

# Risk Factors Affecting PrEP Offering and Uptake Among At-Risk Youth

## in an Area of High HIV Prevalence

Email: [jmstillman@usf.edu](mailto:jmstillman@usf.edu)

Phone: (650) 452 - 9397

Jared Stillman, MS3; Emily Coughlin, MPH; Claudia Espinosa, MD

USF Morsani College of Medicine, Department of Pediatrics; Division of Pediatric Infectious Disease; Tampa, FL

### Background

- In 2019, there were approximately 1.2 million people living with human immunodeficiency virus (HIV) in the U.S.<sup>1</sup>
- Pre exposure prophylaxis (PrEP)** has demonstrated to be an effective intervention to prevent HIV acquisition in high-risk populations when taken as prescribed<sup>2</sup>
- Current PrEP is offered by oral administration of daily antiretroviral drugs<sup>3</sup>
- Despite effectiveness, PrEP intake among high-risk populations remains low (~7%)<sup>4</sup>
- Critical populations targeted for PrEP use include:
  - Adolescents (10-19 years) and young adults (20-24 years) as they are at the highest risk of becoming HIV infected.<sup>5</sup>
  - Americans living in the South comprise 51% of HIV diagnoses despite making up 38% of the population.<sup>6</sup>
  - Black Americans make up 42% of new HIV diagnoses nationwide, the highest proportion by race/ethnicity.<sup>6</sup>
  - When compared with other risk factors for HIV acquisition, male-to-male sexual contact (MSM) by itself was associated with 68% of new HIV diagnoses<sup>7</sup>
  - While women make up 18% of yearly HIV diagnoses, PrEP uptake is 10% among females whom it is recommended<sup>8</sup>
  - Florida leads the U.S. in the number of new HIV cases and has the nation's third highest infection rate<sup>9</sup>
- Currently, there are no studies evaluating documentation of PrEP recommendations or prescription rates at clinics in Hillsborough County, Florida.

### Methods

#### Setting:

The USF clinic is located in the inner city of Ybor in the Tampa Bay. The clinic provides HIV and sexually transmitted diseases (STD) screenings free of charge to adolescents and young adults until age 25 years patients who qualify. The clinic sees more than 2000 individual patients every year.

#### Inclusion criteria:

- Young adults 18 to 24 years of age.
- Patients seeking medical care between January 01, 2018 and December 31, 2020 at either Ybor Youth Clinic or Children's Medical Services.
- Patients seeking care for sexually transmitted disease or HIV testing
- Patients who have at least one risks factor\* for HIV infection

#### Exclusion criteria:

- Minors (less than 17 years old)
- Adults over 25 years
- Patients with no risk factors for HIV

#### \*ICD Codes include:

- Contact with and (suspected) exposure to HIV (Z20.6).
- Contact with and (suspected) exposure to infections with a predominantly sexual mode of transmission (Z20.2).
- Encounter for screening for infections with a predominantly sexual mode of transmission (Z11.3).
- Encounter for screening for HIV (Z11.4).
- Encounter for screening for other viral diseases (Z11.59).
- Contact with and (suspected) exposure to viral hepatitis (Z20.5).
- High-risk sexual behavior (Z11.86) including men who have sex with men

Individuals' charts were accessed through USF electronic medical record system (EPIC). A data collection sheet was used to assess PrEP documentation/prescriptions, including:

- PrEP Offered
- Type of PrEP
- PrEP Intake
- Length of PrEP's use
- Follow up at 6 and 12 months
- Compliance at 6 and 12 months

We collected demographic data for each patient, including:

- Sex, Gender, & Sexual Orientation
- Race & Ethnicity
- Insurance Status & Type
- Marital Status
- Employment Status
- Housing Status
- Education status
- Age at First Visit
- If Multiple Related Visits

