

Epidemiology of HIV in the Indianapolis Transitional Grant Area: 2022

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Prevent. Promote. Protect.

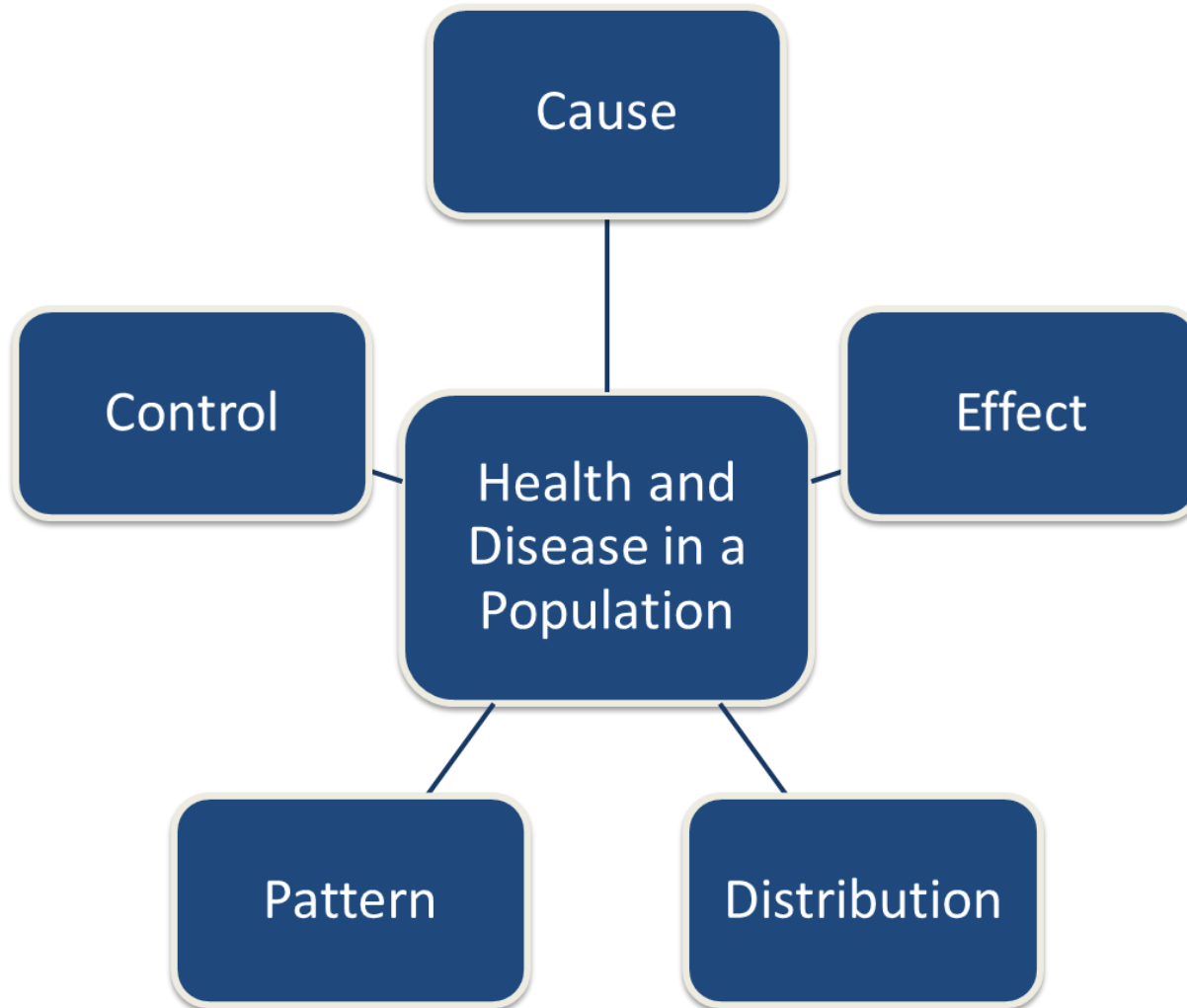
Objectives

- To identify trends in HIV incidence, prevalence, mortality, and health outcomes within the TGA
- To provide the Ryan White Planning Council with information necessary for priority setting and allocation
- To provide Planning Council subcommittees with relevant information

Epidemiology



Epidemiology – The study of:



Epidemiology - Terminology

- Incidence
 - New diagnoses – Annual rate of new diagnoses per 100,000 of those at risk
- Prevalence
 - Existing diagnoses – The number of previously diagnosed and newly diagnosed people per 100,000 (e.g., number of TGA residents living with HIV on 01/01/2022 who were still living in the TGA on 12/31/2022)
- Mortality
 - Deaths due to a specific cause – Annual rate of deaths per 100,000
- Rate Ratio
 - Comparison of rates between two or more groups

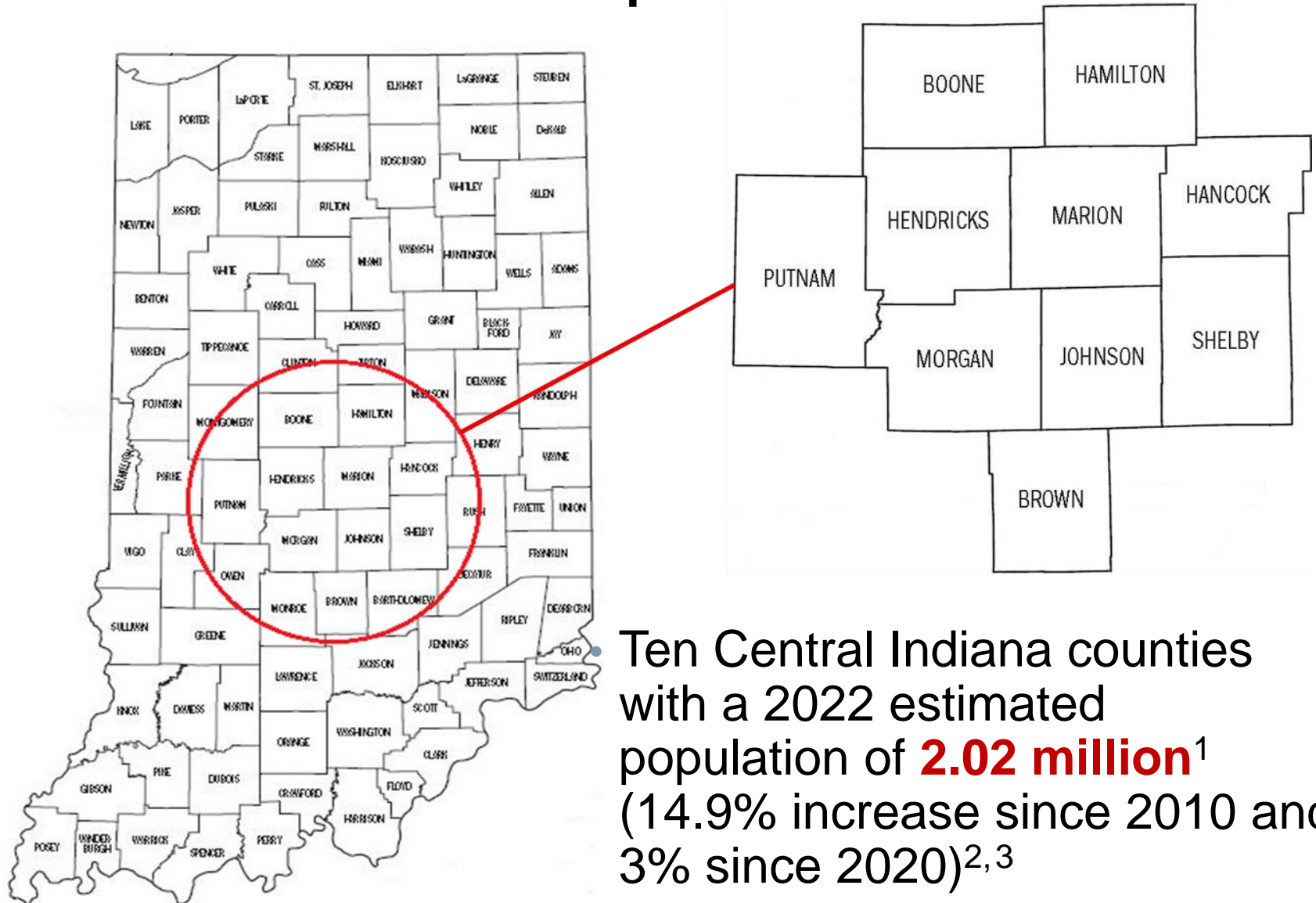
Gender Classification

- Male: persons assigned “male” sex at birth and current gender identity is “male.”
- Female: persons assigned “female” sex at birth and current gender identity is “female.”
- Transgender woman: persons assigned “male” sex at birth and current gender identity is “female.”
- Transgender man: persons assigned “female” sex at birth and current gender identity is “male.”
- Unknown

*The Indianapolis Transitional
Grant Area
(TGA)*

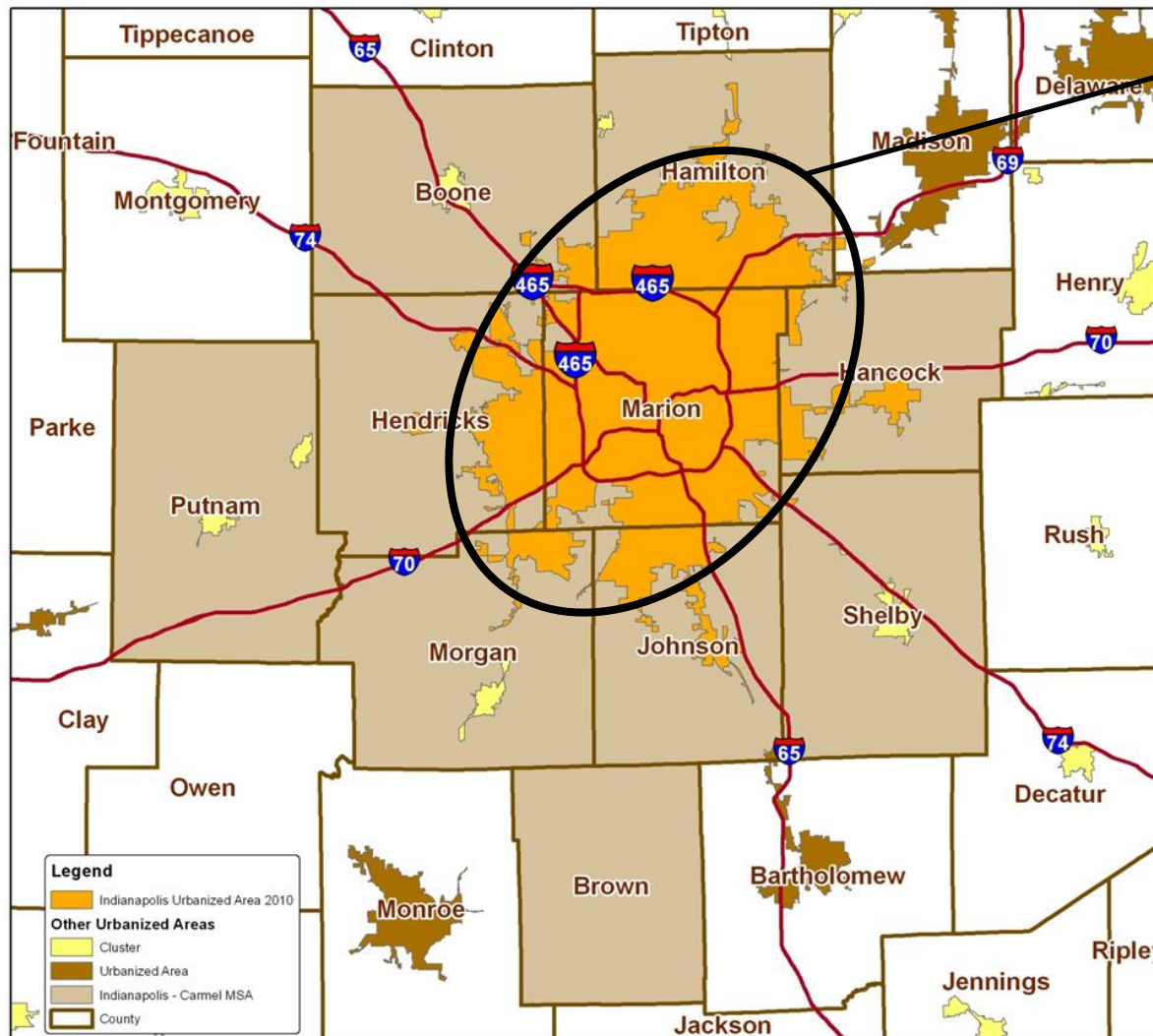


TGA Location & Population



Ten Central Indiana counties with a 2022 estimated population of **2.02 million**¹ (14.9% increase since 2010 and 3% since 2020)^{2,3}

TGA Population Center

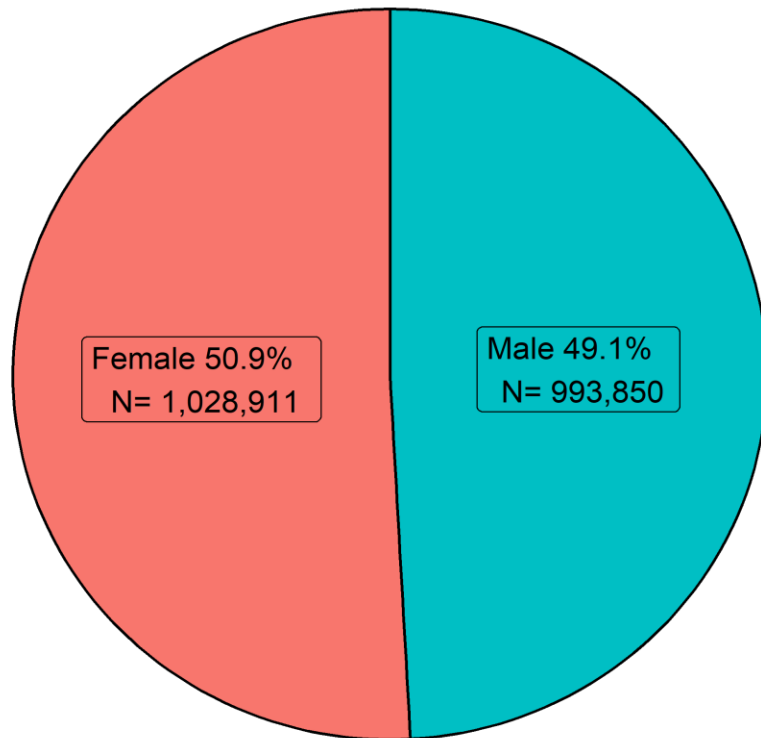


83% of the TGA's population in orange⁴

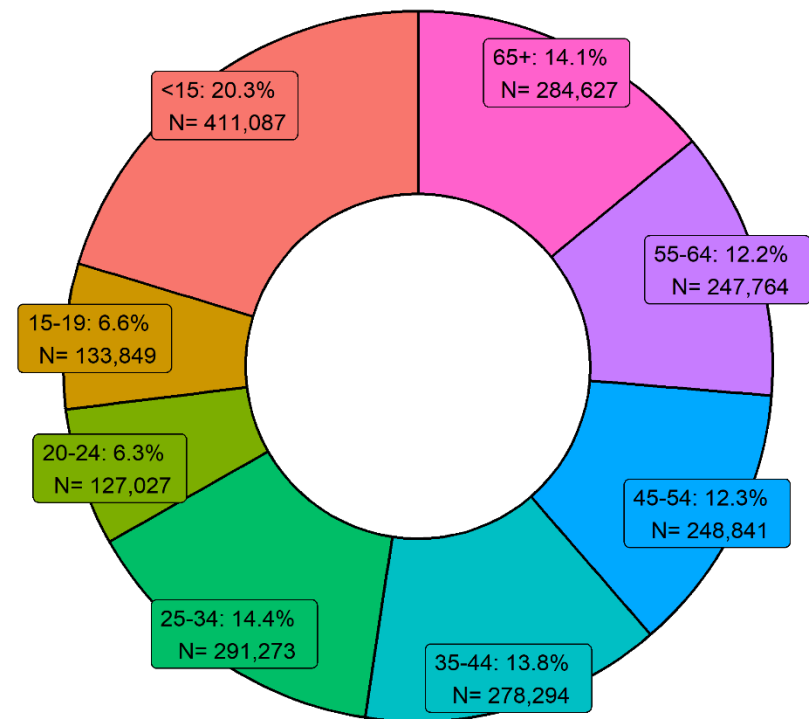
48% reside inside Indianapolis city limits¹

TGA Demographics

Gender of All TGA Residents, 2022

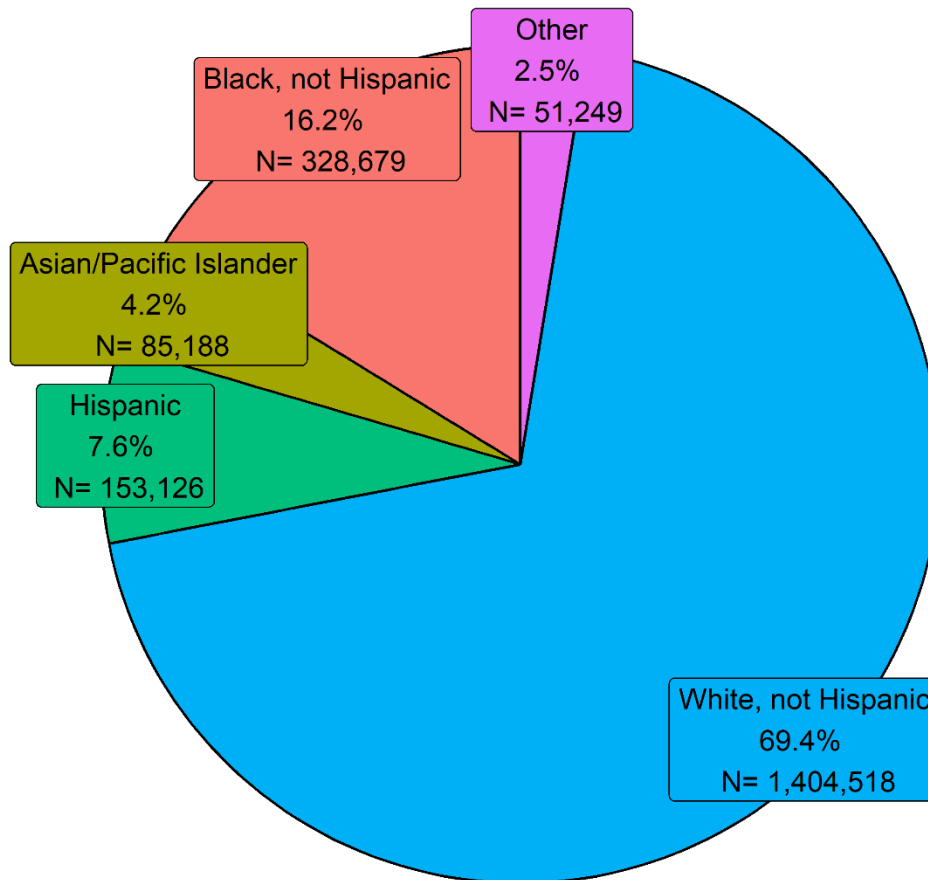


Age Groups of All TGA Residents, 2022



TGA Demographics

Race/Ethnicity Groups of All TGA Residents, 2022

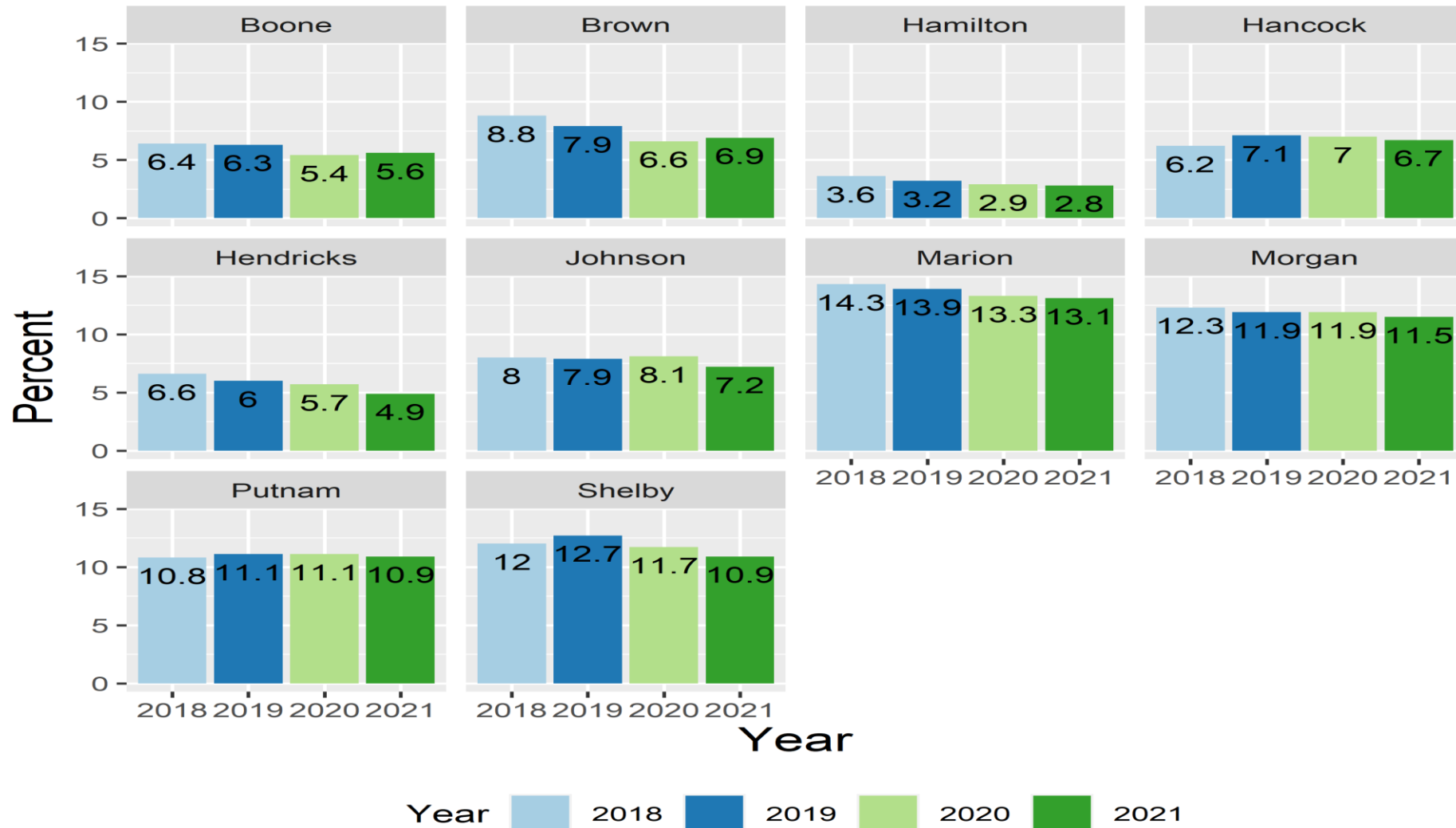


The population of Marion County is more diverse than that of the TGA overall, with 52.7% White, not Hispanic, 29% Black, not Hispanic, 11% Hispanic, 4% Asian/PI and 3% Other

SOCIAL DETERMINANTS OF HEALTH (SDOH)

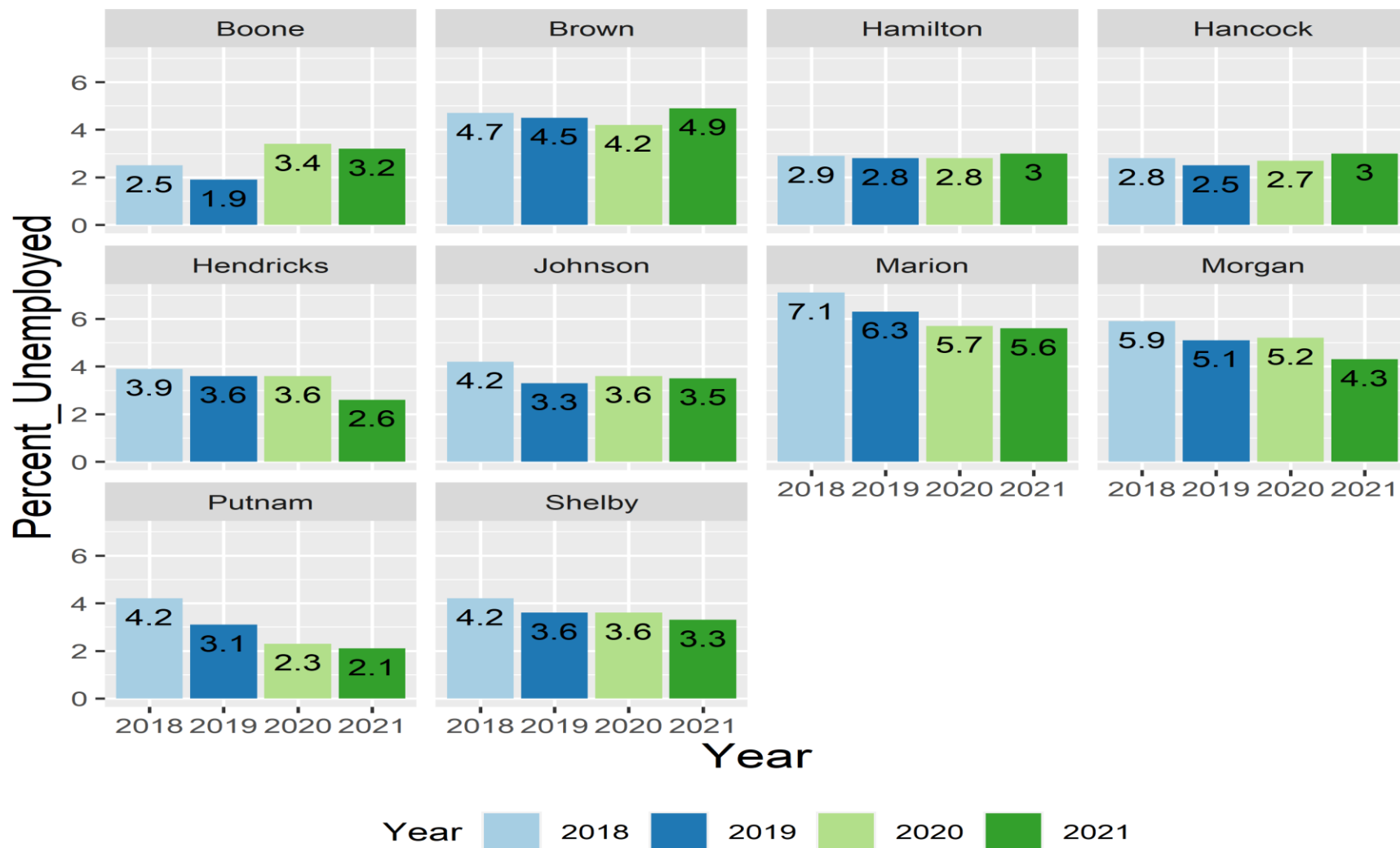
Education Attainment

%Pop with LT a HS diploma in the TGA, 2018-2021



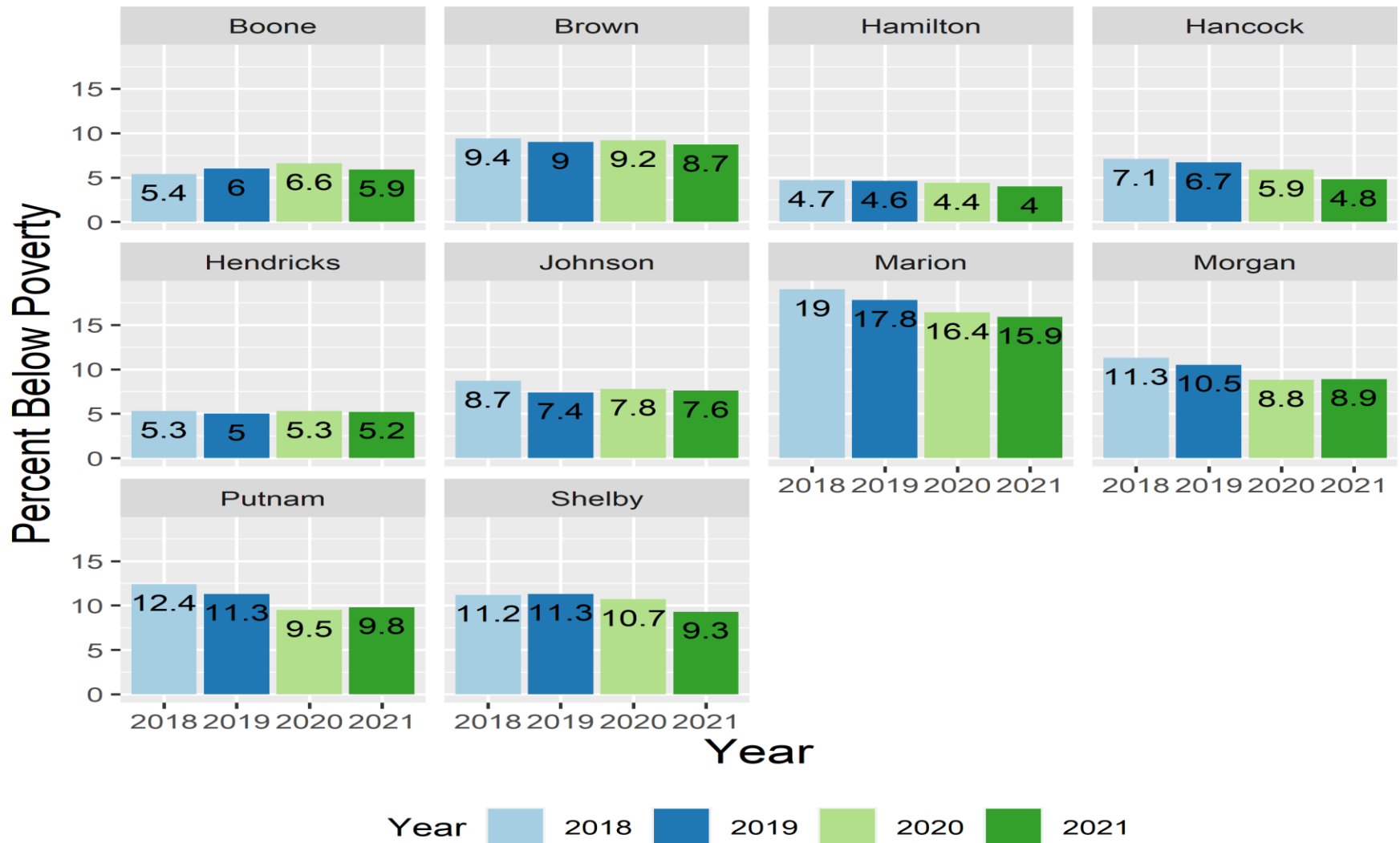
Unemployment

Percent Unemployed in the TGA, 2018-2021



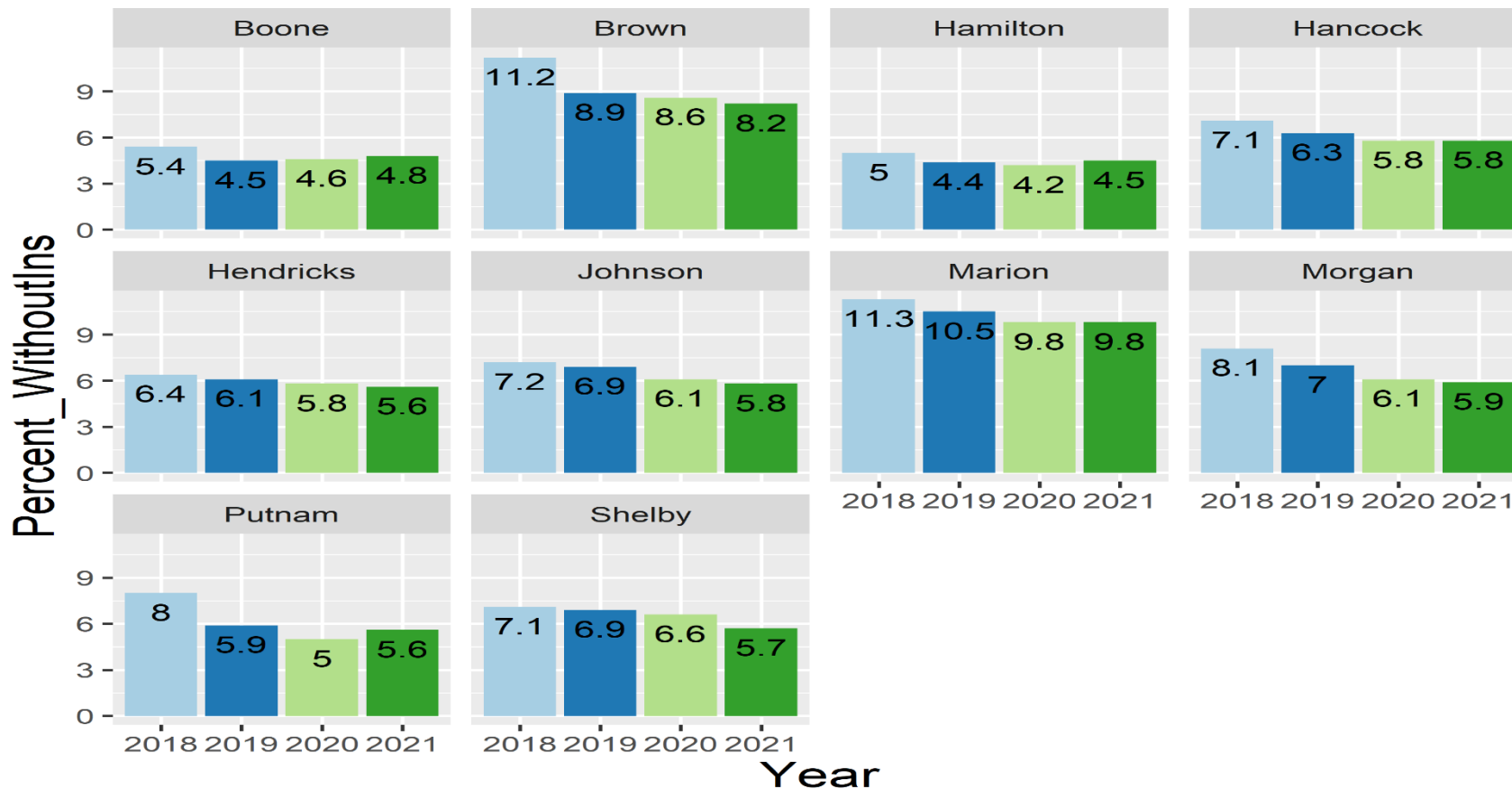
Poverty

Percent Below Poverty in the TGA, 2018-2021



Insurance Status

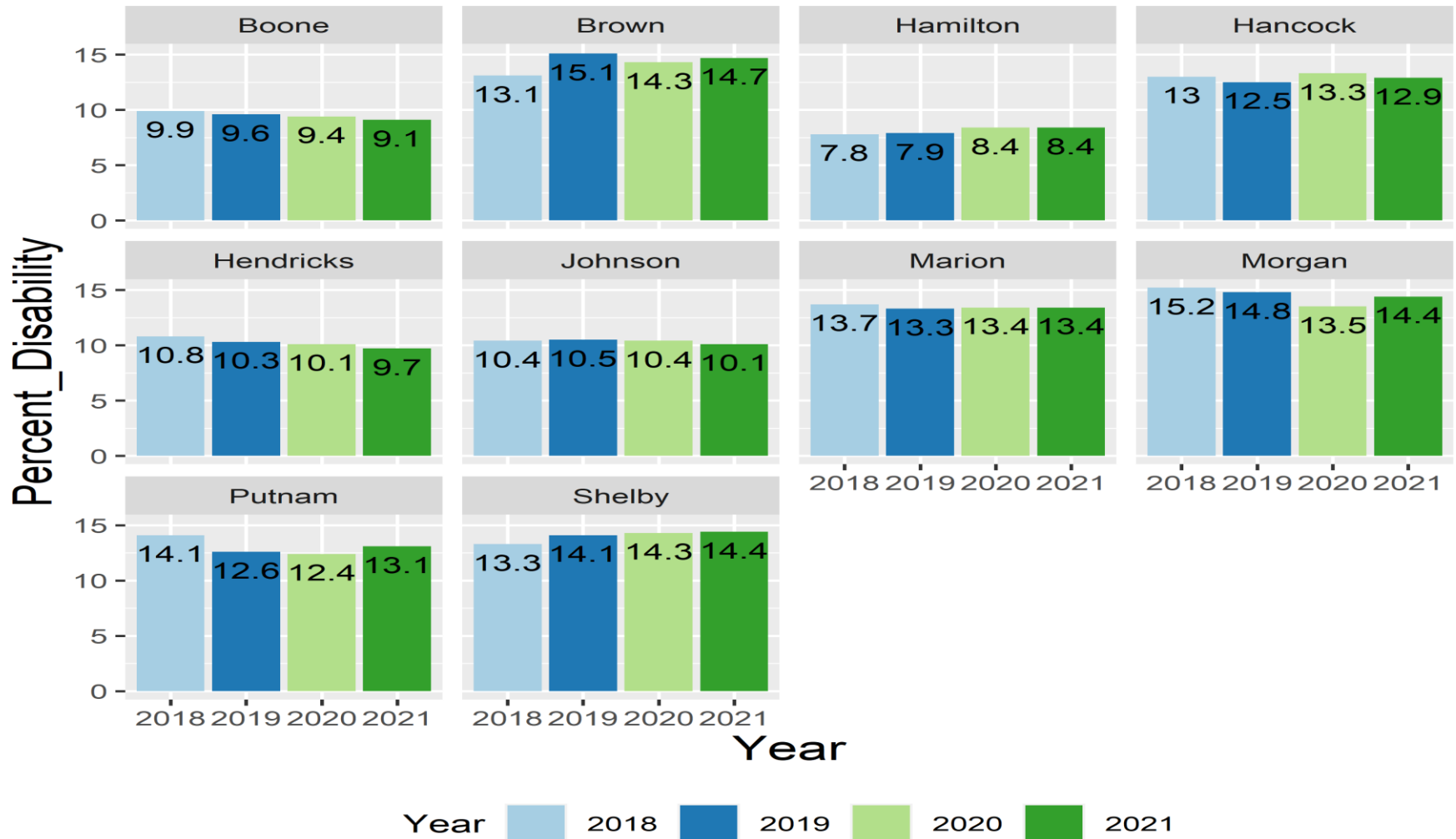
% Pop Without Insurance in the TGA, 2018-2021



