

Trajectories of Newly Initiated Pre-Exposure Prophylaxis Use Among Priority Populations With Unmet Needs for PrEP in the USA

Li Tao, Juan Yang, Joshua Gruber, Chris Nguyen, and Woodie Zachry

Gilead Sciences, Inc., Foster City, CA, USA

Author Disclosures

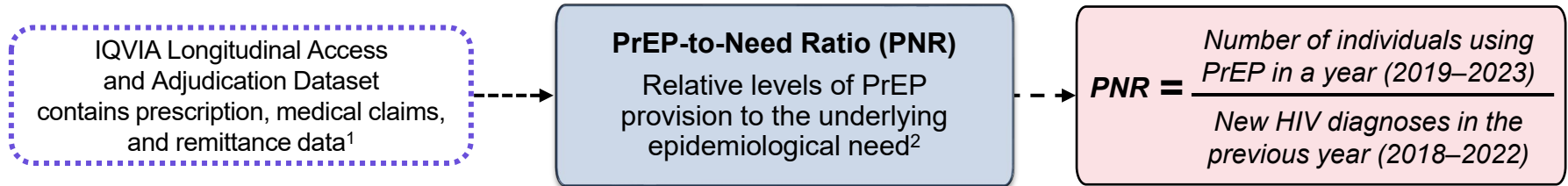
- **Li Tao, Juan Yang, Joshua Gruber, Chris Nguyen, and Woodie Zachry** are all employees and shareholders of Gilead Sciences, Inc.
- All relevant financial disclosures have been mitigated

Background

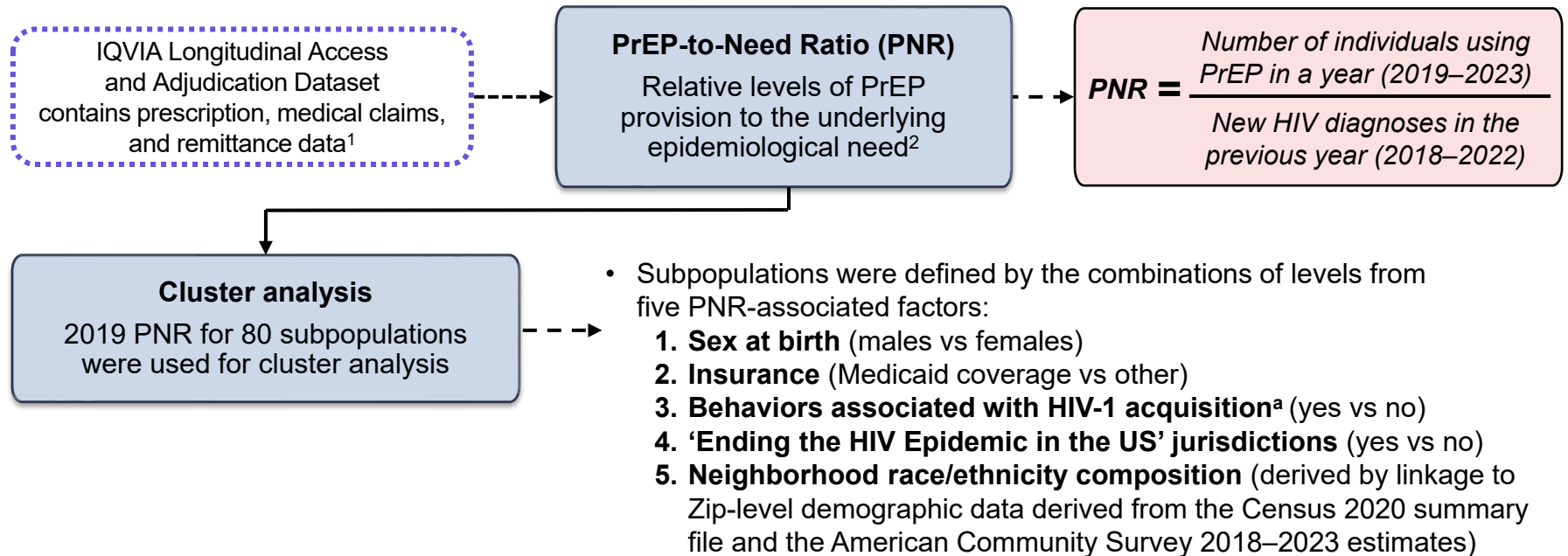
- Pre-exposure prophylaxis (PrEP) is an important strategy in HIV-1 prevention and several PrEP choices are approved by the USA Food and Drug Administration¹:
 - Options include daily oral pills (emtricitabine/tenofovir alafenamide and emtricitabine/tenofovir disoproxil fumarate) and intramuscular injections given every 2 months (cabotegravir)
 - Twice-yearly lenacapavir administered by subcutaneous injection is currently being investigated in clinical trials²
- Disparities persist in PrEP uptake and initiation across diverse demographic groups^{3,4}
 - Inequities remain in PrEP use among Black and Hispanic/Latinx people and in Southern USA, indicating a substantial unmet need in these communities⁴

