 (98.9 - 100.0)	100.0 (98.9 - 100.0)
	Ever tested for HIV	79.2 (76.6 - 81.6)	79.1 (76.5 - 81.6)	88.0 (84.2 - 91.2)	88.0 (84.2 - 91.2)
	Tested for HIV in the last year	84.1 (81.4 - 86.6)	66.4 (63.4 - 69.3)	94.3 (91.1 - 96.6)	83.0 (78.7 - 86.8)
Prevention cascade (safer sex branch)	Ever heard of HIV/AIDS	99.0 (98.3 - 99.5)	99.0 (98.3 - 99.5)	100.0 (98.9 - 100.0)	100.0 (98.9 - 100.0)
	Saw prevention messages in the last 6 months	91.4 (89.2 - 92.7)	90.1 (88.1 - 91.8)	100.0 (99.0 - 100.0)	100.0 (99.0 - 100.0)
	Saw condom demonstration in the last 6 months	72.8 (69.9 - 75.6)	65.4 (62.5 - 68.2)	85.2 (81.1 - 88.7)	85.2 (81.1 - 88.8)
	Received free condoms in the last 3 months	92.0 (89.7 - 93.9)	76.1 (73.4 - 78.6)	81.0 (76.2 - 85.3)	75.5 (70.1 - 79.9)
	Consistent condom use in the last month for vaginal (anal) sex	70.9 (67.2 - 74.3)	66.1 (63.2 - 68.9)	63.6 (56.5 - 70.2)	58.4 (52.5 - 64.1)
Treatment cascade			Among all HIV+ FSW (N=84)		Among all HIV+ MSM (N=29)
	HIV+ status	7.7 (6.2 - 9.5)	100.0 (95.7 - 100.0)	8.1 (5.5 - 11.4)	100.0 (88.1 - 100.0)
	Knows HIV+ status	40.5 (29.9 - 51.7)	40.5 (29.9 - 51.7)	-	-
	ARV detected in blood	67.6 (49.5 - 82.6)	27.4 (18.2 - 38.2)	34.5 (17.9 - 54.3)	34.5 (17.9 - 54.3)
	Undetectable viral load	86.4 (65.1 - 97.1)	39.7 (28.0 - 52.3)	44.4 (13.7 - 78.8)	26.1 (10.2 - 48.4)

DISCUSSION

STRENGTHS

- Original study :
 - few treatment cascade studies among key populations in Africa
 - fewer prevention cascade ones
- National survey :
 - representative population
- Biological measure for ARV

WEAKNESSES

- No question on the HIV serologic status for MSM
- Possible underestimation of HIV prevalence among FSW
- Social desirability bias
- Test for only 2 ARVs
- Small sample for treatment cascades
 - Worse for MSM

CONCLUSION

- Despite long-standing HIV prevention programs for FSW, prevention indicators were often lower than among MSM
 - Likely because of their high mobility (most are migrants), leading to relative short duration of stay at their current sex work place
- Treatment cascade indicators are poor and far from UNAIDS objectives
 - Except for undetectable viral load among FSW on ARV
- Knowing their status is where we lose the most people
 - HIV testing services need to be enhanced and diversified for key populations