PrEP Knowledge and Use: Results from the Zambia Population Based HIV Impact Assessment 2021

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BACKGROUND

Pre-exposure prophylaxis (PrEP) taken daily has been shown to be effective prevention against HIV acquisition and has been recommended by WHO for people at substantial risk for HIV since 2015. Zambia has been implementing the PrEP program since 2017 and rolled it out nationwide in 2018[1]. The knowledge and use of PrEP has not been comprehensively assessed in Zambia since the roll out. Population based HIV impact assessments have been conducted in several countries to estimate national adult HIV incidence, and subnational prevalence of viral load suppression[2]. We analyzed data from the 2021 Zambia Population Based HIV Impact Assessment (ZAMPHIA) in order to learn more about the knowledge and uptake of PrEP in Zambia.

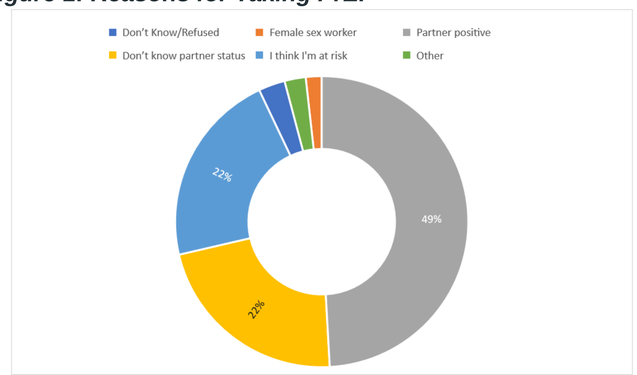
METHODS

We analyzed data from the 2021 ZAMPHIA using descriptive and quantitative analyses of demographic and behavioral characteristics of participants who responded to PrEP questions. A weighted multivariable logistic regression model was fitted to identify predictors of PrEP use. All results were weighted to account for survey complex design.

RESULTS

- Among 22,183 survey participants aged 15+ year, 21.2% (95% CI: 20.3-22.2) reported ever having heard of PrEP: 18.9% (95% CI: 17.6-20.2) among men and 23.5% (95% CI: 22.3-24.8) among women.
- Within age groups 17.5% (95% CI 16.1-18.9) of young adults aged 15 to 24 years and 17.2% (95% CI: 15.8-18.7) of those aged 45+ years had ever heard of PrEP.
- Other characteristics associated with having ever heard of PrEP were being married (22.1% [95% CI: 20.9- 23.3]), living in urban areas (30.3% [95% CI:28.5-32.1]) and having more than a secondary education (56.7% [95% CI:52.8-60.4]).
- Of those who have ever heard of PrEP, 3.9% (95% CI: 3.2- 4.8) reported ever using PrEP. PrEP use was highest among those who reported having a sexual partner who is HIV positive 16.5% [95% CI: 12.3- 21.7]).
- Those who reported a HIV positive sexual partner were more likely to report ever having used PrEP compared to those who did not know the HIV status of their partner (aOR 5.84 [95% CI: 3.27-10.41]; $P<0.001$).

Figure 1: Reasons for Taking PrEP



Although PrEP has been available in Zambia since 2018, only a fifth (21.2%) of adults were aware of it and only 3.9% of those who ever heard of PrEP reported ever using it – PrEP use was highest (16.5%) among those who reported having an HIV positive sexual partner

Table 1: Demographic and Behavioral Characteristics Associated with PrEP knowledge and use among Participants in ZAMPHIA 2021 (Weighted).