Objective: To identify priority populations with unmet PrEP needs and to describe trajectories of new PrEP prescription initiation within these groups in the real-world setting

Methods



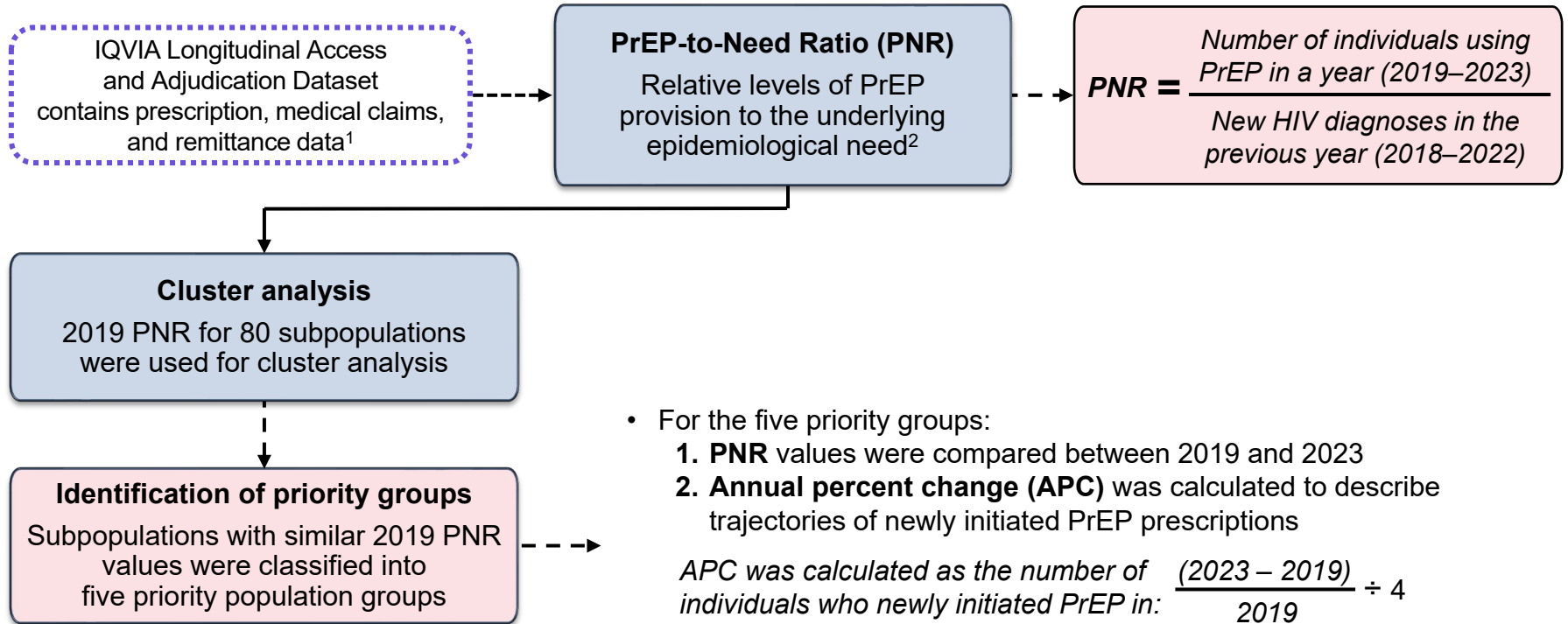
Methods



^aBehaviors associated with HIV-1 acquisition were a group of International Classification of Diseases, Tenth Revision-based diagnosis and Current Procedural Terminology codes that were highly recommend for PrEP use by providers, including any diagnoses of any sexually transmitted diseases (A50-64), contact with and exposure to communicable diseases (Z20.6, Z20.2, Z20.828, Z20.9), high-risk sexual behavior (Z72.51-Z72.53), other hazardous exposures (Z77.21, Z77.9), contact with hypodermic needle (W46.0, W46.1), long-term prophylaxis (Z79.899), HIV prevention counseling (99401-99404), and HIV screening procedures (86689, 86701-86703, 87389, 87534-87538, G0432-G0435). PrEP, pre-exposure prophylaxis.