Year ■ 2018 ■ 2019 ■ 2020 ■ 2021

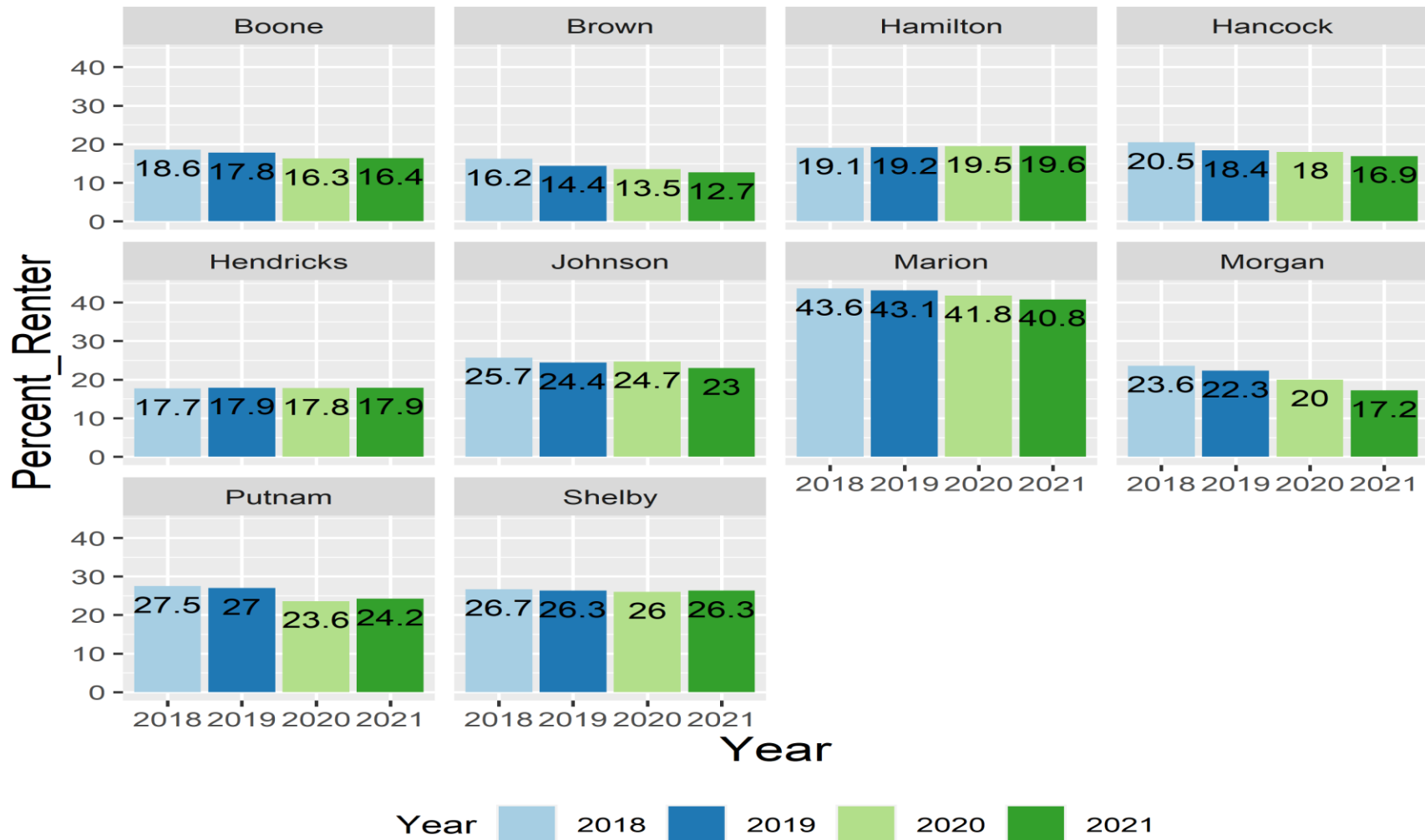
Disability

Percent Pop with Disability in the TGA, 2018-2021



Renter

% Pop Renter_Occupied in the TGA, 2018-2021



HIV/AIDS Incidence



HIV/AIDS Incidence

New Diagnoses	No.	Rate [95% CI*]	2021 Rate [95% CI*]	U.S. Rate** (2020) ⁵
HIV†	300	14.9[13.2-16.7]	14.1 [12.5-15.9]	10.9
AIDS	114	5.6 [4.7-6.8]	6.2[5.2-7.4]	5.2

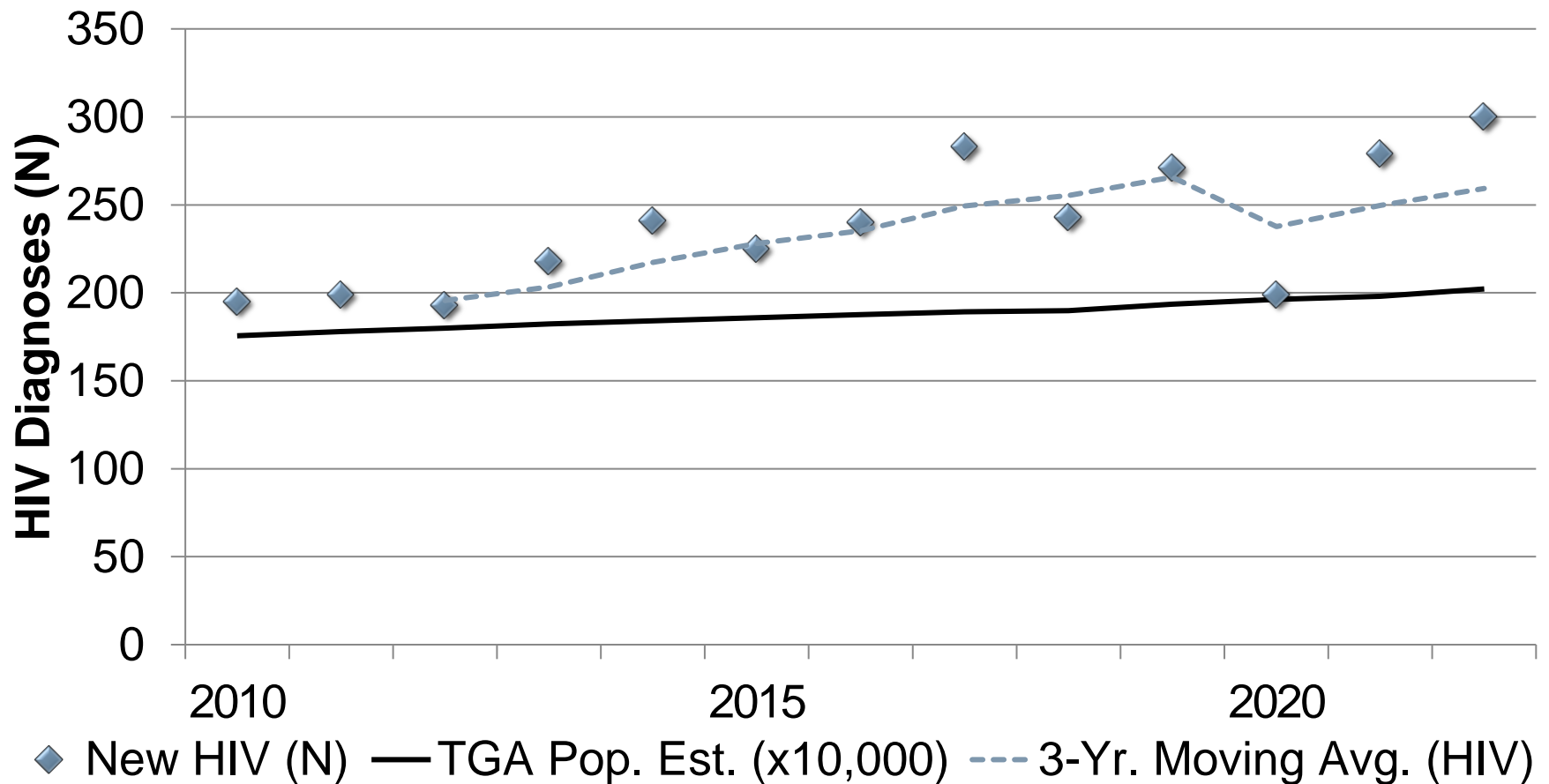
*95% confidence interval **Includes the TGA

† New HIV dx and HIV at AIDS dx

In 2022, HIV incidence increased by 7.5% compared to 2021 (279) in the TGA.
AIDS incidence decreased by 7.3% compared to 2021 (123) in the TGA.

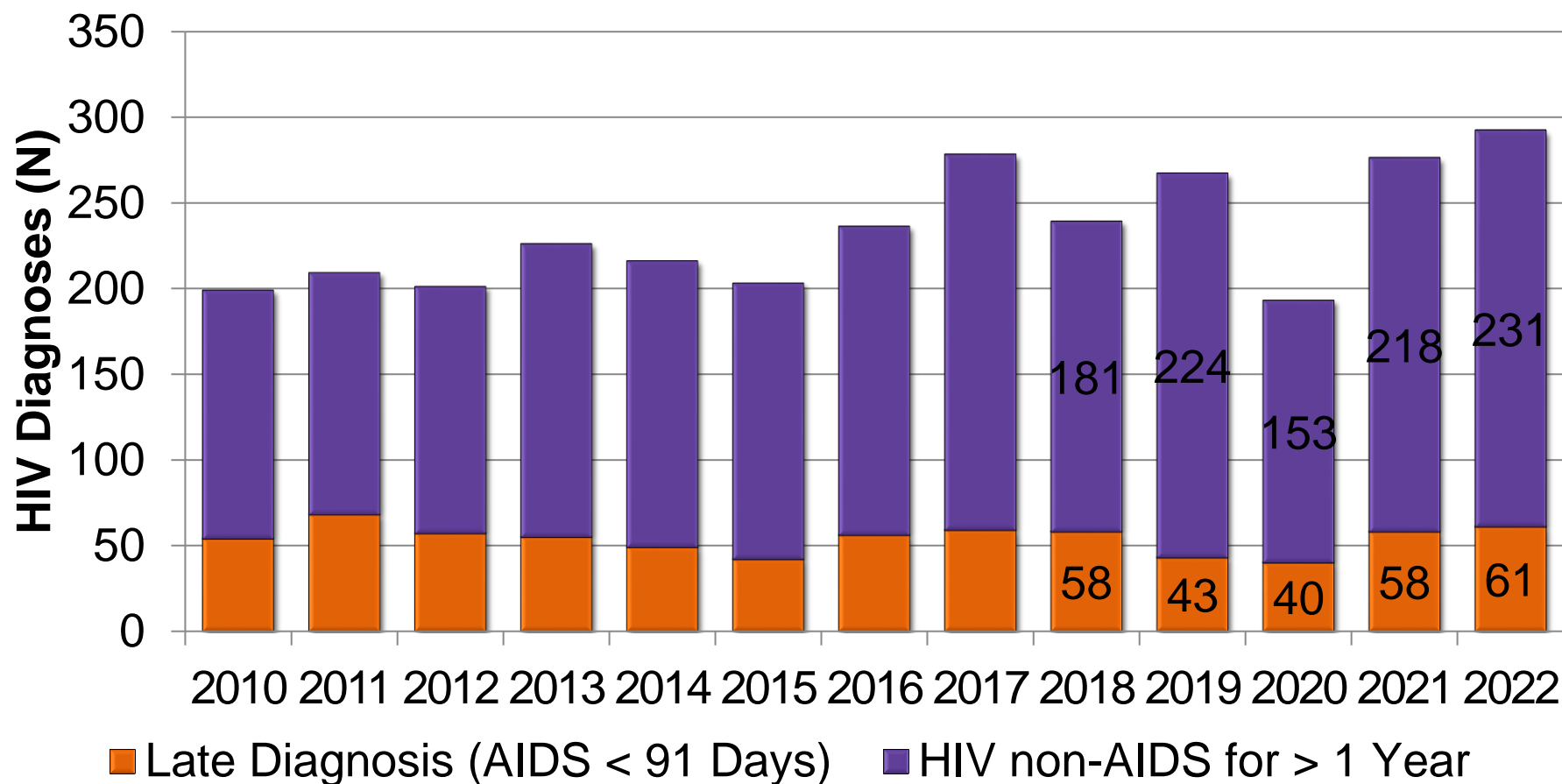
HIV/AIDS Incidence

HIV Diagnoses and Population Estimates in the Indianapolis TGA: 2010-2022



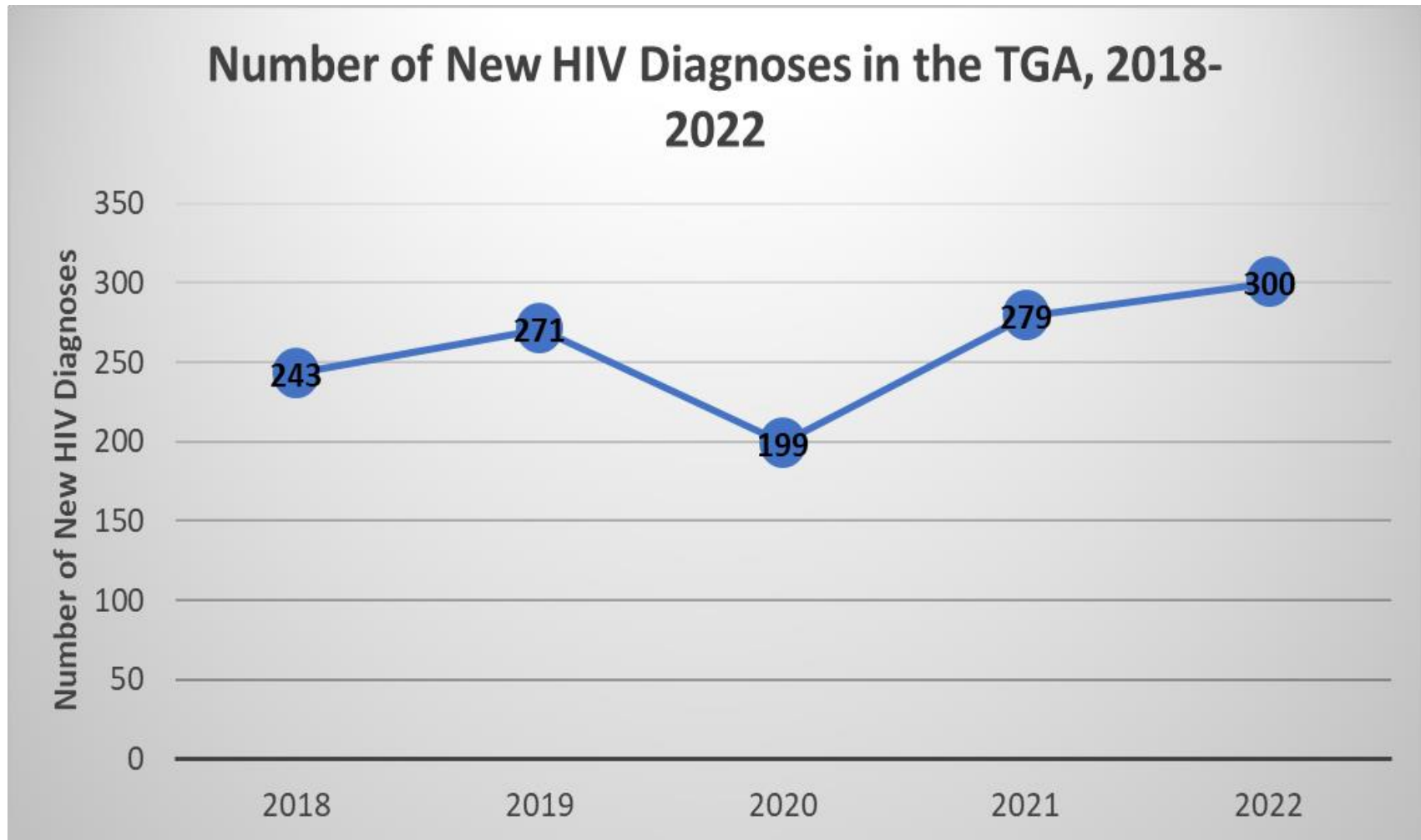
HIV/AIDS Incidence

HIV Diagnoses by Time to AIDS in the Indianapolis TGA: 2010-2022

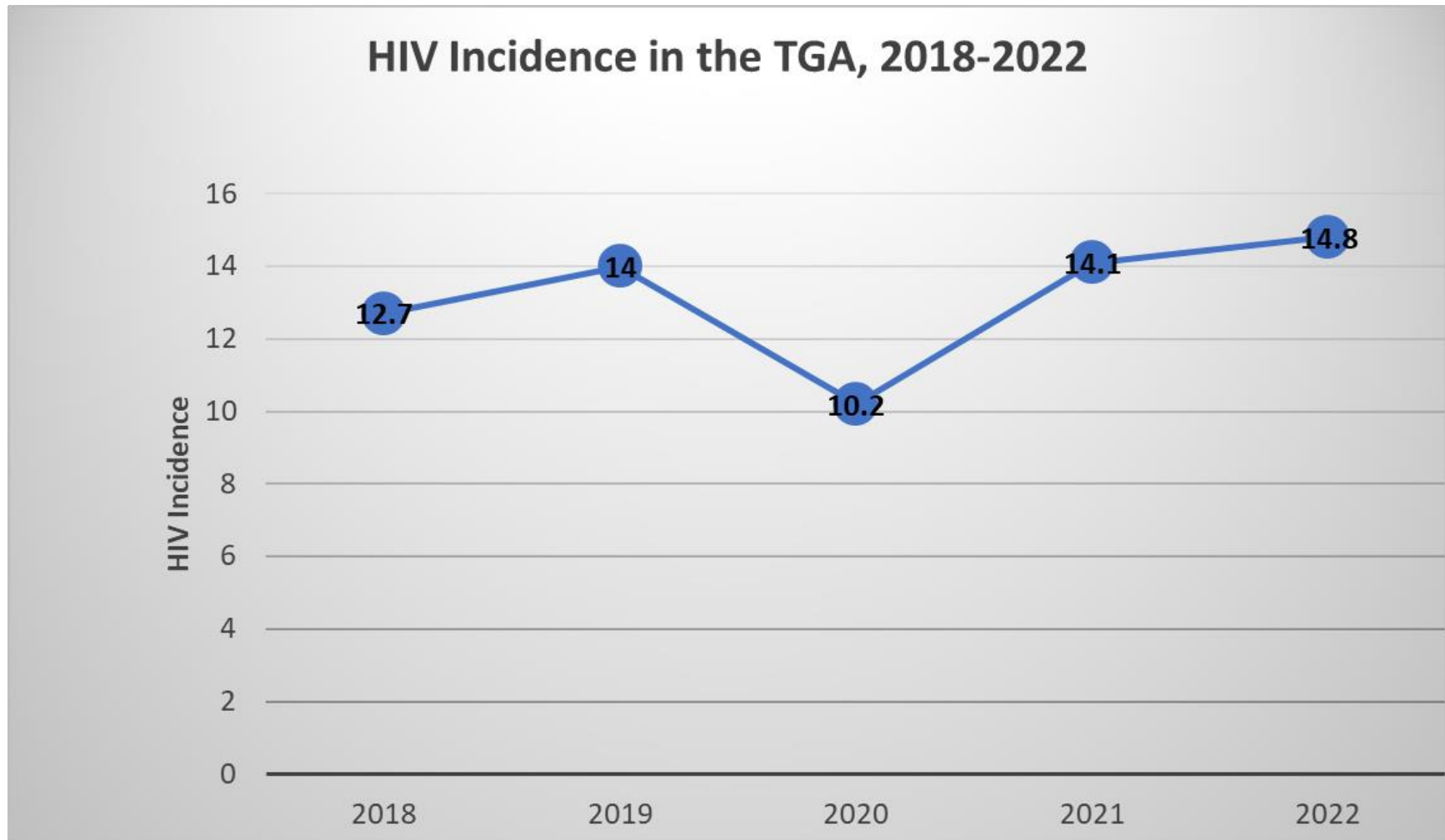


*Conversion within 91-365 Days masked due to low case counts

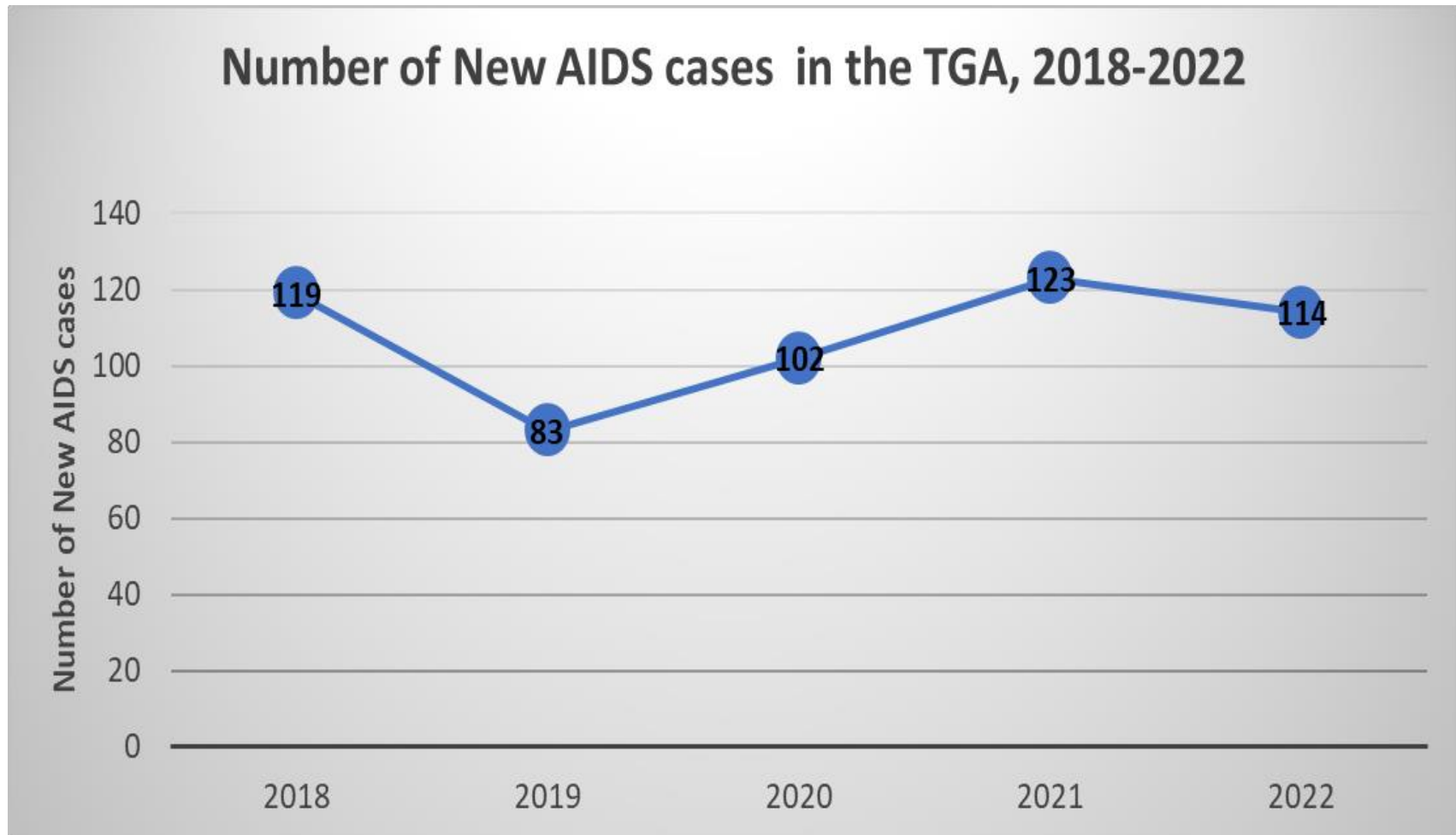
New HIV Diagnoses, 2018-2022



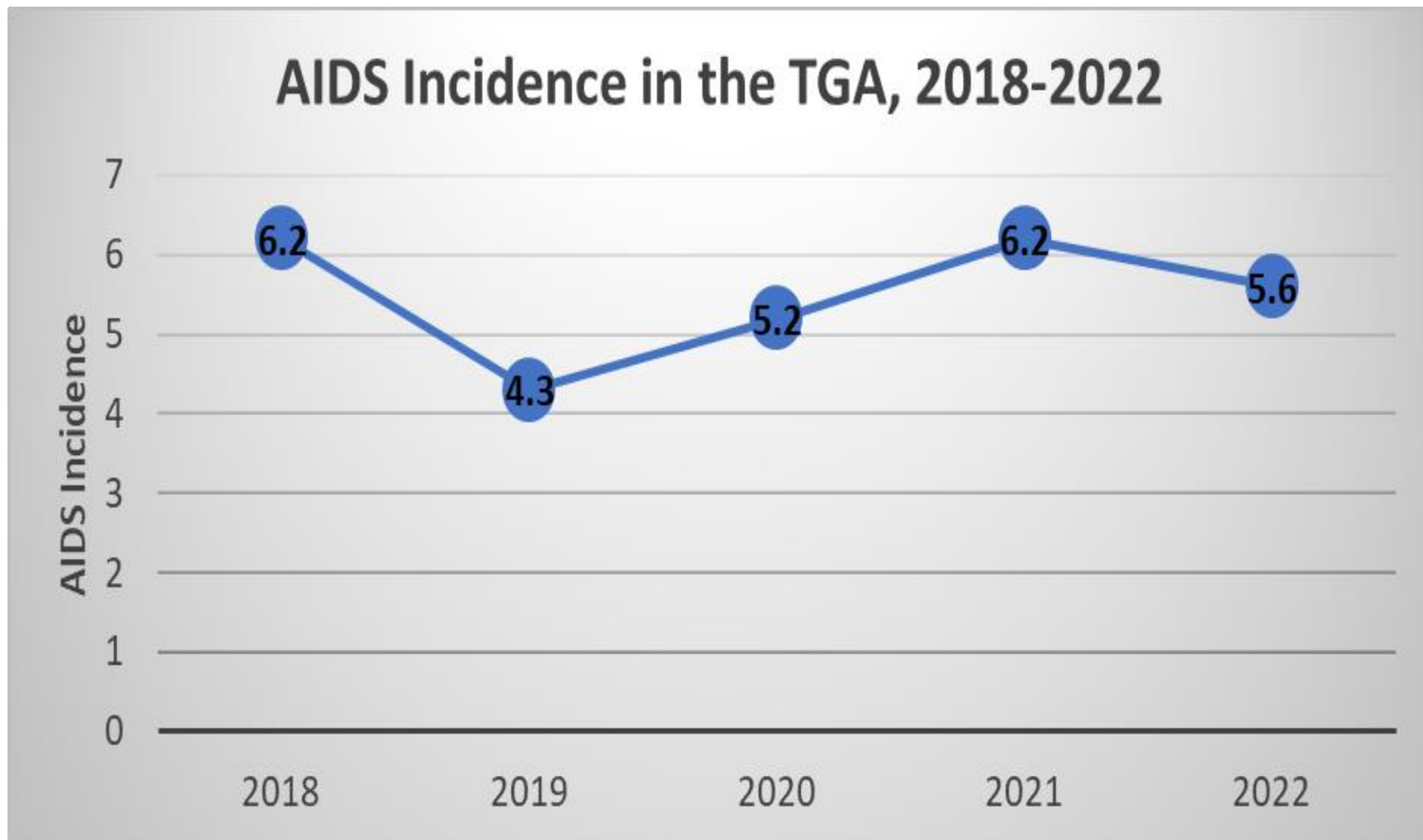
HIV Incidence 2018-2022



New AIDS Diagnoses, 2018-2022



AIDS Incidence 2018-2022



HIV Incidence by County

County	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to Others
Marion	235	78.3%	24 [21-27.3]	5 [3.1-7.8]
Hendricks	22	7.3%	12 [7.5-18.1] +	2.5 [1.3-4.5]
Hancock	12	4.0%	14.4 [7.5-25.2] +	3 [1.5-6.1]
Hamilton	11	3.7%	3 [1.5-5.4] +	0.6 [0.3-1.3]
Others	20	6.7%	4.9 [3-7.5] +	1.0

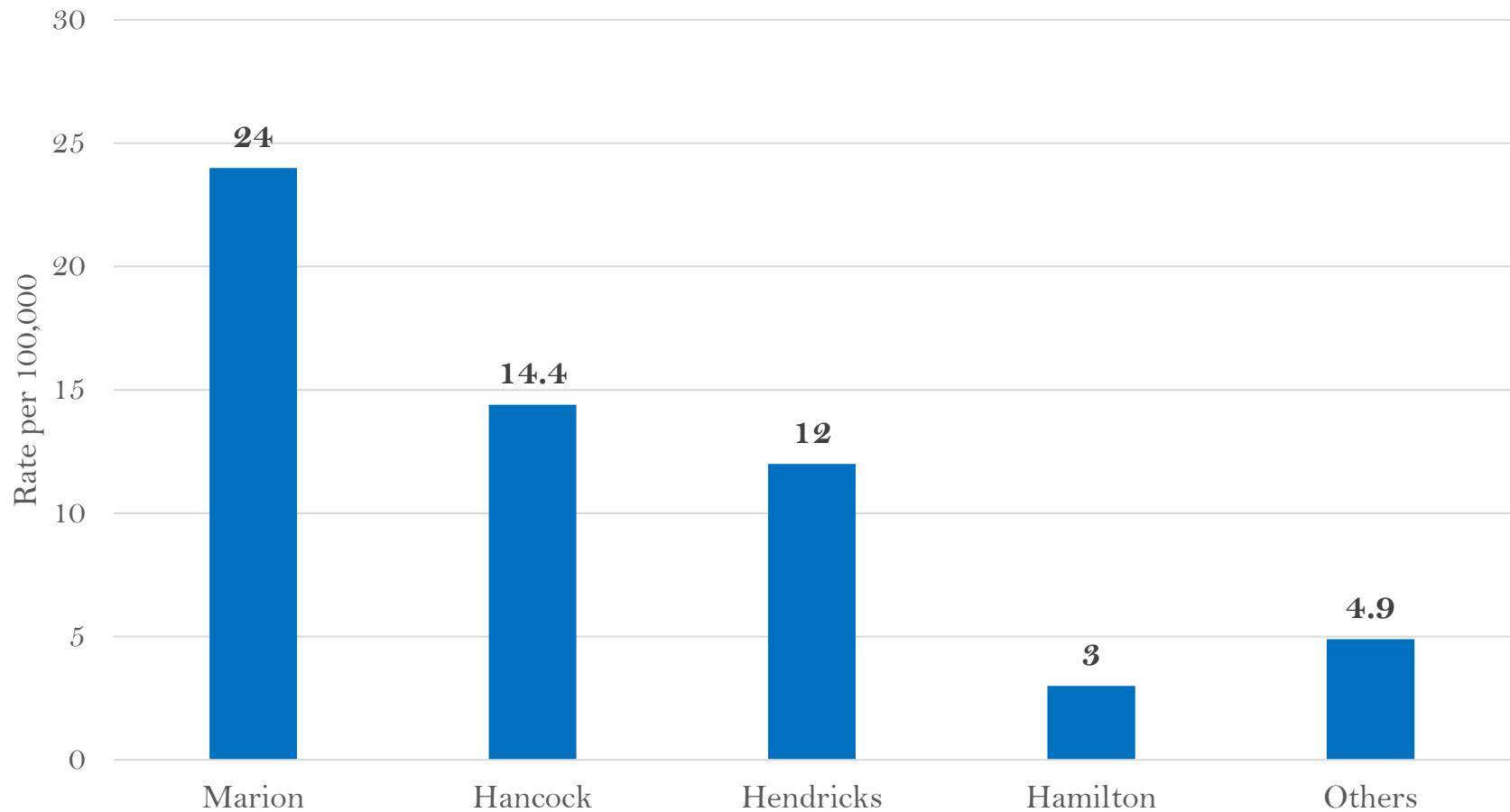
- * 95% confidence interval

- + Unstable rate

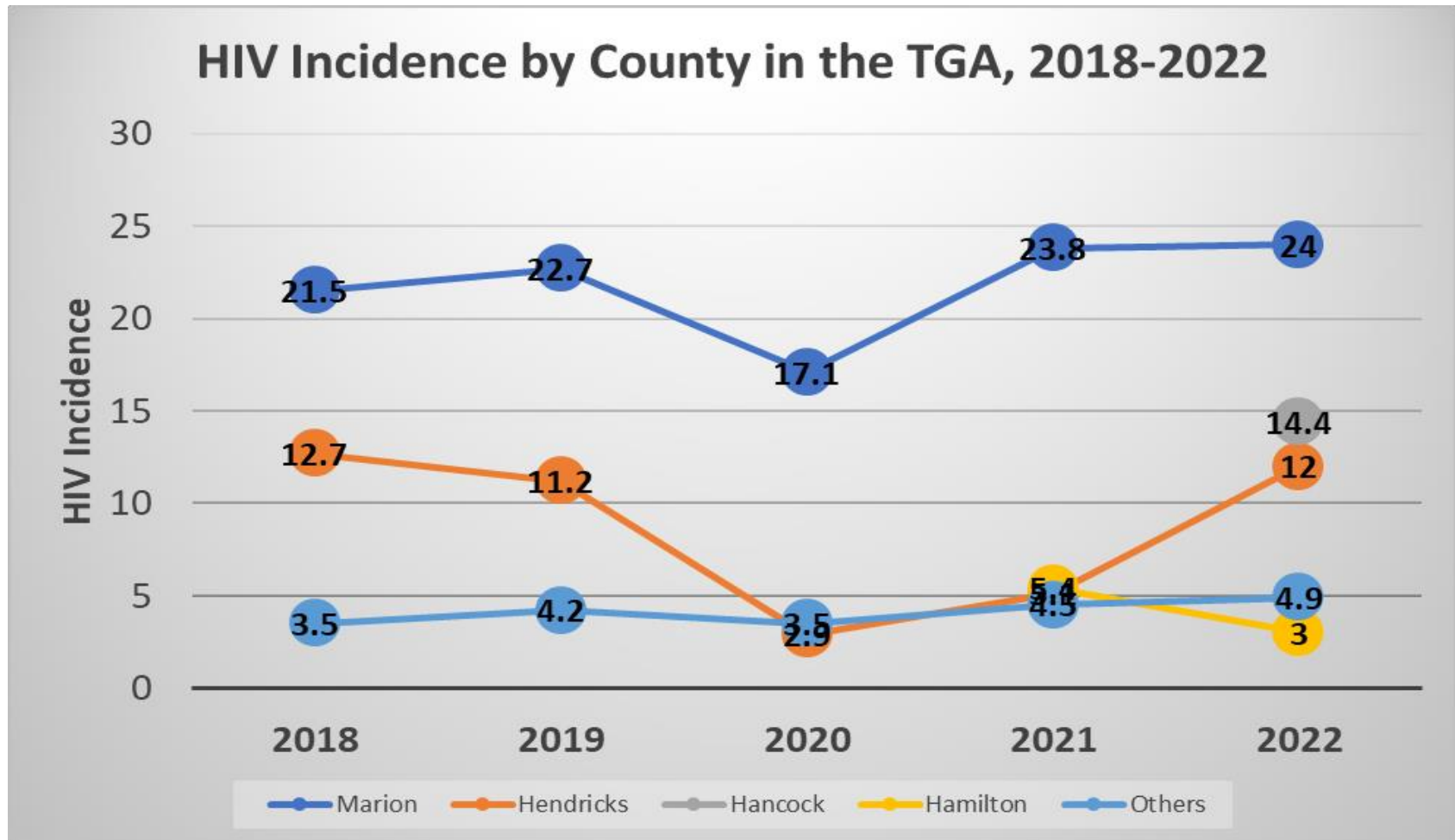
Marion County HIV incidence was at about 5 times that of TGA counties outside of Marion, Hendricks, Hancock, and Hamilton