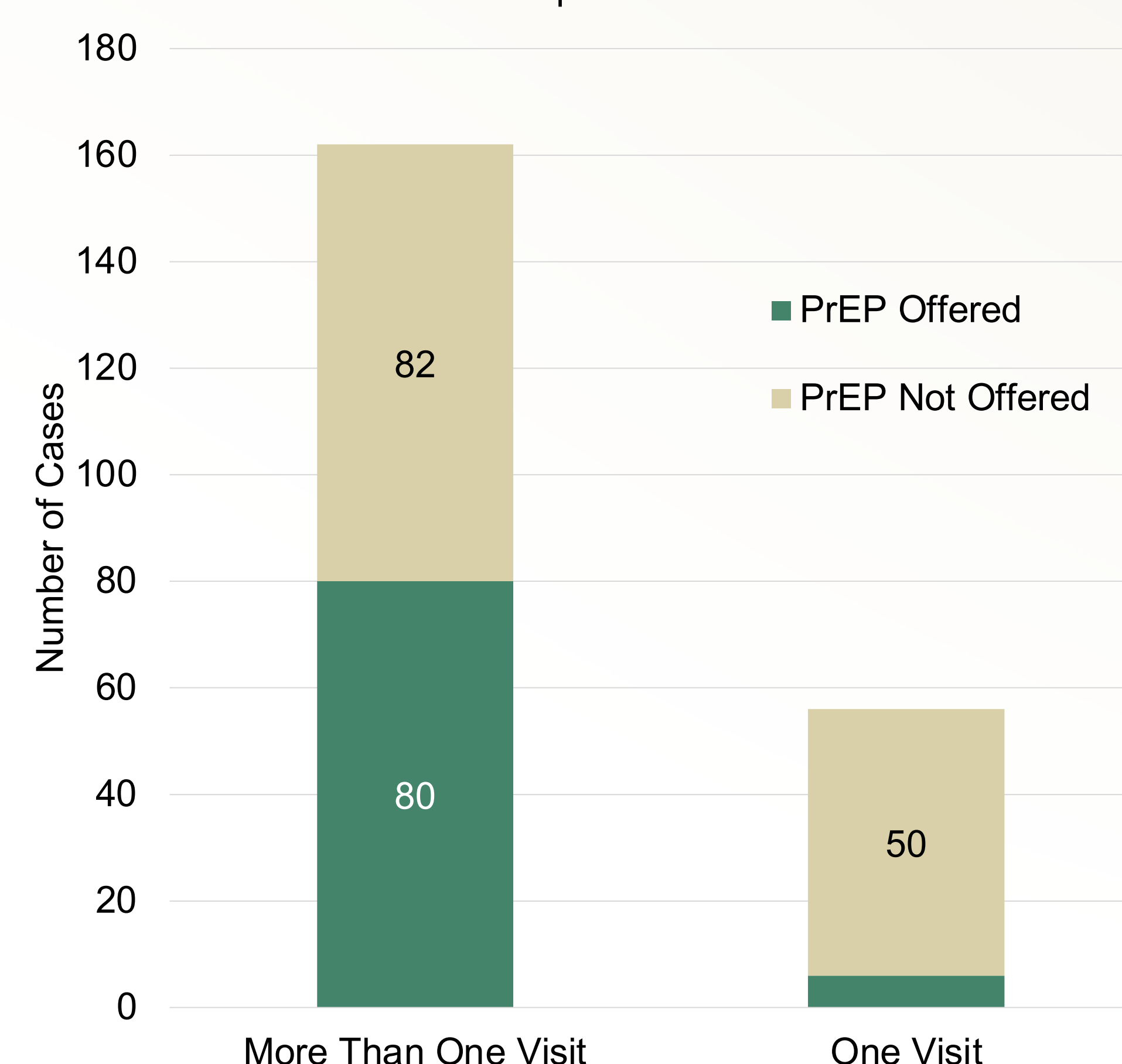
### Results

**Table 1.** Statistically Significant Factors Affecting PrEP Offerings

Variable	PrEP Not Offered	PrEP Offered	P-value
Sex			Sex p-value
Female	91 (67.9%)	43 (32.1%)	0.005
Male	41 (48.8%)	43 (51.2%)	
Race			Race p-value
White	52 (58.4%)	37 (41.6)	0.020
Black	56 (67.5%)	27 (32.5%)	
Other	10 (37.0%)	17 (63.0%)	
Ethnicity			Ethnicity p-value
Non-Hispanic	98 (64.5%)	54 (35.5%)	0.011
Hispanic	19 (43.2%)	25 (56.8%)	
MSM Status			MSM p-value
Non-MSM	126 (70.4%)	53 (29.6%)	<.001
MSM	6 (15.4%)	33 (84.6%)	

- Of 218 charts reviewed, 86 (39.4%) had documented PrEP discussion
- There were no statistically significant differences in PrEP offerings based on: Marital Status, Housing Status, Education Status, Employment Status, Age at First Visit, or Insurance Type
- Potential populations to improve the proportion of PrEP offerings include: Female, Black, Non-Hispanic, and Non-MSM patients

**Chart 1.** Number of Visits vs Proportion of PrEP offered



- For patients with <2 relevant visits, 10.7% were offered PrEP
- For patients with ≥2 relevant visits, 49.4% were offered PrEP
- Patient follow-up significantly impacts the likelihood a patient will have a documented PrEP offering (p <.001)
- All patients who used PrEP in our study have multiple visits

**Table 2.** Statistically significant Factors Affecting PrEP Uptake

Variable	PrEP not used	PrEP used	P-value
Sex			Sex p-value
Female	42 (97.7%)	1 (2.30%)	<.001
Male	22 (51.2%)	21 (48.8%)	
MSM Status			Race p-value
Non-MSM	52 (98.1%)	1 (1.9%)	<.001
MSM	12 (36.4%)	21 (63.9%)	

- Of the 86 patients who had documented PrEP offering, 22 (10.1%) began using PrEP
- There were no statistically significant differences in PrEP offerings based on: Marital Status, Housing Status, Education Status, Employment Status, Age at First Visit, or Insurance Type
- For the patients who used PrEP, 11 (52.4%) have documented ongoing PrEP use
- Among patients who discontinued PrEP within our date range, median length of use was between 14 and 15 months
- Compliance varied at 6 months and 12 months follow-ups for each patient
- Potential populations who have low PrEP uptake include Female and Non-MSM patients

### Discussion

- Despite enormous advances in science and care of HIV disease, this infection constitutes a considerable burden for the health care system.<sup>10</sup>
- For our patient population, we find that frequency of documented PrEP offerings could be greatly improved, especially among Female, Black, Non-Hispanic, and Non-MSM patients.
- Critical populations for targeted interventions to improve uptake include Female and Non-MSM patients.
- This patient population is epidemiologically important given the higher than national average rates of HIV infections.<sup>6, 7</sup>

### Limitations/Future Directions

- The impact of PrEP pamphlets/infographics that are available to patients in the clinic cannot be measured via EPIC chart review
- Not all patients have complete demographic data available
- Moving forward, this study could aid in establishing protocols for improving PrEP documentation and help develop strategies for boosting acceptance and adherence to PrEP.
- Future studies could include:
  - Surveys given to our patient population to assess the acceptability of other forms of PrEP administration such as monthly injectable doses.
  - Focused investigations into critical demographics with low offerings, uptake, or adherence to PrEP.

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