# Who opts for Daily versus On-Demand Pre-Exposure Prophylaxis?

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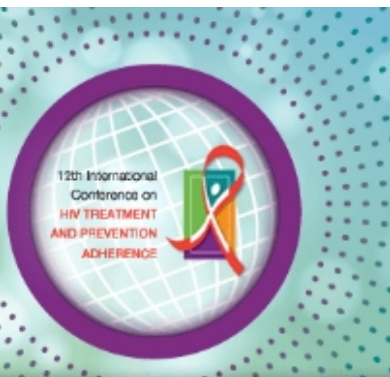
Adherence 2017: Miami
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Session: Preference and Acceptance of PrEP

Background: PrEP regimens

- The efficacy of Pre-Exposure Prophylaxis (PrEP) for HIV taken either daily[1,2] or on-demand[3] (before and after sexual interactions) among Men who have Sex with Men (MSM) has been established in clinical trials

- Real-world data describing factors associated with decisions to take daily versus on-demand regimens is scarce

1. Grant RM *et al. N Engl J Med* 2010
2. McCormack S, et al *Lancet 2016*
3. Molina JM et al *N Engl J Med 2015*
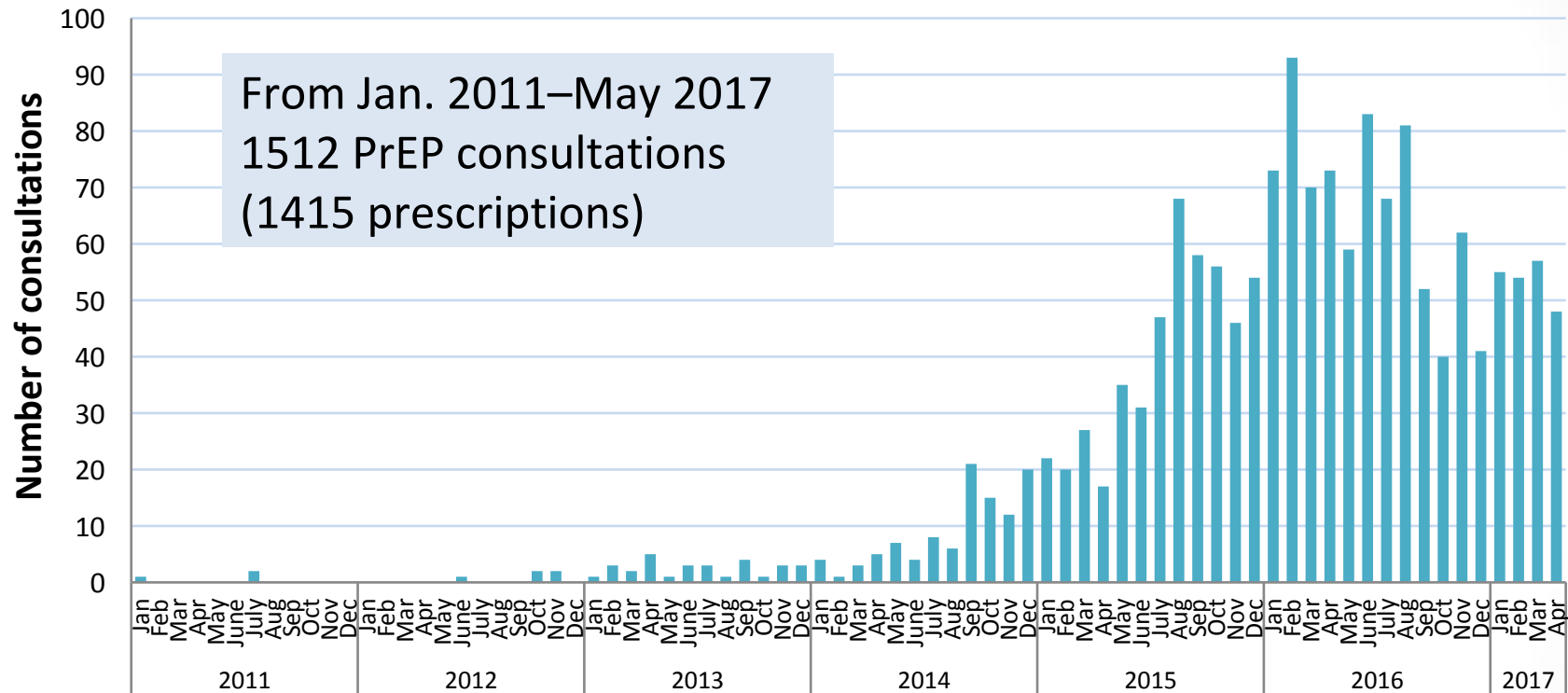
Study site: Clinique l'Actuel

HIV Treatment

Screening

Post-Exposure Prophylaxis

PrEP

Background: research/policy landmarks and trends in PrEP consultations at l'Actuel

From Jan. 2011–May 2017
1512 PrEP consultations
(1415 prescriptions)