1. IQVIA Real World & Health Datasets. Available at: <https://www.iqvia.com/solutions/real-world-evidence/real-world-data-and-insights> (accessed October 2024); 2. Siegler AJ, et al. *Ann Epidemiol.* 2018;28:841–9.

Methods



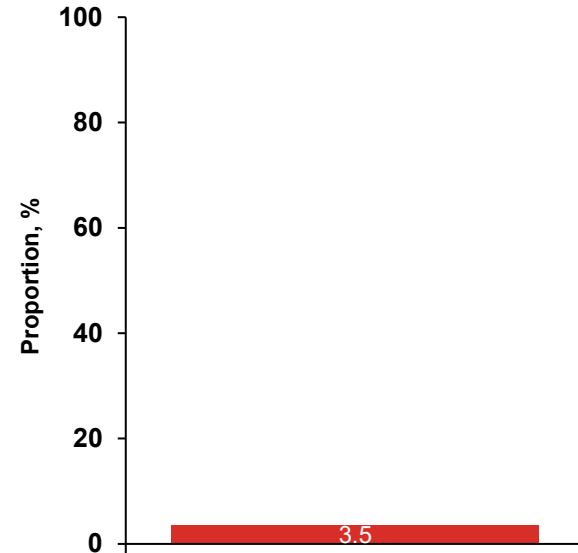
Results: Priority Groups

Identified Priority Groups

- 1 **Female Priority Group 1:** Females without behaviors associated with HIV-1 acquisition

524,389 PrEP-naïve individuals (2019–2023)

Proportion of PrEP-naïve individuals by Priority Group



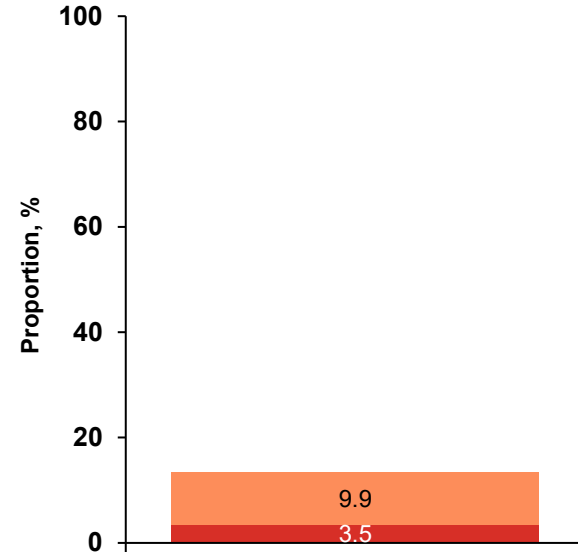
Results: Priority Groups

Identified Priority Groups

- 1 **Female Priority Group 1:** Females without behaviors associated with HIV-1 acquisition
- 2 **Female Priority Group 2:** Females with behaviors associated with HIV-1 acquisition

524,389 PrEP-naïve individuals (2019–2023)

Proportion of PrEP-naïve individuals by Priority Group



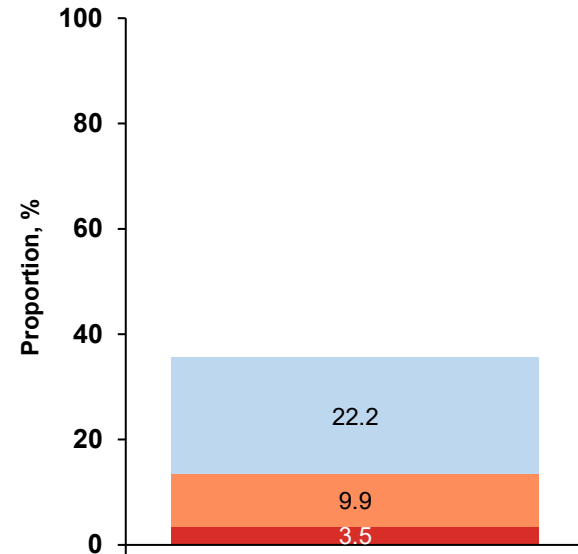
Results: Priority Groups

Identified Priority Groups

- 1 **Female Priority Group 1:** Females without behaviors associated with HIV-1 acquisition
- 2 **Female Priority Group 2:** Females with behaviors associated with HIV-1 acquisition
- 3 **Male Priority Group 1:** Males without behaviors associated with HIV-1 acquisition

