Prescription Opioid Use and Disorder Among Older Adults With HIV in the US From 2008-2019

Stephanie Shiau[1], Fabrizio Drago[1], Kylie Getz[1], Greta Bushnell[1], Hillary Samples[1], Alexis Bender[2], Laura Bennett[1], Perry N. Halkitis[1], Tobias Gerhard[1], Jason A. Roy[1], Silvia S. Martins[3], Michael T. Yin[3], Stephen Crystal[1]

[1]Rutgers University, Piscataway, NJ, USA; [2]Emory University, Atlanta, GA, USA; [3]Columbia University, New York, NY, USA

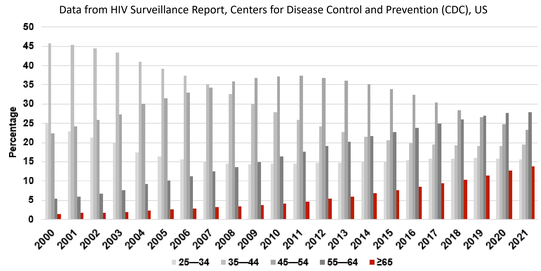
CROI Conference on Retroviruses and Opportunistic Infections

00995

— BACKGROUND —

- Advances in HIV treatment have prolonged life expectancy of people living with HIV. This has resulted in a growing population of older PLWH (≥ 65 years) in the US.

Figure 1: Estimated percentage of people living with HIV by age and year in the United States (2000 – 2021)



- Despite growing concern that PLWH receive prescription opioids at elevated rates and experience a disproportionate burden of opioid use disorder (OUD) compared to their HIV- counterparts, few studies have described opioid prescription and OUD trends over time.
- Our objective was to evaluate these trends among older adults comparing those living with HIV to their HIV- counterparts.

— METHODS —

| Study Population |

- We analyzed claims data from a 20% sample of Medicare fee-for service beneficiaries with Part D that oversampled beneficiaries from New Jersey and prioritized people with Part D enrollment obtained under a research data use agreement established with the Center for Medicare and Medicaid Services.
- Beneficiaries living with HIV (n=124,488) were matched to HIV- beneficiaries (n=373,464) using propensity scores based on age, sex, race/ethnicity, state, and dual eligibility status.

| Measurements |

- Primary outcomes included receipt of 1+ opioid prescription and diagnosed OUD (composite variable) during that calendar year.
- Secondary outcomes included receipt of 'high-risk' opioid prescriptions [i.e., 2+ overlapping prescriptions >7 days, ≥90 mg total morphine milligram equivalent (MME) daily dose, and ≥90 consecutive days of coverage], use of medication for OUD, and opioid-related hospitalizations/emergency department (ED) visits.

| Statistical Methods |

- Logistic regression was used to estimate the odds of each outcome comparing matched HIV and HIV- beneficiaries.

Older (≥65 years) Medicare beneficiaries with HIV have higher odds of receiving opioid prescriptions, diagnosed OUD, and receiving 'high risk' opioid prescriptions compared to matched HIV- beneficiaries.

