Table 2. PrEP Adherence and Discontinuation at the GHS PrEP Program from 2018 to 2020 (N=154)

	n (%)
Adherence on PrEP (mean, SD)	89.2 (12.5)
High adherence	119 (77.3)
Low adherence	35 (22.7)
Active in program	83 (53.8)
Discontinued PrEP	71 (46.1)
Permanently discontinued	62 (87.3)
Re-engaged in program	9 (12.7)
Months in program (mean, SD)	9.8 (6.4)
Positive STI	33 (21.4)
Seroconversion	1 (0.6)

Table 4. Multivariate analysis of individual factors associated with PrEP discontinuation and low adherence

	P-value
PrEP Discontinuation (n=71)	
Age at referral	0.0061
Race	0.1569
Gender	0.3599
Insurance	0.7741
PrEP indication	0.9314
Low adherence (n=35)	
Age at referral	0.5072
Race	0.5601
Gender	0.9988
Insurance	0.3999
PrEP indication	0.4263

Conclusion. Mean PrEP adherence at a safety net PrEP program in Atlanta was high and PrEP discontinuation rates were comparable to other PrEP clinics nationwide. We found no association with individual factors previously linked to lower adherence, including Black race, younger age, and insurance status. Program-related factors that may have impacted these findings need to be investigated. Other future areas of research include strategies to optimize engagement in care in younger patients.

Disclosures. **Bradley L. Smith, Pharm.D., AAHIVP, Gilead Sciences, Inc** (Advisor or Review Panel member)

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53. Sex and Race Disparities in Premature Mortality among People with HIV: A 21-Year Observational Cohort Study

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Session: O-11. Disparities in HIV PrEP and Continum of HIV Care

Background. Since the availability of antiretroviral therapy, mortality rates among people with HIV (PWH) have decreased; however, this trend may fail to quantify premature deaths among PWH. We assessed trends and disparities in all-cause and premature mortality by sex, HIV risk factor, and race, among PWH receiving care at the Vanderbilt Comprehensive Care Clinic from January 1998 – December 2018.

Methods. We examined mortality trends across calendar eras using person-time from clinic entry to date of death or December 31, 2018. We compared mortality rates by demographic and clinical factors and calculated adjusted incidence rate ratios (aIRR) and 95% confidence intervals (CI) using multivariable Poisson regression. For individuals who died, years of potential life lost (YPLL) were obtained from the expected years of life remaining by referencing US sex-specific period life tables at age and year of death; age-adjusted YPLL (aYPLL) rates were also calculated. We examined patient factors associated with YPLL using multivariable linear regression.

Results. Among the 6,531 individuals (51% non-Hispanic [NH] White race, 40% NH Black race, 21% female) included, 956 (14.6%) died. Mortality rates dramatically decreased during the study period (Figure). After adjusting for calendar era, age, injection drug use, hepatitis C virus (HCV), year of HIV diagnosis, history of AIDS-defining illness, CD4 cell count, and HIV RNA at clinic entry, only female sex (aIRR=1.32, 95% CI: 1.13–1.55 vs. males) but not NH Black race (aIRR=1.02, 95% CI: 0.88–1.17 vs. NH White race) was associated with increased mortality. In contrast, aYPLL per 1,000-person years was significantly higher for both female and NH Black PWH (Table 1). In adjusted models including CD4 cell count, HIV RNA, HCV, and year of clinic entry, higher YPLL remained associated with NH Black race, female sex regardless of HIV risk factor, and younger age at HIV diagnosis (Table 2).

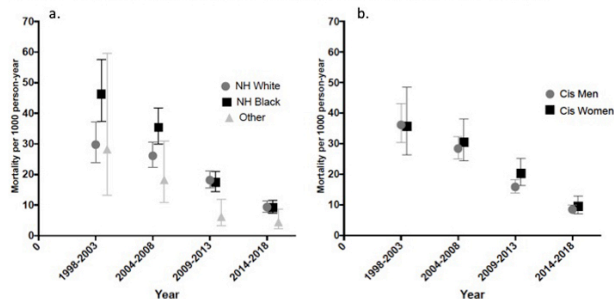**Figure:** Unadjusted mortality rates by (a) race/ethnicity and (b) sex

Table 1. Age-adjusted YPLL per 1,000 person-years

Race/ethnicity and sex group	aYPLL per 1,000 pys [95%CI]
Non-Hispanic White males	308.6 [308.0–309.2]
Non-Hispanic White females	411.5 [405.6–417.4]
Non-Hispanic Black males	470.7 [468.5–472.9]
Non-Hispanic Black females	592.5 [588.4–596.6]

YPLL: years of potential life lost
aYPLL: age-adjusted YPLL
pys: person-years
CI: confidence interval

Table 2. Multivariable linear regression for YPLL

Variable	Adjusted β coefficient [95% CI]	P value
HIV risk factors		
MSM (reference)	1.00	
Heterosexual females	5.58 [4.58, 6.59]	<0.001
Heterosexual males	0.49 [-0.64, 1.61]	0.396
Other/IDU males	1.25 [0.24, 2.27]	0.015
Other/IDU females	6.17 [4.72, 7.62]	<0.001
Race/ethnicity		
NH White race (reference)	1.00	
NH Black	0.77 [0.03, 1.51]	0.042
Other	1.01 [-0.80, 2.81]	0.274
Age at HIV infection (per year)	-0.66 [-0.69, -0.63]	<0.001
CD4 cell count at clinic entry (per cells/μL)	-0.004 [-0.002, 0.001]	0.572
Log10 HIV RNA at clinic entry	1.04 [0.72, 1.36]	<0.001
Hepatitis C virus coinfection	-1.96 [-2.83,-1.09]	<0.001
Year of clinic entry (per year)	0.22 [0.14, 0.30]	<0.001

MSM: men who have sex with men; IDU: injection drug use; NH: Non-Hispanic

Conclusion. Despite marked improvement over time, sex disparities in mortality as well as sex and race disparities in YPLL remained among PWH in care in this cohort. YPLL is a useful measure for examining persistent gaps in longevity and premature mortality among PWH.

Disclosures. **Peter F. Rebeiro, PhD, MHS, Gilead** (Other Financial or Material Support, Single Honorarium for an Expert Panel)

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54. Self-Perception of Risk for HIV Acquisition and Calculated Risk for HIV Acquisition Among Active Duty Air Force Members with Newly Diagnosed HIV Infection

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Session: O-11. Disparities in HIV PrEP and Continum of HIV Care

Background. Persons may underestimate their risk of HIV infection despite presence of risk factors. Accurate appraisal of HIV risk may assist both patients and providers in preventing HIV acquisition. We evaluated self-perceived risk (SPR) versus calculated risk (CR) of HIV infection in active duty US Air Force (USAF) members with incident HIV infection.

Methods. USAF members with new HIV diagnosis evaluated at a specialty care military medical center between January 2015-March 2020 with available case report forms were included (n=142). Chart reviews were performed and demographic, social, and clinical characteristics were collected from initial Infectious Disease specialty encounters and case report forms. SPR was characterized as Low or High and compared to CR derived by the Denver HIV Risk Score (DHRS) by points based on patient demographic and risk exposure characteristics.

Results. Overall, patients were predominantly male (98%), with a median age of 26 years (IQR 22-30), and the majority (85%) reported same-sex partners (Table 1). Patients more commonly characterized themselves as Low SPR (n=78; 55%) than High SPR (n=64; 45%). Demographic characteristics were similar except a higher proportion of Low SPR