HIV Incidence by County

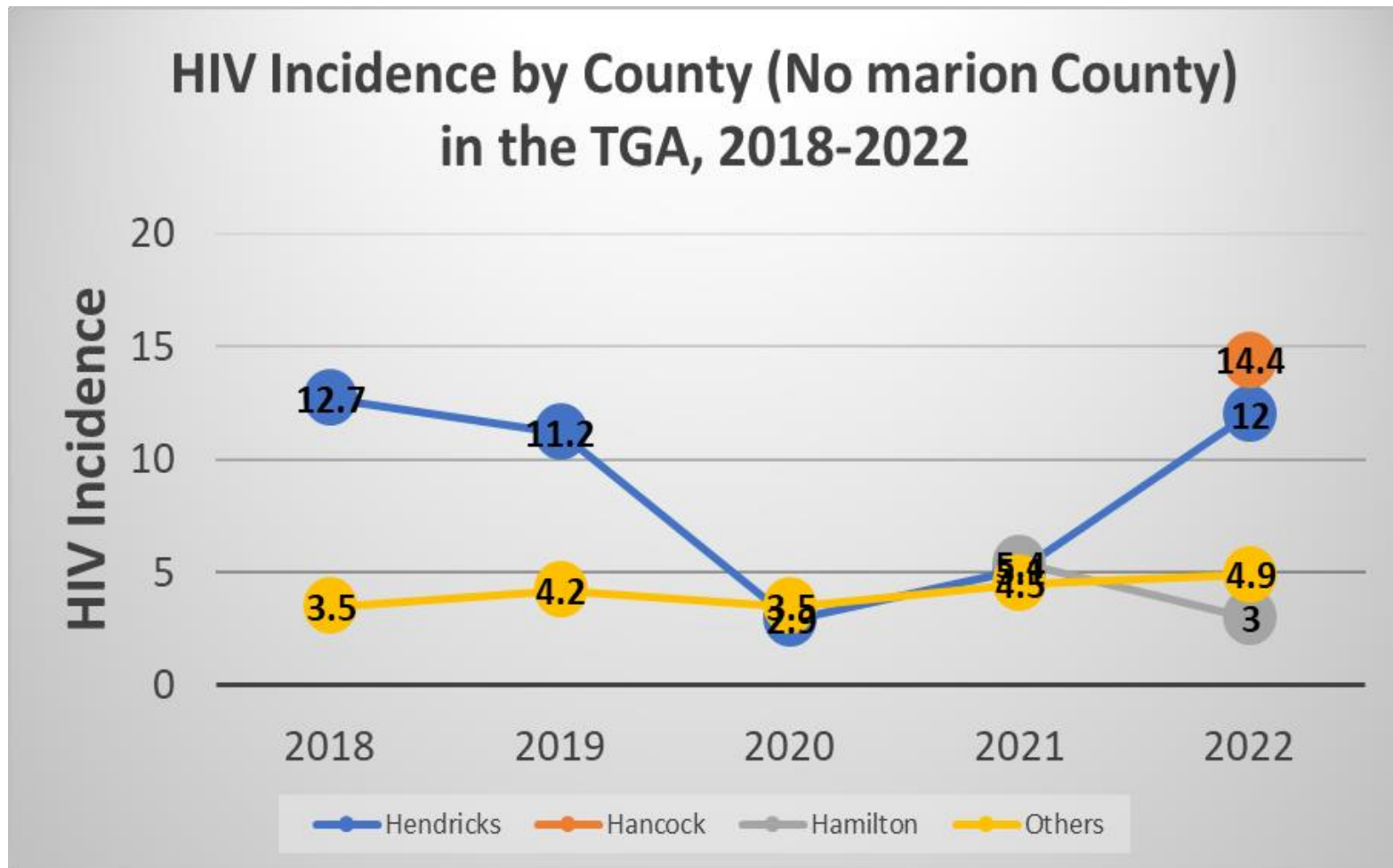
HIV Incidence by County, 2022



HIV Incidence by County, 2018-2022

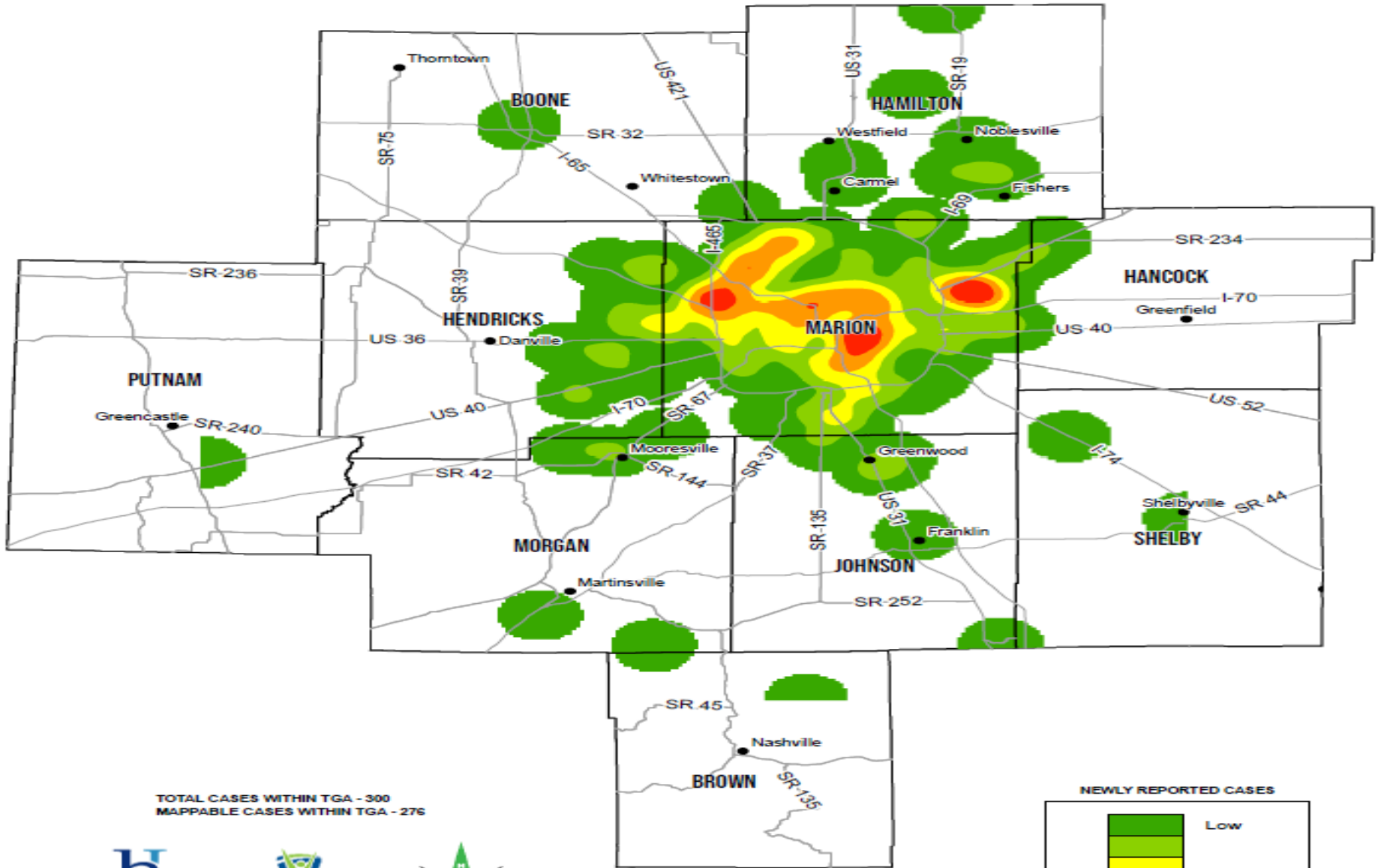


HIV Incidence by County (No Marion County), 2018-2022

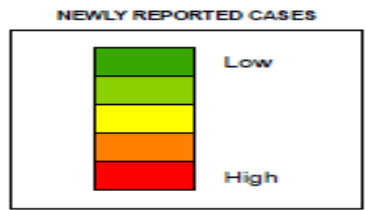


INDIANAPOLIS TGA RESIDENTS NEWLY DIAGNOSED WITH HIV

[PER SQUARE MILE: CY 2022]

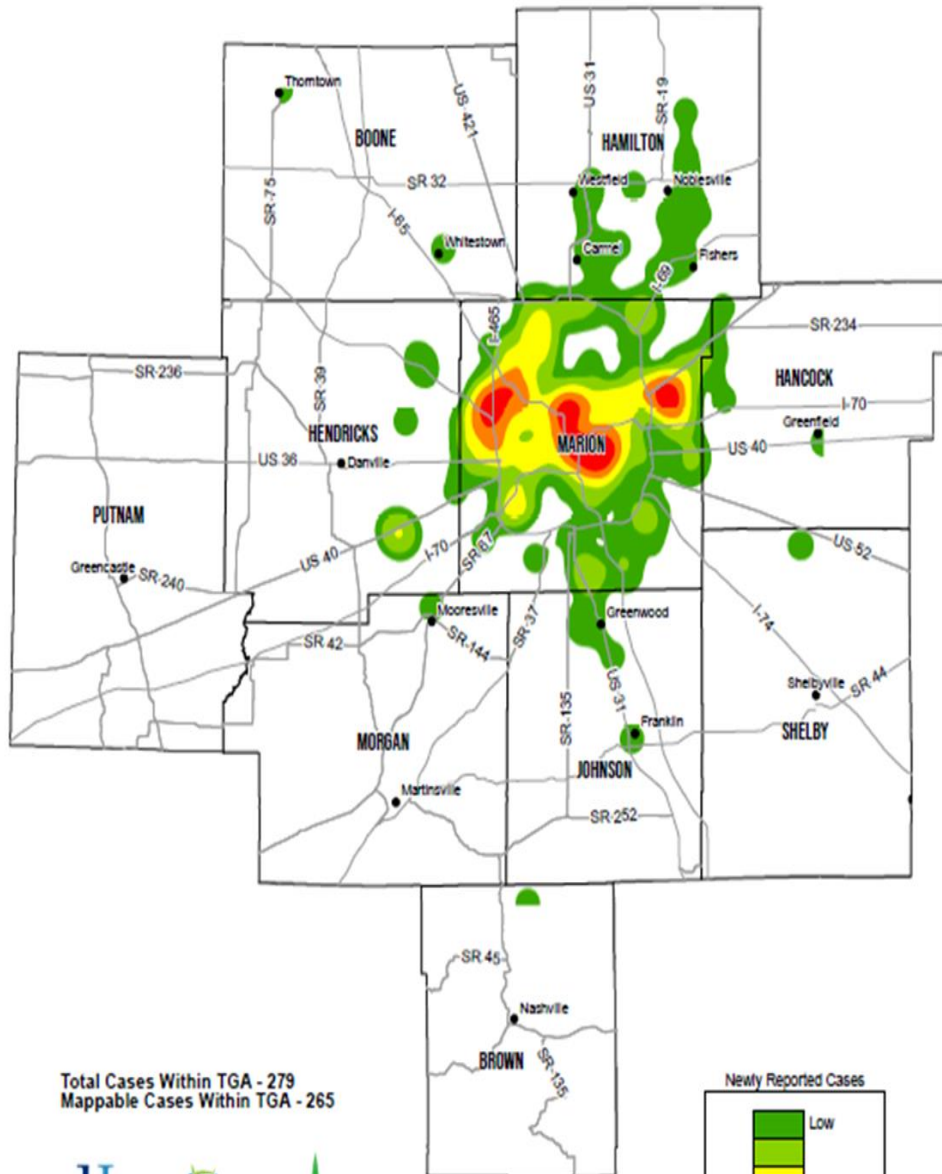


TOTAL CASES WITHIN TGA - 300
 MAPPABLE CASES WITHIN TGA - 276



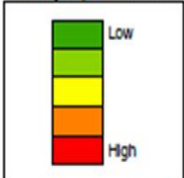
**INDIANAPOLIS TGA RESIDENTS NEWLY DIAGNOSED WITH HIV
(PER SQUARE MILE: CY 2021)**

**INDIANAPOLIS TGA RESIDENTS NEWLY DIAGNOSED WITH HIV
(PER SQUARE MILE: CY 2022)**

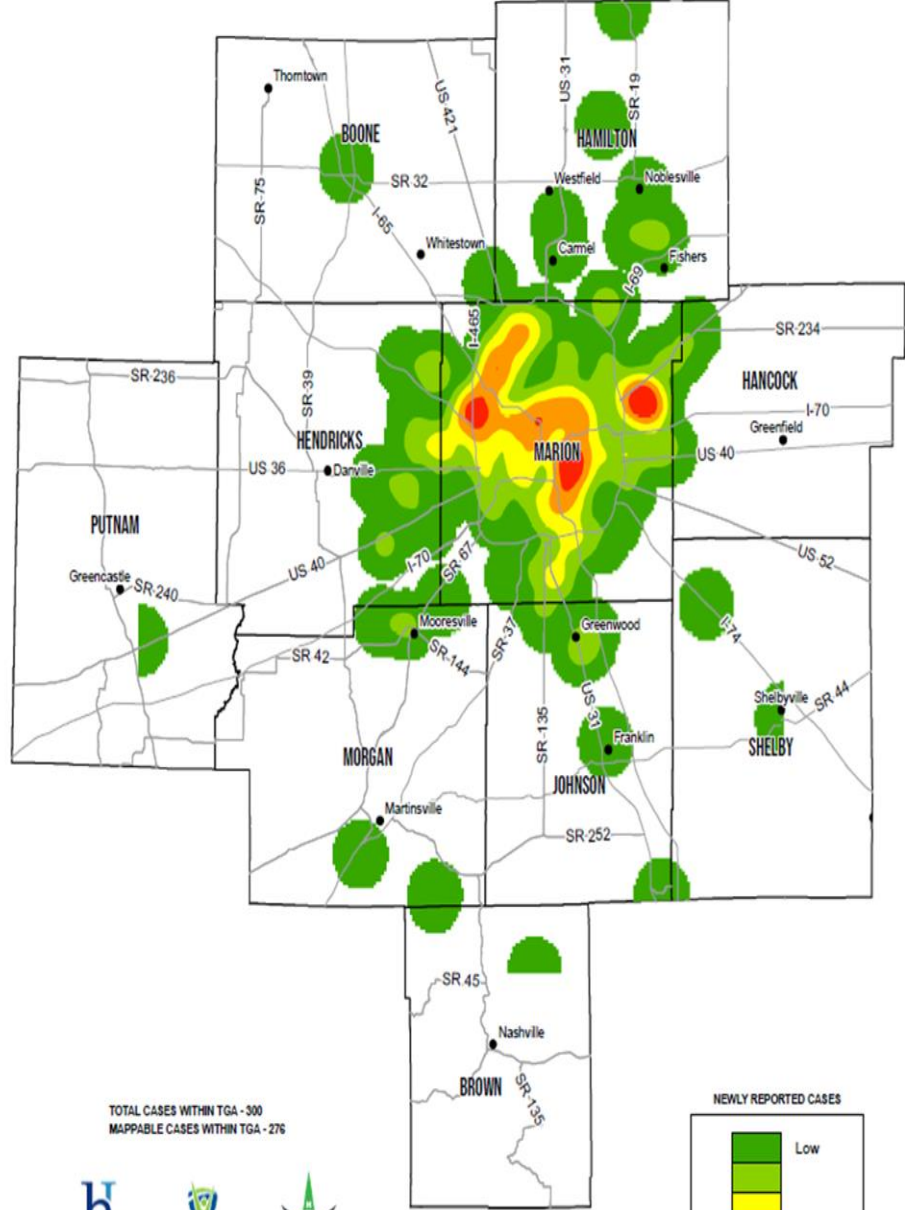


Total Cases Within TGA - 279
Mappable Cases Within TGA - 265

Newly Reported Cases

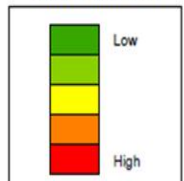


Created 04/11/22 HHC GIS 0273588

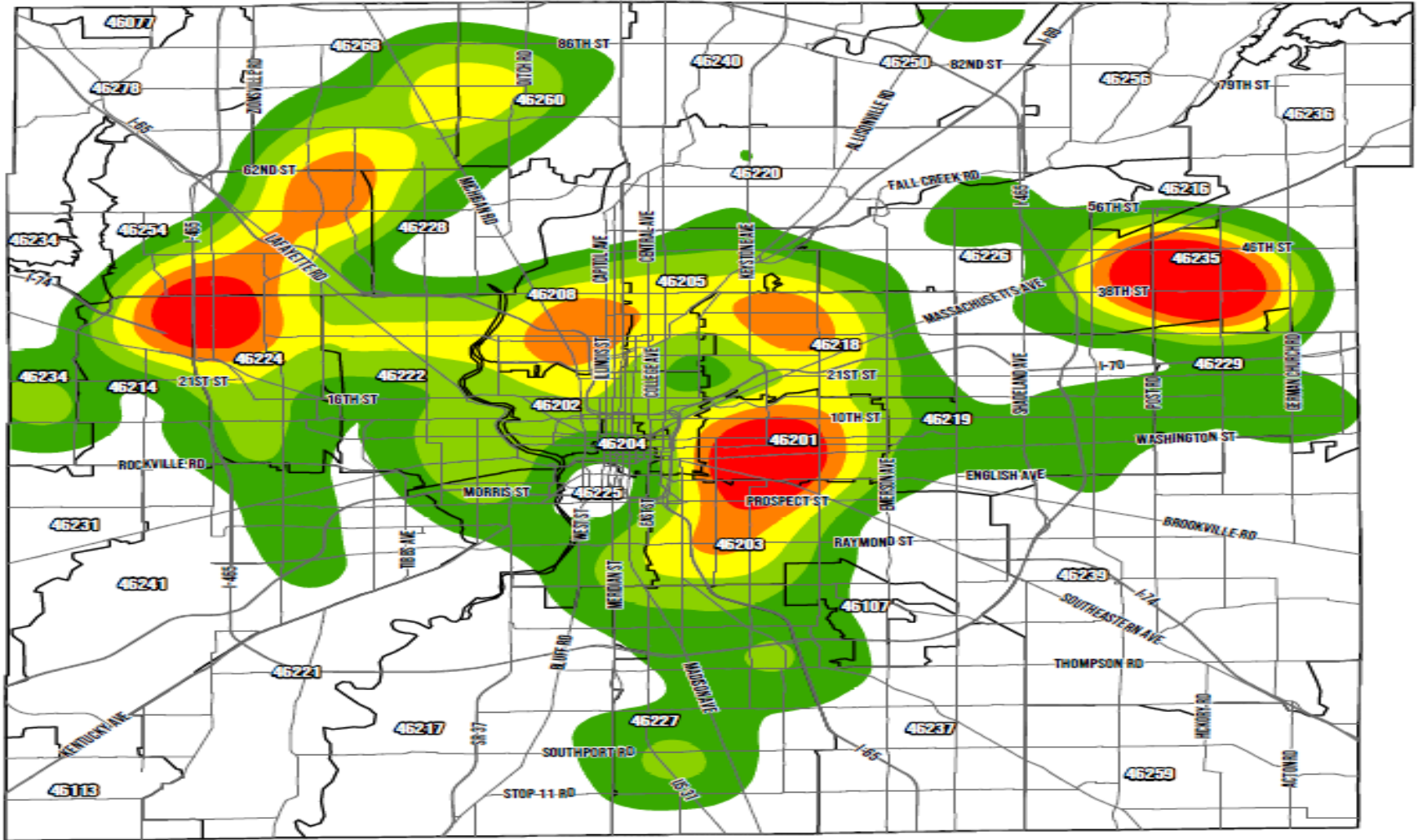


TOTAL CASES WITHIN TGA - 300
MAPPABLE CASES WITHIN TGA - 276

NEWLY REPORTED CASES

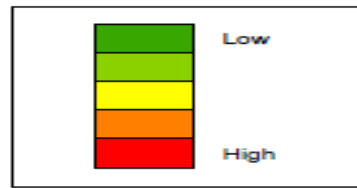


MARION COUNTY (IN) RESIDENTS NEWLY DIAGNOSED WITH HIV [PER SQUARE MILE: CY 2022]



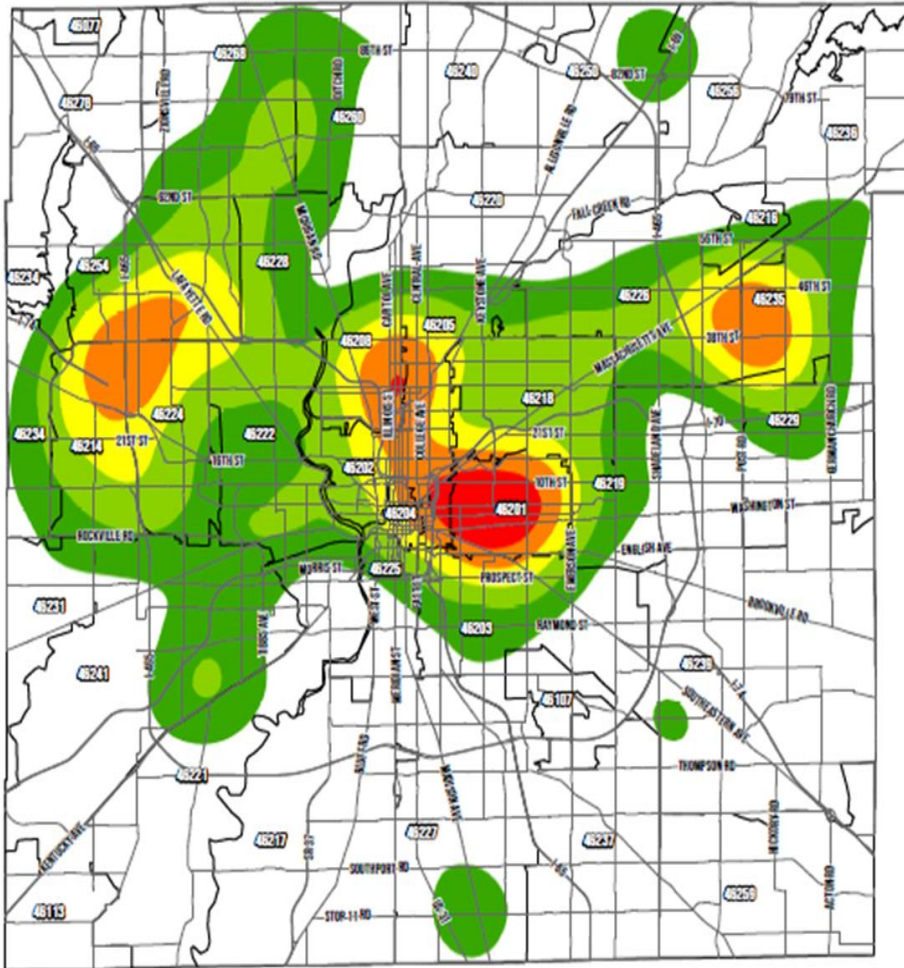
TOTAL CASES WITHIN MARION COUNTY - 234
MAPPABLE CASES WITHIN MARION COUNTY - 230

NEWLY REPORTED CASES



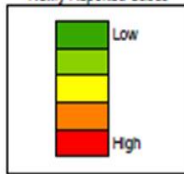
MARION COUNTY (IN) RESIDENTS NEWLY DIAGNOSED WITH HIV

(PER SQUARE MILE: CY 2021)



Total Cases Within Marion County - 231
Mappable Cases Within Marion County - 226

Newly Reported Cases

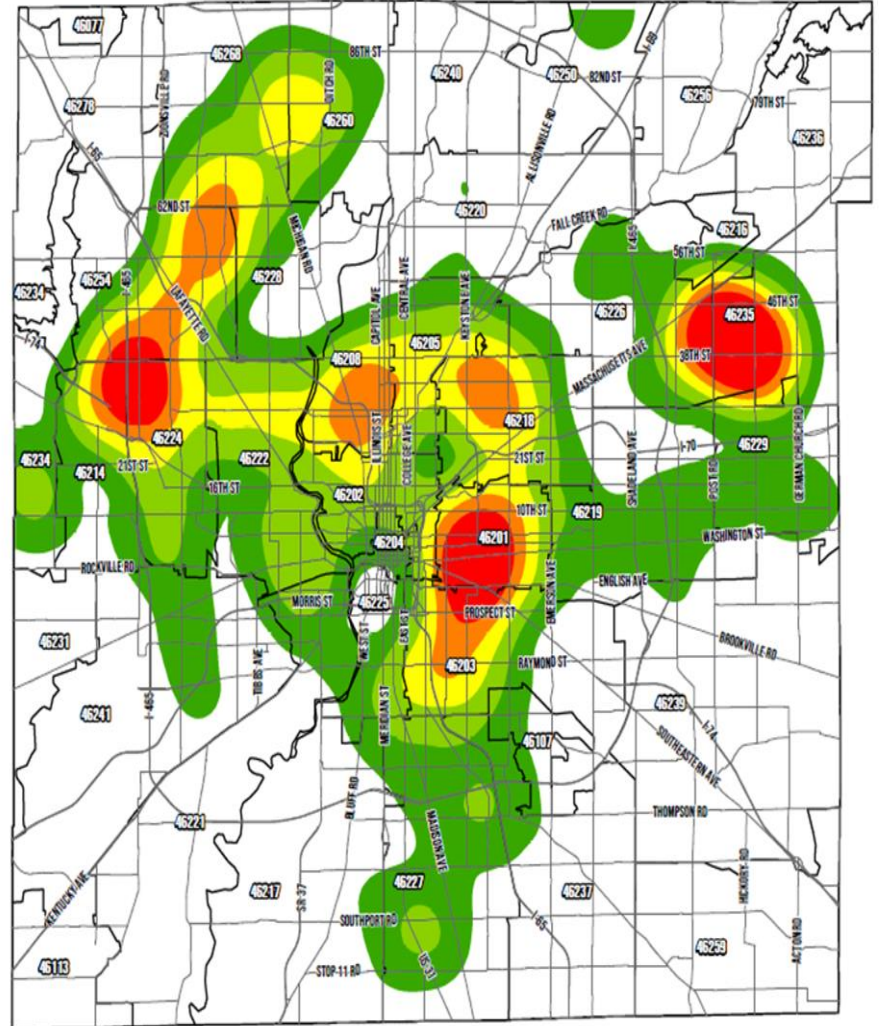


Created: 04/11/23 HHCID: 0273586



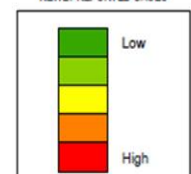
MARION COUNTY (IN) RESIDENTS NEWLY DIAGNOSED WITH HIV

(PER SQUARE MILE: CY 2022)



TOTAL CASES WITHIN MARION COUNTY - 234
MAPPABLE CASES WITHIN MARION COUNTY - 230

NEWLY REPORTED CASES



Created: 04/06/2023 HHCID: 0287471

HIV Incidence by Gender

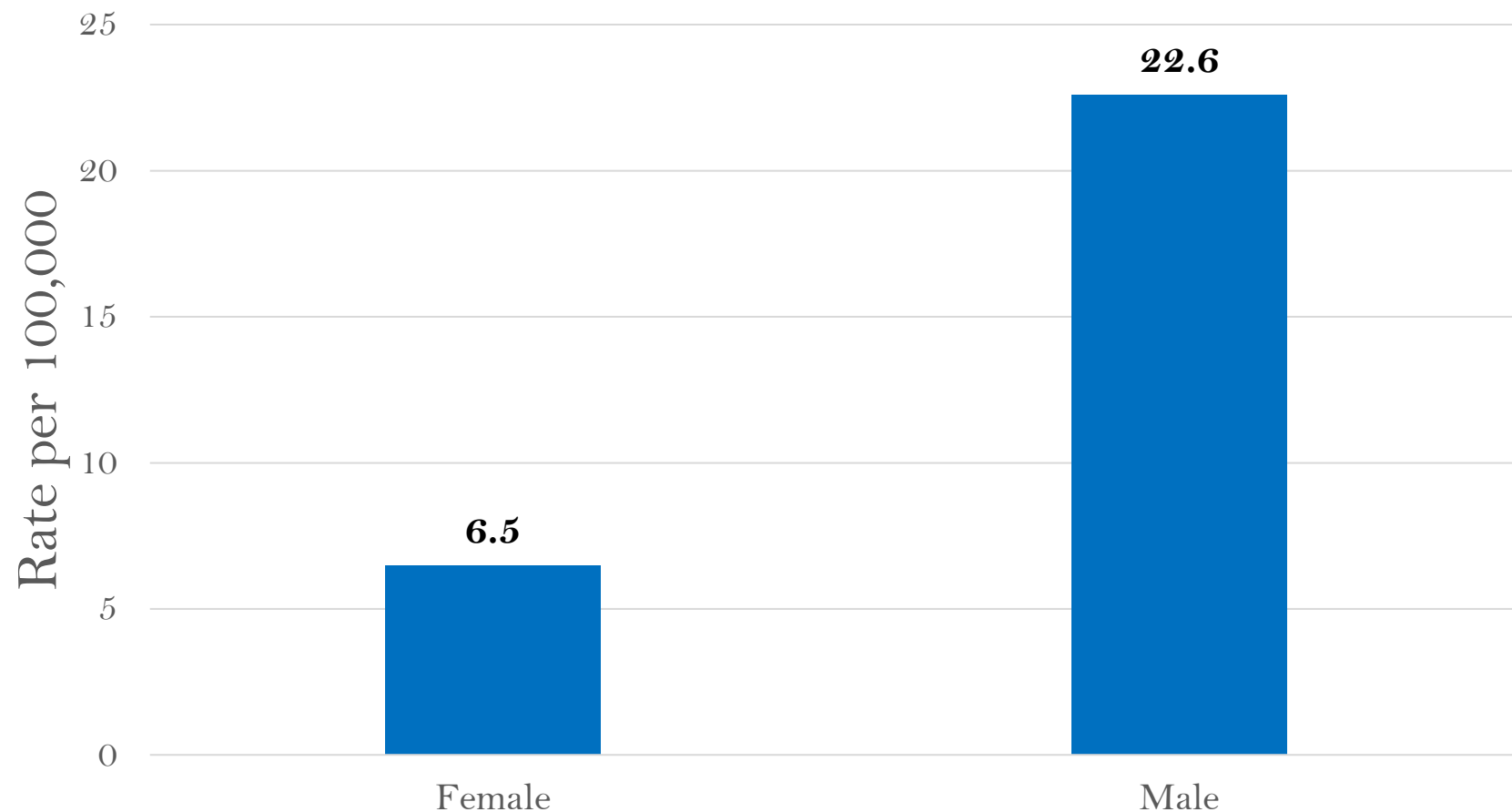
Gender	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to Female
Female	67	22.3%	6.5[5-8.3]	1.0
Male	225	75.0%	22.6[19.8-25.8]	3.5[2.6-4.6]
Transgender	8	2.7%		
Unknown	< 5	-	-	-

**95% confidence interval*

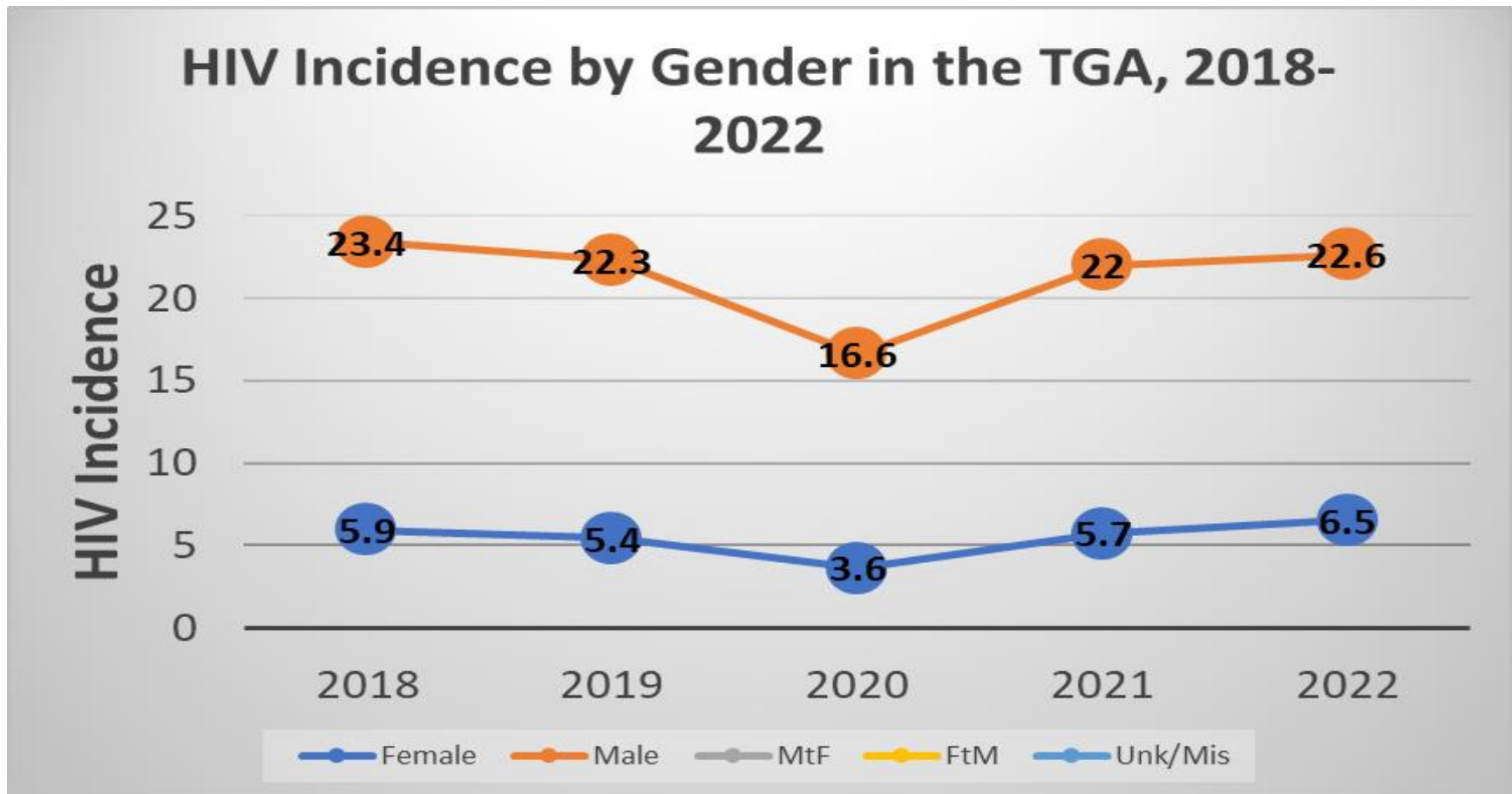
**Men were diagnosed with HIV at a rate
of about 4 times that of women**

