



Comparing PrEP adherence via objective and self-reported measures among fishermen working on Lake Victoria, Kenya



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Introduction

- Fishermen working along Lake Victoria in Kenya experience high rates of HIV acquisition that can be mitigated by effective preventative treatment such as pre-exposure prophylaxis (PrEP), which requires adequate adherence to effectively prevent HIV acquisition.
- Despite the availability of no-cost PrEP in public health facilities in Kenya, studies report low uptake and poor adherence.
- Since self-report can be unreliable, we sought to evaluate PrEP adherence using objective metrics and to examine the reasons for non-adherence among fishermen.

- Using urine assays, 12 (17%) had PrEP detected and 58 (83%) did not have PrEP detected.
- In regression analyses, self-reported PrEP non-adherence was associated with 15.7 times higher odds of non-detection of PrEP in the urine assay (95% CI: 2.65, 93.3; $p=0.002$).

General Objective

- To compare PrEP adherence via urine Tenofovir assay and self reported measures of adherence among fishermen working on Lake Victoria, Kenya

Methods

- Data are from the Owete study (NCT04772469), a cluster randomized control trial using a social network approach to increase HIV prevention and treatment among fishermen in Siaya County, Kenya.
- Survey and lab data were collected at 6 months from seronegative fishermen who reported already being on or newly initiating PrEP after study enrolment.
- Surveys included self-reported PrEP adherence in the past 30 days (reporting percentage of times a dose was missed) and reasons for non-adherence.
- We measured PrEP adherence using Tenofovir Test Device (manufactured by Abon Biopharm (Hangzhou) Co. Ltd) on urine samples collected at this visit.
- We report descriptive self-reported adherence data and results from a logistic regression comparing self-reported adherence to objective adherence via the urine tenofovir assay.

Table 1. Baseline characteristics of participants

Characteristics	Overall (n=70)		Self-reported adherence $\geq 90\%$ (n=24)		Self-reported adherence $< 90\%$ (n=46)		p
	n	%	N	%	n	%	
Demographics							
Age (Median, IQR)	32	[28.8, 37.6]	33.6	[29.1, 42.5]	30.6	[28.4, 36.8]	0.0429
Educational Attainment							
Primary & below	45	67.2	15	62.5	30	69.8	0.796
Secondary education	19	28.4	8	33.3	11	25.6	
Tertiary education	3	4.5	1	4.2	2	4.7	
Marital Status							
Currently married	61	87.1	23	95.8	38	82.6	0.117
Unmarried	9	12.9	1	4.2	8	17.4	
Polygynous Marriage²							
Yes	14	23.3	5	21.7	9	24.3	0.818
No	46	76.7	18	78.3	28	75.7	
Wealth Quintiles							
Lowest	11	16.9	3	13.0	8	19.1	0.751
Second	13	20.0	5	21.7	8	19.1	
Third	14	21.5	6	26.1	8	19.1	
Fourth	13	20.0	3	13.0	10	23.8	
Highest	14	21.5	6	26.1	8	19.1	
PrEP Adherence							
Urine assay PrEP adherence							
Adherent	12	17.1	10	41.7	2	4.4	
Non-adherent	58	82.9	14	58.3	44	95.7	

¹ Self-reported PrEP adherence over last 30 days at 90% or higher

² Among married participants

Table 2. Top reasons for PrEP non-adherence (n=70)

	N	%
Felt not at risk and you did not need the medications	22	31.4
Away from home and without medication when it was time to take it	19	26.8
Felt well/better and felt you did not need the medications	17	23.9
Too busy & did not have time to go to the clinic to pick up medications	15	21.1
No transportation to the pharmacy/clinic	12	16.9
Side effects from the medications	7	9.9
Did not have privacy & did not want others to see you taking the medications	5	7.0
Did not have enough food to eat with the medication	4	5.6
Lapse of drug supply at the clinic	3	4.2
Was sick	2	2.8
Did not know that medications needed to be refilled	2	2.8
Others	5	7.0