524,389 PrEP-naïve individuals (2019–2023)

Proportion of PrEP-naïve individuals by Priority Group



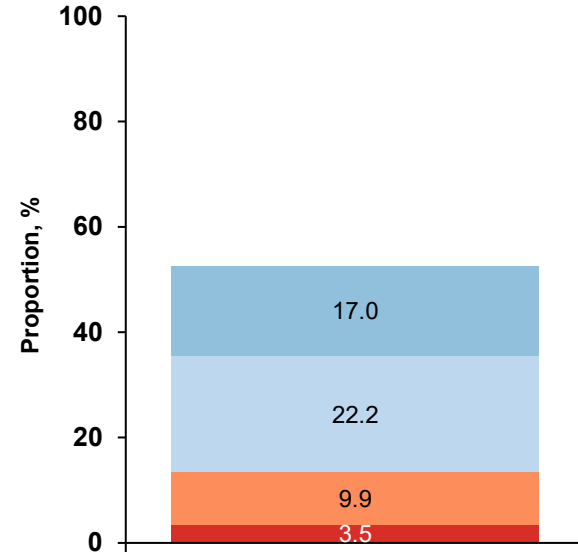
Results: Priority Groups

Identified Priority Groups

- 1 Female Priority Group 1:** Females without behaviors associated with HIV-1 acquisition
- 2 Female Priority Group 2:** Females with behaviors associated with HIV-1 acquisition
- 3 Male Priority Group 1:** Males without behaviors associated with HIV-1 acquisition
- 4 Male Priority Group 2:** Males with behaviors associated with HIV-1 acquisition and Medicaid coverage (55%) **OR** males with behaviors associated with HIV-1 acquisition, with commercial insurance, and residing in non-Hispanic Black (NHB)- or Hispanic-dominant neighborhoods (45%)

524,389 PrEP-naïve individuals (2019–2023)

Proportion of PrEP-naïve individuals by Priority Group



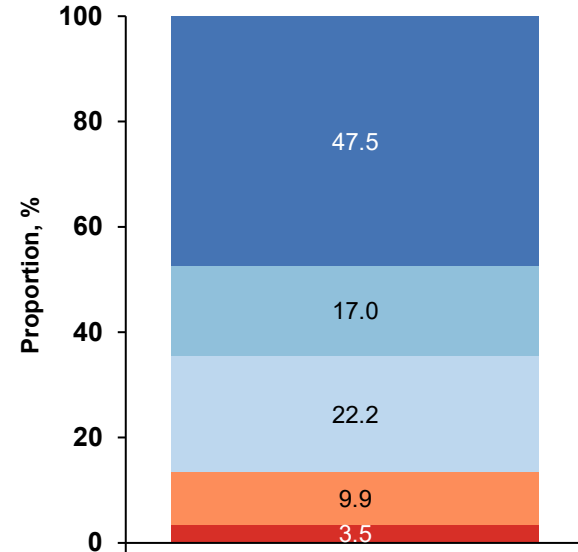
Results: Priority Groups

Identified Priority Groups

- 1 Female Priority Group 1:** Females without behaviors associated with HIV-1 acquisition
- 2 Female Priority Group 2:** Females with behaviors associated with HIV-1 acquisition
- 3 Male Priority Group 1:** Males without behaviors associated with HIV-1 acquisition
- 4 Male Priority Group 2:** Males with behaviors associated with HIV-1 acquisition and Medicaid coverage (55%) **OR** males with behaviors associated with HIV-1 acquisition, with commercial insurance, and residing in non-Hispanic Black (NHB)- or Hispanic-dominant neighborhoods (45%)
- 5 Male Priority Group 3:** Males with behaviors associated with HIV-1 acquisition, with majority commercial insurance, and residing in non-Hispanic White (NHW)-dominant neighborhoods