HIV Incidence by Gender

HIV Incidence by Gender, 2022

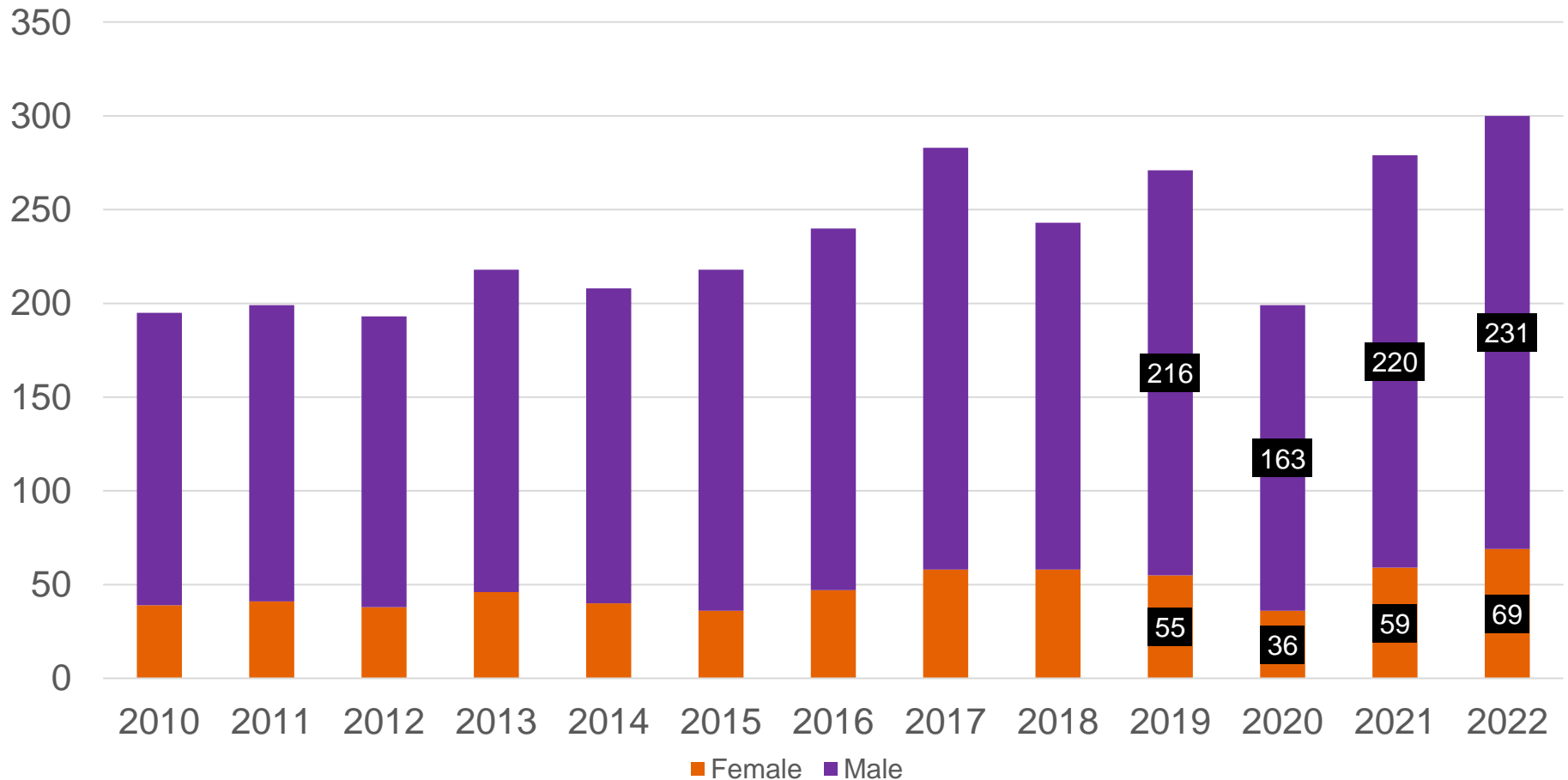


HIV Incidence by Gender, 2018-2022



HIV/AIDS Incidence

HIV Diagnoses by **Sex at Birth** in the Indianapolis TGA: 2010-2022



HIV Incidence by Race/Ethnicity

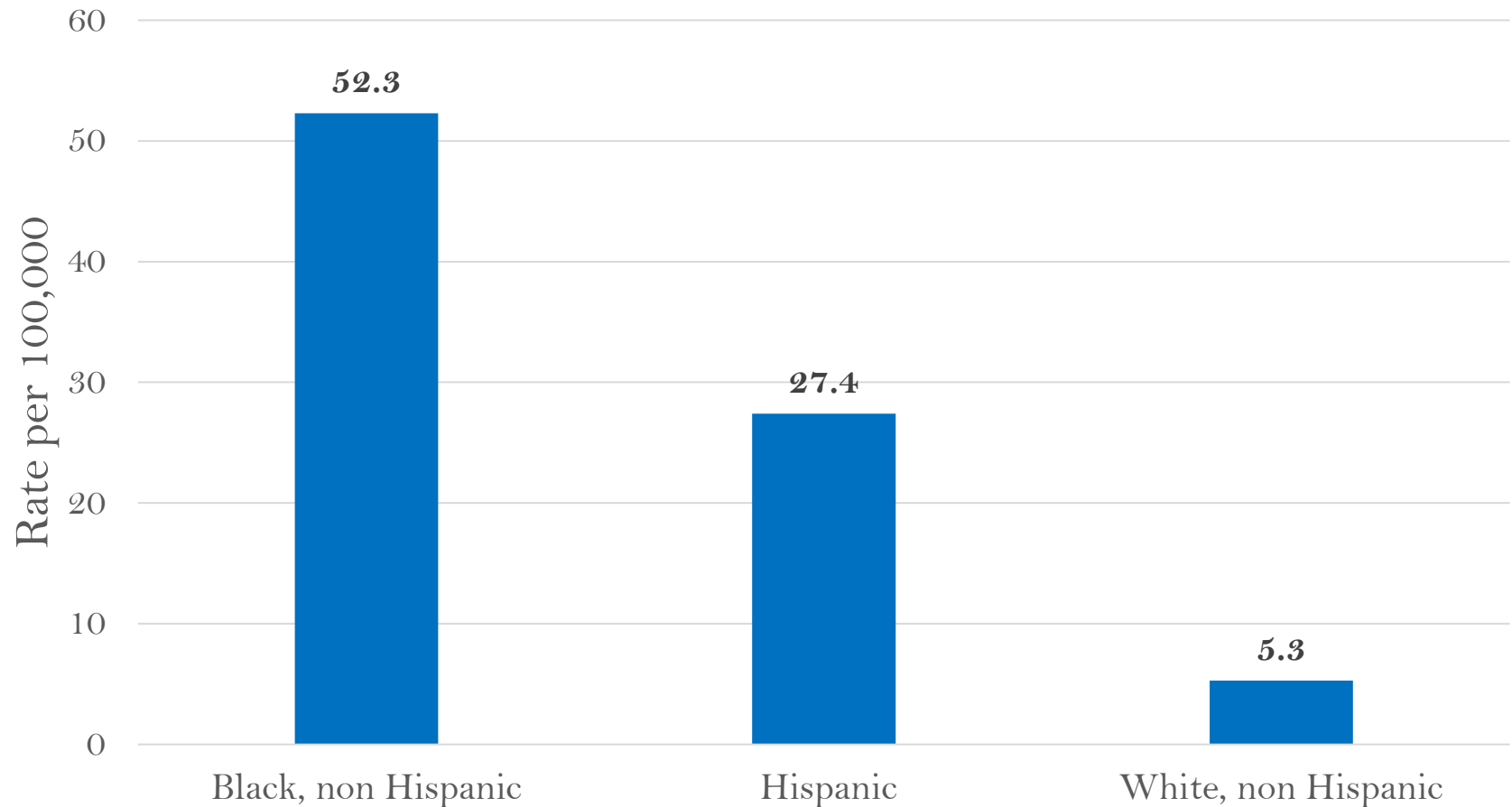
Race/ Ethnicity	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to White
Asian/PI	< 5	-	NS	NS
Black	172	57.3%	52.3[44.8-60.8]	9.8[7.5-12.9]
Hispanic	42	14.0%	27.4[19.8-37.1] ⁺	5.1[3.5-7.5]
Other	7	2.3%	NS	NS
White	75	25%	5.3[4.2-6.7]	1.0

*95% confidence interval ⁺ = Unstable Rate NS = Does not meet MCPHD standards for statistical significance

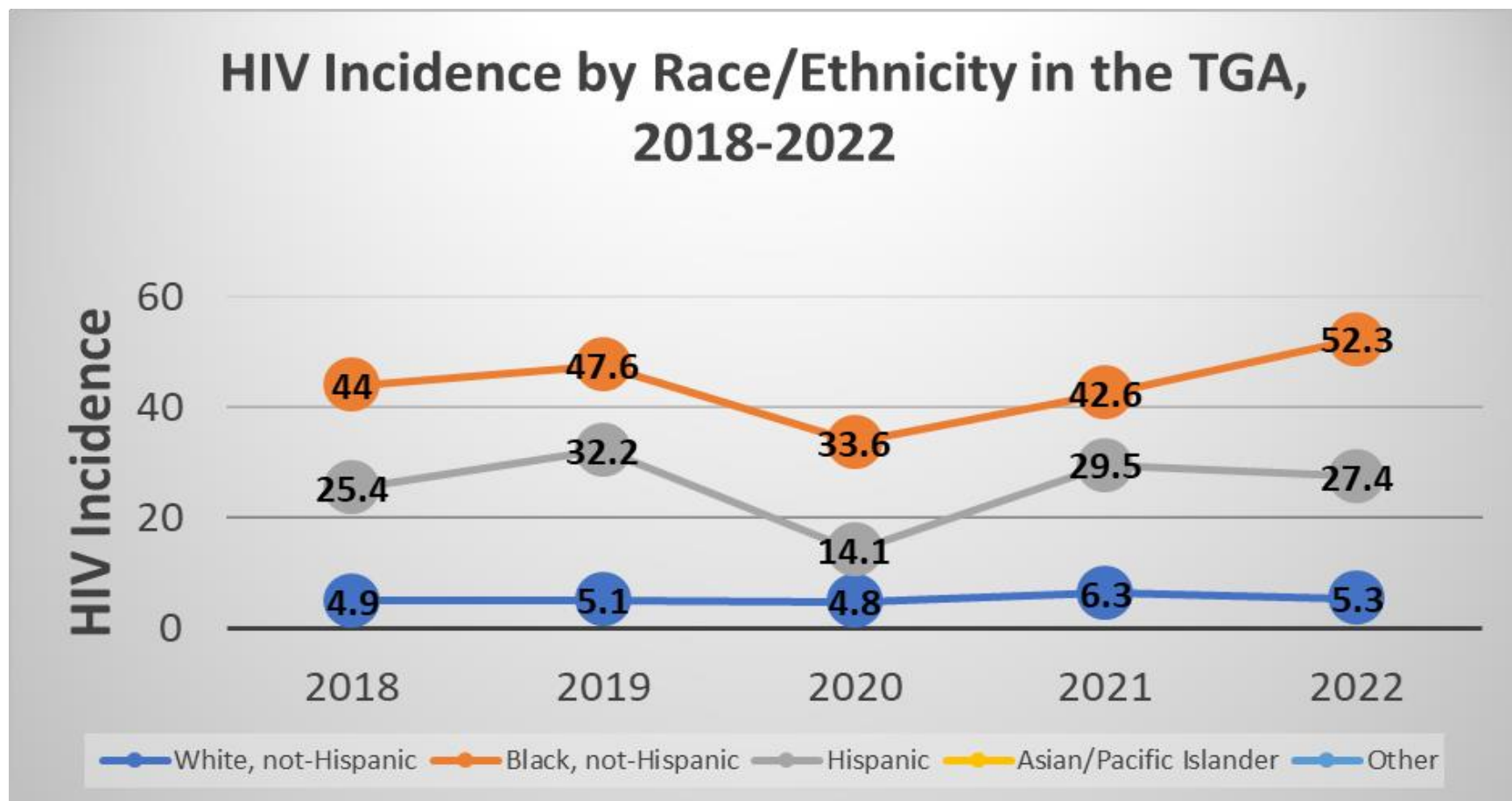
African Americans and residents of Hispanic ethnicity continue to experience increased risk of HIV infection

HIV Incidence by Race/Ethnicity

HIV Incidence by Race/Ethnicity, 2022



HIV Incidence by Race/Ethnicity, 2018-2022



HIV Incidence by Age

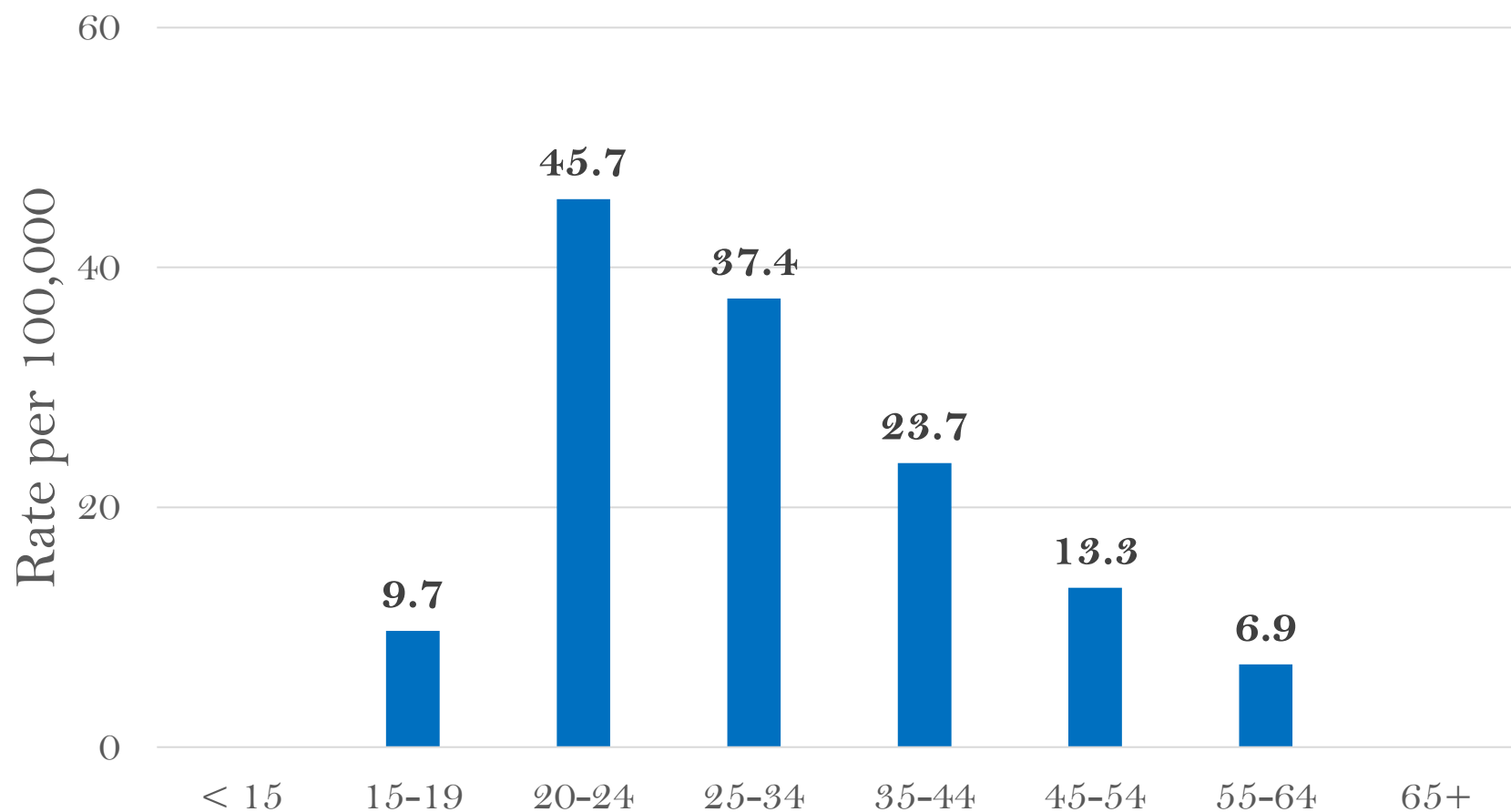
Age (Yrs.)	No.	% of HIV in TGA	Rate [95% CI*]
<15	-	-	NS
15-19	13	4.3%	9.7 [5.2-16.6] ⁺
20-24	58	19.3%	45.7 [34.7-59]
25-34	109	36.3%	37.4 [30.7-45.1]
35-44	66	22.0%	23.7 [18.3-30.2]
45-54	33	11.0%	13.3 [9.1-18.6] ⁺
55-64	17	5.7%	6.9[4-11] ⁺
65+	< 5	-	-

*95% confidence interval ⁺= Unstable Rate NS = Does not meet MCPHD standards for statistical significance

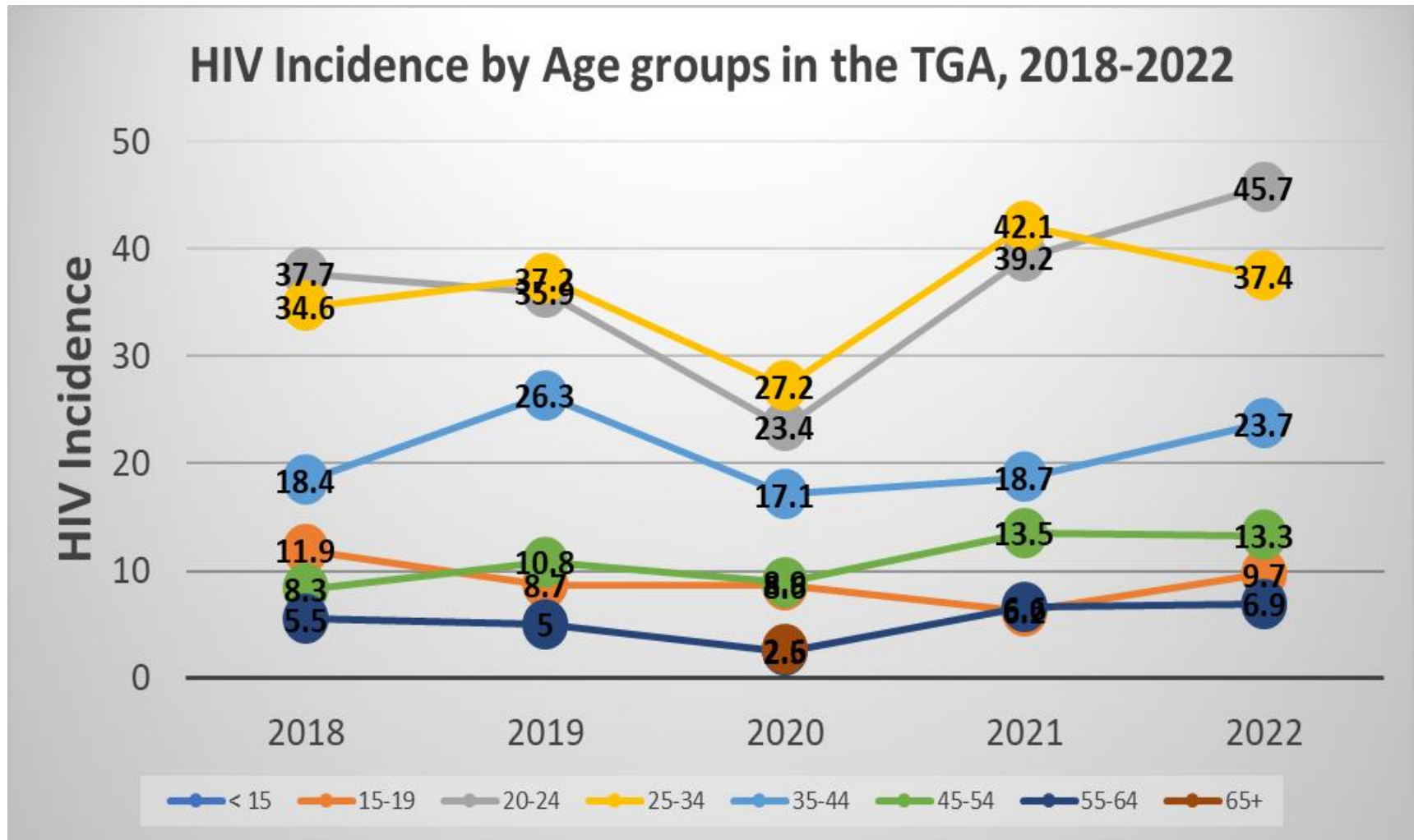
Young adults 20-34 continue to be at most risk of HIV, with rates at least double those of other age groups

HIV Incidence by Age

HIV Incidence by Age groups, 2022



HIV Incidence by Age, 2018-2022



HIV Incidence by Exposure Category

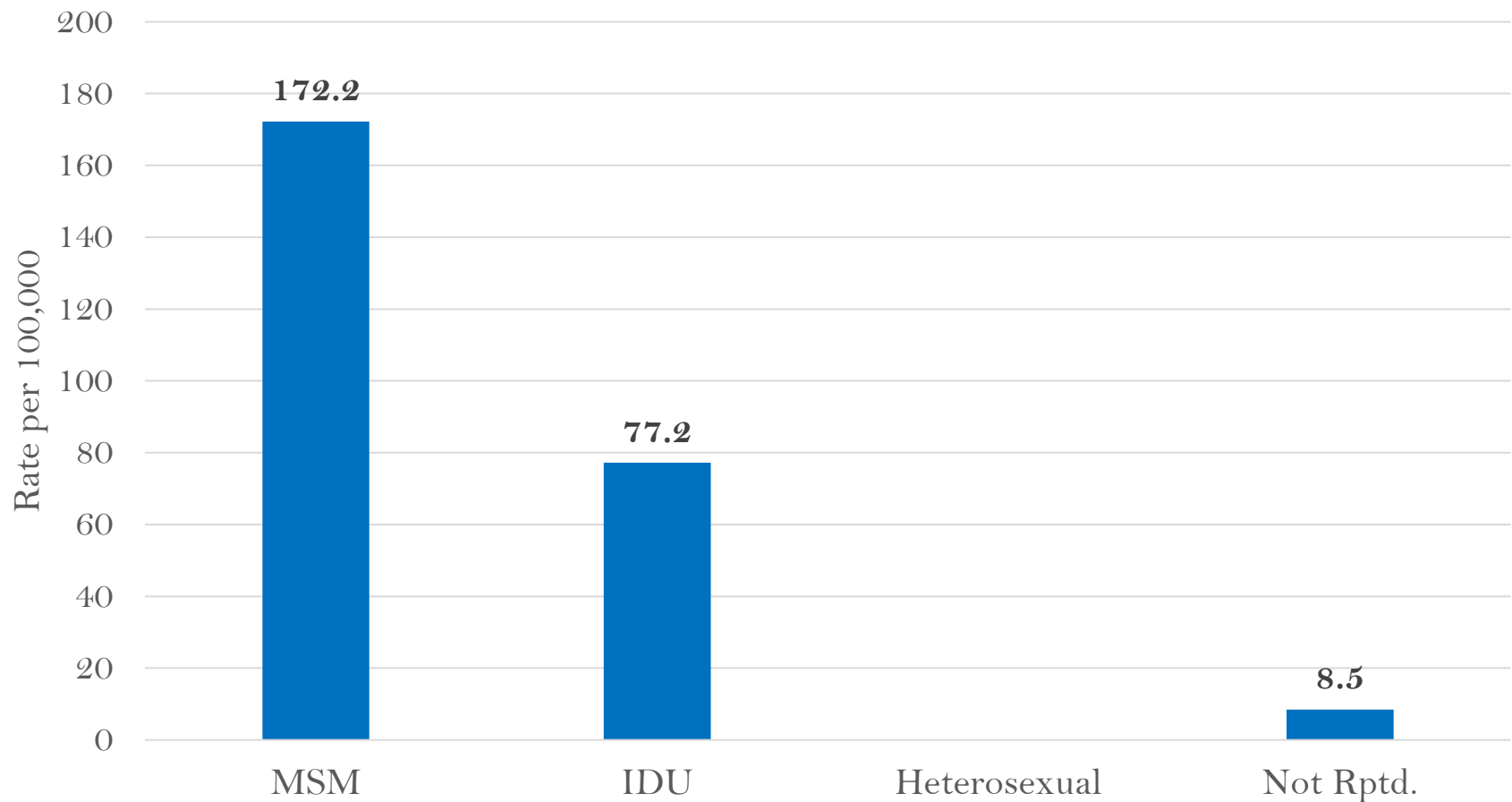
Exposure	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to Heterosexual
MSM [^]	101	33.7%	172.2 [140.3-209.2]	1690.9 [417.1-6828.3] ⁺
IDU [^]	25	8.3%	77.2 [50-114] ⁺	758.6 [179.7-3202.] ⁺
Heterosex.	< 5	-	-	1.0
Not Rptd.	172	57.3%	8.5[7.3-9.9]	NA

[^]MSM=Male-to-male sexual contact (denominator estimated)^{5,6} and
 IDU=Injection drug use(denominator estimated)³⁰ Rows may total more than actual incidence
 due to report of multiple categories *95% confidence interval ⁺ = Unstable Rate

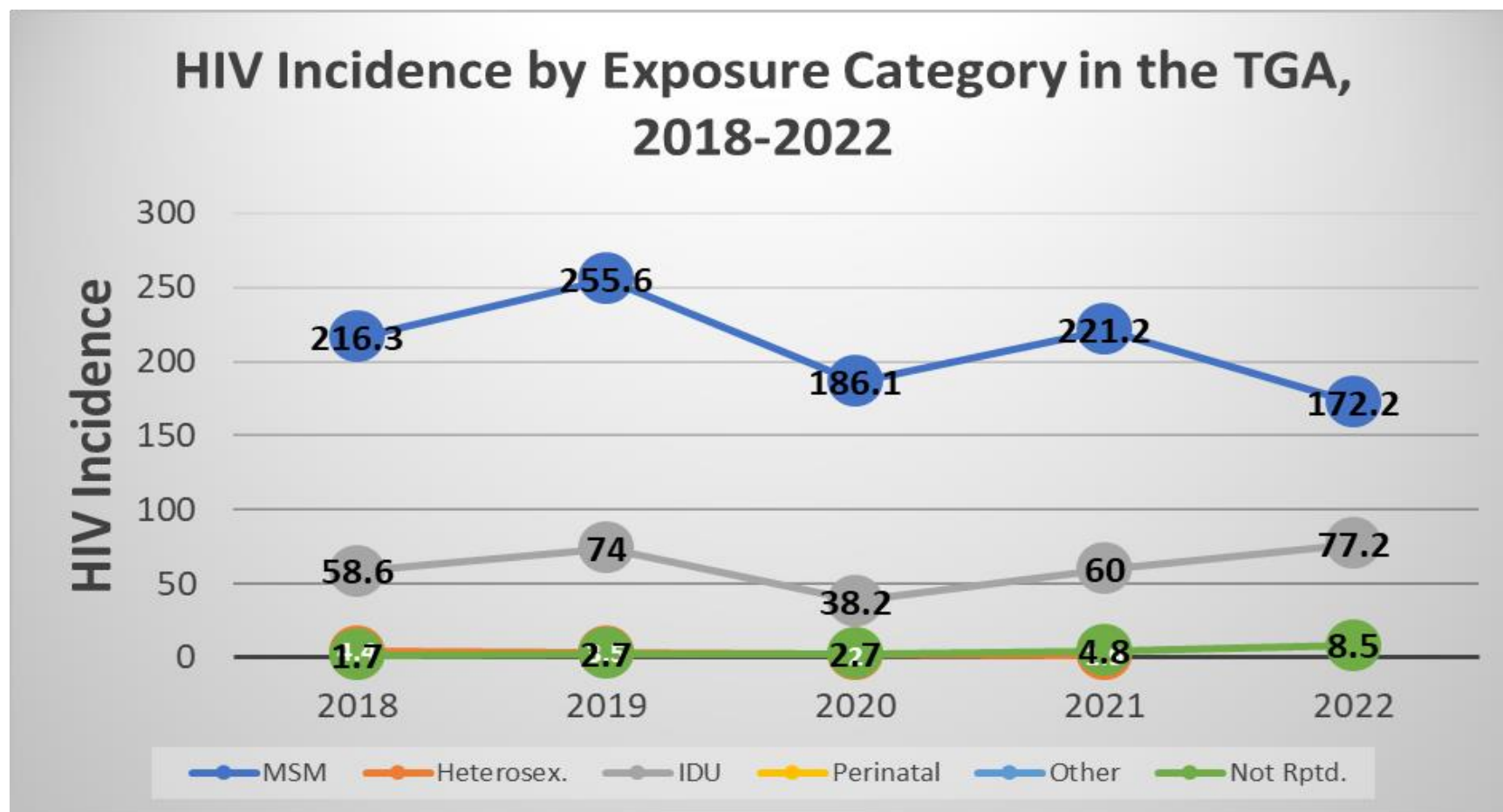
**MSM continue to bear the
greatest burden of HIV**

HIV Incidence by Exposure Category

HIV Incidence by Exposure Category, 2022



HIV Incidence by Exposure Category, 2018-2022



HIV Incidence by U.S. Nativity Status

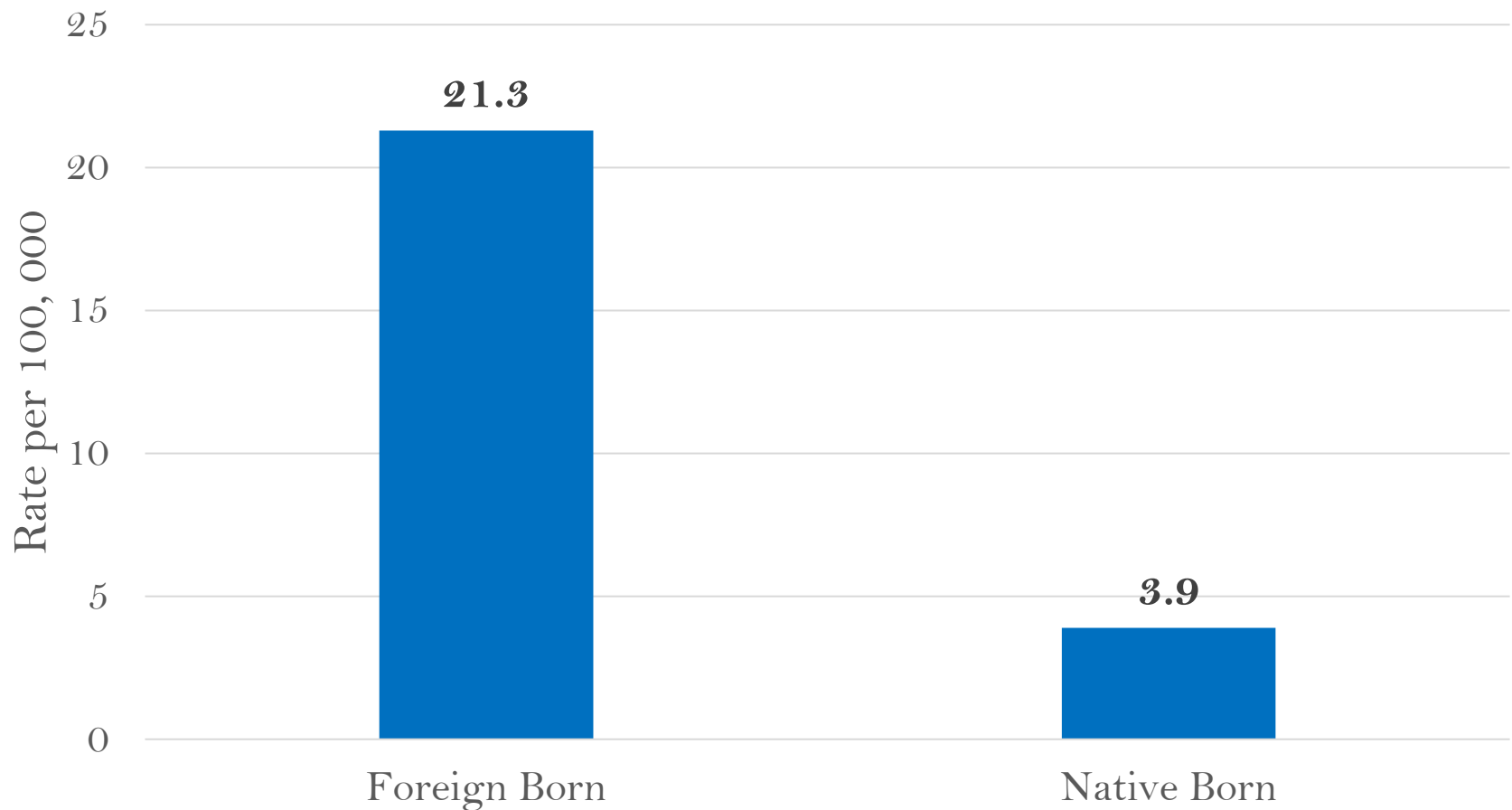
Nativity Status	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to Native Born
Foreign Born**	33	11.0%	21.3[14.7-29.9] +	5.4 [3.6-8.2]
Native Born	73	24.3%	3.9 [3.1-4.9]	1.0
Other	< 5			
Unk/Miss	193	64.3%	-	-

*95% confidence interval, ** TGA foreign born population denominator based on census tract data¹ += Unstable Rate

