Development of a PrEP Equity Index to Set Local Targets for PrEP Coverage

CROI 2020
Abstract #1005

Contact: Julie Myers
jem2200@cumc.columbia.edu

Julie Myers[1,2], Sarah L. Braunstein[1], Zoe R. Edelstein[1], Alexis Rivera[1], Njideka Motanya[1], Oni J. Blackstock[1]

[1]New York City Department of Health and Mental Hygiene; [2]Division of Infectious Diseases, Department of Medicine, Columbia University Vagelos College of Physicians and Surgeons

Background

Scaling-Up PrEP – Impact, Disparities

- Scaling up PrEP is a priority for plans to end the HIV epidemic; implementation is expected to result in large reductions in incidence.[1]
- However, modeling suggests that lower uptake among Black MSM relative to White MSM may limit the impact of PrEP use among Black MSM, ultimately driving greater racial disparities in HIV incidence among MSM.[2]

Developing PrEP Metrics – Incorporating Use, Need

- PrEP metrics are needed to drive PrEP programming, guide resource allocation, and quantify inequities.
- Prominent PrEP coverage metrics have focused on "use" defined by prescription data and "need" defined by new diagnoses at the level of geography or risk factor only.

NYC Context – Setting Local Targets for Equity

- In NYC, PrEP use prevalence estimates among MSM are generated from local behavioral surveillance efforts.
- Intensive efforts to support and measure PrEP scale-up in NYC since 2014[4] have contributed to increases in PrEP use among *all* MSM without a consistent association between use and race/ethnicity.[5]
- However, major differences in HIV burden by race/ethnicity stimulate discussion about how to conceptualize PrEP targets, incorporating an equity lens.

Objective

- We developed a **PrEP equity index (PEI)** to quantify and illustrate inequities in PrEP coverage and used this metric to support **local target development** for PrEP coverage among MSM, focusing on racial equity.

Methods

We first estimated **PrEP coverage ("use"/"need")** using a modified PrEP-to-need ratio:

- **Numerator ("PrEP use"):** Prevalence of PrEP use in the past 6-months, derived either from:
  1. The Sexual Health Survey (SHS) among NYC MSM aged 18-40, 2018, or
  2. The National HIV Behavioral Surveillance (NHBS) study among NYC MSM, aged 18 or older, 2017
- **Denominator ("PrEP need"):** Epidemiologic need, derived either from:
  1. HIV diagnosis rate per 100,000 for men ages 13-59 from NYC HIV surveillance data & US Census data
  2. Number of new diagnoses among MSM, both for 2017, each stratified by race/ethnicity (Black, Latino, White)

We then calculated the **PrEP Equity Index,** varying the numerator and denominator used (4 "approaches"):

$$\textbf{PrEP Equity Index} = \frac{\text{PrEP coverage for White MSM}}{\text{PrEP coverage for Black (or Latino) MSM}}$$

To set **targets** for Black (and Latino) MSM, we then performed the following calculation:

PrEP targets for Black (or Latino) MSM =

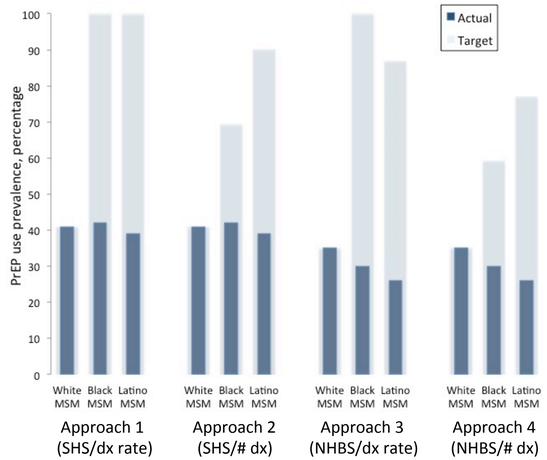
[PrEP Equity Index] **x** [PrEP use prevalence]

This effectively quantified the improvement in PrEP coverage needed among Black and Latino MSM to approximate the PrEP coverage of White MSM (with a maximum of 100%).

Results

- The **PrEP Equity Index** (PEI) varied markedly for Black and Latino MSM regardless of approach used to define PEI:
  - Black MSM, range: 1.7-3.9
  - Latino MSM, range: 2.3-3.3
- **Targets for Black MSM and Latino MSM** also varied by approach used to define PEI **(figure)**.

Figure. Targets for PrEP coverage among Black and Latino MSM in NYC derived from a novel PrEP Equity Index (PEI).



Abbreviations: Dx, diagnosis; MSM, men who have sex with men; NHBS, National HIV Behavioral Surveillance; PrEP, pre-exposure prophylaxis; SHS, Sexual Health Survey

Results, cont.

- **Reaching targets.** Regardless of how the PEI was defined, reaching targets set for Black and Latino MSM would require substantial increases in current PrEP use:
  - Black MSM, range: 65-295% increase
  - Latino MSM, range: 131-235% increase

Discussion

- Applying a newly developed **PrEP Equity Index** to set local PrEP targets dramatically illustrates inequity in PrEP coverage for Black and Latino MSM.
- These inequities are likely driven by both:
  - Inequities in PrEP access, and
  - The large differential HIV burden in these populations.
- The highly aspirational targets we generated both:
  - Illustrate the distance needed to travel to move beyond equality towards equity, and
  - Motivate intensive efforts to address racial inequities in PrEP scale-up, including new programming, messaging and research.

References

1. Jenness et al., JID 2016.
2. Goedel et al., JAIDS 2018.
3. Rosenberg and Marcus, Ann Epidemiol. 2018; Siegler et al., Ann Epidemiol. 2018; Sullivan et al., Ann Epidemiol. 2018.
4. Myers et al., AJPH 2018.
5. Scanlin et al., CROI 2016; Scanlin et al., IAPAC 2018; Rivera et al., NYCEF, 2019

Acknowledgements

We wish to thank the survey staff and participants.