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Factors associated with Integrase Strand Transfer Inhibitor use between 2008- 2015

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Background

- Integrase strand transfer inhibitors (INSTIs) when used in conjunction with other antiretroviral drugs, are highly effective and well tolerated.
- First licenced in 2007, guidelines have recommended their use as an option for initial treatment of HIV since 2009.
- Here we examine factors associated with INSTI use in people living with HIV (PLWH) who were newly initiated on antiretroviral therapy during the study period.

Methods

- Data on PLWH who were newly initiated on antiretroviral therapy (ART) was extracted from the Truven Health Analytics MarketScan® database for commercially insured and Medicaid covered adults aged 18-64 between Jan 1, 2008 and Dec 30, 2015.
- New users were identified as those with a new ART prescription who had medical and prescription drug coverage in the 6 months prior to the prescription.
- Factors potentially associated with initiation on an INSTI-based regimen identified during the 6 month baseline period included age, insurance coverage, infectious diseases provider, NSAID prescription and hyperlipidemia/statin prescription.
- Multivariable logistic regression was preformed to determine independent factors associated with initiation of INSTI.

Results

- 25,928 new ART initiators were identified.
- 6,000 (23%) were initiated on INSTI-based regimens (raltegravir 47%, elvitegravir 40%, dolutegravir 13%). 53% initiated regimens containing non-nucleoside reverse transcriptase inhibitors and 28% included protease inhibitors.
- Mean age was 40.4 yrs (10.9); 15,382 (76%) were male.
- As expected, the proportion of PLWH initiated on INSTI-based regimes increased from 117 (5%) in 2008 to 53% in 2015 (n=1082).

Results

Figure 1. Proportion of new ART users initiated on INSTI by year

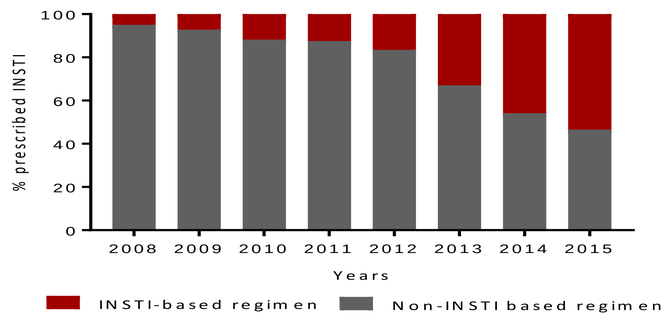
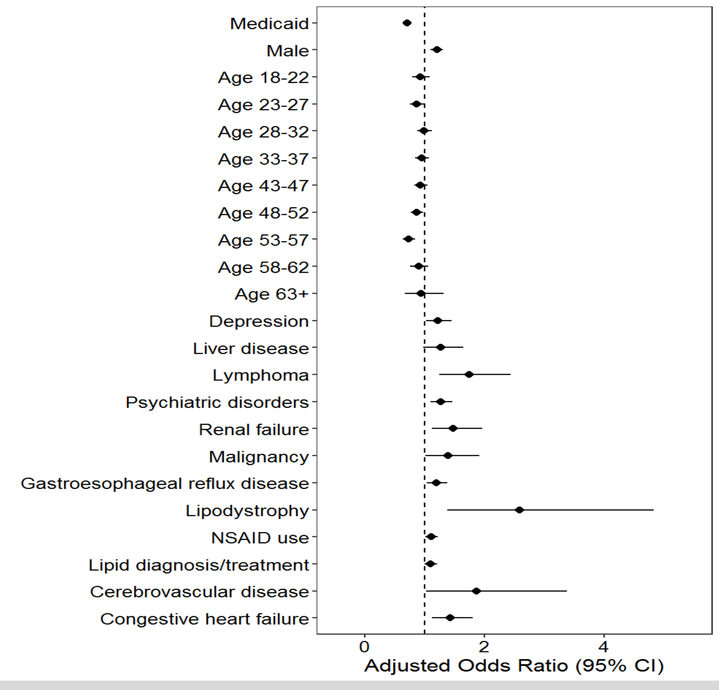


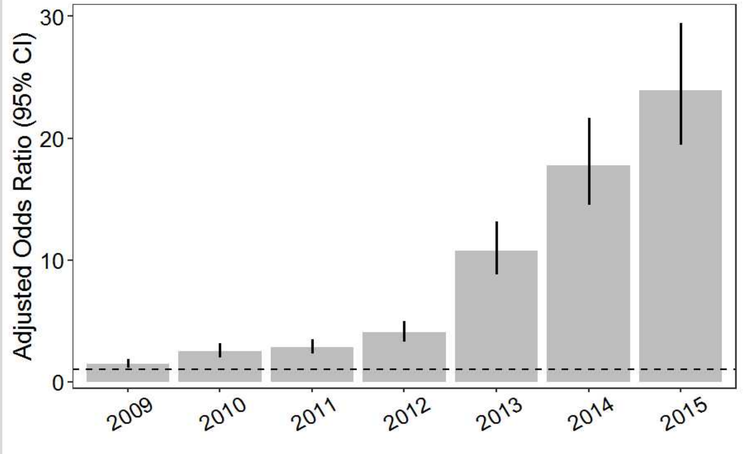
Figure 2. Patient-level factors associated with INSTI initiation on multivariable analysis



- Those on INSTI were more likely male (OR 1.21 [95% CI 1.11, 1.31) and not insured by the Medicaid program (1.41, [1.29, 1.54]).

Results

Figure 3.



- Although PLWH with a history of congestive cardiac failure (1.42 [1.12, 1.8]), previous cerebrovascular disease (1.87 [1.03, 3.38]) or renal failure (1.48 [1.12, 1.98]) were more likely to receive INSTIs, those with a history of ischaemic heart disease (p=0.18) or risk factors for cardiovascular disease including, hypertension (p=0.52), obesity (p=0.25) or diabetes (p=0.29) were not more likely to initiate INSTI-based regimens after controlling for age and year.
- INSTI prescribing did not differ between infectious diseases (ID) and non-ID providers.

Conclusions

- Despite their good safety profile and recommendation for first line treatment, a significant proportion of PLWH were still initiated on non-INSTI based regimens in the later half of the study period.
- This occurred even in the setting of underlying comorbidities.

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