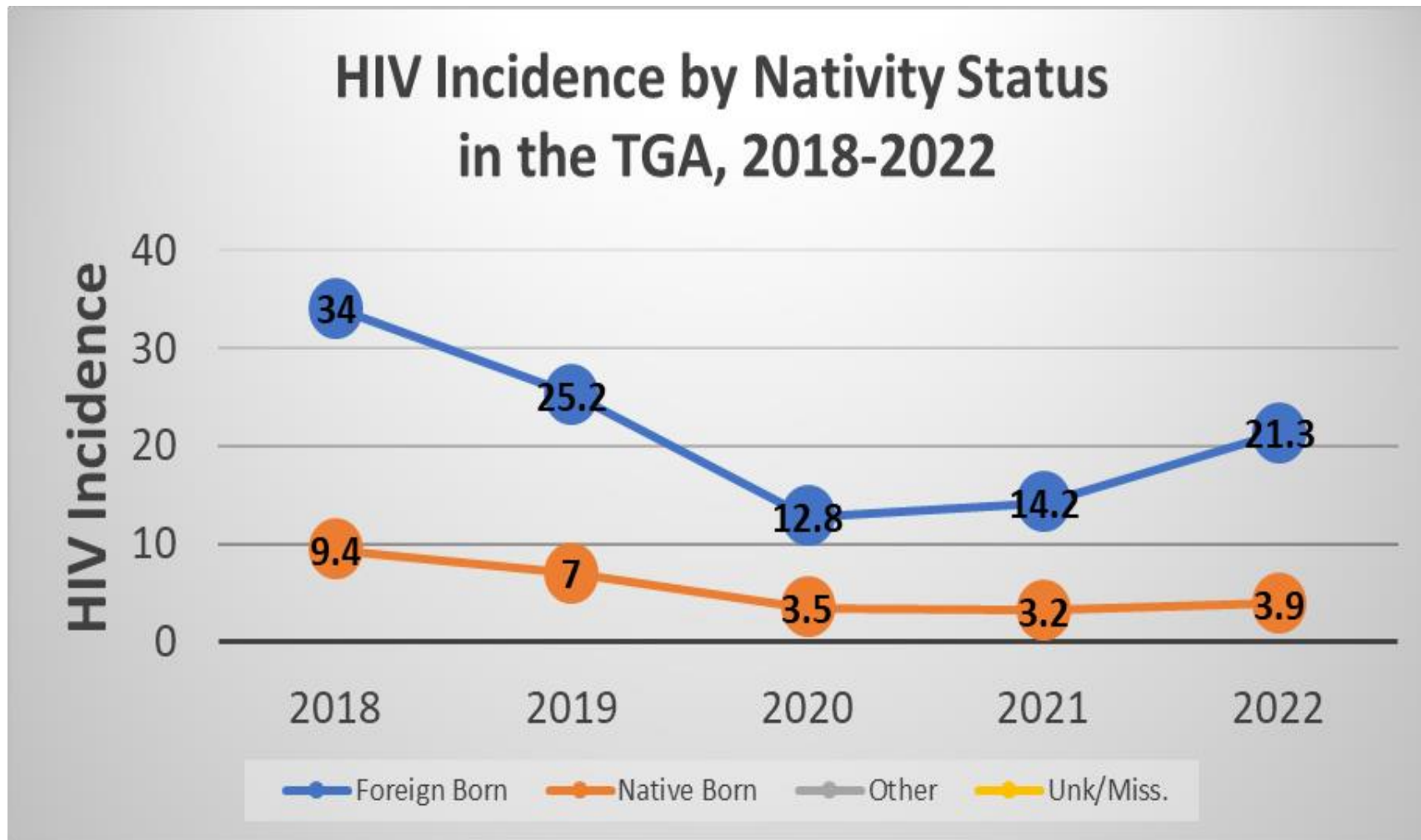
Foreign-born residents of the TGA account for an estimated 7.7% of the TGA population and experienced HIV incidence at 5x that of native-born residents

HIV Incidence by U.S. Nativity Status

HIV Incidence by Nativity Status, 2022



HIV Incidence by U.S. Nativity Status, 2018-2022



HIV/AIDS Death



Death of PLWH/A (Regardless of Cause) in the Indianapolis TGA: 2022

Area	No.	Rate [95% CI*]	2021 Rate [95% CI*]	U.S. Rate**7
Deaths (<i>TGA</i>)	59	2.9[2.2-3.8]	2.6[1.9-3.4]	5.6 ₍₂₀₂₀₎

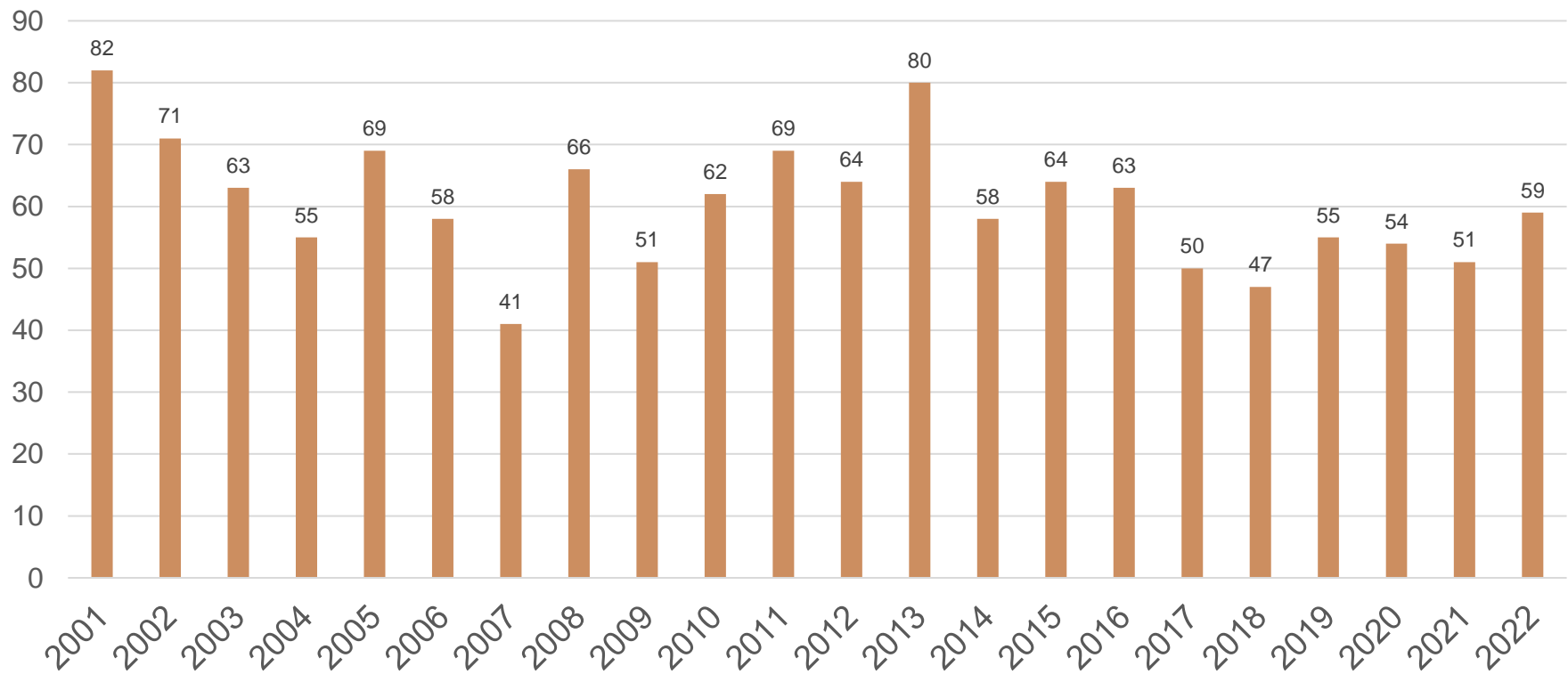
*95% confidence interval; NS = Does not meet MCPHD standards for statistical significance

The mortality rate of PLWH/A in 2022 was 2.9.

Death of PLWH/A (Any Cause)

Deaths of Indianapolis TGA Residents Living with HIV/AIDS, Regardless of Cause of Death, by Year: 2000-2022

Deaths of PLWH/A (Any Cause)



Deaths by County

County	No.	% of HIV in TGA	Rate [95% CI*]
Marion	44	74.6%	4.5 [3.3-6.0] +
Hamilton	6	10.2%	-
Others	9	15.3%	-

* 95% confidence interval + = Unstable Rate

Marion County had the highest number of death

Deaths by Gender

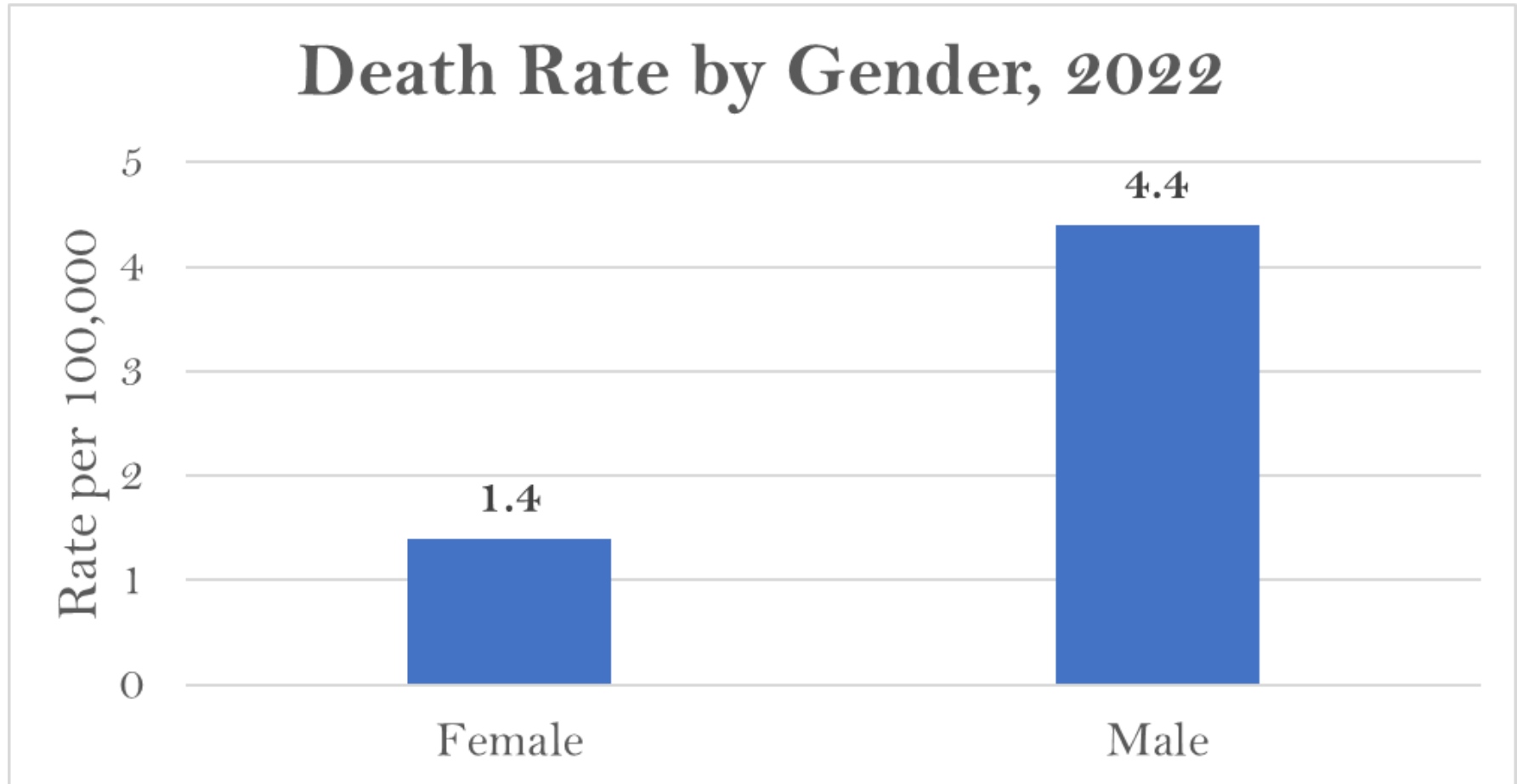
Gender	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to Female
Female	14	23.7%	1.4 [0.7-2.3] ⁺	1.0
Male	44	74.6%	4.4 [3.2-5.9] ⁺	3.3[1.8-5.9]
Transgender	< 5	-		

*95% confidence interval

⁺ = Unstable Rate

**Men were at least 3 times more likely
to die compared to Women**

Death Rate by Gender



Deaths by Race/Ethnicity

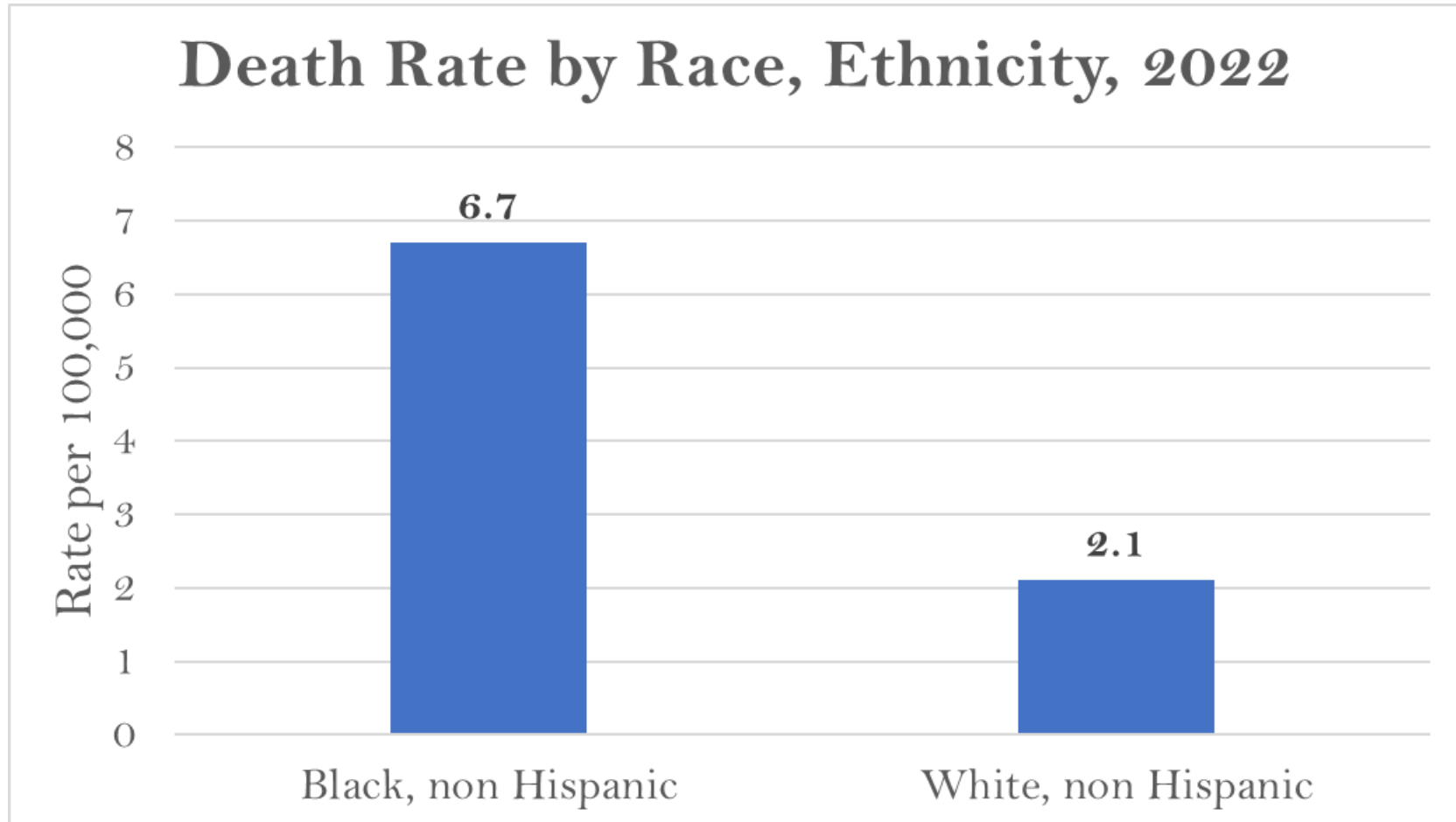
Race/ Ethnicity	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to White
Asian/PI	-	-	NS	NS
Black	22	37.3%	6.7[4.2-10.1] ⁺	3.1[1.8-5.4]
Hispanic	< 5	-	NS	NS
Other	< 5	-	NS	NS
White	30	50.9%	2.1[1.4-3.0] ⁺	1.0

*95% confidence interval NS = Does not meet MCPHD standards for statistical significance

⁺ = Unstable Rate

**African Americans were 3 times
more likely to die compared o
their White counterparts**

Death Rate by Race/Ethnicity



Deaths by Age groups

Age (Yrs.)	No.	%	Rate [95% CI*]
<15	-	-	-
15-19	-	-	-
20-24	-	-	-
25-34	< 5	-	-
35-44	8	13.6%	2.9[1.2-5.7] +
45-54	9	15.3%	3.6[1.7-6.9] +
55-64	24	40.7%	9.7[6.2-14.4] +
65+	14	23.7%	4.9[2.7-8.3] +

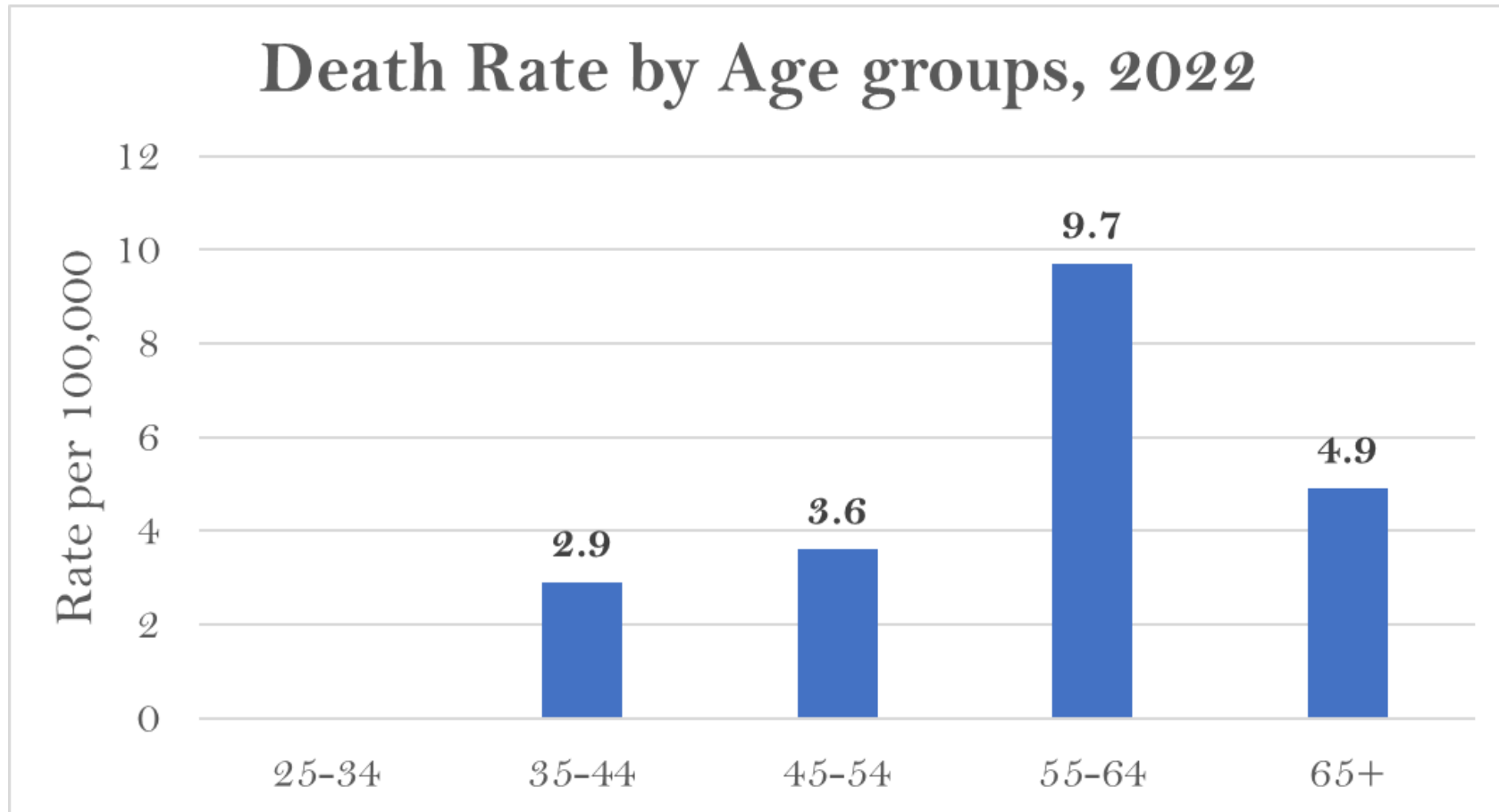
*95% confidence interval

NS = Does not meet MCPHD standards for statistical significance

+ = Unstable Rate

Adults aged 55-64 experienced the highest death rate

Death Rate by Age



Deaths by Exposure/Risk

Exposure	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to Heterosexual
MSM [^]	28	47.5%	47.7[31.7-69] ⁺	93.8[45.5-193]
Heterosex.	10	16.9%	0.5[0.2-0.9] ⁺	1.0
IDU [^]	13	22.0%	40.2[21.4-68.7] ⁺	78.9[34.6-179.9]
Perinatal	-	-	NS	NS
Other	-	-	NS	NS
Not Rptd.	8	13.6%	0.4[0.2-0.8] ⁺	NS

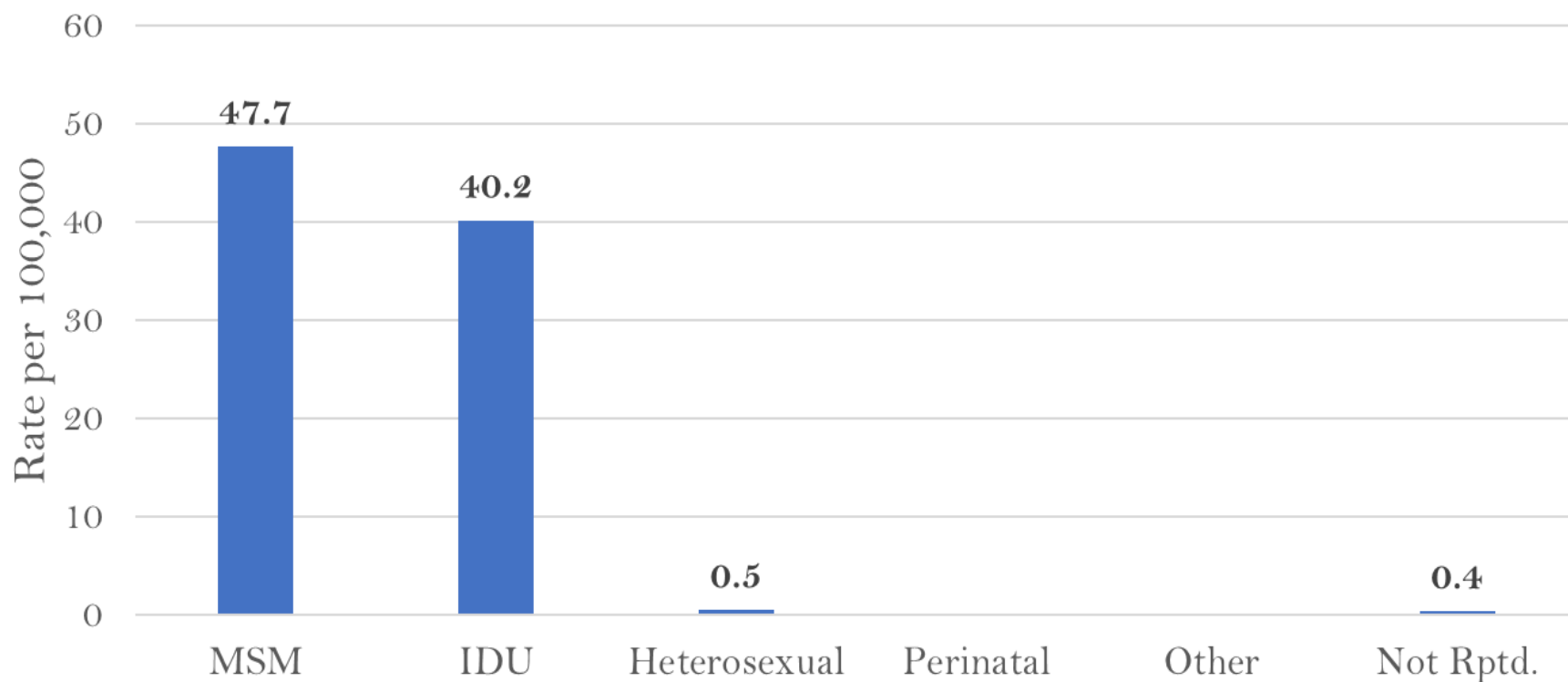
[^]MSM=Male-to-male sexual contact (denominator estimated)⁵⁶ and
 IDU=Injection drug use (denominator estimated)³⁰ Rows may total more than actual incidence
 due to report of multiple categories

*95% confidence interval ⁺ = Unstable Rate

MSM and IDU had the highest death rate

Death Rate by Exposure Status

Death Rate by Exposure Category, 2022



Deaths by U.S. Nativity Status

Nativity Status	No.	% of HIV in TGA	Rate [95% CI*]	RR [95% CI*]: to Native Born
Foreign Born**	< 5	-	-	-
Native Born	50	84.8%	2.7[2-3.5]	1.0
Unk/Miss	8	13.6%	-	-

**95% confidence interval, ** TGA foreign born population denominator based on census tract data¹*

Native Born had a death rate of 2.7

HIV Prevalence



Estimated Number of Undiagnosed PLWH/A

HIV/AIDS Prevalence	6,447
HIV Prevalence	3,549
AIDS Prevalence	2,898
Undiagnosed/Unaware	964
Estimated Total PLWH/A	7,411

- Current estimated proportion of PLWH/A while undiagnosed/unaware is 13% of known prevalence²⁷

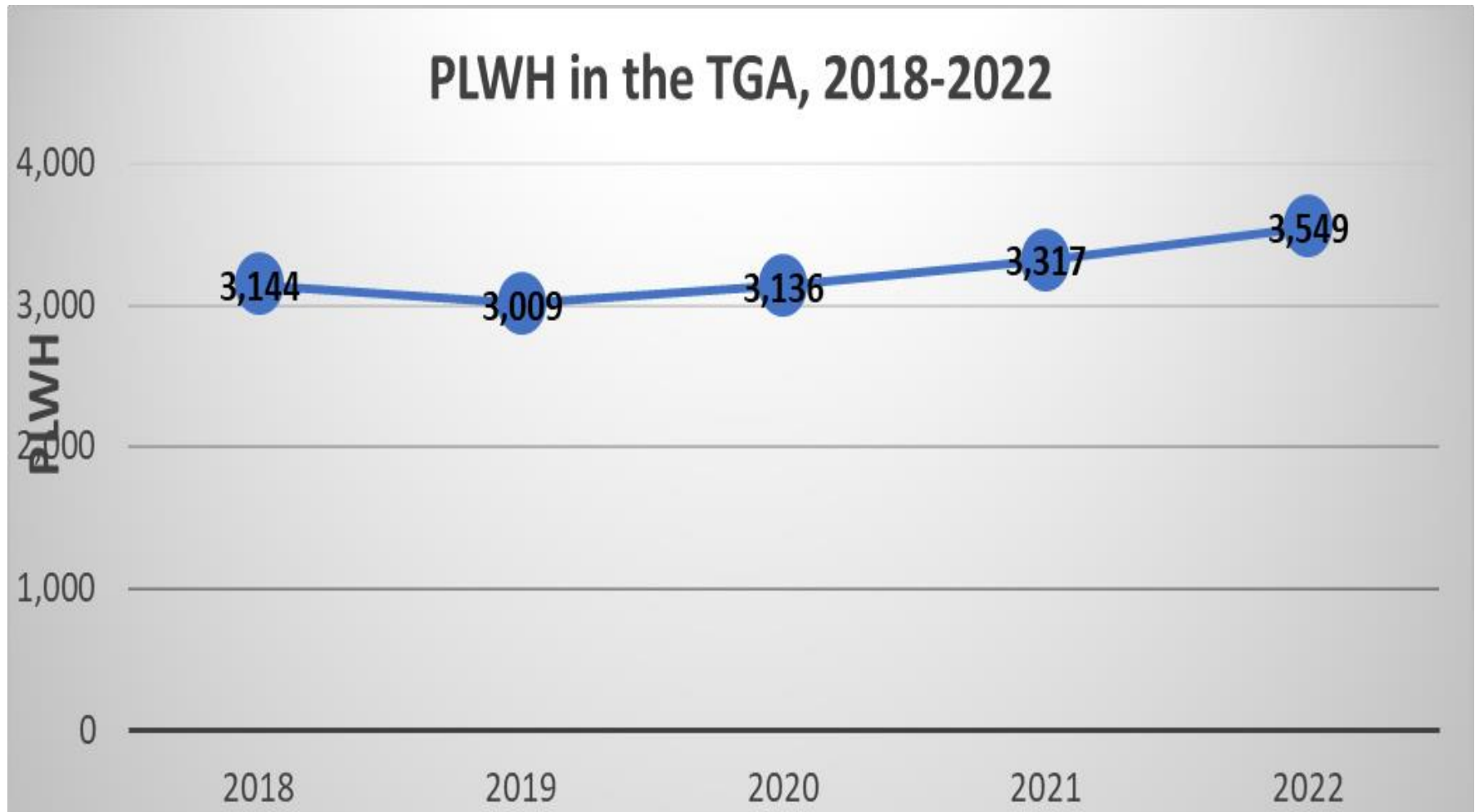
Prevalence of Diagnosed HIV/AIDS

Status	No.	Rate [95% CI*]	U.S. Rate (2017) ⁵
HIV	3,549	175.5 [169.7-181.3]	147.3
AIDS	2,898	143.3 [138.1-148.6]	161.4
Total	6,447	318.7[311-326.6]	308.7