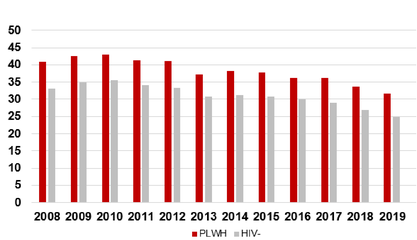
— RESULTS —

Table 1: Characteristics of beneficiaries included in analysis

	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-	PLWH	HIV-
N	4849	14547	5510	16530	6313	18939	7169	21507	8218	24654	9475	28425	10505	31515	11518	34554	13080	39240	14501	43503	15943	47829	17407	52221
Male (%)	68.4	68.4	69.3	69.3	69.4	69.4	69.6	69.6	70.6	70.6	71.7	71.7	71.4	71.4	72.1	72.1	71.9	71.9	72.9	72.9	73.9	73.9	74.3	74.3
Age Category (%)																								
65 – 69	48.4	48.4	49.4	49.4	48.2	48.2	47.5	47.5	48.2	48.2	47.3	47.3	47.5	47.5	47.7	47.7	48.4	48.4	48.2	48.2	48.2	48.2	47.4	47.4
70 – 75	30.7	30.7	29.9	29.9	30.8	30.8	31.2	31.2	31.2	31.2	32.0	32.0	31.5	31.5	30.7	30.7	29.9	29.9	29.8	29.8	30.1	30.1	30.9	30.9
75 – 79	12.6	12.6	12.8	12.8	13.1	13.1	13.2	13.2	12.8	12.8	13.1	13.1	13.2	13.1	13.6	13.6	13.4	13.4	13.6	13.6	13.6	13.6	13.4	13.4
80+	8.3	8.3	7.9	7.9	8.0	8.0	8.1	8.1	7.8	7.8	7.6	7.6	7.9	7.9	8.0	8.0	8.4	8.4	8.4	8.4	8.1	8.1	8.3	8.3
Race (%)																								
NH White	40.8	40.8	39.7	39.7	39.8	39.8	40.6	40.6	41.9	41.9	42.8	42.8	44.2	44.2	45.4	45.4	46.5	46.5	47.3	47.3	48.3	48.3	49.0	49.0
Black / AA	40.9	40.9	41.4	41.4	41.3	41.3	40.7	40.7	39.5	39.5	39.8	39.8	39.1	39.1	37.9	37.9	37.0	37.0	36.5	36.5	35.4	35.4	34.7	34.7
Asian / PI	1.6	1.6	1.5	1.5	1.6	1.6	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.5	1.5
AI / AN	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Hispanic	15.7	15.7	16.6	16.6	16.4	16.4	16.3	16.3	15.9	15.9	14.5	14.5	13.3	13.3	12.9	12.9	12.5	12.5	12.0	12.0	11.8	11.8	11.7	11.7
Other	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9
Unknown	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.4	0.4	0.6	0.6	0.9	0.9	1.2	1.2	1.3	1.3	1.6	1.6	1.8	1.8	1.9	1.9

- The cohort was predominantly male (68.4-74.3%) and White (39.7-49.0%) or African American (34.7-41.4%) (**Table 1**).
- Among beneficiaries with HIV, the prevalence of receiving 1+ opioid prescription (31.7-43.0%) (**Figure 2**) and an OUD diagnosis (2.1-4.7%) was higher than their matched HIV- counterparts (24.9-35.6 and 0.6-2.3%, respectively).

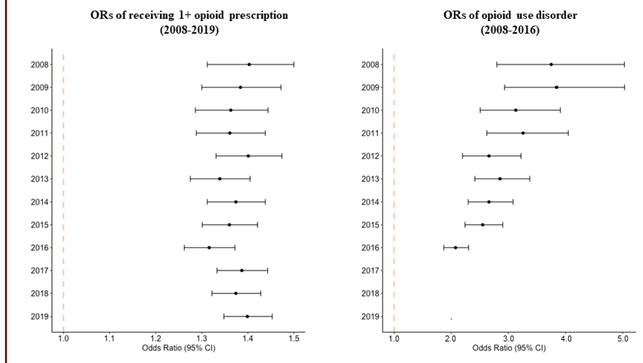
Figure 2: Percentage of Medicare beneficiaries with HIV and matched HIV- receiving 1+ opioid prescription, by calendar year



- Consistent across all years, beneficiaries living with HIV had significantly increased odds of receiving 1+ opioid prescription (OR=1.32-1.40) and diagnosed OUD (OR=2.08-3.84) compared to their matched HIV- counterparts (**Figure 3**).
- Similar trends were observed for all secondary outcomes, including receipt of 2+ overlapping prescriptions >7 days (OR=1.41-1.70), ≥90 mg total MME daily dose (OR=1.41-2.17), ≥90 consecutive days of coverage (OR=1.50-1.72), use of medication for OUD (OR=2.73-7.51), and opioid-related hospitalizations/ED visits (OR=2.48-3.60).

— RESULTS —

Figure 3: Logistic regression (odds ratio [OR] and 95% confidence interval [CI]) for the odds of receiving 1+ opioid prescription or diagnosed opioid use disorder comparing Medicare beneficiaries with HIV vs. HIV- beneficiaries during each calendar year



— CONCLUSIONS —

- Medicare beneficiaries living with HIV have higher odds of receiving opioid prescriptions, diagnosed OUD, and receiving 'high risk' opioid prescriptions compared to matched HIV- beneficiaries.
- Trends are consistent across all years.
- Our findings may help guide opioid use management among this vulnerable population.

— CONTACT —

Stephanie Shiau, PhD, MPH
Assistant Professor of Epidemiology
Rutgers School of Public Health
stephanie.shiau@rutgers.edu

— FUNDING —

This study was supported by funding from the National Institute on Drug Abuse (K01DA053157).

National Institutes of Health
Turning Discovery Into Health