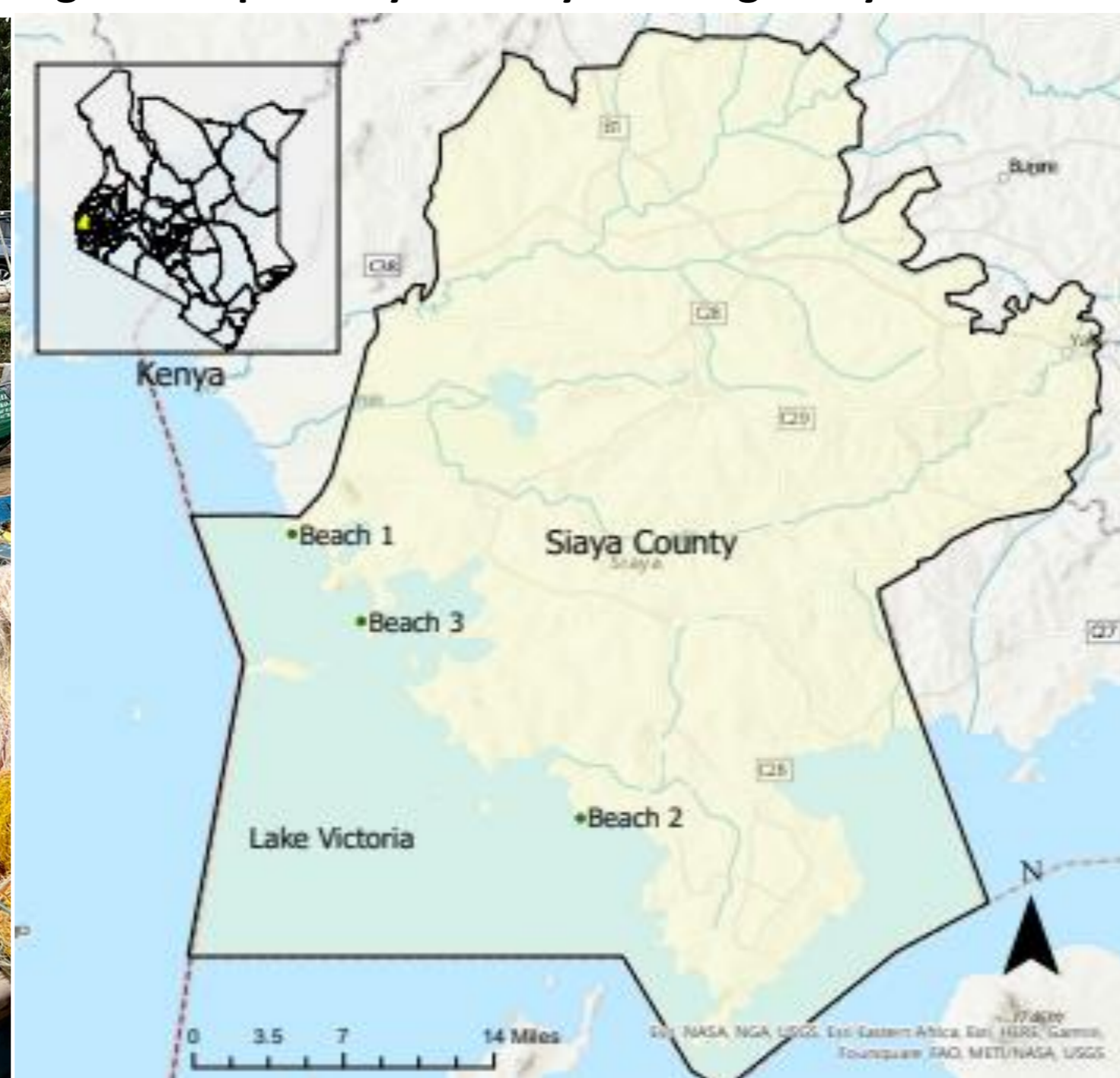
Conclusion & Recommendations

- Self-reported PrEP non-adherence were consistent with the objective measures of non-adherence.
- The major reasons for non-adherence among the fishermen were low risk perception, mobility, and being too busy to go to clinics for refills.
- This study illustrates that objective measures, such as a point of care assay, may be a valuable tool for measuring PrEP adherence, especially among populations vulnerable to HIV.
- Developing strategies to increase knowledge about risks and benefits of PrEP for prevention, along with interventions to bolster PrEP adherence, are critically needed to reduce HIV acquisition among this high-risk population.

Picture: Men preparing to go fishing



Figure: Map of Siaya county showing study sites



Results

- Of 70 participants on PrEP, 24 (34%) self-reported $\geq 90\%$ PrEP adherence and 46 (66%) reported $< 90\%$ adherence.
- Primary reasons for self-reported non-adherence included not feeling at risk ($n=22$, 31%), being away from home and without PrEP medication ($n=19$, 27%), or feeling well and thinking they did not need PrEP ($n=17$, 24%).

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