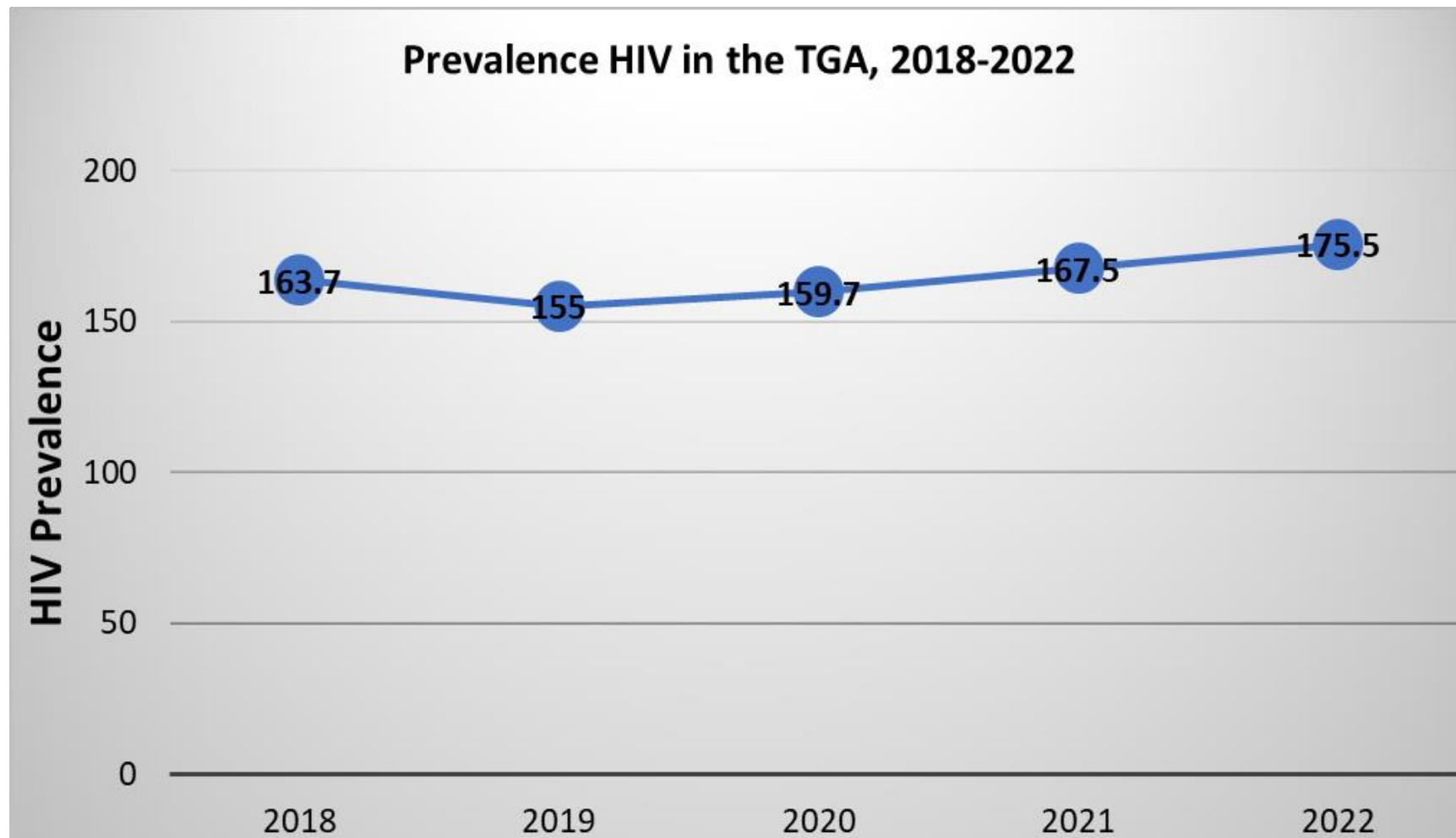
**95% confidence interval*

**No significant change in HIV and AIDS
prevalence from 2021 to 2022**

PLWH in the TGA, 2018-2022



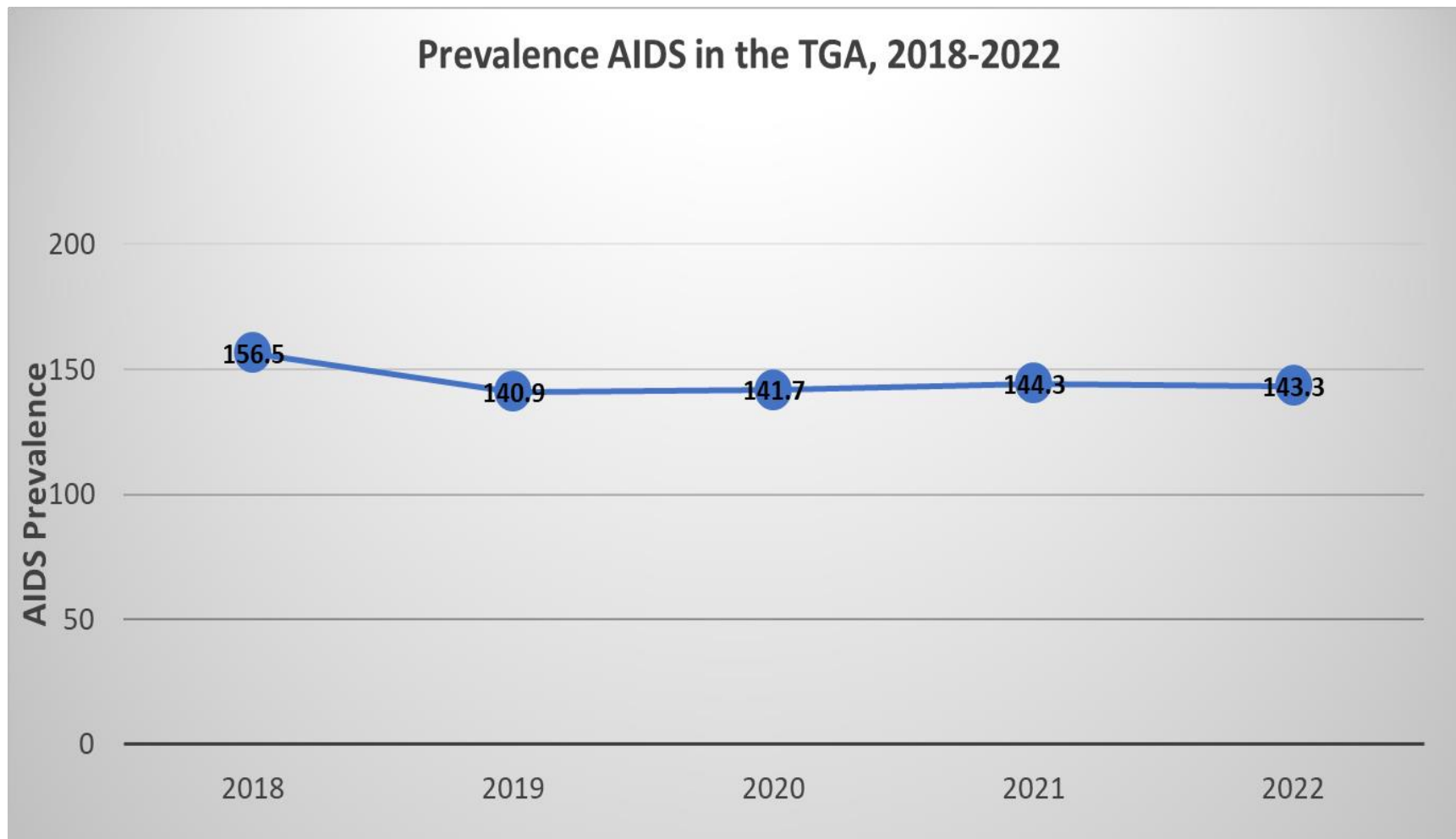
Prevalence HIV in the TGA, 2018-2022



PLWA in the TGA, 2018-2022



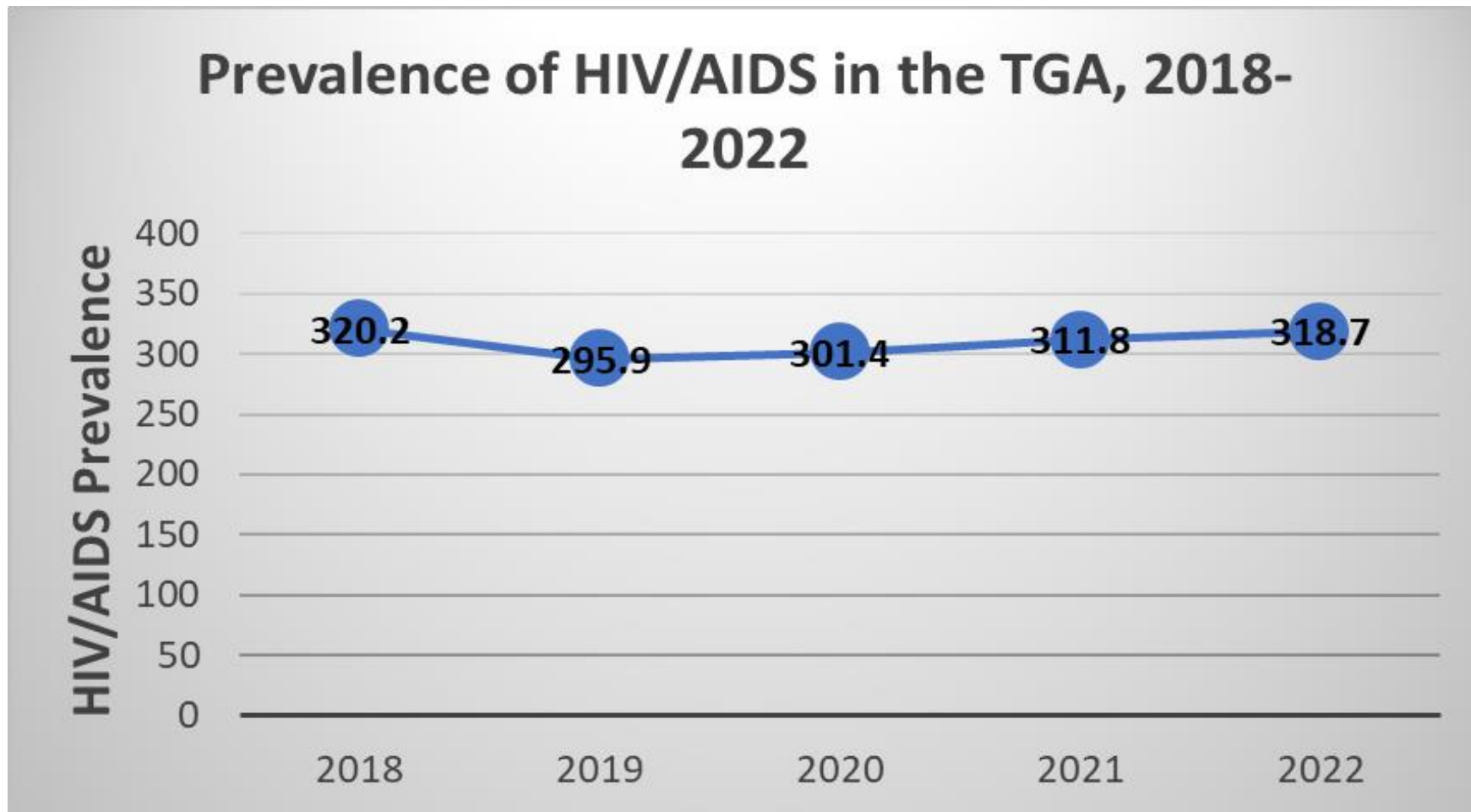
Prevalence AIDS in the TGA, 2018-2022



PLWH/A in the TGA, 2018-2022



Prevalence of HIV/AIDS in the TGA, 2018-2022



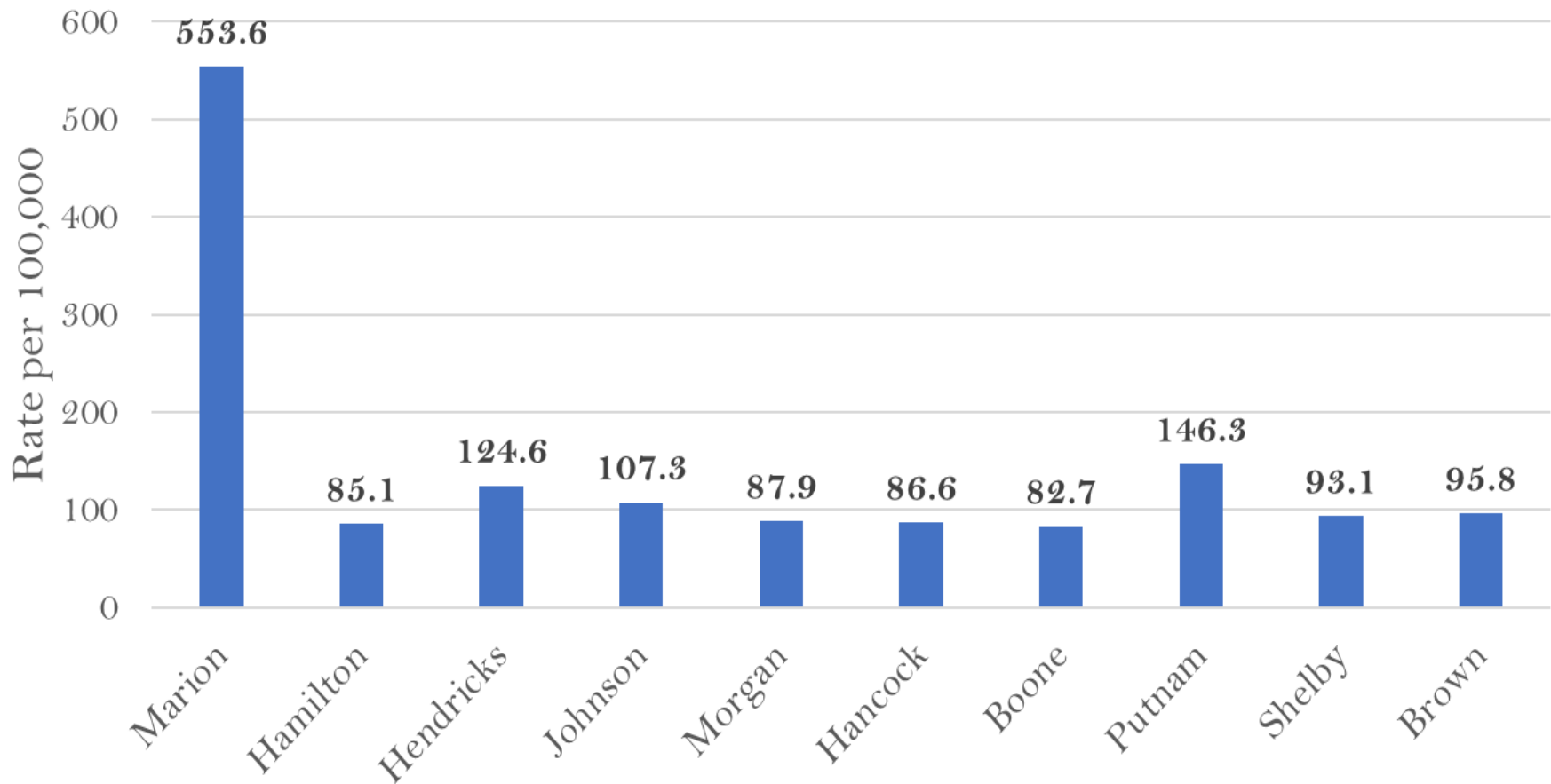
HIV/AIDS Prevalence by County

County	No.	% of HIV/AIDS in TGA	Rate [95% CI*]	RR [95% CI*]: to Brown
Marion	5,420	84.1%	553.6[539.1-568.5]	5.8 [3.5-9.6]
Hamilton	310	4.8%	85.1[75.9-95.1]	NS
Hendricks	229	3.6%	124.6[109-141.8]	[0.8-2.2]
Johnson	179	2.8%	107.3[92.1-124.2]	NS
Hancock	72	1.1%	86.6[67.7-109]	NS
Morgan	64	1.0%	87.9[67.7-112.3]	NS
Boone	62	1.0%	82.7[63.4-106]	NS
Putnam	54	0.8%	146.3 [110-190.9]	[0.9- 2.7]
Shelby	42	0.7%	93.1[67.1-125.8] ⁺	NS
Brown	15	0.2%	95.8[53.6-158] ⁺	1.0

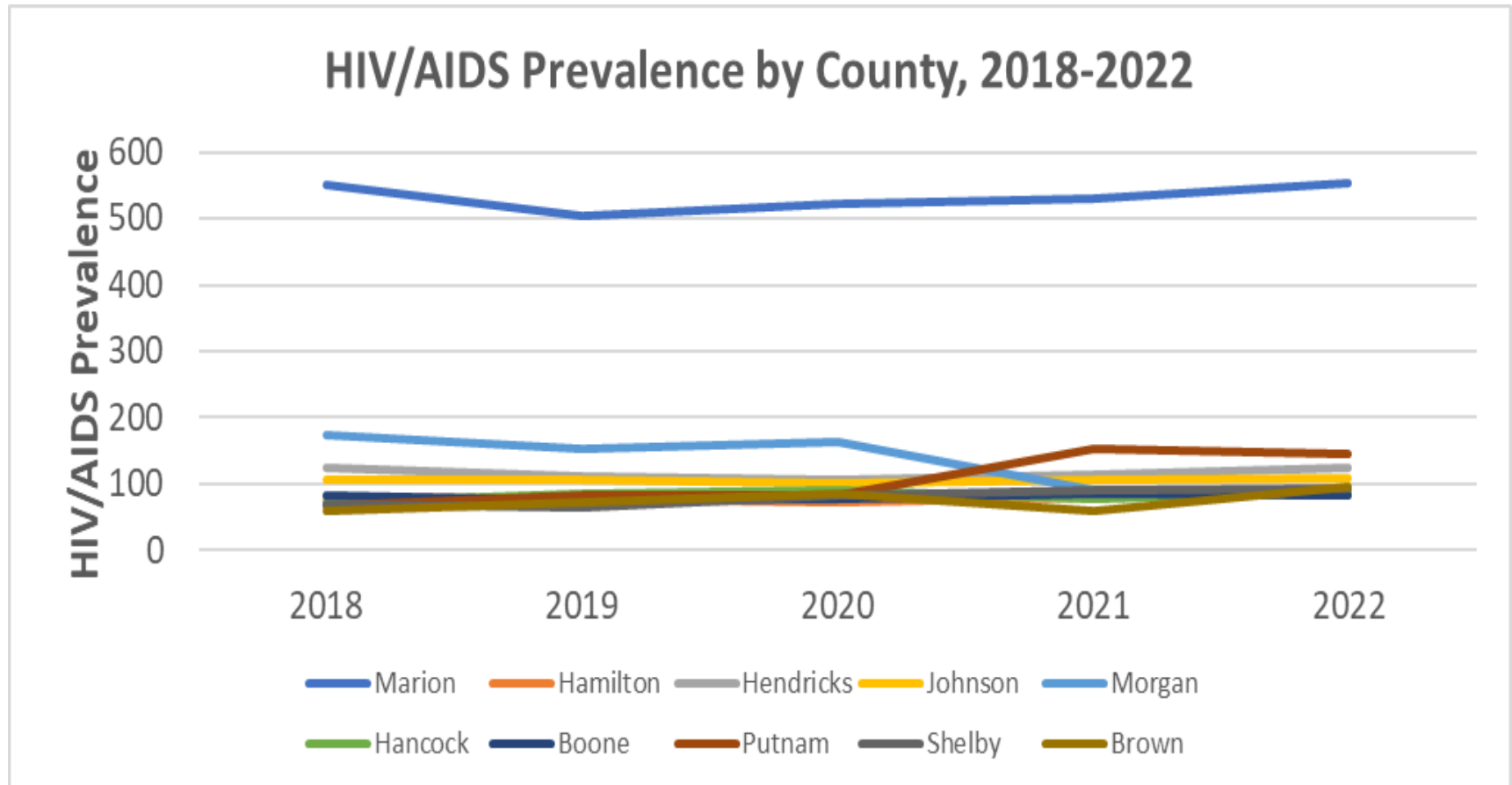
*95% confidence interval + = Unstable Rate

HIV/AIDS Prevalence by County

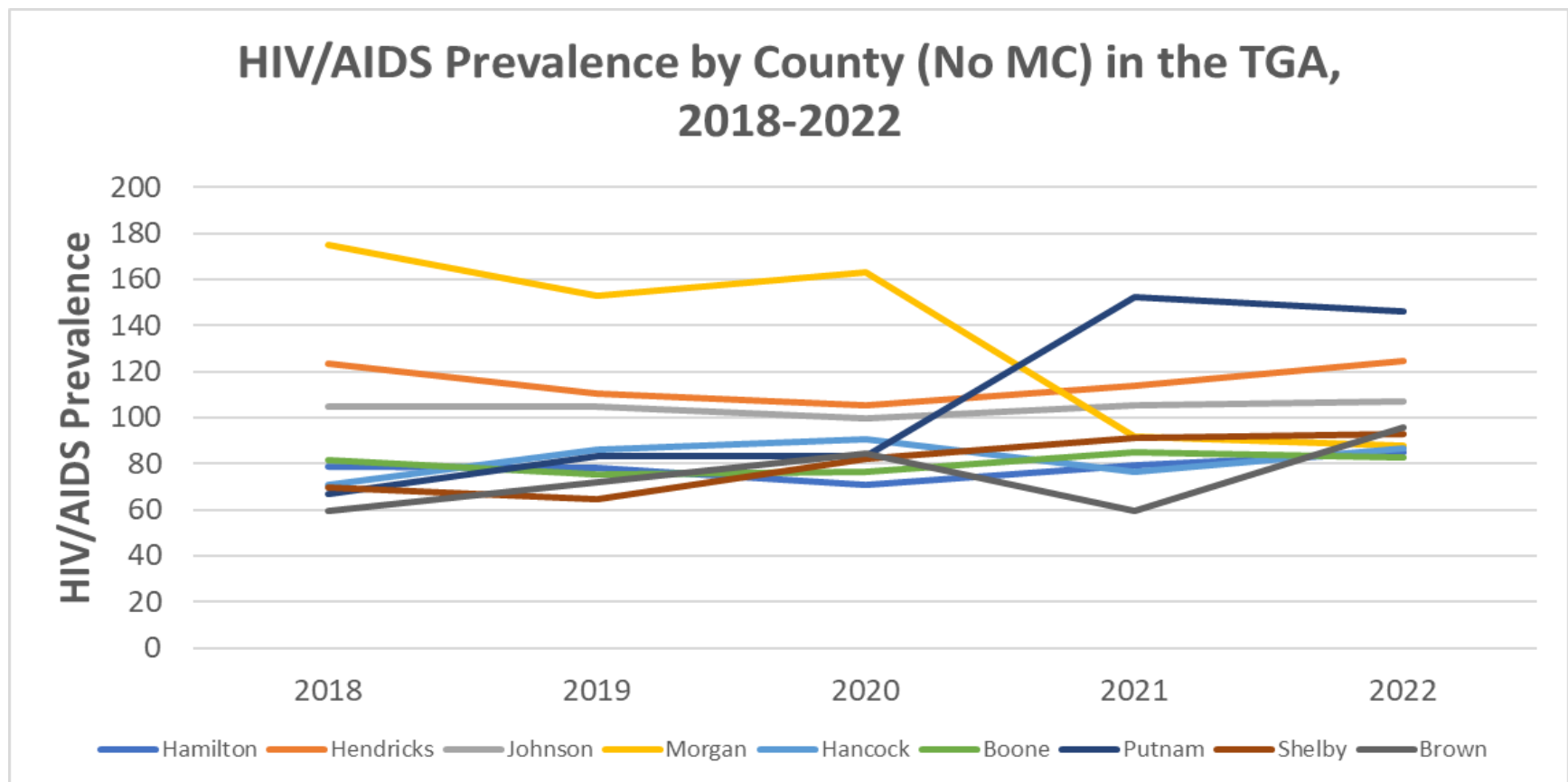
HIV/AIDS Prevalence by County, 2022



HIV/AIDS Prevalence by County, 2018-2022

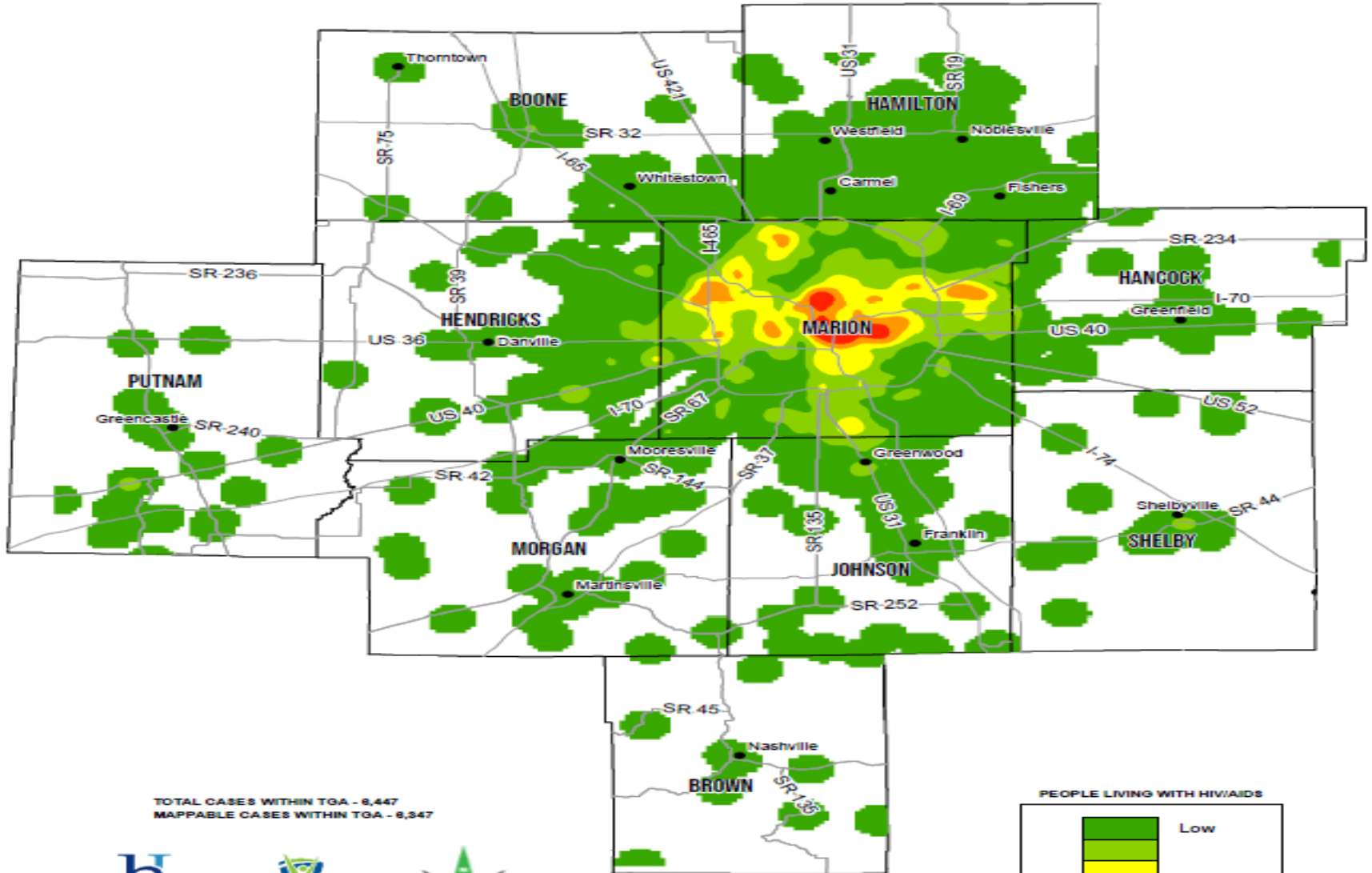


HIV/AIDS Prevalence by County (No Marion County), 2018-2022

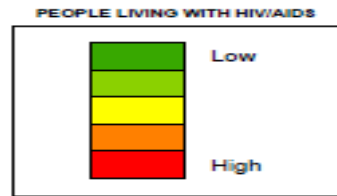


INDIANAPOLIS TGA RESIDENTS LIVING WITH HIV/AIDS

(PER SQUARE MILE: CY 2022)



TOTAL CASES WITHIN TGA - 8,447
 MAPPABLE CASES WITHIN TGA - 6,347

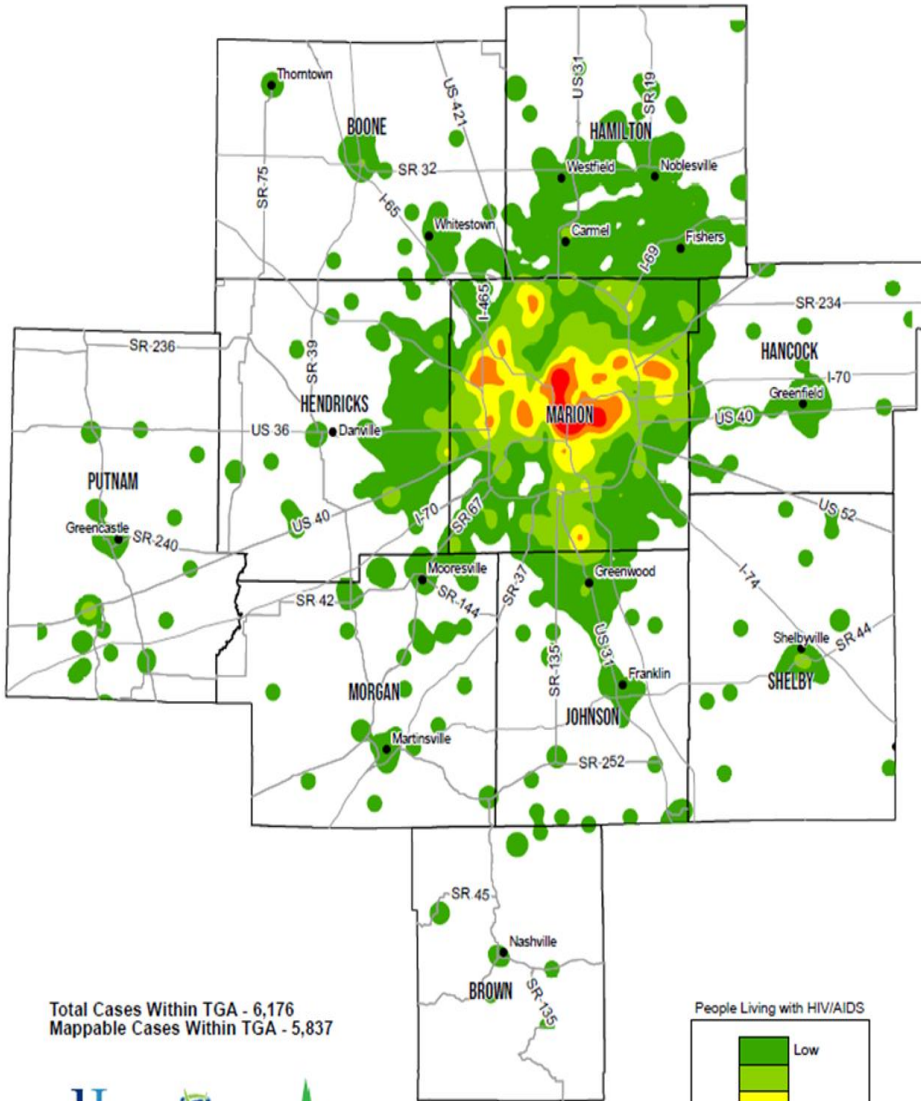


INDIANAPOLIS TGA RESIDENTS LIVING WITH HIV/AIDS

(PER SQUARE MILE: CY 2021)

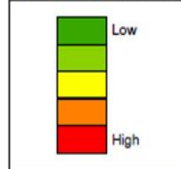
INDIANAPOLIS TGA RESIDENTS LIVING WITH HIV/AIDS

(PER SQUARE MILE: CY 2022)

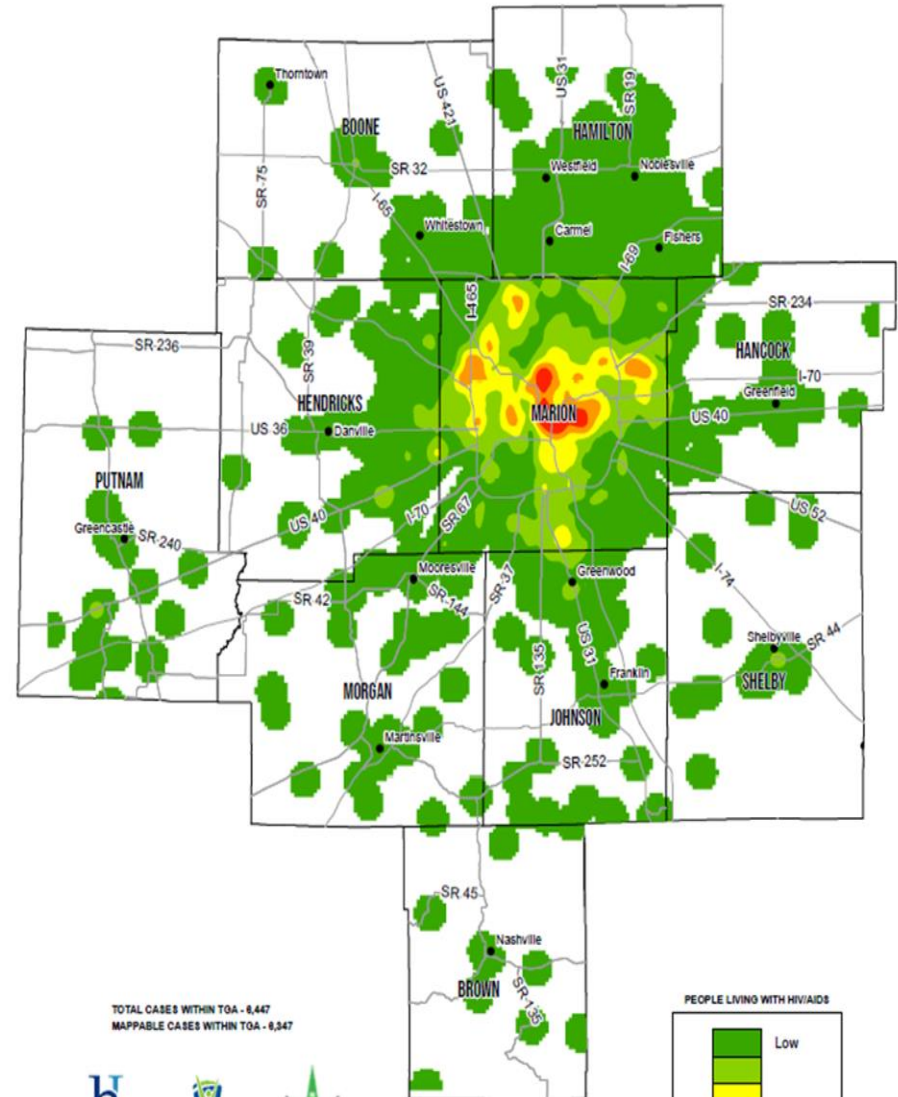


Total Cases Within TGA - 6,176
Mappable Cases Within TGA - 5,837

People Living with HIV/AIDS

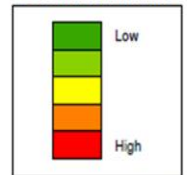


Created 04/11/22 HHC GIS 0273586



TOTAL CASES WITHIN TGA - 6,447
MAPPABLE CASES WITHIN TGA - 6,347

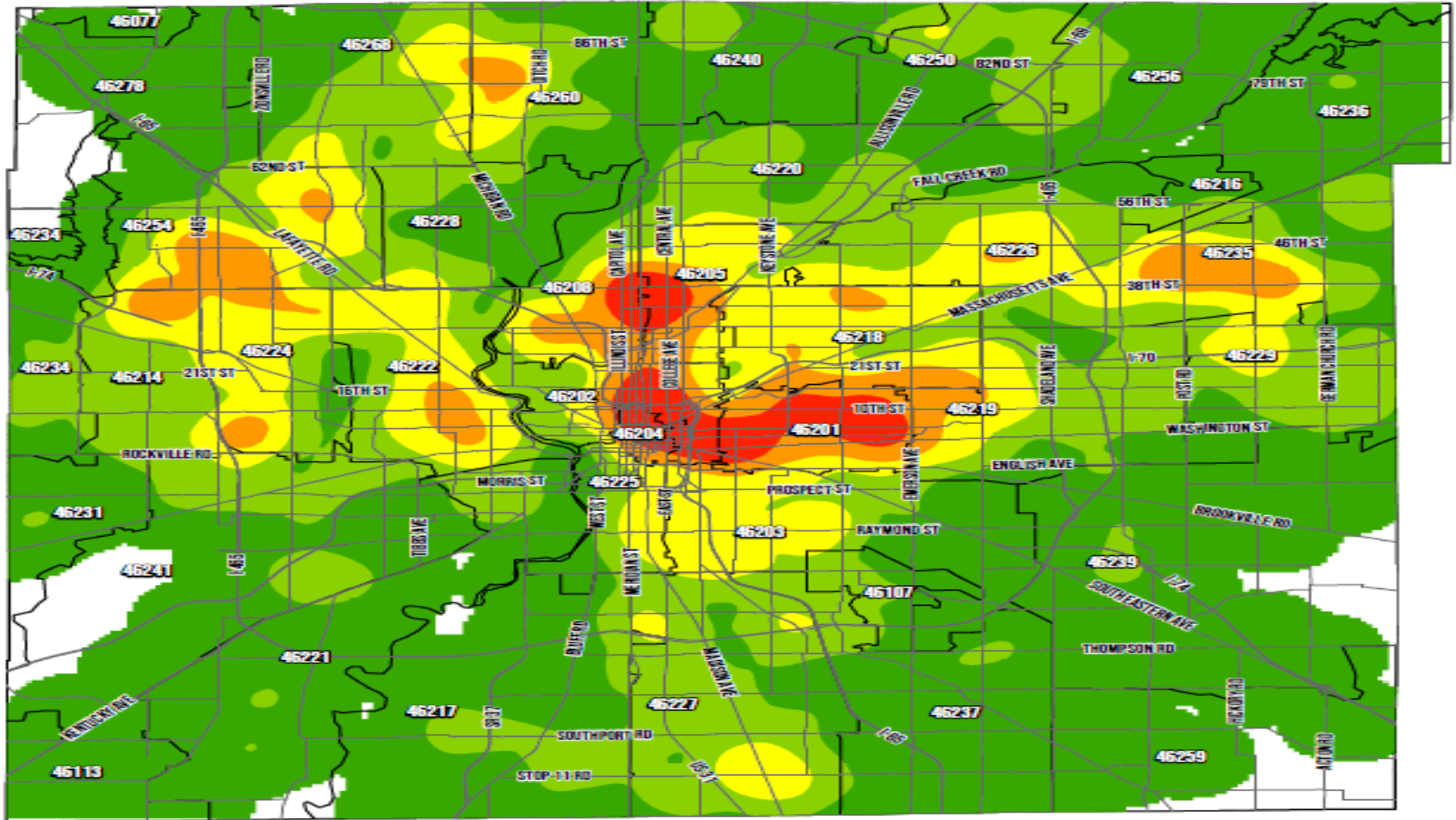
PEOPLE LIVING WITH HIV/AIDS



Created 04/08/2023, HHC GIS 0297871



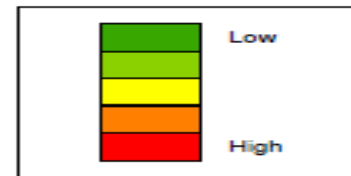
MARION COUNTY (IN) RESIDENTS LIVING WITH HIV/AIDS (PER SQUARE MILE: CY 2022)



TOTAL CASES WITHIN MARION COUNTY - 6,418
MAPPABLE CASES WITHIN MARION COUNTY - 6,084

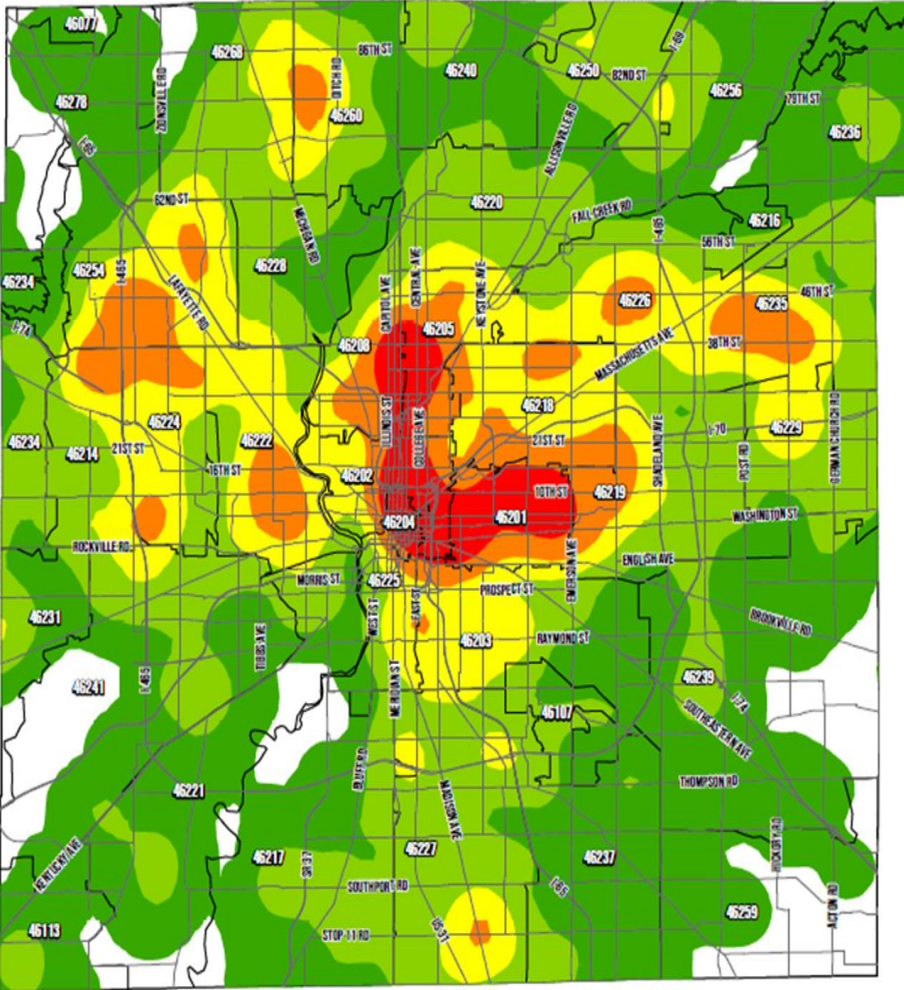


PEOPLE LIVING WITH HIV/AIDS

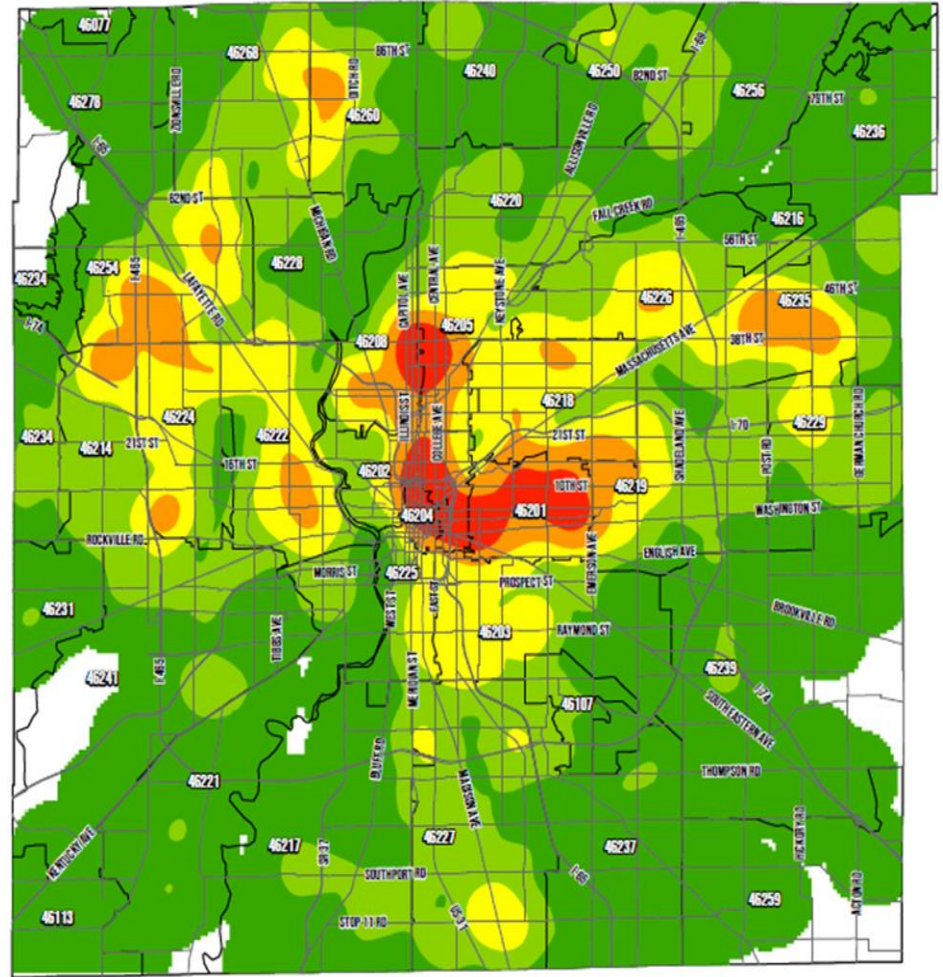


Created 04/06/2023. HHC GIS 0297671

MARION COUNTY (IN) RESIDENTS LIVING WITH HIV/AIDS (PER SQUARE MILE: CY 2021)

