



# PrEP Primary Non-Adherence and Associated HIV Incidence in 2019-2020

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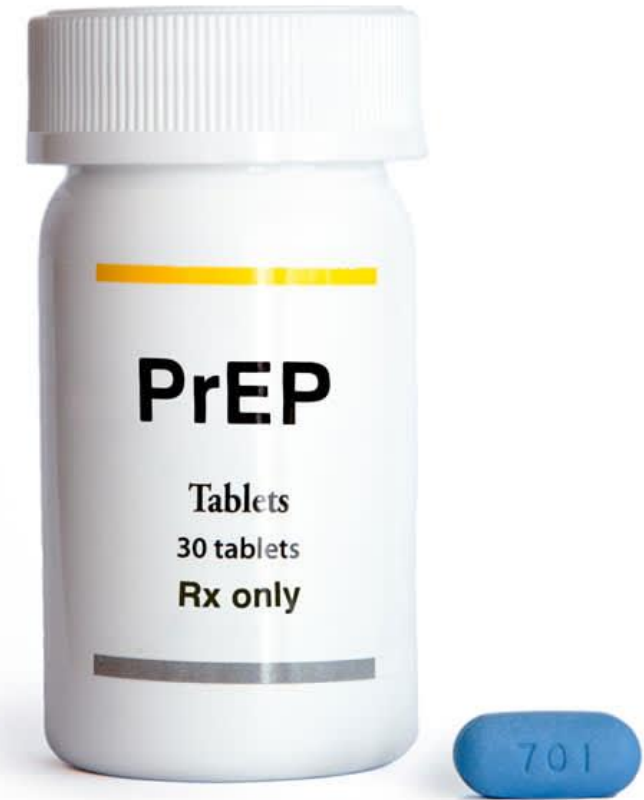
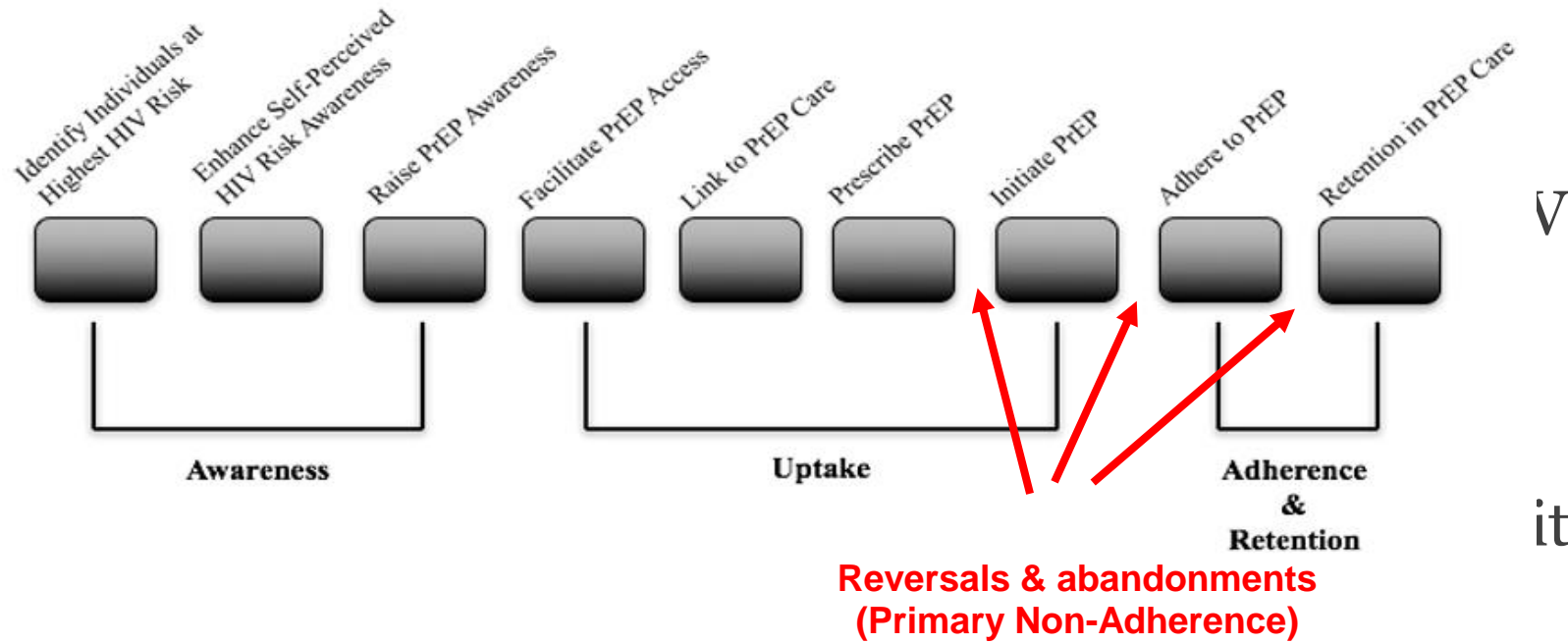
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# Acknowledgements