Variable	Ever Heard of PrEP, %				Ever Used PrEP, %			
	Number	(n= 4,530)	95% CI	P-Value	Number	(n = 171)	95% CI	P-Value
Total	22,183	21.2	[20.3- 22.2]		4,530	3.9	[3.2- 4.8]	
Age group (in Years)				<0.001				0.395
15-24	7,323	17.5	[16.1-18.9]		1,241	3.4	[2.0- 6.0]	
25-34	5,451	27.5	[25.8- 29.3]		1,474	4.0	[3.0- 5.2]	
35-44	3,988	24.7	[22.2- 27.3]		963	5.0	[3.5- 7.1]	
45+	5,421	17.2	[15.8- 18.7]		852	3.2	[2.0- 5.0]	
Gender				<0.001				0.590
Men	9,647	18.9	[17.6- 20.2]		1,782	3.7	[2.8- 5.0]	
Women	12,536	23.5	[22.3- 24.8]		2,748	4.0	[3.2- 5.1]	
Marital Status				<0.001				0.451
Never married	6,965	19.9	[18.5- 21.3]		1,358	3.2	[1.9- 5.5]	
Married or living together	12,420	22.1	[20.9- 23.3]		2,594	4.3	[3.5- 5.4]	
Divorced or separated	1,639	24.6	[22.1- 27.3]		385	3.4	[2.0- 6.0]	
Widowed	1,121	16.0	[13.8- 18.5]		184	5.1	[2.5- 10.1]	
Educational Level				<0.001				0.158
No education	2,021	10.0	[8.5- 11.8]		194	0.6	[0.2- 2.0]	
Primary	8,998	13.4	[12.5- 14.5]		1,174	3.5	[2.4- 5.1]	
Secondary	9,679	23.2	[22.0-24.6]		2,317	3.9	[3.1- 4.9]	
More than Secondary	1,465	56.7	[52.8- 60.4]		844	4.9	[2.9- 8.2]	
Wealth Quintile				<0.001				0.453
Lowest	5,631	10.6	[9.6- 11.7]		603	2.9	[1.7- 5.0]	
Second	4,677	13.0	[11.7- 14.5]		635	3.8	[2.4- 6.0]	
Middle	3,811	17.1	[15.7- 18.6]		667	4.5	[2.6- 7.7]	
Fourth	3,910	25.8	[23.9- 27.7]		1,035	4.6	[3.5- 6.0]	
Highest	4,154	35.9	[33.4- 38.4]		1,590	3.4	[2.4- 4.8]	
Area of residence				<0.001				0.728
Urban	8,534	30.3	[28.5- 32.1]		2,632	4.0	[3.3- 5.0]	
Rural	13,649	14.7	[13.4- 16.1]		1,898	3.7	[2.3- 5.8]	
Ever tested for HIV				<0.001				0.009
Yes	17,848	24.4	[23.2- 25.5]		4,162	4.1	[3.4- 5.1]	
No	4,286	8.4	[7.1- 10.0]		365	1.1	[0.4- 3.1]	
Self-reported HIV status of 3 most recent Sexual Partners in past 12 months				<0.001				<0.001
At least one partner positive	1,126	35.6	[32.4- 38.8]		423	16.5	[12.3- 21.7]	
Unknown partner status	9,755	24.0	[22.5- 25.5]		2,237	2.4	[1.8- 3.2]	
Partners' status negative	4,936	17.3	[15.9- 18.9]		806	3.2	[1.9- 5.1]	

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Table 2: Predictors of PrEP Use

Variable	aOR	[95% CI]	P-Value
Educational Level			
No education	Ref.		
Primary	5.61	[0.24- 2.06]	0.046
Secondary	7.26	[1.37- 38.46]	0.022
More than Secondary	8.89	[1.69- 46.73]	0.012
HIV status of Sexual Partner			
Don't Know	Ref.		
Sexual partner Positive	5.84	[3.27- 10.41]	<0.001
Sexual partner Negative	0.69	[0.41- 1.19]	0.177
Alcohol Consumption frequency			
Never	Ref.		
Monthly or less	1.44	[0.81- 2.55]	0.207
2-4 times per month	0.33	[0.13- 0.82]	0.019
2-3 times per week	2.56	[1.36- 4.79]	0.005
4 or more times per week	2.06	[0.86- 4.95]	0.102

CONCLUSIONS

- PrEP awareness and use was found to be low among adults age 15+ years who have the highest incidence of HIV as seen in ZAMPHIA. These results can guide the Zambian Ministry of Health to target the dissemination of PrEP information to these populations, including men aged 45+ years, living in rural areas, and with lower education levels.
- Having a sexual partner who is HIV positive is a strong predictor of PrEP use. More efforts, are needed to increase uptake in populations that are at substantial risk for HIV infection, such as persons with multiple sexual partners.

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Additional Information

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