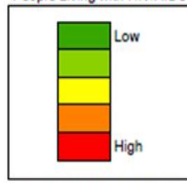


MARION COUNTY (IN) RESIDENTS LIVING WITH HIV/AIDS (PER SQUARE MILE: CY 2022)



Total Cases Within Marion County - 5,229
Mappable Cases Within Marion County - 4,912

People Living with HIV/AIDS

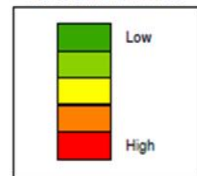


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TOTAL CASES WITHIN MARION COUNTY - 5,419
MAPPABLE CASES WITHIN MARION COUNTY - 5,084

PEOPLE LIVING WITH HIV/AIDS



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HIV/AIDS Prevalence by Gender

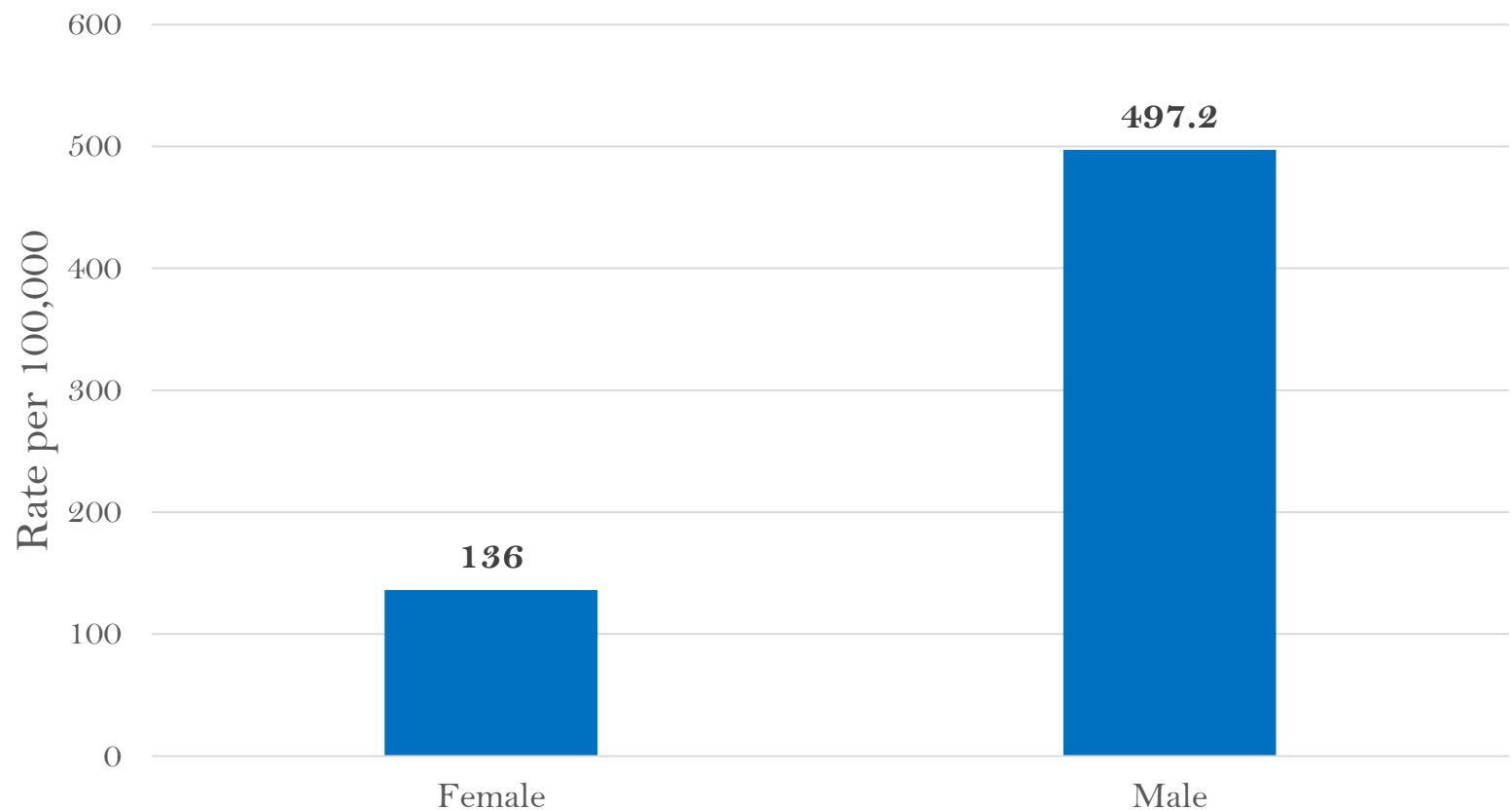
Gender	No.	% of HIV/AIDS in TGA	Rate [95% CI*]	RR [95% CI*]: to Female
Female	1,399	21.7%	136[128.9-143.3]	1.0
Male	4,941	76.6%	497.2[483.5-511.1]	3.7 [3.4-3.9]
MtF	88	1.4%	UNK	UNK
FtM	18	0.3%	UNK	UNK
Unk/Mis	<5	-	-	-

**95% confidence interval*

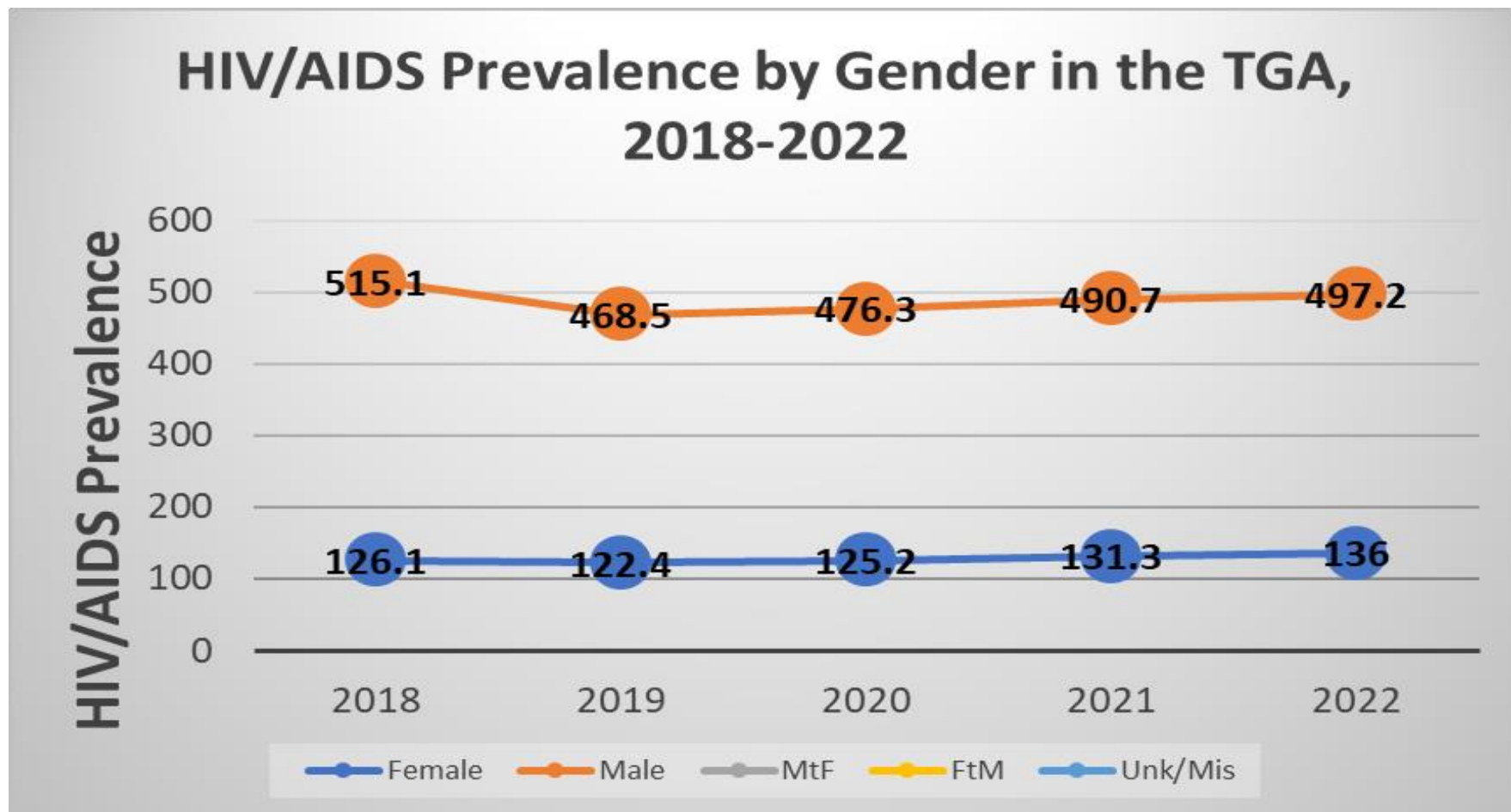
HIV prevalence among the TGA's men was about 4 times that found among women

HIV/AIDS Prevalence by Gender

HIV/AIDS Prevalence by Gender, 2022



HIV/AIDS Prevalence by Gender, 2018-2022



HIV/AIDS Prevalence by Race/Ethnicity

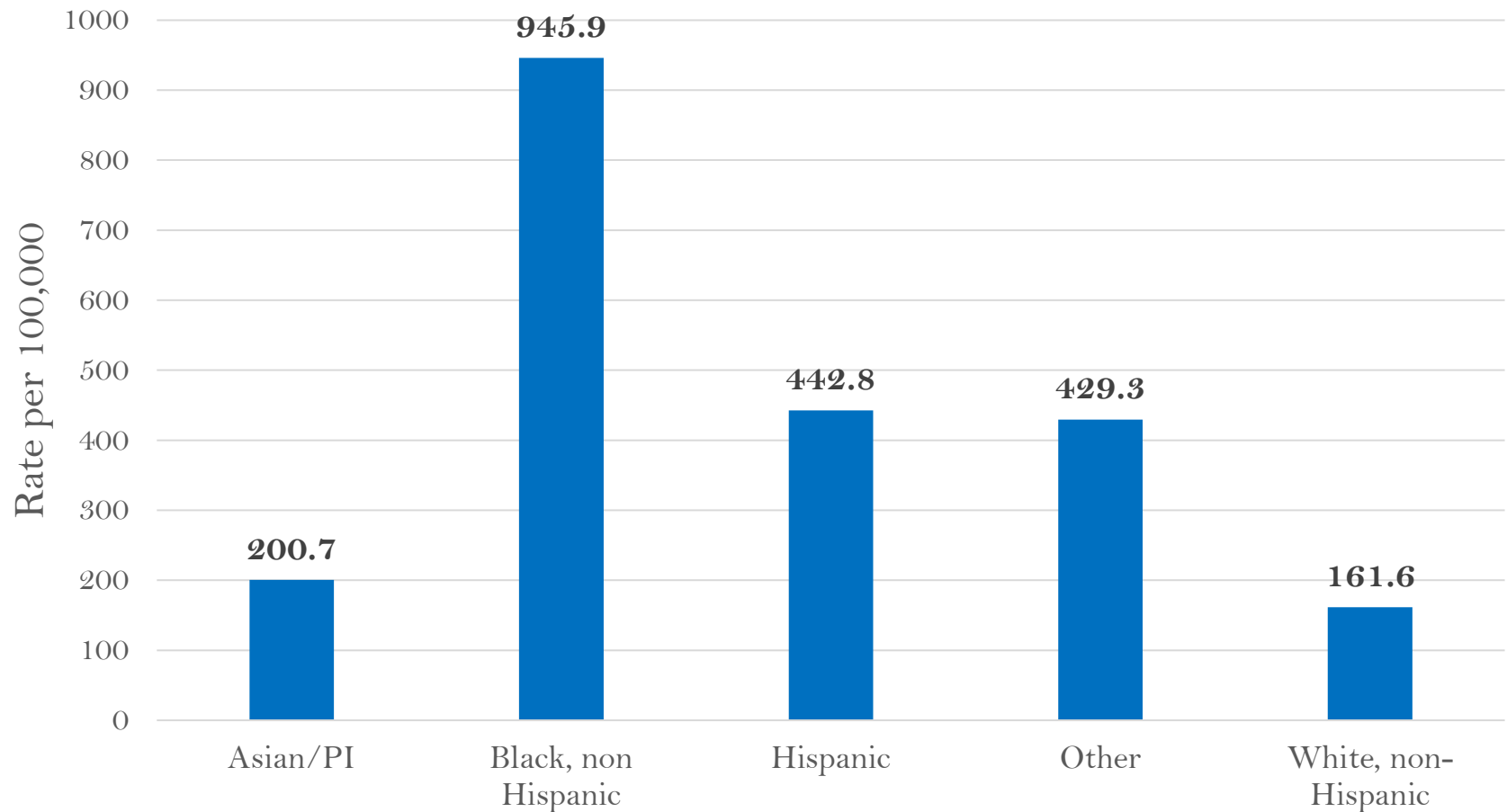
Race/ Ethnicity	No.	% of HIV/AIDS in TGA	Rate [95% CI*]	RR [95% CI*]: to White
Black	3,109	48.2%	945.9[913.2-979.4]	5.9 [5.5-6.2]
Other	220	3.4%	429.3[374.5-489.8]	2.7 [2.3-3.1]
Hispanic	678	10.5%	442.8[410.1-477.3]	2.7 [2.5-3]
Asian/PI	171	2.7%	200.7[171.8-233.1]	1.2 [1.1-1.5]
White	2,269	35.2%	161.6[155-168.3]	1.0

**95% confidence interval*

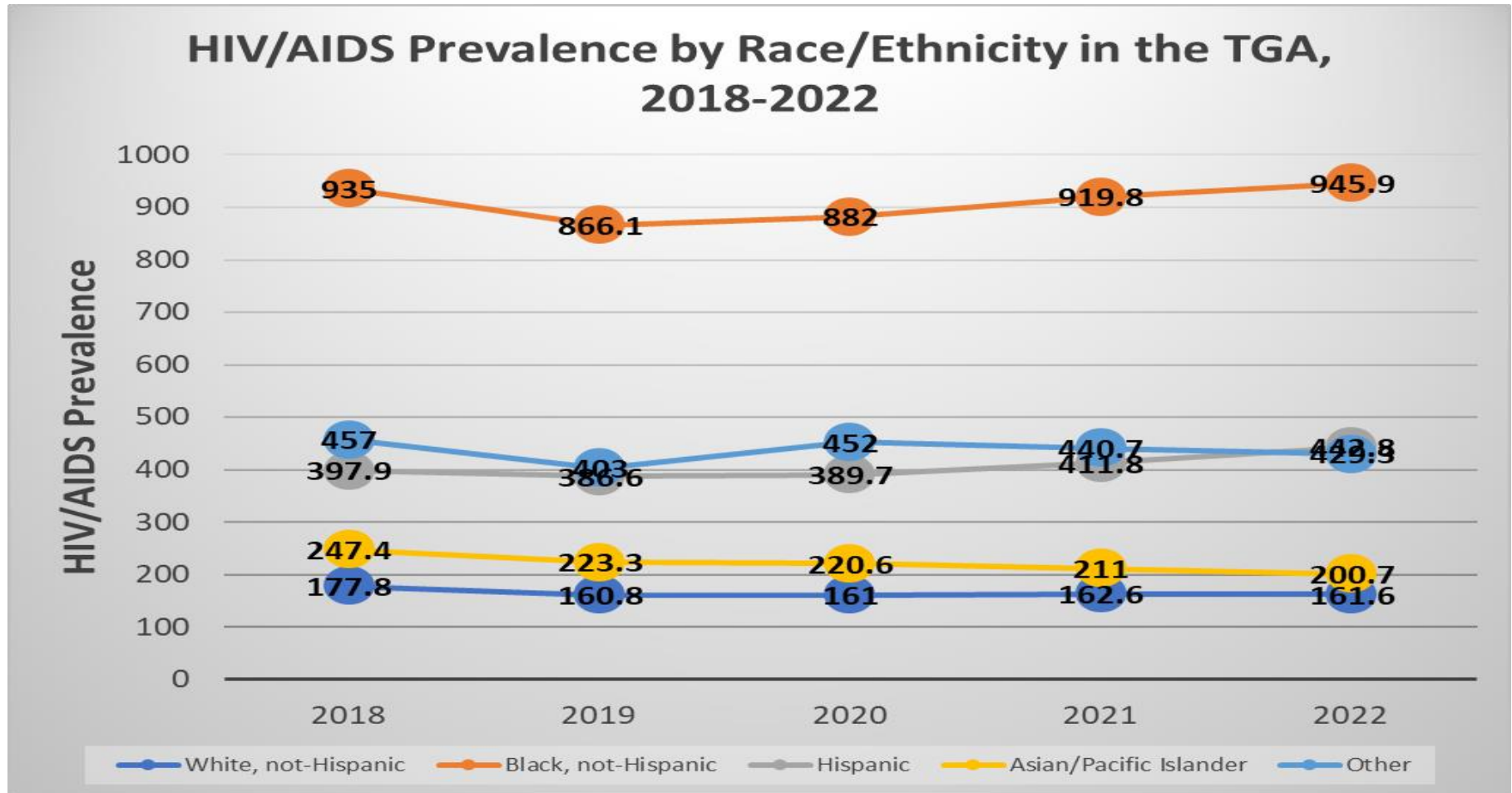
HIV prevalence continues to be higher among racial/ethnic minorities than among Caucasians in the TGA

HIV/AIDS Prevalence by Race/Ethnicity

HIV/AIDS Prevalence by Race/Ethnicity, 2022



HIV/AIDS Prevalence by Race/Ethnicity, 2018-2022



HIV/AIDS Prevalence by Current Age

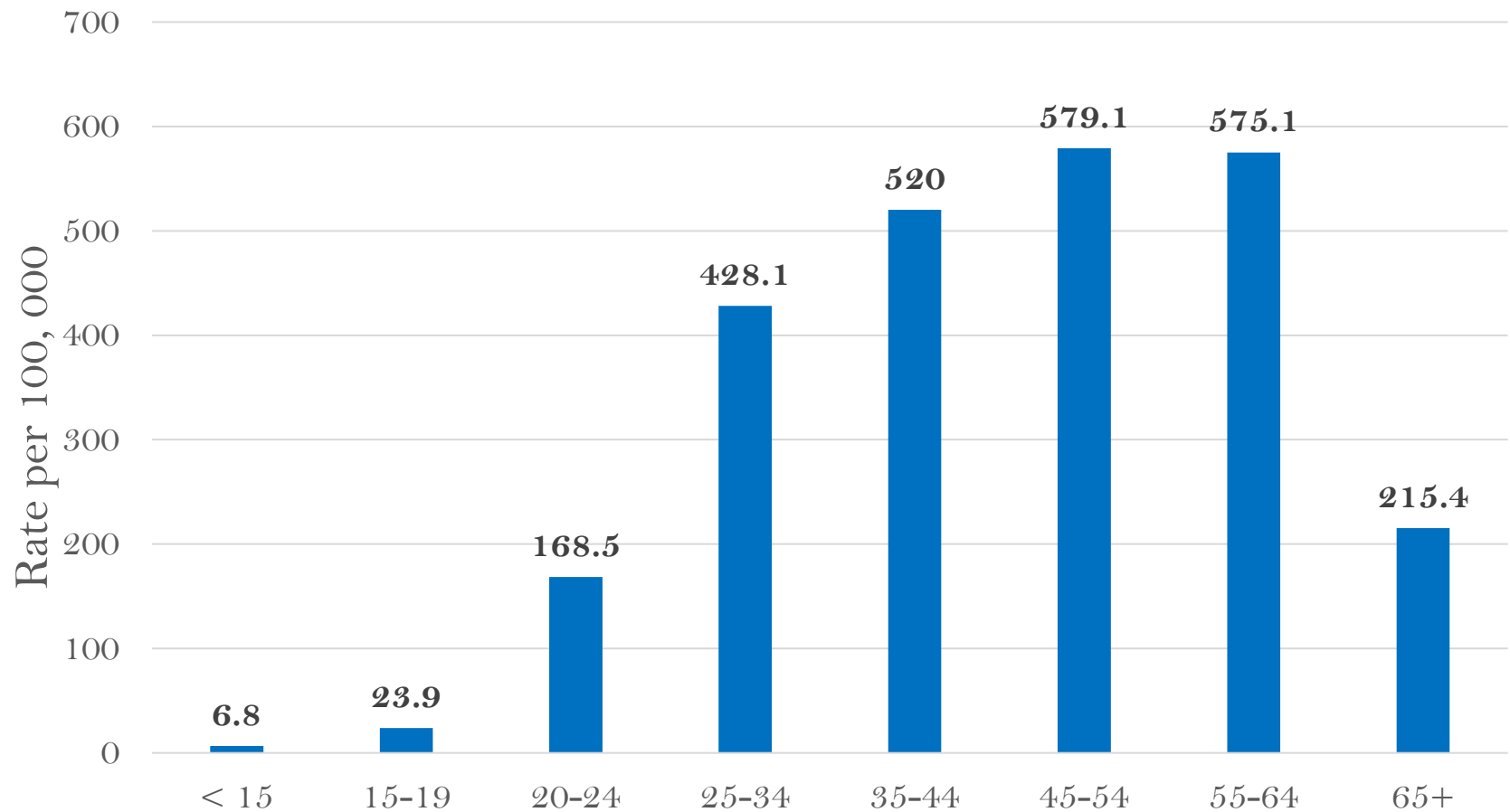
Age (Yrs.)	No.	% of HIV/AIDS in TGA	Rate [95% CI*]
<15	28	0.4%	6.8[4.5-9.8] +
15-19	32	0.5%	23.9[16.4-33.7] +
20-24	214	3.3%	168.5[146.7-192.6]
25-34	1,247	19.3%	428.1[404.8-452.4]
35-44	1,447	22.4%	520[493.6-547.3]
45-54	1,441	22.4%	579.1[549.7-609.6]
55-64	1,425	22.1%	575.1[545.8-605.6]
65+	613	9.5%	215.4[198.7-233.1]

*95% confidence interval + = Unstable Rate

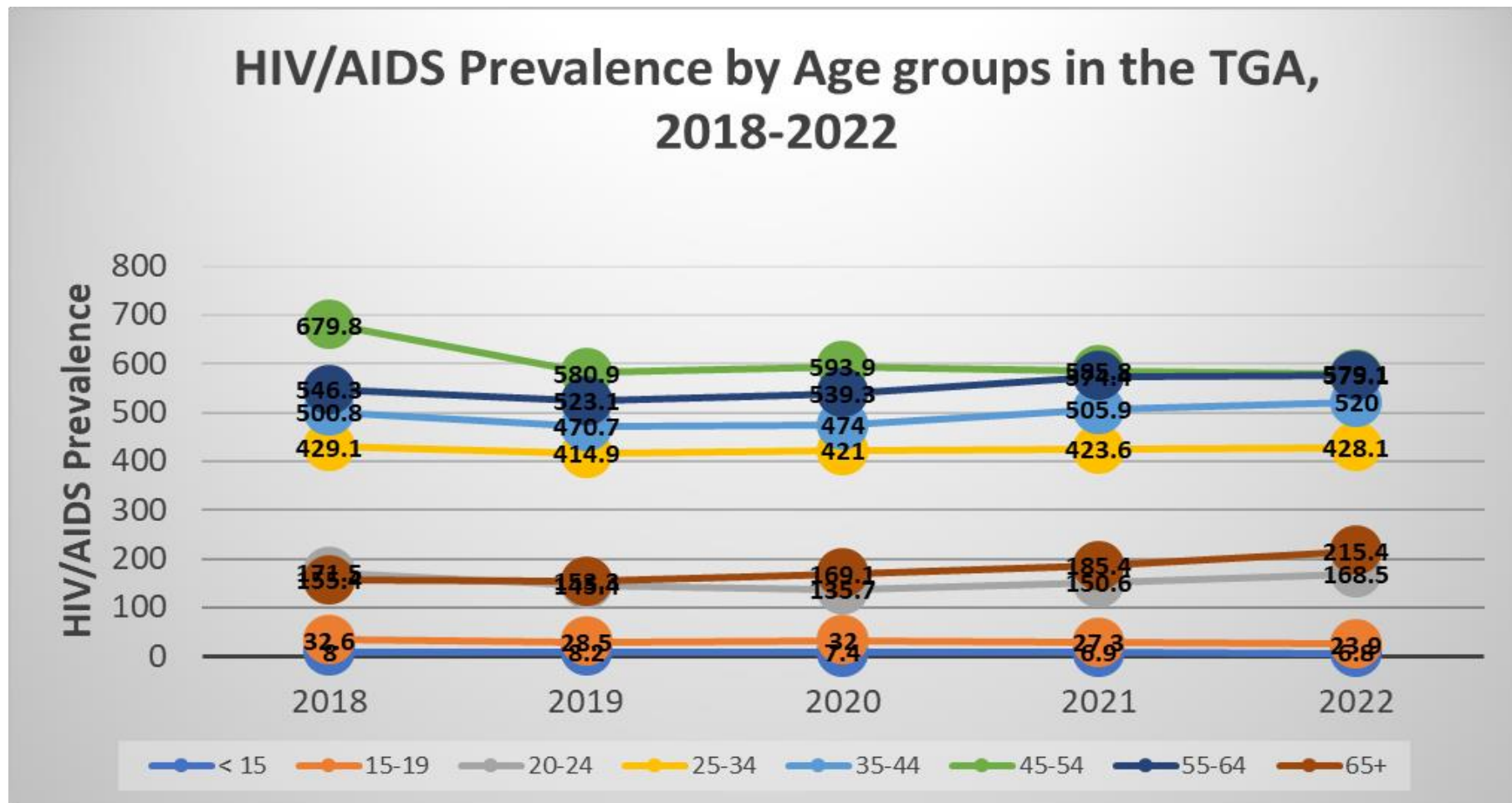
**Adults over 45 Yrs. of age
account for more than 54% of
the TGA's PLWH/A**

HIV/AIDS Prevalence by Current Age

HIV/AIDS Prevalence by Age groups, 2022



HIV/AIDS Prevalence by Current Age, 2018-2022



HIV/AIDS Prevalence by Exposure/Risk

Exposure	No.	% of HIV/AIDS in TGA	Rate [95% CI*] per 100,000 or per 100(%)	RR [95% CI*]: to Heterosexual
MSM [^]	3,424	53.1%	5.8%[5.6%-6.0%]	81.7 [76.8-87]
Heterosex.	1,403	21.8%	0.071%[0.067%-0.075%]	1.0
IDU [^]	553	8.6%	1.7% [1.57%-1.86%]	23.9[21.7-26.4]
Perinatal	81	1.3%	-	-
Other	9	0.1%	NS	NS
Not Rptd.	977	15.2%	0.048%[0.045%-0.051%]	0.67[0.62-0.73]

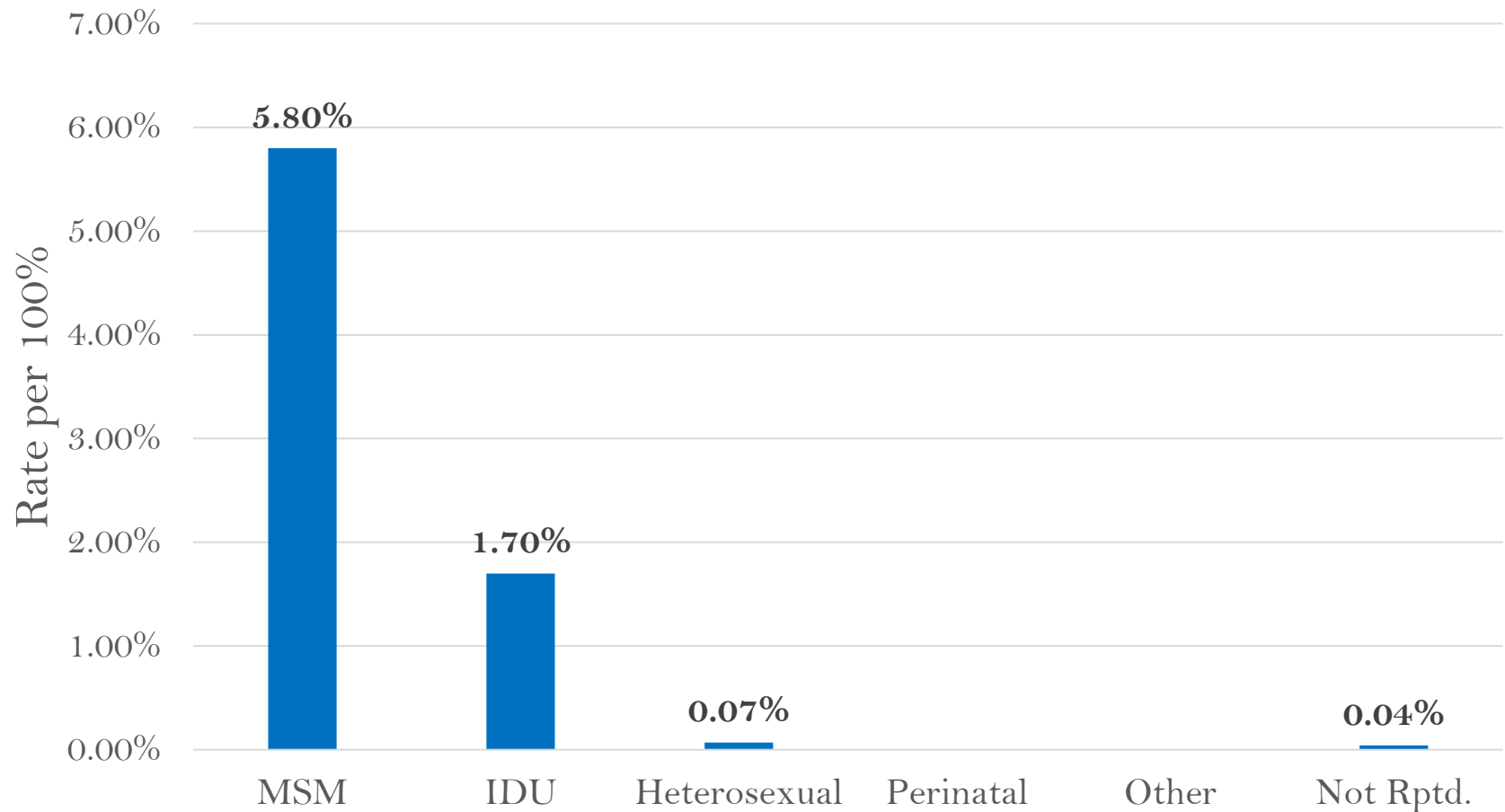
[^]MSM=Male-to-male sexual contact (denominator estimated)⁵⁶ and IDU=Injection drug use (denominator estimated)³⁰ Rows may total more than actual incidence due to report of multiple categories

*95% confidence interval

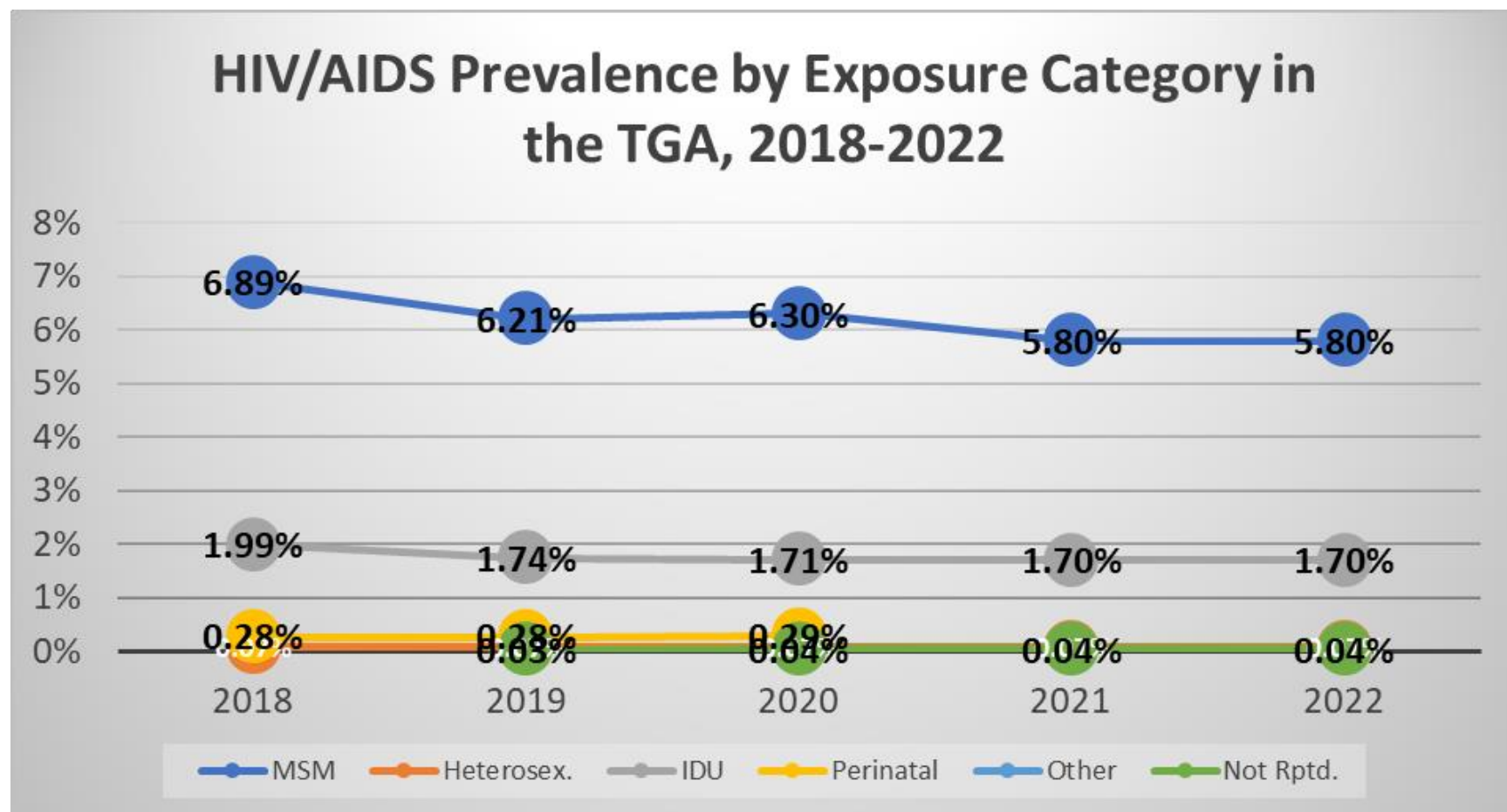
The TGA's MSM continue to bear the highest prevalence of HIV/AIDS

