

Suicide rates among adults living with HIV, 2000-2015

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NA-ACCORD
North American AIDS Cohort Collaboration on Research and Design

IeDEA
International Epidemiology Databases to Evaluate AIDS

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Background

It is unknown if the increasing suicide rate (particularly among White men) and the increased risk of suicide among those who use drugs in the United States (US) general population are mirrored among people with HIV (PWH).

OBJECTIVE: To estimate suicide rates among PWH in the US & Canada from 2000-2015.

Methods

STUDY POPULATION. PWH enrolled in cohorts of the NA-ACCORD

Study sample: 81,014 PWH (aged 20-79 years)

- Subset: 59,919 men, 46% Black and 54% White
- Subset: 58,961 Black and White men, 26% have a history of IDU as their HIV transmission risk factor and 74% non-IDU

STUDY PERIOD. 1 Jan 2000 to 31 Dec 2015

PRIMARY OUTCOME. Suicide as the cause of death on the death certificate or noted in the electronic medical record

ANALYSIS. Follow up time and events accrued from

- Follow up start: Enrollment into the NA-ACCORD or 1 Jan 2000 (whichever came later)
- Follow-up end: Death by suicide, death from another cause, lost to follow up (2 years without a CD4 or HIV RNA measurement), or 31 Dec 2015 (whichever came first)

Suicide rates and 95% confidence intervals, stratified by a history of injection drug use (IDU) and race (White, Black) were estimated.

Adjusted incidence rate ratios (aIRR) and 95% confidence intervals (CIs) were estimated using Poisson regression models.

Results

Figure 1: Suicide rates (and 95% CIs) per 100,000 person-years for men with HIV in the NA-ACCORD (circles) and men in the general US population (dashed lines), by race, 2000-2015 (n=59,919)

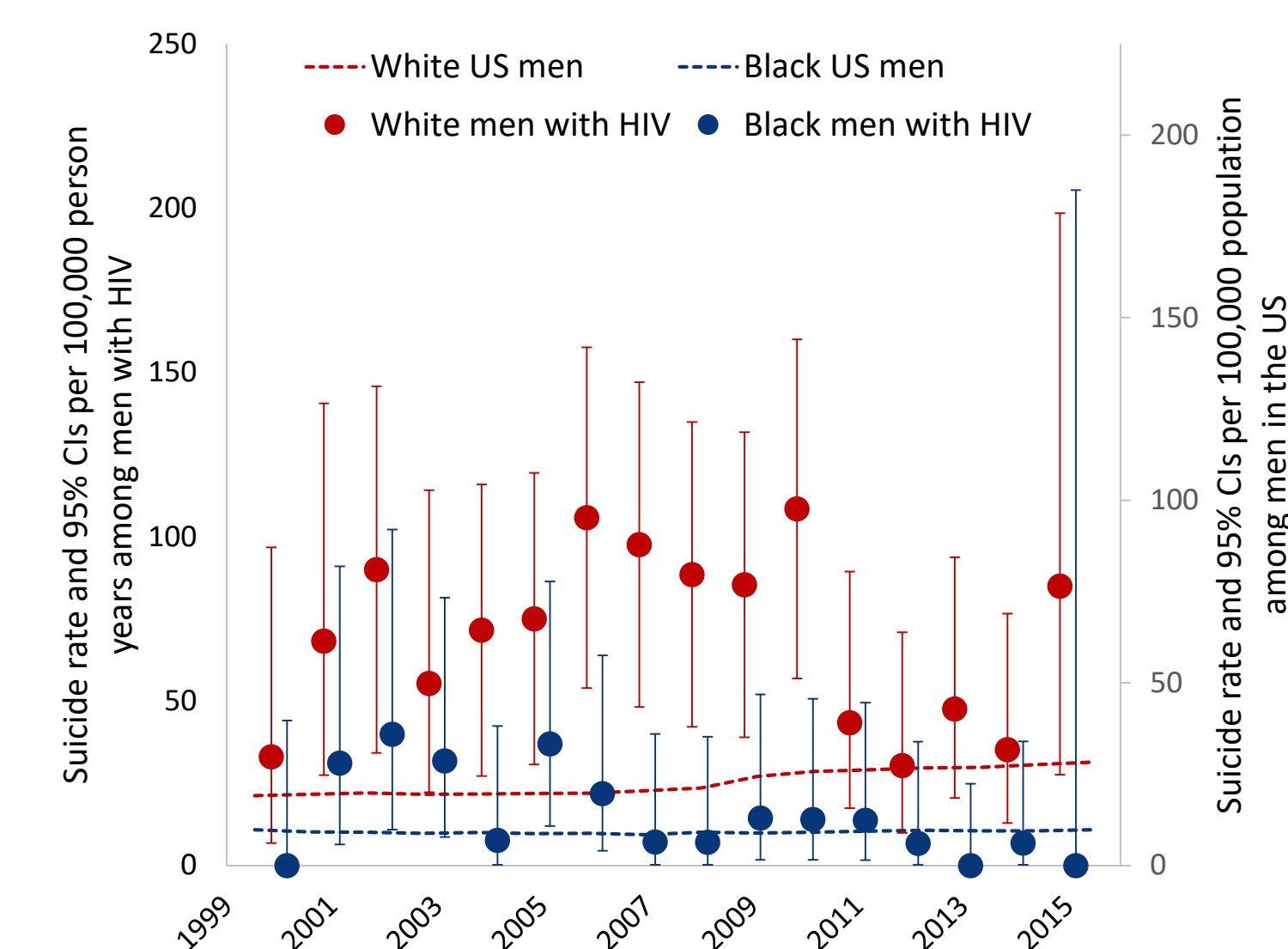


Figure 2: Suicide rates (and 95% CIs) per 100,000 person-years for men with HIV in the NA-ACCORD by IDU status and race, 2000-2015 (n=58,961)

