Racial/Ethnic Disparities in Timely Antiretroviral Therapy Initiation, 2007-2019

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BACKGROUND

- Integrase inhibitor (INSTI)-containing antiretroviral therapy (ART) is currently the guideline-recommended first-line treatment for HIV.
- Delayed initiation of INSTIs may amplify racial and ethnic inequities in health outcomes among people living with HIV.
- **We estimated racial/ethnic differences in timely ART initiation and INSTI prescription among adults newly linked to HIV care in the US from 2007-2019.**

METHODS

- Observational study enrolling 42,841 adults entering HIV care at >200 U.S. clinical sites in the North American AIDS Cohort Collaboration on Research and Design.
- **Outcomes**: overall (unadjusted) racial/ethnic differences in **(1) the 1-month probability of initiating ART** and **(2) the proportion of participants prescribed an INSTI.**
- Confidence intervals (CIs) around differences were estimated using the delta method; intervals that exclude 0 indicate a significant difference at α=0.05.
- We examined variation in racial/ethnic differences over time in relation to FDA approval of INSTIs, updated national guidelines on 'when to start' ART, and guidelines' inclusion of INSTIs as preferred initial ART.

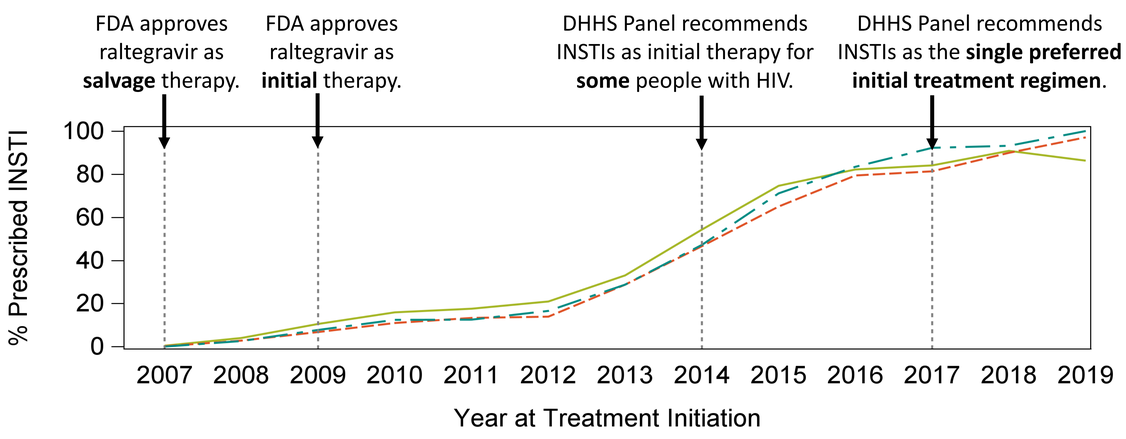
RESULTS

(1) 1-month probability of initiating ART

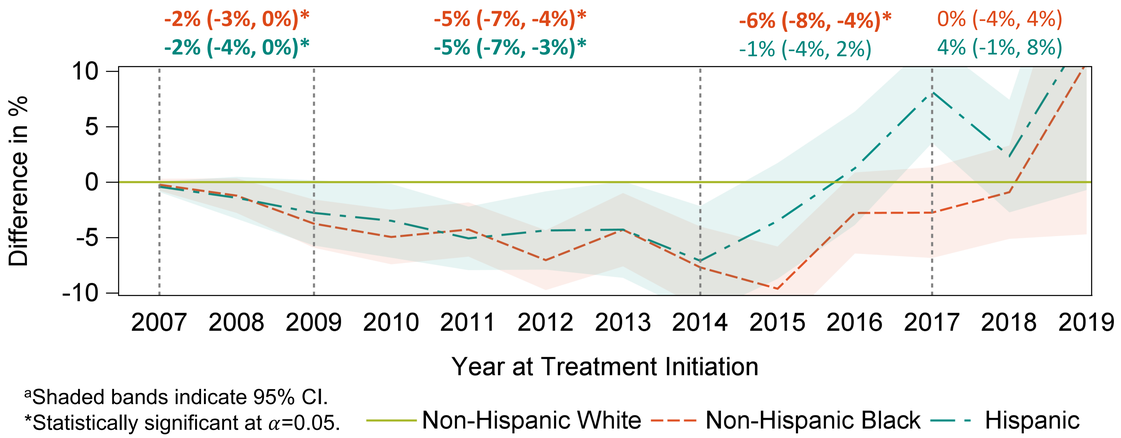
- From **2007-2015**, the probability of initiating ART within 1 month of care entry was 45% among White participants, 45% among Black participants (difference: 0%; -1, 1), and 51% among Hispanic participants (5%; 95% CI 4, 7).
- From **2016-2019**, after guidelines strongly recommended treating all patients regardless of their CD4+ T-cell count, this probability increased to 66% among White participants, 68% among Black participants (2%; -1, 5), and 71% among Hispanic participants (5%; 1, 9).

Racial/ethnic disparities in INSTI prescription persisted for several years after INSTIs were approved by the FDA. Disparities were resolved after INSTIs became DHHS guideline-preferred therapy.

Percent of White, Black, and Hispanic patients prescribed INSTIs



***Difference* in the percent of Black and Hispanic vs. White patients prescribed INSTIs[a]**



[a]Shaded bands indicate 95% CI.
*Statistically significant at α=0.05.

Non-Hispanic White — Non-Hispanic Black — Hispanic

RESULTS (cont.)

(2) Proportion of participants prescribed an INSTI

- INSTIs were prescribed to 22% of White participants and only 17% of Black (-5%; -7, -4) and 17% of Hispanic (-5%; -6, -3) participants from **July 2009 – April 2014**, when INSTIs were FDA-approved as initial therapy but not yet guideline-recommended.
- Significant differences persisted for Black (-6%; -8, -4) but not Hispanic (-1%; -4, 2) participants from **May 2014 – October 2017**, when INSTIs were a guideline-recommended option for initial therapy.
- Differences by race/ethnicity were not statistically significant from **November 2017 – April 2019,** when INSTIs were the single preferred initial therapy for most people with HIV.

CONCLUSIONS

- **National treatment guidelines were associated with improved pharmacoequity among people entering HIV care and starting treatment from 2007-2019.**
- Additional research is needed to uncover the specific mechanisms linking guidelines to reduced disparities.

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