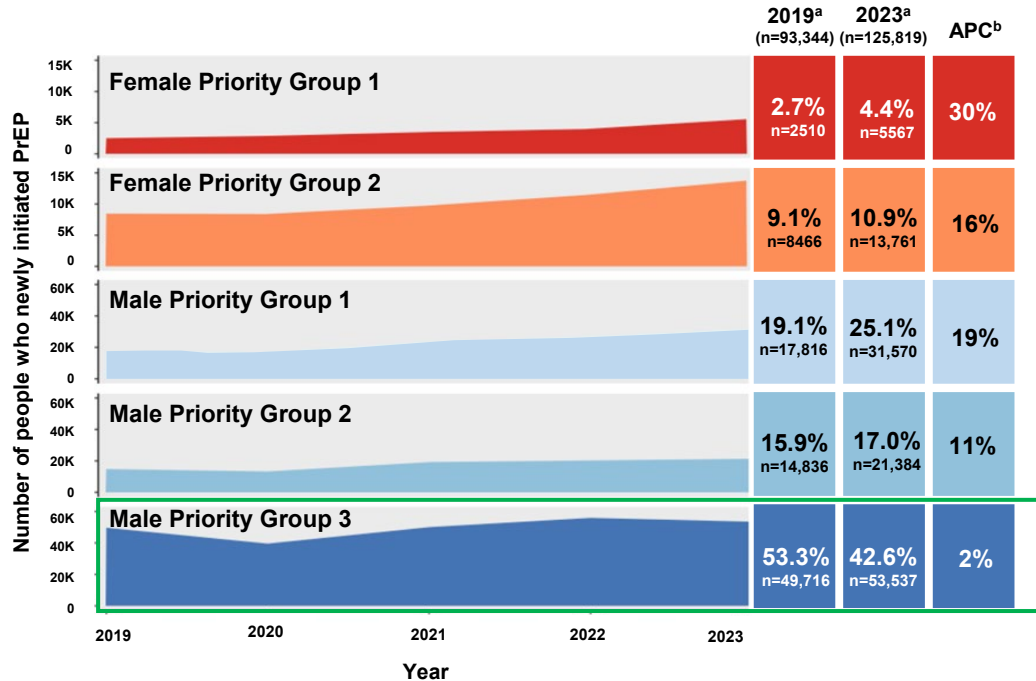
524,389 PrEP-naïve individuals (2019–2023)

Proportion of PrEP-naïve individuals by Priority Group



Results: Trajectories of Individuals Who Newly Initiated PrEP

Trajectories for Number of Individuals Who Newly Initiated PrEP between 2019 and 2023



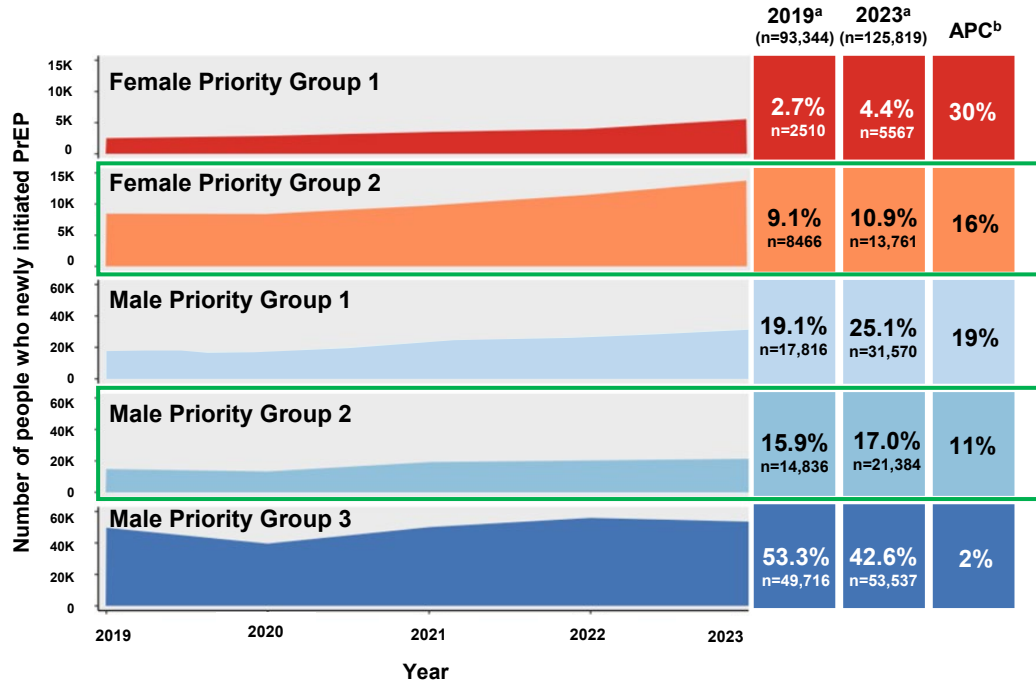
- A **large proportion** of newly initiated PrEP users in both 2019 and 2023 were **males with behaviors associated with HIV-1 acquisition**, using commercial insurance, and residing in White-dominant neighborhoods
- However, this group had the **lowest increase** in the number of individuals **initiating PrEP**

⑤ **Male Priority Group 3:** Males with behaviors associated with HIV-1 acquisition, with commercial insurance, and residing in NHW-dominant neighborhoods

^aProportions of all newly initiated PrEP prescriptions in that year. ^bAPC from 2019 to 2023. APC, annual percent change; NHW, non-Hispanic White; PrEP; pre-exposure prophylaxis.