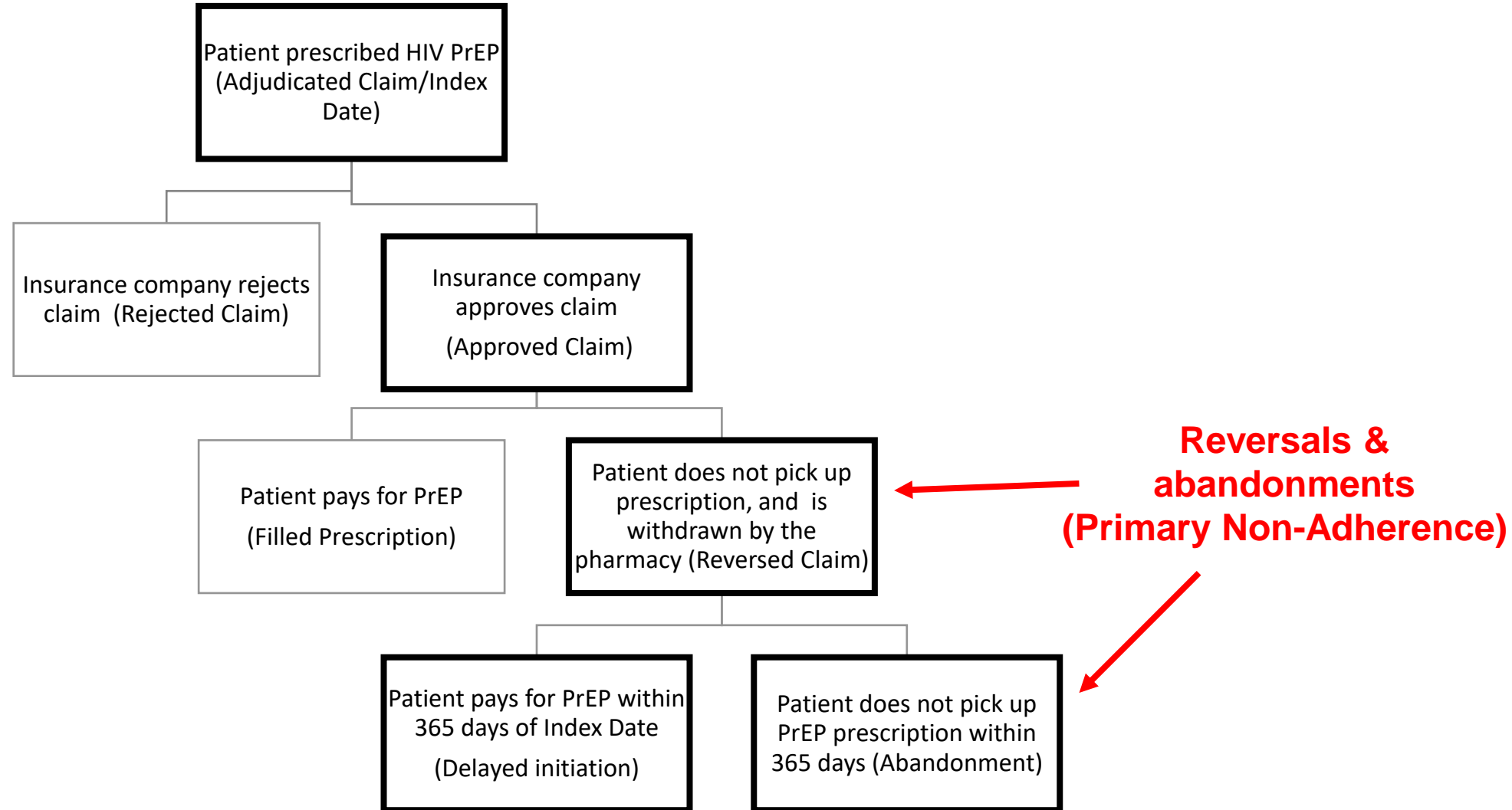
- ▶ This research was supported by a JHU Center for AIDS Research (CFAR) Grant

# What is HIV PrEP?



- ▶ **Failing to pick up PrEP at the pharmacy is a gap in the care continuum- contributes to up to 5x elevated HIV risk**

# Defining primary non-adherence



# Descovy approval may improve uptake



- ▶ Relative importance of issues affecting PrEP initiation\*:

- ▶ **Side effects: 43.5%**

What about side effects?