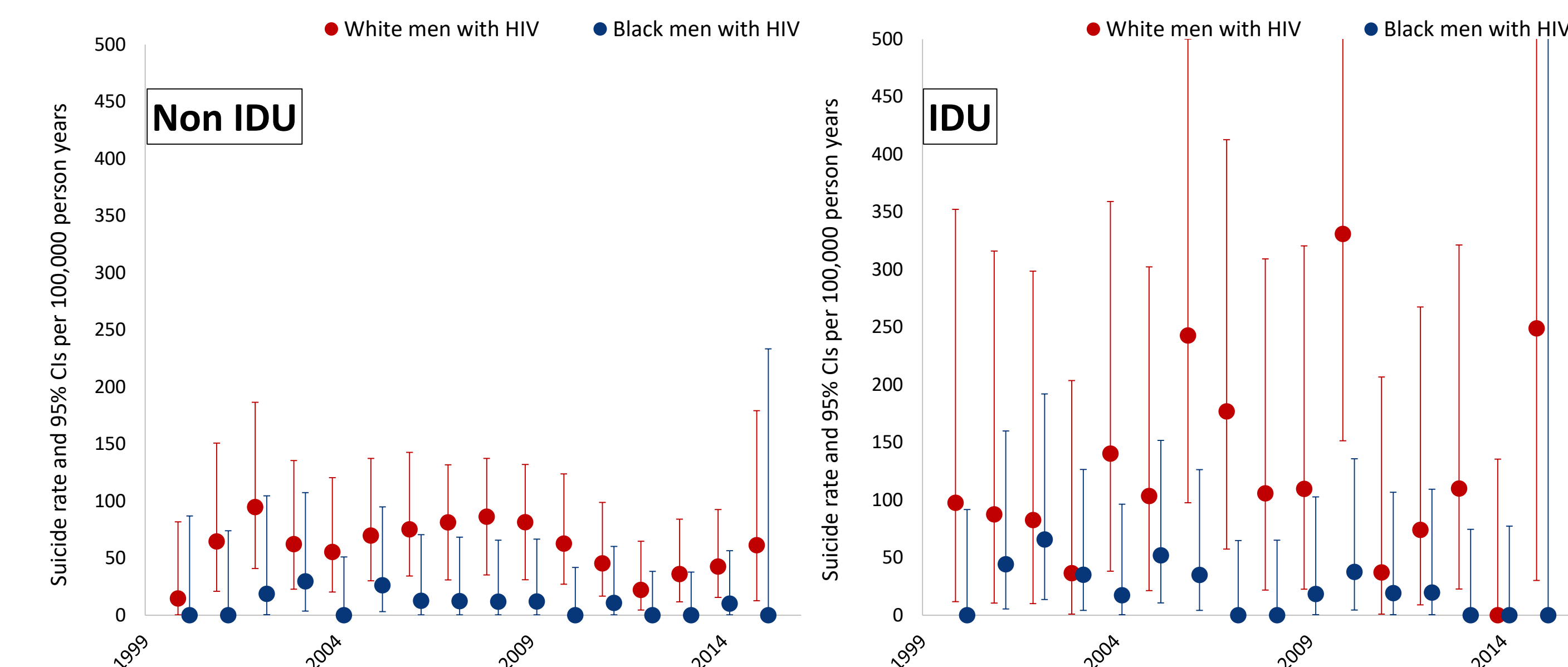


Table 1: Suicide rate (and 95% CIs) per 100,000 person-years for women with HIV in the NA-ACCORD, 2000-2015 (n=7,701)

# of deaths	# of person-years	Suicide rate (95% CI)
2	47,953	4.17 (0.51,15.07)

Study sample (N=81,014)

217 deaths, 547,503 person-years

Subset: Black and White Men (n=59,919)

184 deaths, 419,149 person-years

Subset: Black and White men with known IDU status (n=58,961)

183 deaths, 413,622 person-years

Table 2: Adjusted incidence rate ratios (and 95% CIs) for suicide among men with HIV in the NA-ACCORD, by race and IDU, 2000-2015 (n=58,961)

Group	aIRR	95% CI
White IDU	9.98	(5.13, 19.40)
White non-IDU	5.92	(3.17, 11.03)
Black IDU	2.21	(1.03, 4.73)
Black non-IDU	1.00	ref

Adjusted for age, mental health conditions at enrollment (depression, bipolar, schizophrenia, HIV dementia), efavirenz use, and calendar year.

Conclusions

Men with HIV warrant targeted suicide prevention efforts

- White IDU men had the highest rates of suicide, followed by White non-IDU, Black IDU, and Black non-IDU men
- Among men with HIV, suicide rates were higher among White (vs Black) men, corroborative of US general population findings
- Suicide rates were much lower in women (vs. men) with HIV, corroborative of US general population findings

Limitations: The number of deaths from suicide are likely underestimated as suicide requires evidence of intent.

Additionally, suicides could be misclassified as overdose, particularly among IDU.

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