Results: Trajectories of Individuals Who Newly Initiated PrEP

Trajectories for Number of Individuals Who Newly Initiated PrEP between 2019 and 2023



- Other males and females with behaviors associated with HIV-1 acquisition had a **6–8 times higher APC** compared with Male Priority Group 3

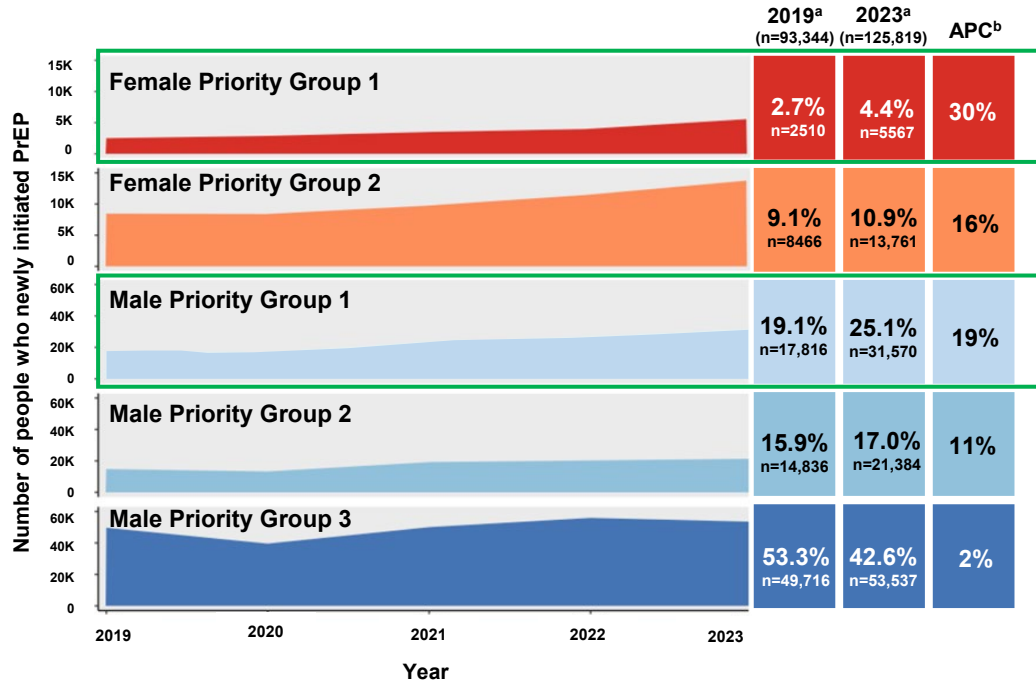
② **Female Priority Group 2:** Females with behaviors associated with HIV-1 acquisition

④ **Male Priority Group 2:** Males with behaviors associated with HIV-1 acquisition and Medicaid coverage **OR** males with behaviors associated with HIV-1 acquisition, with commercial insurance, and residing in NHB- or Hispanic-dominant neighborhoods

^aProportions of all newly initiated PrEP prescriptions in that year. ^bAPC from 2019 to 2023. APC, annual percent change; NHB, non-Hispanic Black; PrEP, pre-exposure prophylaxis.

Results: Trajectories of Individuals Who Newly Initiated PrEP

Trajectories for Number of Individuals Who Newly Initiated PrEP between 2019 and 2023



① **Female Priority Group 1:** Females without behaviors associated with HIV-1 acquisition

