Profiles of Pre-Exposure Prophylaxis (PrEP) modality preferences among Brazilian, Mexican and Peruvian Sexual and Gender Minorities (SGM)

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Introduction

- Daily oral PrEP is highly effective for HIV prevention, yet its use remains limited in Latin America
- Where available, adherence difficulties compromise the effectiveness of PrEP
- The efficacy/effectiveness of other PrEP modalities have been demonstrated
- We analyze the characteristics of an online sample of sexual and gender minorities in Latin America associated with willingness to use four PrEP modalities:
  1. Daily oral PrEP
  2. Event-driven PrEP (or PrEP 2-1-1)
  3. Monthly oral PrEP
  4. Injectable PrEP

Methods

- A cross-sectional online survey was conducted from April-August 2021 among sexual and gender minority (SGM) individuals aged 18+ years
- Participants were asked to report their willingness to use PrEP modalities and to assume equal effectiveness and availability
  - Willingness was assessed using a 4-point Likert scale with *Very likely* classified as 'willing'
- We conducted multivariate Poisson regression estimating prevalence ratios to determine differences in willingness to use each PrEP modality
  - Models were developed for each PrEP modality
  - Models were adjusted for: age, country, race, education, income, HIRI-risk score (combining sexual risk and substance use), HIV testing, and HIV risk perception

Results

- Among 35,541 individuals who initiated the survey, 24,573 were eligible for this analysis
- Median age was 32 years (interquartile range 26-39), most participants were cisgender men (95.8%) and had more than secondary education (66.2%)
- Most participants were from Brazil: 64.9%, followed by Mexico: 27.8%; and then Peru: 7.4%

Table 1: Characteristics of an online sample of sexual and gender minorities from Brazil, Mexico, and Peru

Characteristics	Brazil	Mexico	Peru
	N=15936	N=6821	N=1816
Gender Identity Trans/non-binary	2%	7%	10%
Age (years) 25+	87%	80%	57%
Black/Mixed-race	45%	82%	87%
Greater than secondary education	65%	70%	65%
Earn less than minimum wage	21%	21%	50%
HIV risk perception			
Low risk	65%	64%	53%
Some risk	26%	27%	32%
High risk	9%	9%	15%
High HIRI HIV risk score (≥10 points)	43%	46%	47%
HIV test >6 months	45%	57%	56%

Results, cont.

- Most participants were willing to use:
  - Monthly oral PrEP 74.6%
  - Daily oral PrEP 66.1%,
  - Injectable PrEP 60.4%,
  - Event-driven PrEP was only acceptable to 38.1%
- Across modalities, increased willingness was associated with with increased HIV risk perception
- Individuals deemed high-risk (HIRI-score ≥10) based on reported behavior also reported increased willingness to use all of the PrEP modalities, except event-driven PrEP
- Peruvian respondents reported lower willingness for all modalities except event-driven PrEP
- Mexicans and Peruvians respondents reported higher willingness to use event-driven PrEP compared to Brazilians
- Higher-income and education were associated with higher willingness for monthly and injectable PrEP only

Table 2: Characteristics Associated with Preferred PrEP Modalities among an online sample of MSM and TGW from Brazil, Mexico, and Peru

	Daily oral aPR (95% CI)	Event-driven aPR (95% CI)	Monthly oral aPR (95% CI)	Injectable aPR (95% CI)
Income (effect of an additional minimum wage per month)	0.99 [0.98,1.00]	1.00 [0.94,1.06]	**1.01 [1.00,1.02]**	**1.01 [1.00,1.02]**
>secondary education (Ref. ≤secondary)	1.00 [0.95,1.05]	1.03 [0.96,1.10]	**1.06 [1.01,1.11]**	**1.06 [1.01,1.12]**
HIV risk perception				
Low risk	**1.14 [1.06,1.24]**	1.02 [0.92,1.12]	**1.10 [1.03,1.18]**	**1.07 [1.00,1.16]**
Some risk	**1.42 [1.31,1.54]**	**1.20 [1.08,1.33]**	**1.21 [1.12,1.30]**	**1.21 [1.12,1.31]**
High risk	**1.53 [1.39,1.68]**	**1.29 [1.14,1.47]**	**1.25 [1.14,1.36]**	**1.29 [1.17,1.42]**
Very high risk	**1.39 [1.05,1.84]**	**1.46 [1.04,2.05]**	1.22 [0.94,1.58]	**1.32 [1.01,1.74]**
(Ref=none)				
Country				
Mexico	1.03 [0.98,1.08]	**1.16 [1.09,1.24]**	1.04 [0.99,1.09]	**0.94 [0.90,0.99]**
Peru (Ref=Brazil)	**0.83 [0.76,0.91]**	**1.18 [1.06,1.32]**	**0.87 [0.80,0.95]**	**0.80 [0.72,0.88]**
HIRI HIV risk score ≥10 high risk (Ref. <10 low risk)	**1.15 [1.09,1.20]**	1.04 [0.98,1.10]	**1.07 [1.02,1.11]**	**1.17 [1.11,1.22]**
HIV test >6 months (Ref. ≤6 months)	**1.05 [1.00,1.09]**	1.05 [0.99,1.11]	1.01 [0.97,1.05]	**1.12 [1.07,1.17]**

Bolding indicates statistical significance; all models were additionally adjusted for age, race, sex work, and self-reported STI diagnosis

Conclusions

- Higher willingness to use monthly oral and injectable PrEP indicates preference for long-acting formulations among sexual and gender minorities in Latin America
- As PrEP remains primarily unavailable in Latin America or available only in daily form, studies like this can help to identify current understanding of other PrEP modalities and how to design their introduction into prevention programs
- Research and education are needed to better understand and to address the gaps in knowledge of prevention modalities
- The availability of additional choices to better address the prevention needs of SGM populations could empower individuals to use these methods
- Tools to guide this process need to be made available as additional choices are included in prevention programs

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