Number of consultations (y-axis: 0–100)

Timeline: 2011, 2012, 2013, 2014, 2015, 2016, 2017

iPrEx results Grant et al. NEJM (2010)

FDA approval

Quebec Interim notice / PrEP clinic promotion

IPERGAY results Molina et al. NEJM (2015)

Health Canada Notice of Compliance 2016/02/26

Methods

- **Cross-sectional study**
- **Inclusion criteria:**
  - Men who have sex with men (MSM), ages 18 +
  - HIV-Negative and assessed as high-risk for HIV by a clinic physician
  - PrEP consultation from March 1st, 2015 to February 1st, 2017
- **Outcome**: Decision to select Daily or On-Demand regimen
- **Analysis:**
  - Baseline characteristics were compared between individuals prescribed Daily and On-Demand using two-sided t-tests for continuous variables and chi-square tests for categorical variables.
  - Logistic regression models were used to calculate Odds Ratios (OR) with 95% Confidence Intervals (CIs) for prescription of On-demand versus Daily PrEP
  - We constructed univariate models and a multivariate model adjusted for age, education, revenue, indication of PrEP prescription and number of sexual partners in the last year

Baseline characteristics among Daily and On-Demand PrEP users

VARIABLES		DAILY	ON-DEMAND	P-value
Age, mean (CI)		36.7 (10.3)	39.2 (10.9)	**<0.001**
Education, N (%)	Primary	6 (0.8%)	1 (0.5%)	0.44
	Secondary	110 (14.9%)	24 (11.4%)	
	College	161 (21.8%)	42 (20%)	
	University	461 (62.5%)	143 (68.1%)	
Annual revenue, N (%)	< $10 000	66 (8.8%)	15 (6.8%)	0.09
	$10 001-20 000	73 (9.7%)	18 (8.1%)	
	$20 001-35 000	102 (13.6%)	21 (9.5%)	
	$35 001-55 000	178 (23.7%)	50 (22.6%)	
	$55 001-75 000	144 (19.1%)	40 (18.1%)	
	> $75 000	189 (25.1%)	77 (34.8%)	
Primary reason for seeking PrEP, N (%)*	CAI	625 (73.9%)	202 (83.1%)	0.664
	Multiple PEPs	47 (5.5%)	13 (5.3%)	0.732
	Serodifferent couple	76 (9%)	10 (4.1%)	0.01
# contacts in the last year, Mean (CI)	Regular partners	3.2 (2.3-4.0)	2.2 (1.8-2.6)	0.23
	Occasional partners	22.3 (17.7-26.8)	14.2 (12.2-16.3)	**<0.001**
TOTAL		**848 (78%)**	**243 (22%)**	

Associations between baseline factors and decision for On-Demand PrEP

VARIABLES		Univariate Odds Ratio	95% CI	Adjusted Odds Ratio	95% CI
Age		1.02***	(1.01 - 1.04)	1.02**	(1.00 - 1.04)
Total number of sex contacts in past 12 months (reg. + occasional)		0.987***	(0.978 - 0.996)	0.98***	(0.98 - 0.99)
Serodifferent partner		0.44**	(0.22 - 0.86)	0.41**	(0.19 - 0.88)
Education	Secondary or below	Ref.		Ref.	
	College	1.21	(0.70 - 2.10)	1.22	(0.66 - 2.26)
	University	1.44	(0.90 - 2.31)	1.38	(0.80 - 2.40)
Annual income	< $20 000	Ref.		Ref.	
	$ 20 001-35 0000	0.87	(0.47 - 1.59)	0.84	(0.42 - 1.65)
	$ 35 001-55 000	1.18	(0.72 - 1.94)	1.17	(0.67 - 2.04)
	$ 55 0001-75 000	1.17	(0.70 - 1.96)	1.05	(0.59 - 1.87)
	$ 75 000+	1.72**	(1.08 - 2.73)	1.31	(0.75 - 2.27)

*** p<0.01, ** p<0.05, * p<0.1

Discussion

- Younger patients were more likely to receive daily PrEP, which may be explained by behaviour profiles in line with daily use, such as spontaneous sex with multiple partners
- Older patients may tend to engage in planned sex, making on-demand PrEP an appropriate option

- **Limitations**
  - Data reflects the regimen decided on by both physician and patient, therefore initial patient preferences may have been changed based on the counseling they received during their consultation
  - Susceptible to reporting bias
  - Exploratory study only

- Longitudinal data to follow the pathways of patients once they initiate PrEP regimens, in terms of protocol compliance, switches and stops at our clinic can further inform us of differences between user profiles (See Adherence2017: Abstract #229, Beauchemin)

Significance

- Push for combined prevention measures is needed for all PrEP users regardless of regimen, as it has been shown that both groups report equal risks in terms of condomless anal intercourse at baseline

- Further research is needed to understand the best situations in which to prescribe On-Demand PrEP

Merci!

➢Our patients
➢Clinical team
➢Epidemiology team

Supplementary data

PrEP treatment protocol at Actuel