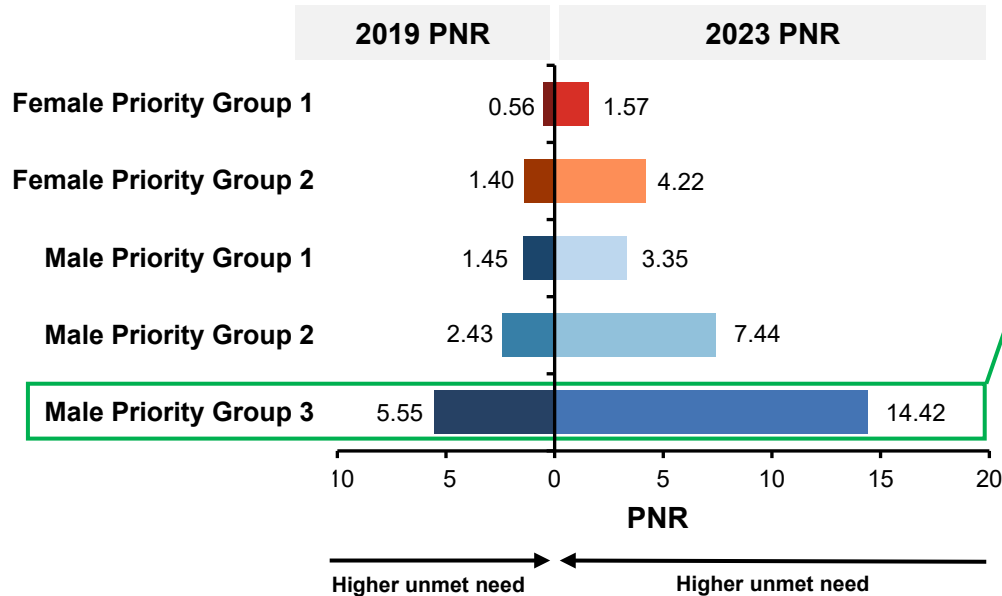
③ **Male Priority Group 1:** Males without behaviors associated with HIV-1 acquisition

- Females and males **without recorded behaviors associated with HIV-1 acquisition** showed the **highest increase** in the number of individuals initiating PrEP and had a **10–15 times higher APC** compared with Male Priority Group 3

^aProportions of all newly initiated PrEP prescriptions in that year. ^bAPC from 2019 to 2023. APC, annual percent change; PrEP; pre-exposure prophylaxis.

Results: PNR in Priority Groups

PNR in 2019 and 2023 by Priority Groups in the USA

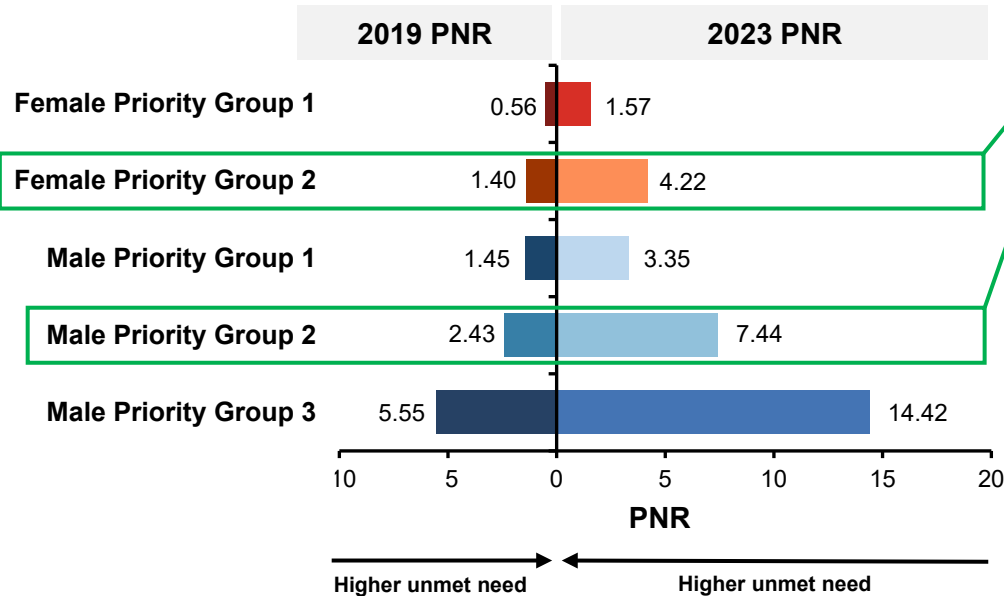


• Males with behaviors associated with HIV-1 acquisition, using commercial insurance, and residing in White-dominant neighborhoods had the lowest unmet needs

⑤ Male Priority Group 3: Males with behaviors associated with HIV-1 acquisition, with commercial insurance, and residing in NHW-dominant neighborhoods