- ▶ **Cost: 35.2%**

2019: Cost should not be a significant concern

- ▶ **Other\*\*: 21.3%**



- ▶ Descovy, approved as PrEP in Oct. 2019, **has a superior side effect profile to prior standard of care (Truvada)**

- ▶ Impact on primary non-adherence and associated HIV risk has not been investigated

\*Percents reflect relative importance of issues. N=688 GBMSM across 6 New England States

NIH R21MH118019

\*\* Time of follow-up visits and mode of administration

# Study objectives



- ▶ To serially assess PrEP reversal, abandonment, and HIV incidence by calendar month among a cohort of new PrEP users in 2019
- ▶ To compare overall reversal, abandonment, and HIV incidence rates between incident users of Truvada and Descovy in 2019

# Methods: Study Design



- ▶ **Design:** Retrospective longitudinal analysis of PrEP utilization
- ▶ **Data:** IQVIA Longitudinal Rx claims data
- ▶ **Sample:** Previously PrEP-naïve adults without HIV or HBV with an insurance-approved claim for emtricitabine/tenofovir (Descovy or Truvada) between January 1, 2019 and January 2, 2020
- ▶ **Exposure:** We used a validated algorithm that identifies antiretroviral medications prescribed for PrEP
- ▶ **Outcomes:**
  - ▶ **1.** Primary non-adherence to PrEP: categorized as:
    - a. Reversal
    - b. Abandonment
  - ▶ **2.** HIV incidence in 365 days subsequent to first claim

# Characteristics: Newly Prescribed PrEP (N=134,884)



	Truvada (N = 119,569)	Descovy (N = 15,315)	TOTAL (N = 134,884)
% Male	82.2	83.6	82.3
<b>Age (yrs)</b> (median, IQR)	31 (26, 40)	<b>37 (29, 51)</b>	31 (26, 41)
<b>Age group (%)</b>			
18-24	20.4	12.1	19.5
25-34	44.7	33.7	43.4
35-44	18.5	20.1	18.7
45-54	10.3	18.5	11.2
55+	6.1	15.6	7.2
<b>Insurance type (%)</b>			
Cash	1.3	1.8	1.4
Commercial	89.1	81.5	88.3
Medicaid	6.9	8.4	7.1
Medicare	2.6	7.9	3.2

	Truvada (N = 119,569)	Descovy (N = 15,315)	TOTAL (N = 134,884)
<b>Out of pocket cost (\$)</b> (median, IQR)	0 (0, 25)	0 (0, 3)	0 (0, 25)
<b>Provider specialty (%)</b>			
Primary care	37.5	32.1	36.9
Infectious disease	6.7	<b>21.0</b>	8.3
Allied health	45.5	41.0	45.0
Other	10.3	6.0	9.8

