National HIV testing trends and sociodemographic correlates in Black cisgender or transgender women

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BRFSS™ Behavioral Risk Factor Surveillance System

BACKGROUND

- Black cisgender and transgender women are disproportionally impacted by HIV in the United States. Having risky behaviors that can lead to HIV transmission but not receiving HIV testing could result in delayed diagnosis and treatment in this population.
- We investigated the prevalence of HIV testing and associated sociodemographic characteristics among Black cisgender and transgender women at risk for HIV from 2016-2020.

METHODS

- *Data Source*: 2016-2020 Behavioral Risk Factor Surveillance System (BRFSS)
- *Participants included in the analysis*: self-identified as Black, cisgender or transgender women, and reported high-risk behaviors. Based on BRFSS, high-risk behaviors related to HIV include any of the following behaviors in the past year:
  - injected any non-prescribed drug
  - have been treated for a sexually transmitted disease
  - have given or received money or drugs in exchange for sex
  - had anal sex without a condom
  - had four or more sex partners
- *Measures*:
  - Dependent variable: ever been tested for HIV
  - Independent variables: age, education, income, healthcare coverage, and geographic region
- *Statistical analysis*:
  - Unweighted counts and weighted percentages to describe population's characteristics via SAS
  - Annual percent change (APC) and p-value to examine the trend of HIV testing over 5 years via Joinpoint trend analysis software
  - Multivariate analyses to investigate associated covariates with ever tested for HIV via SAS

1. One in six Black women with high-risk behaviors had never tested for HIV.
2. A slight decrease in HIV testing trend among Black women from 2016-2020.

RESULTS

- Among 3,474 Black cisgender and transgender women who reported high-risk behaviors from 2016-2022, 83.1% had tested for HIV and **16.9% had never tested for HIV**.
- In the five-year sample, 64.2% were 18-34 years old, 70.8% had some post high school education, 48.1% had annual income less than $25,000, 85.2% had health insurance, and 57.2% were from the South region.
- **A slight decrease in percentages of HIV testing over 5 years** (APC=-1.29) was found, but the change is not significant (p=0.5420).
- Black women who were less likely to get HIV testing were those **aged 18-34 years or ≥55 years; and those with less than high school or some post-high school education.**

Table 1. Sociodemographic characteristics and ever tested for HIV among Black women who had high-risk behaviors, 2016-2020

	Total		2016		2017		2018		2019		2020	
	Unweighted N	Weighted %	Unweighted N	Weighted %	Unweighted N	Weighted %	Unweighted N	Weighted %	Unweighted N	Weighted %	Unweighted N	Weighted %
Age (years)												
18-34	1839	64.2	176	68.7	439	61.0	453	64.3	399	66.6	372	63.6
35-54	1218	29.4	124	27.5	292	30.0	299	29.0	257	27.3	246	31.8
>=55	433	6.4	17	3.8	134	9.0	109	6.7	91	6.1	82	4.6
Education												
Less than high school	306	11.5	29	11.0	83	14.5	85	13.8	59	8.2	50	9.1
Some post high school	2317	70.8	227	77.7	578	67.4	554	66.7	496	75.6	462	71.7
College graduate	881	17.7	62	11.3	208	18.0	227	19.6	193	16.2	191	19.2
Income												
<25,000	1480	48.1	159	57.0	379	52.3	361	46.1	310	46.2	271	44.3
25,000-50,000	803	27.3	74	19.2	184	26.0	199	28.1	172	30.7	174	27.4
>=50,000	735	24.7	58	23.8	173	21.7	170	25.9	168	23.1	166	28.3
Healthcare coverage												
Yes	2846	85.2	269	83.8	715	86.2	696	86.2	606	84.7	560	84.2
No	480	14.8	45	16.2	103	13.8	119	13.8	105	15.3	108	15.8
Region												
Northeast	492	15.4	60	23.2	116	13.8	140	17.4	74	12.1	102	15.6
South	2151	57.2	153	35.7	552	58.6	538	55.9	487	61.9	421	60.2
West	169	7.4	13	4.7	44	9.1	39	8.6	38	6.6	35	6.1
Midwest	696	19.9	91	36.2	157	18.5	151	18.1	151	19.5	146	18.2
Other	1	0.0	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0
Ever tested for HIV												
Yes	2827	83.1	267	83.8	699	82.0	720	87.8	611	83.1	530	79.2
No	647	16.9	49	16.2	162	18.0	140	12.2	134	16.9	162	20.8

RESULTS (Cont'd)

Figure 1. Prevalence of ever tested for HIV among Black women with high-risk behaviors, 2016-2020

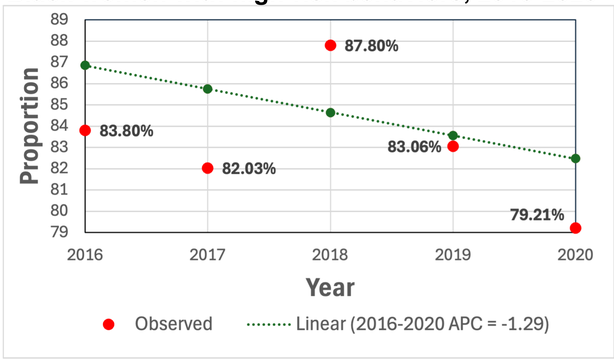

Table 2. Associations between sociodemographic characteristics and ever tested for HIV, 2016-2022

	Ever tested for HIV	
	OR (95%CI)	aOR (95%CI)
Age (years)		
18-34	0.45 (0.32-0.62)	0.47 (0.33-0.65)**
35-54	1.00	
>=55	0.17 (0.1-0.29)	0.18 (0.11-0.31)**
Education		
Less than high school	0.54 (0.34-0.85)	0.61 (0.38-0.99)*
Some post high school	0.56 (0.41-0.76)	0.63 (0.46-0.86)*
College graduate	1.00	
Income		
<25,000	1.00	--
25,000-50,000	1.04 (0.71-1.53)	--
>=50,000	1.4 (0.95-2.08)	--
Healthcare coverage		
Yes	1.4 (0.97-2.04)	--
No	1.00	--
Region		
Northeast	1.00	--
South	0.88 (0.59-1.33)	--
West	0.74 (0.35-1.55)	--
Midwest	0.68 (0.43-1.06)	--
Other	--	--

*p<0.05, **P<0.0001

CONCLUSIONS

- The gap in HIV testing among Black women with high-risk behaviors persisted and remained consistent from 2016-2020, underscoring a critical area for intervention.
- HIV prevention programs should target Black women aged 18-34 and ≥55 years as well as those with a lower education level to address the missed opportunities in HIV testing.

CONTACT INFORMATION

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