Results: PNR in Priority Groups

PNR in 2019 and 2023 by Priority Groups in the USA



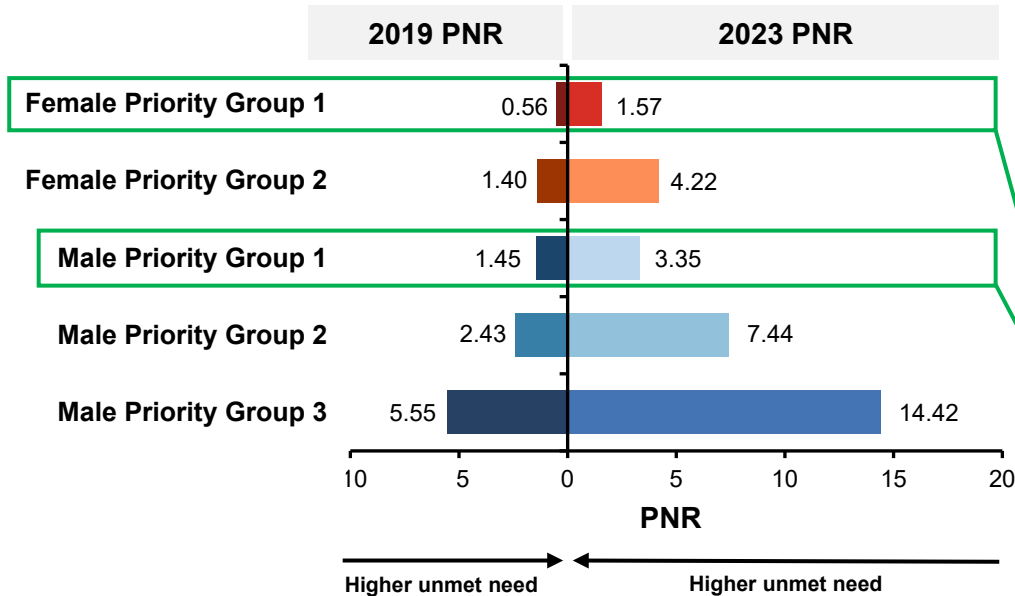
- Other males and females **with behaviors associated with HIV-1 acquisition** had higher unmet needs

② **Female Priority Group 2:** Females with behaviors associated with HIV-1 acquisition

④ **Male Priority Group 2:** Males with behaviors associated with HIV-1 acquisition and Medicaid coverage **OR** males with behaviors associated with HIV-1 acquisition, with commercial insurance, and residing in NHB- or Hispanic-dominant neighborhoods

Results: PNR in Priority Groups

PNR in 2019 and 2023 by Priority Groups in the USA



① **Female Priority Group 1:** Females without behaviors associated with HIV-1 acquisition

③ **Male Priority Group 1:** Males without behaviors associated with HIV-1 acquisition

- Females and males **without recorded behaviors associated with HIV-1 acquisition** retained the **most substantial unmet needs** from 2019 to 2023

Limitations

- Data collection based on pharmacy claims may lead to the omission of clinically relevant data in real-world settings
 - Cluster analyses and priority grouping were developed based on data available
- Female priority groups were small; however, the findings of the study represent a large population that is not captured by the claims database, and it is critical to interpret these findings
- Socio-structural factors that may influence participant behavior and individual-level demographic factors were not recorded
- PNR values calculated using claims data may differ from values based on other data sources
- Causal inferences cannot be drawn from this descriptive study, as many factors may contribute to PrEP initiation

Take Away Points

- From over half a million real-world PrEP users in the past 5 years, this study was able to identify priority populations with distinct unmet needs for PrEP
 - Male PrEP users with behaviors associated with HIV-1 acquisition, with commercial insurance, and who resided in NHW-dominant neighborhoods, had the lowest unmet need and the slowest increase in PrEP uptake
 - Males and females without recorded behaviors associated with HIV-1 acquisition had the highest unmet need and the most rapid increase in PrEP uptake
 - While PNR improvements were observed in groups with substantial unmet needs, disparities persist, and the need remains significant
- Identifying priority populations with unmet needs in PrEP use is crucial for guiding future HIV-1 prevention options, such as twice-yearly injectable lenacapavir, to address barriers in adherence and persistent use
 - A PrEP choice with less frequent administration may appeal to individuals who are not interested in currently available oral and injectable PrEP options
 - Additionally, long-acting PrEP options may help to address socio-structural factors in HIV-1 acquisition, such as partner behavior and a lack of providers willing to provide PrEP in underserved areas

Acknowledgments

- This study was funded by Gilead Sciences, Inc.
- All authors contributed to and approved the presentation; medical writing support was provided by Amy Watkins, PhD, of Ashfield MedComms (Manchester, UK), an Inizio company, and funded by Gilead Sciences, Inc.

Copies of this poster obtained through QR (Quick Response) and/or text key codes are for personal use only and may not be reproduced without written permission of the authors.