Patients were the unit of analysis, followed for up to one year from 2019-2020



# Results

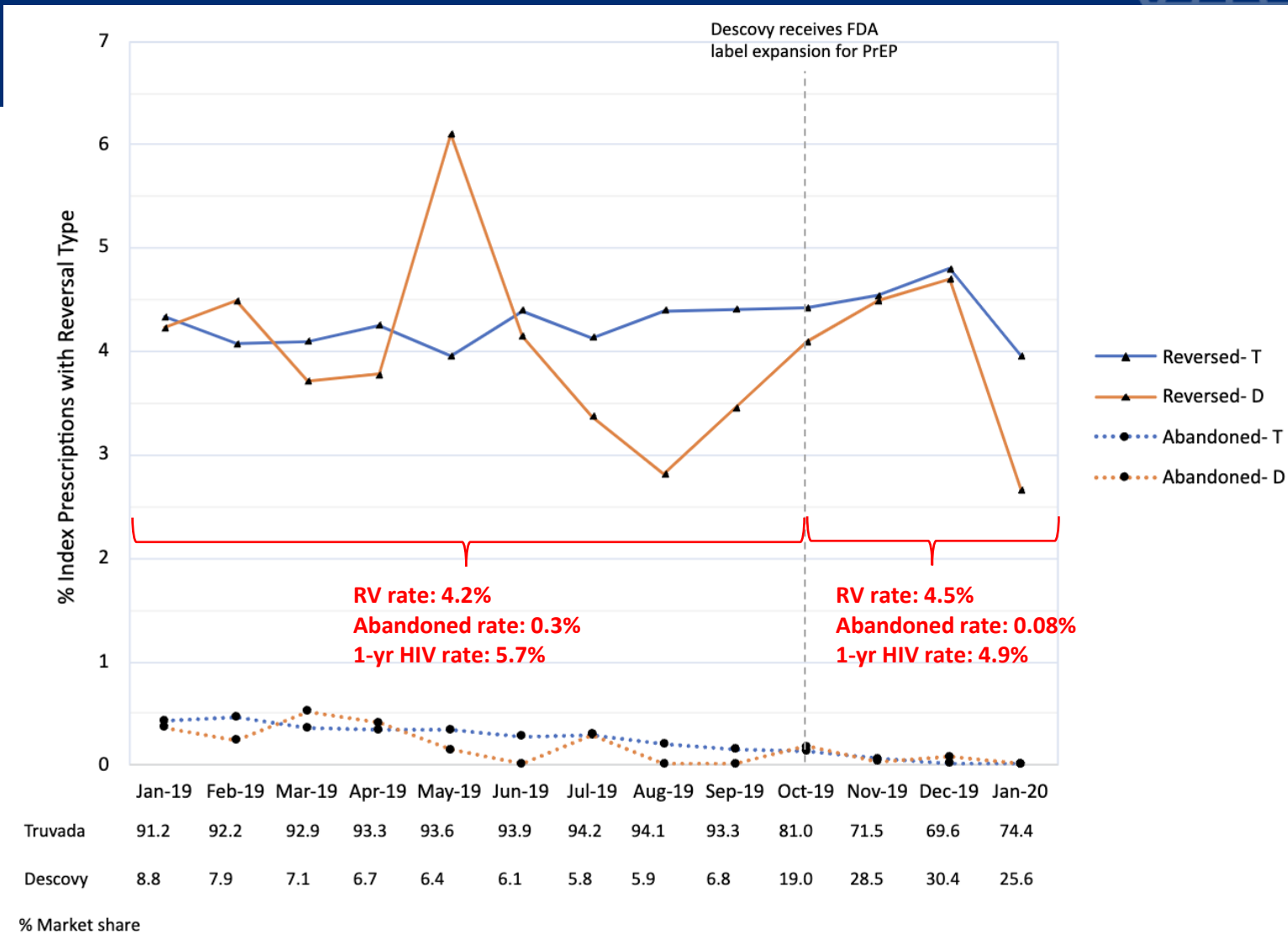


▶ **PrEP reversal did not differ overall between Truvada (4.3%) and Descovy (4.2%);** while Truvada had a modest but statistically significantly higher rate of abandonment (0.3% vs. 0.2%) ( $p < 0.05$ ).

▶ **The one-year incidence of HIV following PrEP abandonment was doubled in users prescribed Descovy vs. Truvada (17.4% vs. 7.7%) ( $p = 0.10$ ),** and appeared elevated among non-abandoners as well (Descovy, 7.5% vs. Truvada, 5.2%) ( $p < 0.0001$ ).

▶ **Overall PrEP reversal rate similar after Descovy FDA approval in October 2019 (4.5% vs. 4.2%) ( $p < 0.05$ );** HIV slightly reduced (4.9% vs. 5.7%) ( $p < 0.05$ )

▶ Source: IQVIA FIA, January 2019 – January 2020



# Conclusions



- ▶ Primary adherence was very high (>95%) for both Descovy and Truvada (compared with ~80% measured in other studies)
- ▶ While use of Descovy since October 2019 increased five-fold to ~25% of the PrEP market, overall rates of reversal & abandonment did not significantly differ after FDA approval, or between Truvada and Descovy users
  - ▶ Secondary adherence may differ between products, which we did not assess in this analysis
- ▶ There was usually no out-of-pocket cost for either product
- ▶ Increased rate of incident HIV among Descovy users
  - ▶ Significantly older and were more likely to be treated by an infectious disease specialist
  - ▶ More likely to have been followed up for abandonment & HIV during COVID-19
- ▶ Limited by lack of data on patient-provider/pharmacist communication about side effects



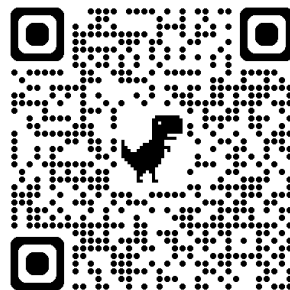
Thank you!

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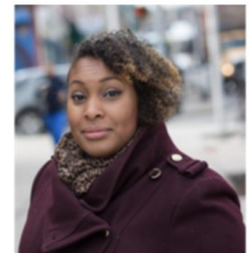
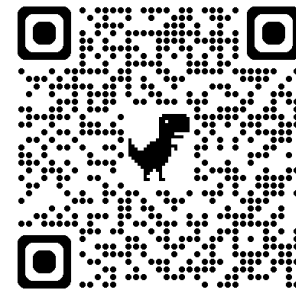
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