HIV/AIDS Prevalence by Exposure/Risk

HIV/AIDS Prevalence by Exposure Category, 2022



HIV/AIDS Prevalence by Exposure/Risk, 2018-2022



HIV/AIDS Prevalence by U.S. Nativity Status

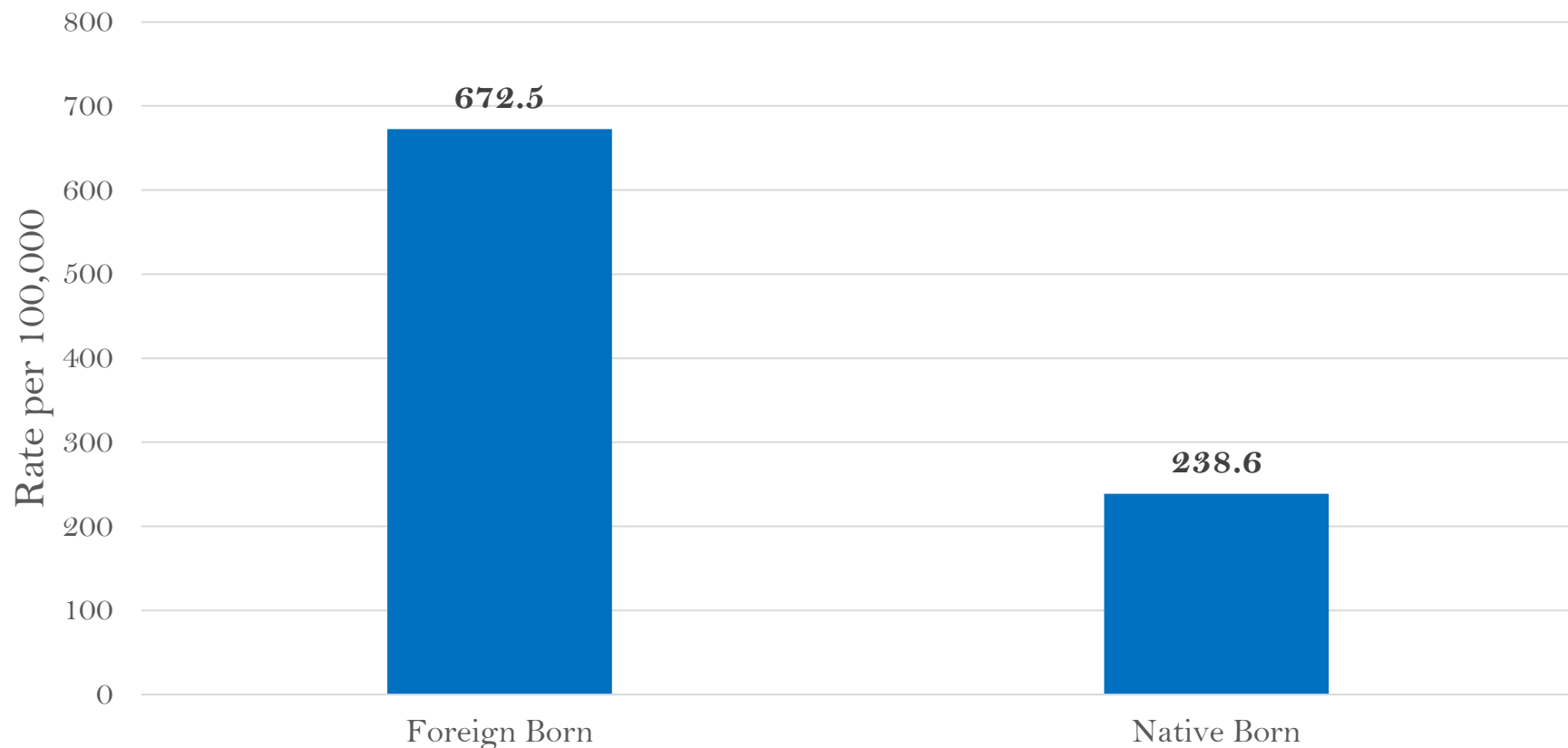
Nativity Status	No.	% of HIV/AIDS in the TGA	Rate [95%CI*]	RR [95% CI*]: to Native Born
Foreign Born	1,013	15.7%	654.1[614.6-695.5]	2.7[2.6-2.9]
Native Born	4,459	69.2%	239.1[232.2-246.2]	1.0
Other	9	0.1%	-	
Unk/Miss	966	15.0%	-	

**95% confidence interval*

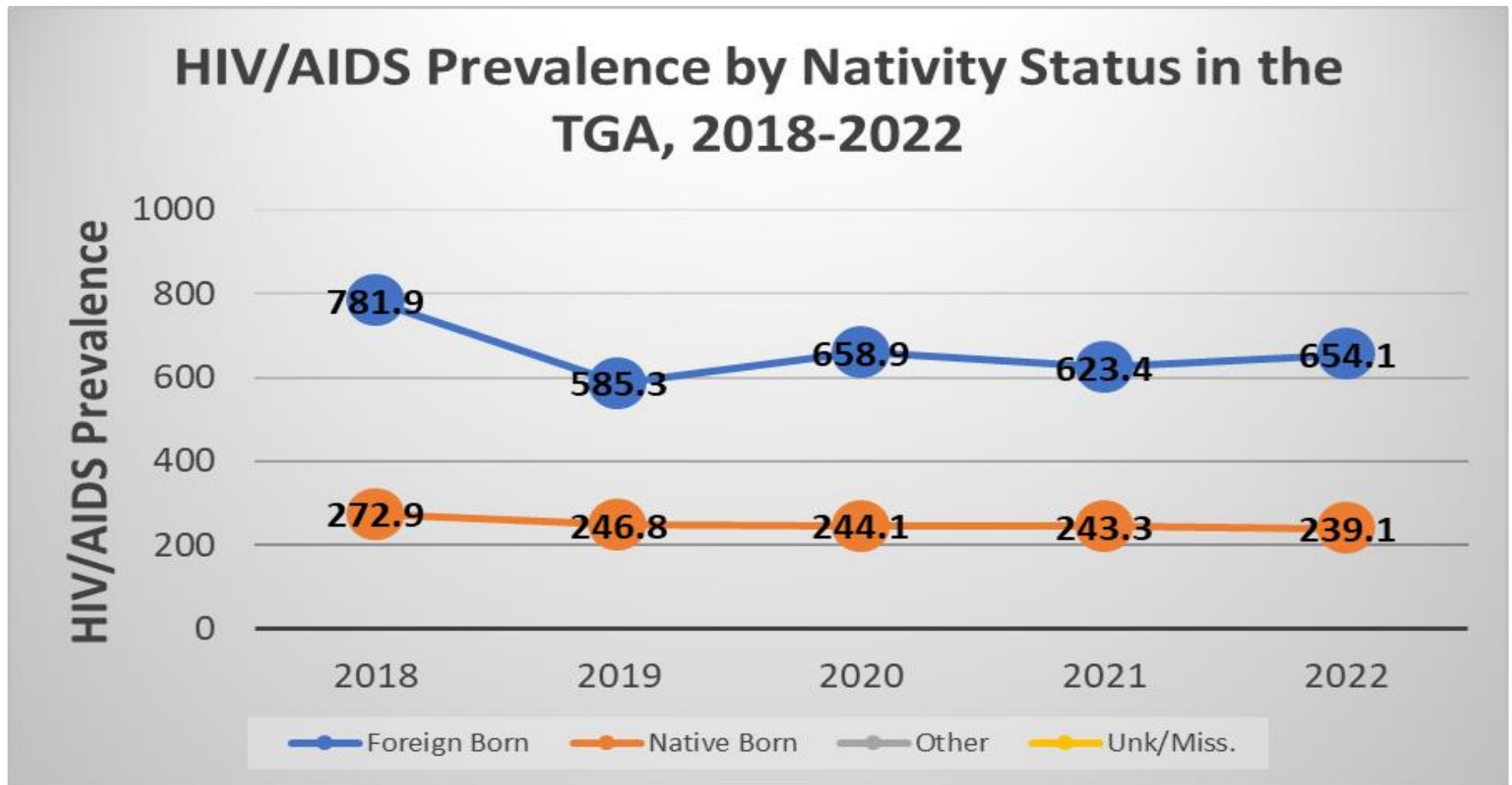
HIV prevalence among foreign-born TGA residents is about three times that of native-born residents

HIV/AIDS Prevalence by U.S. Nativity Status

HIV/AIDS Prevalence Rate by Nativity Status, 2022



HIV/AIDS Prevalence by U.S. Nativity Status, 2018-2022



HIV/AIDS Prevalence by Birth Region

Birth Region	No.	% of HIV/AIDS in TGA
Northern America	4,459	69.2%
Latin America and Caribbean	452	7%
Africa	343	5.3%
Asia	153	2.4%
Europe	26	0.4%
Unknown	1,014	15.7%

**United States,
Latin America
and Africa are the
top 3 Birth
Regions for
PLWHA in our
TGA**

Co-occurring conditions

MPOX

- As of October 31, 2022, the CDC estimated that 40% of people diagnosed with mpox in the United States also had HIV
- It is still unknown if people with HIV are at a greater risk of getting sick from mpox
- However, limited data have showed that people who are severely immunosuppressed are at increased risk of severe illness from mpox and even death
- In 2022, among PLWH/A in the TGA, 77(1.2%; 95% CI: 0.9%-1.5%) had received a confirmed or probable diagnosis of mpox and 30 (0.5%; 95% CI : 0.3%-0.7%) *had received a confirmed diagnosis of mpox.*
- People with HIV should follow the same CDC recommendations as everyone to prevent mpox including avoiding close, skin-to –skin contact with people who have a rash that looks like mpox, avoiding contact objects and materials that a person with mpox has used, wash their hands often, and get vaccinated. In addition, people with HIV should take their medications as prescribed to keep an undetectable viral load which will be the best way to stay healthy

COVID-19

- We are still learning about the effects of COVID-19 on PLWH/A
- Some studies done in the United States and Europe showed no significant differences in the clinical outcomes of COVID-19 between HIV positive and HIV negative patients.^{33,34,35}
- Some other studies done in the United States, the United Kingdom, and South Africa showed worse COVID-19 outcomes for patients with HIV including high COVID-19 mortality rates.^{36,37,38,39}
- In 2022, among PLWH/A in the TGA, 326 (5.1%; 95% CI: 4.5%-5.6%) were diagnosed with COVID-19 in Marion County and 0 died of COVID-19
- People who are at increased risk of severe illness and those who live or visit them should take the following precautions: wearing well-fitting masks and get vaccinated

Foreign-Born

- With a risk of about **5 times** that of native-born residents, foreign-born residents of the TGA accounted for over **1 in 10** newly diagnosed with HIV during 2022
- Similarly, over **1 in 10** PLWH/A in the TGA are foreign-born, experiencing a prevalence that is about **three times as high** as among the native-born
- Special considerations
 - Linguistic services
 - Health insurance
 - Social support structure
 - Cultural stigma/beliefs
 - Fear



Aging

Better therapies → Longer lives

- **About 54%** of PLWH/A in the TGA are 45+ years of age
- Special considerations⁹
 - Weakened immune system
 - Increased risk of adverse events and drug interactions
 - Stigma and depression due to illness, or loss of family and friends
 - Increased risk for cardiovascular disease, bone loss, and certain cancers



Homelessness

- Among PLWH/A, **between 290 and 400 were homeless or insecurely housed** at some point during 2022^{10,11,12}
 - Research suggests that 1 in 4 (27.7%) of PLWH had shelter or housing service needs in the United States. Among those with shelter or housing service needs, 40.4% had a need that was not met¹³
- Special considerations
 - Case finding
 - Public assistance
 - Permanent housing
 - Priority of medical care



Photo credit: Jeremy Swain, [Ending Homelessness in London](#)

Recent Incarceration

- **9%** of the TGA's PLWH/A have a history of incarceration
 - Special considerations
 - Employment and housing
 - Retention in care throughout and after the transition
 - Substance abuse
 - Trouble navigating the health care system



Mental Health & Substance Abuse

- According to many studies, PLWH have a higher rate of mental health disorders than the general population with approximately **36%** suffering from major depression, and **15.8%** from generalized anxiety disorder ⁴¹
- **50%** of PLWH/A are estimated to have current or history of drugs or alcohol disorders. ⁴³
- Special considerations
 - Non-adherence to treatment regimens
 - Immunosuppression

Food Insecurity

- **Nearly 50%** of PLWH/A are thought to struggle with food insecurity
 - Food insecurity is a risk factor for mortality among people on HAART, especially those who are underweight¹⁶
- Food insecurity associated with prevalent HIV, STI, and illicit drug use among men in the US ¹⁶

Smoking

- The National Cancer Institute estimate that between 34 to 47% of PLWH/A smoke ⁴⁵
- The leading cause of cancer death among people with HIV on antiretroviral therapy is lung cancer
- The National Cancer Institute estimated the life expectancy of HIV-positive smokers is reduced by 16 years compared to HIV positive nonsmokers and eliminate cigarette smoking among PWH could potentially prevented the diagnoses of lung cancer ⁴⁵
- People with HIV who smoke are at increased risk of developing the following: ⁴⁴
 - Lung cancer, head and neck cancers, cervical and anal cancers , and other cancers
 - Cardiovascular (heart)disease
 - Pulmonary lung infections
 - Chronic obstructive pulmonary disease (COPD)
 - Serious HIV related infections, including bacterial pneumonia
- HIV positive smokers have also lower response to HIV treatment and are at increased risk of developing life-threatening conditions that can lead to AIDS
- People with HIV who smoke should be advised to quit smoking as soon as possible and to avoid secondhand smoke

Mycobacterium tuberculosis (TB)

- For **2019**, 49 TGA residents were diagnosed with active TB, **five were HIV-positive**. For **2020**, 43 TGA residents were diagnosed with active TB, **three were HIV-positive**. For **2021**, 62 TGA residents were diagnosed with active TB, **three were HIV-positive**. For **2022**, **50** TGA residents were diagnosed with active TB, **two were HIV-positive**.
 - 6%-10% of active TB diagnoses are among PLWH/A¹⁷
 - Conversion from latent to active TB is 10 times more likely in PLWH/A (**7%-10% risk each year**)¹⁸
 - Everyone newly HIV diagnosed should be tested for TB right away, and PLWH/A and at risk for TB should be tested annually.¹⁹

- Special considerations
 - Screening
 - Diagnostic
 - HIV-TB synergy
 - Treatment complications



Viral Hepatitis

- Approximately **645** PLWH/A are thought to be co-infected with hepatitis B based on the **10% estimate** of the National Institute of Health²⁰
- Approximately **1,354** PLWH/A are thought to be co-infected with hepatitis C based on the **21% estimate** of the National Institute of Health²¹

- Current guidelines call for HCV screening in all PLWH/A (annually for those at increased risk)²³

Chlamydia

- 10,280 chlamydia diagnoses were reported in the TGA during 2021, at least 142 among PLWH/A²⁴
 - The chlamydia rate among PLWH/A was **2,300** per 100,000 [95% CI: **1,940.6-2.705.3**], a rate **4-5 times higher** than that of HIV-negative residents.
- Chlamydia co-infection among PLWH/A is thought to be grossly underestimated – PLEASE screen, diagnose and treat PLWH/A and their partner(s) for chlamydia

Gonorrhoea

- 4,687 gonorrhoea diagnoses were reported in the TGA during 2021, at least 222 among PLWH/A²⁴
 - The gonorrhoea rate among PLWH/A was **3,596** per 100,000 [95% CI: **3,145-4,090.7**], a rate **14-18 times higher** than that of HIV-negative residents
- Gonorrhoea co-infection among PLWH/A is thought to be grossly underestimated – PLEASE screen, diagnose and treat PLWH/A and their partner(s) for gonorrhoea.

Early Syphilis

- 668 early syphilis (primary, secondary, and early latent) diagnoses were reported in the TGA during 2021, at least 236 among PLWH/A²⁴
 - The rate of early syphilis among PLWH/A was **3,823** per 100,000 [95% CI: **3,358-4,331.1**], a rate at about **175 times higher** [95% CI: 149-204.7] than that of HIV-negative residents.
- HIV co-infection among new syphilis cases is very common— PLEASE screen, diagnose and treat PLWH/A and their partner(s) for syphilis.

More on Sexually-Transmitted Infections

- HIV and STIs are commonly co-morbid conditions
- Special concerns
 - **STDs can increase the likelihood of contracting HIV**
- As providers to residents with the highest risk, you can:
 - **Include routine screening as a function of HIV primary care**
 - Perform risk analyses – Assess risk behaviors of your patients
 - Perform risk reduction - Alert your patients to the risks of STDs, especially when comorbid to HIV/AIDS, and offer periodic STD testing for each of your patients
 - Treat - Diagnose and treat patients and their partner(s)
 - Report – Provide thorough and accurate case reporting for better modeling of risk factors

Measures of HIV Health Outcomes



HIV Treatment Cascade (AKA: Continuum of Care)

- Developed by Dr. Edward Gardner and colleagues²⁵ in March 2011
- Model for use in identifying unmet needs, as well as discovery of where, across the continuum of care, clients are lost to follow-up

“Improving control of HIV begins with enhanced detection and linkage to care” – Gardner, et al., 2011²⁵

“HIV screening without linkage to care “confers little or no benefit to the patient” – Branson, et al., 2006²⁶

Benefits of Improving Linkage Into and Retention in Care

- Delayed linkage and poor engagement in care are associated with:^{25 26}
 - Delayed/no receipt of anti-retroviral therapy (ART)
 - Quicker progression to AIDS
 - Drug resistance
 - Increased morbidity (hospitalizations, opportunistic infections, emergency department visits, etc.)
 - Increased mortality
 - Increased risk of HIV transmission

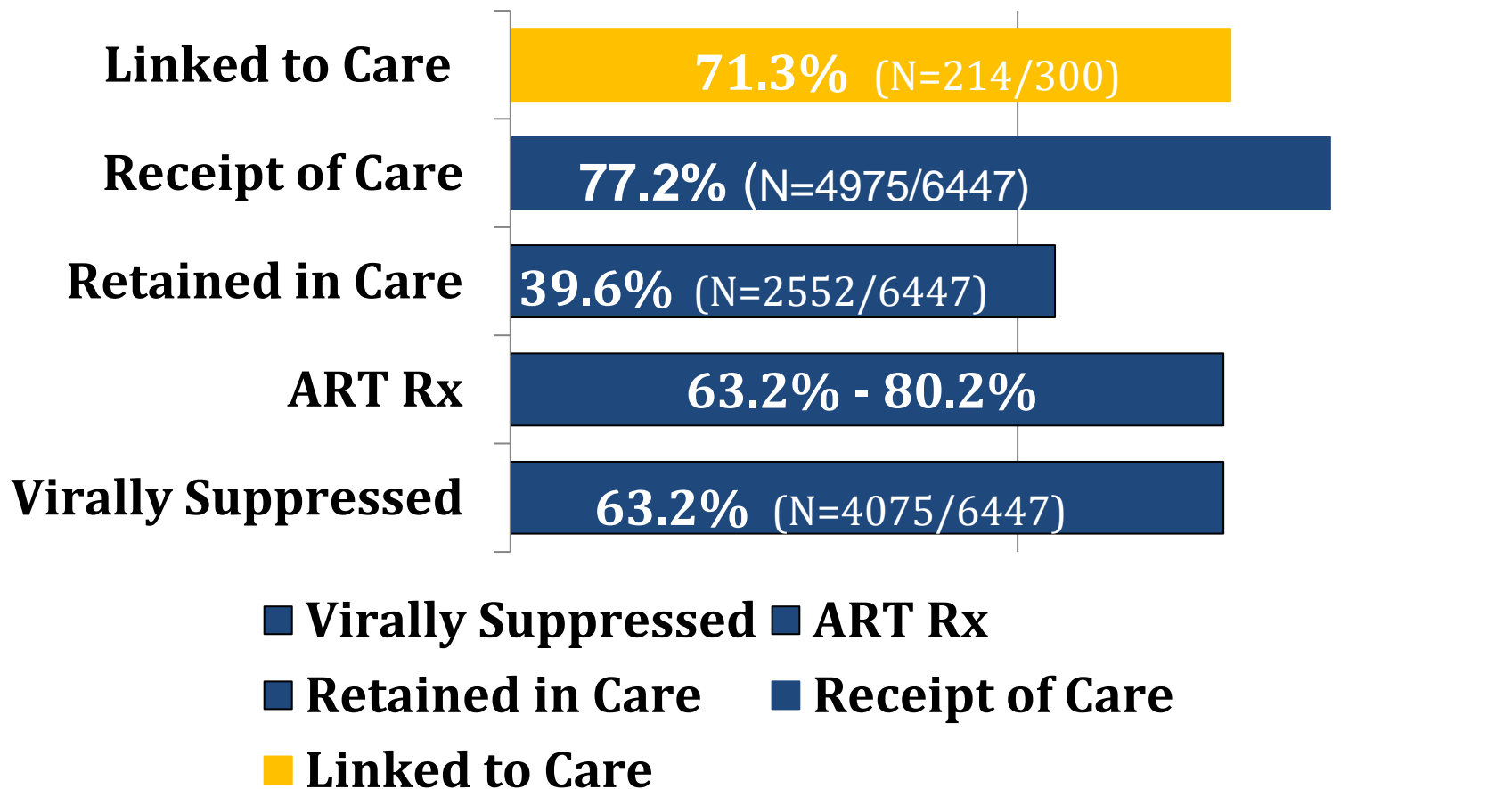
National HIV/AIDS Progress Indicators ¹⁴

- **95%** of HIV-positive residents aware of their status
- **95%** of those newly diagnosed linked to care within 30 days
- **95%** retained in care
- **95%** suppressed viral load

HIV Care Continuum Definitions

- **Linked to Care:** People newly diagnosed with HIV during CY 2022 who received a CD4/viral load test within 30 days
- **Receipt of Care:** Residents living with HIV/AIDS with 1+ CD4 or viral load tests performed during CY 2022
- **Retained in Care:** Residents living with HIV/AIDS with 2+ CD4/viral load tests performed at least 3 months apart in CY 2022
- **Antiretroviral Therapy:** Residents living with HIV/AIDS who received a prescription for antiretroviral therapy in CY 2022
- **Viral Load Suppression:** Residents living with HIV/AIDS with a CY 2022 viral load result <200 RNA copies/mL

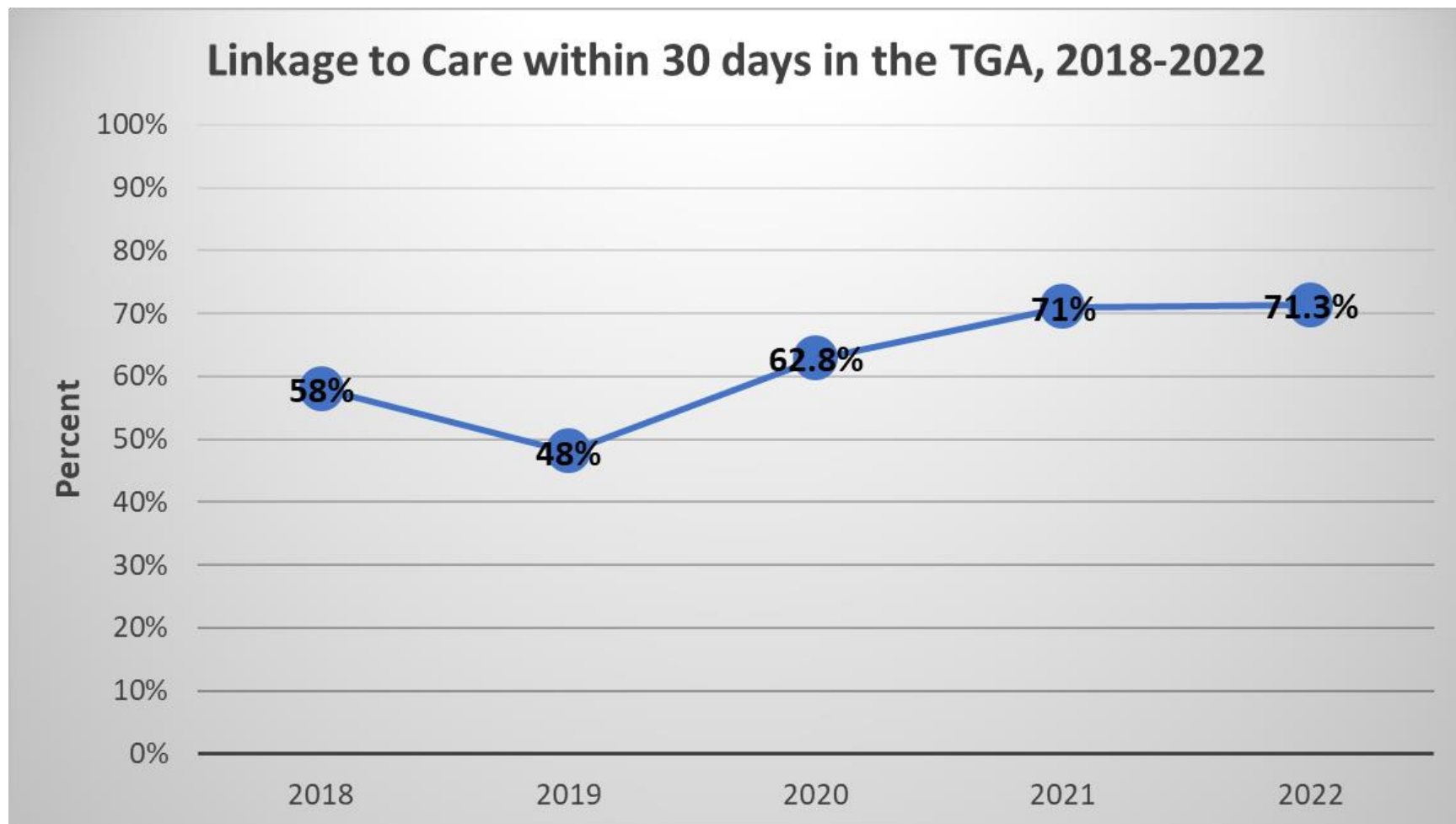
HIV Care Continuum of the TGA



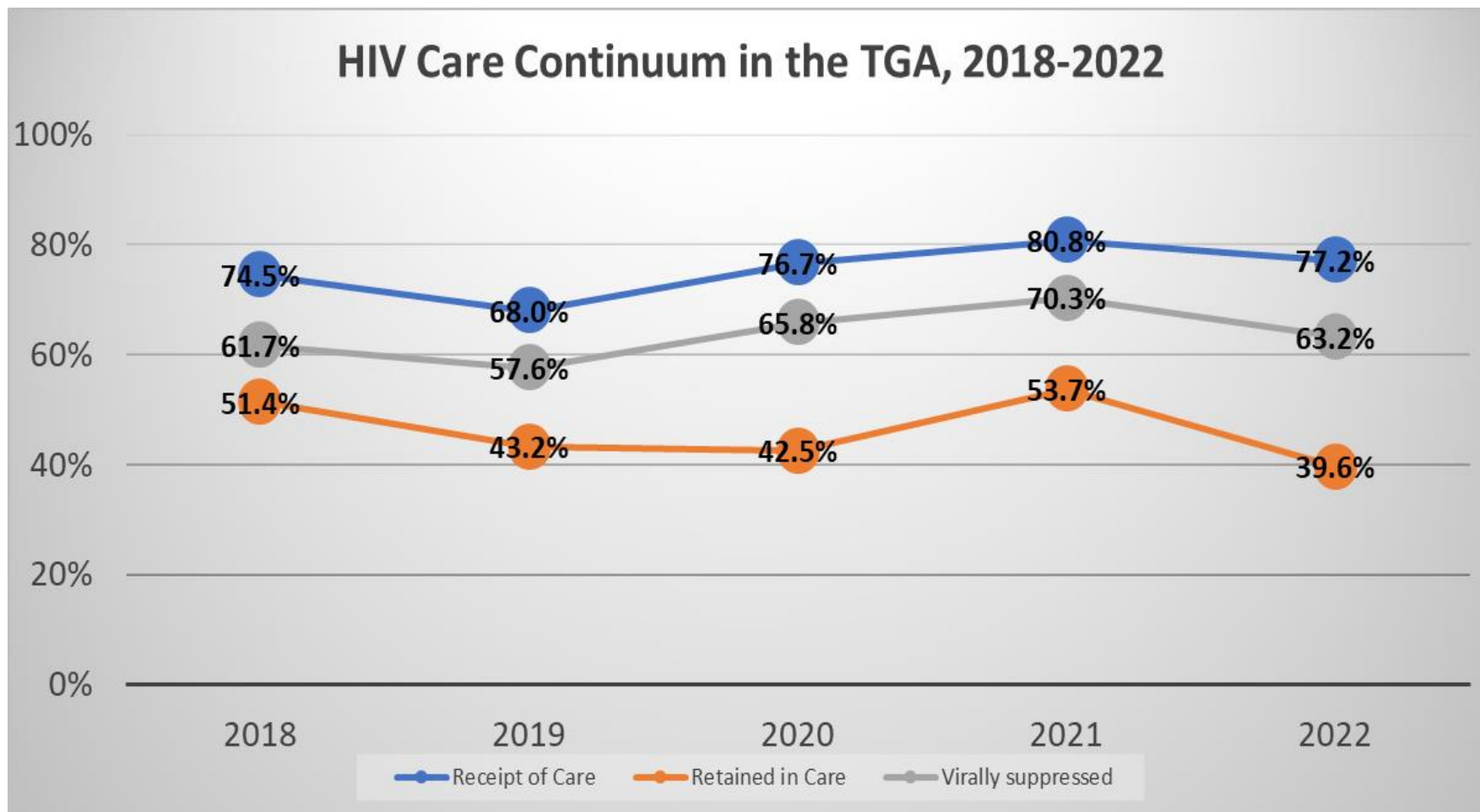
Linkage to care within 30 days shown above

Note: There was 82% linkage to care within 90 days

Linkage to Care within 30 days, 2018-2022



HIV Care Continuum in the TGA, 2018-2022



HIV Care Continuum in the TGA, 2022 (Linkage to Care)

- Among the 214 people linked to Care within 30 days in 2022:
 - By County: 78% were from Marion County
 - By Gender: 74.3 % were Male
 - By Race/Ethnicity: 54.7% were Black not-Hispanic, 26.2% were White not- Hispanic, and 15.9% were Hispanic
 - By Age Groups: 37.4% were aged between 25-34 years old
 - By Exposure Status: 34.6% were MSM and 58.4% were of no reported risk factor
 - By Nativity Status: 66.8% were of unknown Nativity status

HIV Care Continuum in the TGA, 2022 (Receipt of Care)

- Among the 4975 people that received care during CY 2022:
 - By County: 83.5% were from Marion County
 - By Gender: 76.7 % were Male
 - By Race/Ethnicity: 46.6 % were Black not-Hispanic, 36.7% were White not- Hispanic, and 10.3% were Hispanic
 - By Age Groups: People aged 25-54 represented 63.3%
 - By Exposure Status: 54.8% were MSM
 - By Nativity Status: 69.6% were Native Born

HIV Care Continuum in the TGA, 2022 (Retention in Care)

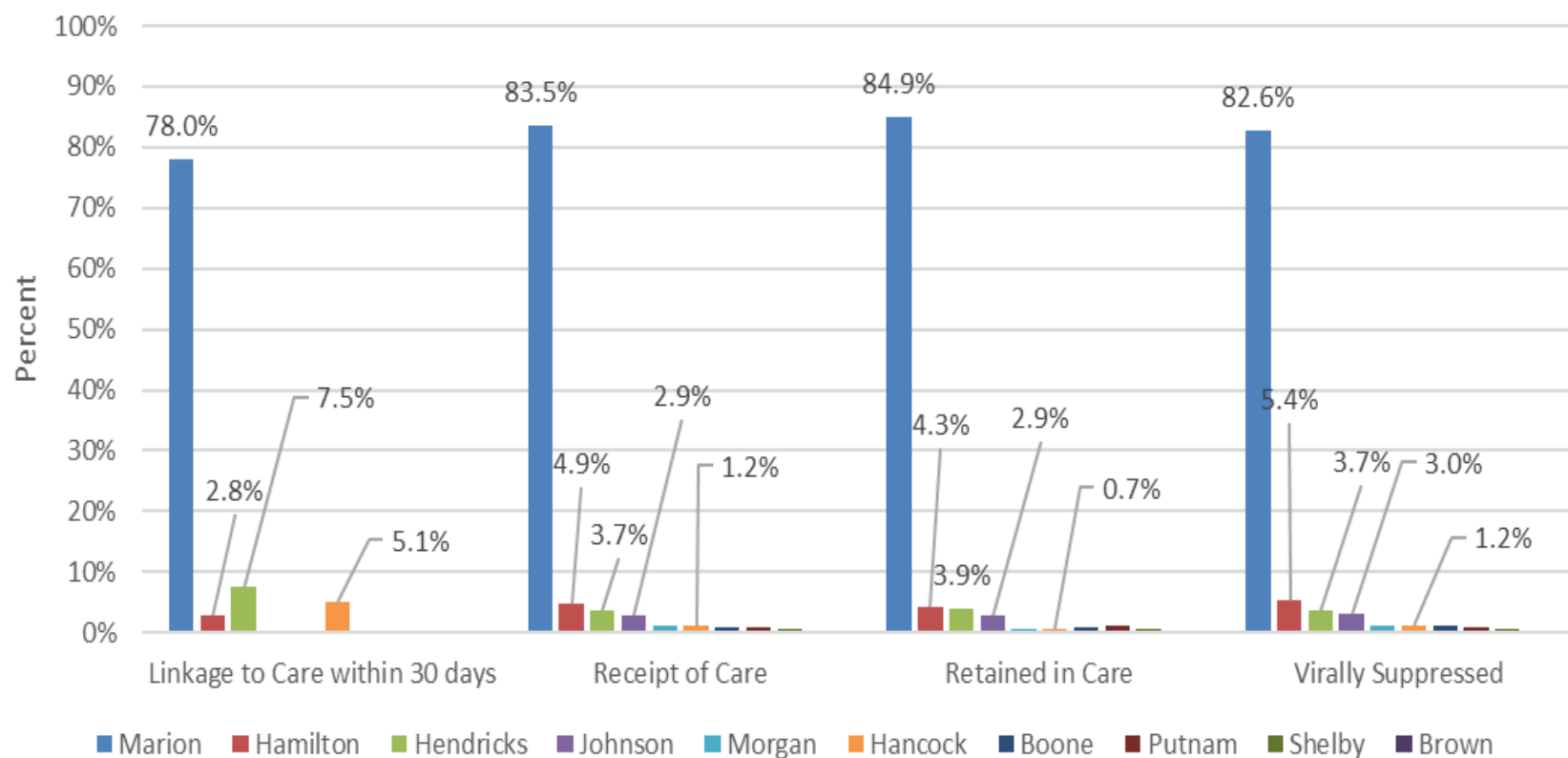
- Among the 2552 people that were retained in Care during CY 2022:
 - By County: 84.9% were from Marion County
 - By Gender: 77.4% were Male
 - By Race/Ethnicity: 47.3% were Black not-Hispanic, 33.7% were White not- Hispanic, and 12.2% were Hispanic
 - By Age Groups: People aged 25-54 represented 63.6%
 - By Exposure Status: 54.7% were MSM
 - By Nativity Status: 67.1% were Native Born

HIV Care Continuum in the TGA, 2022 (Viral suppression)

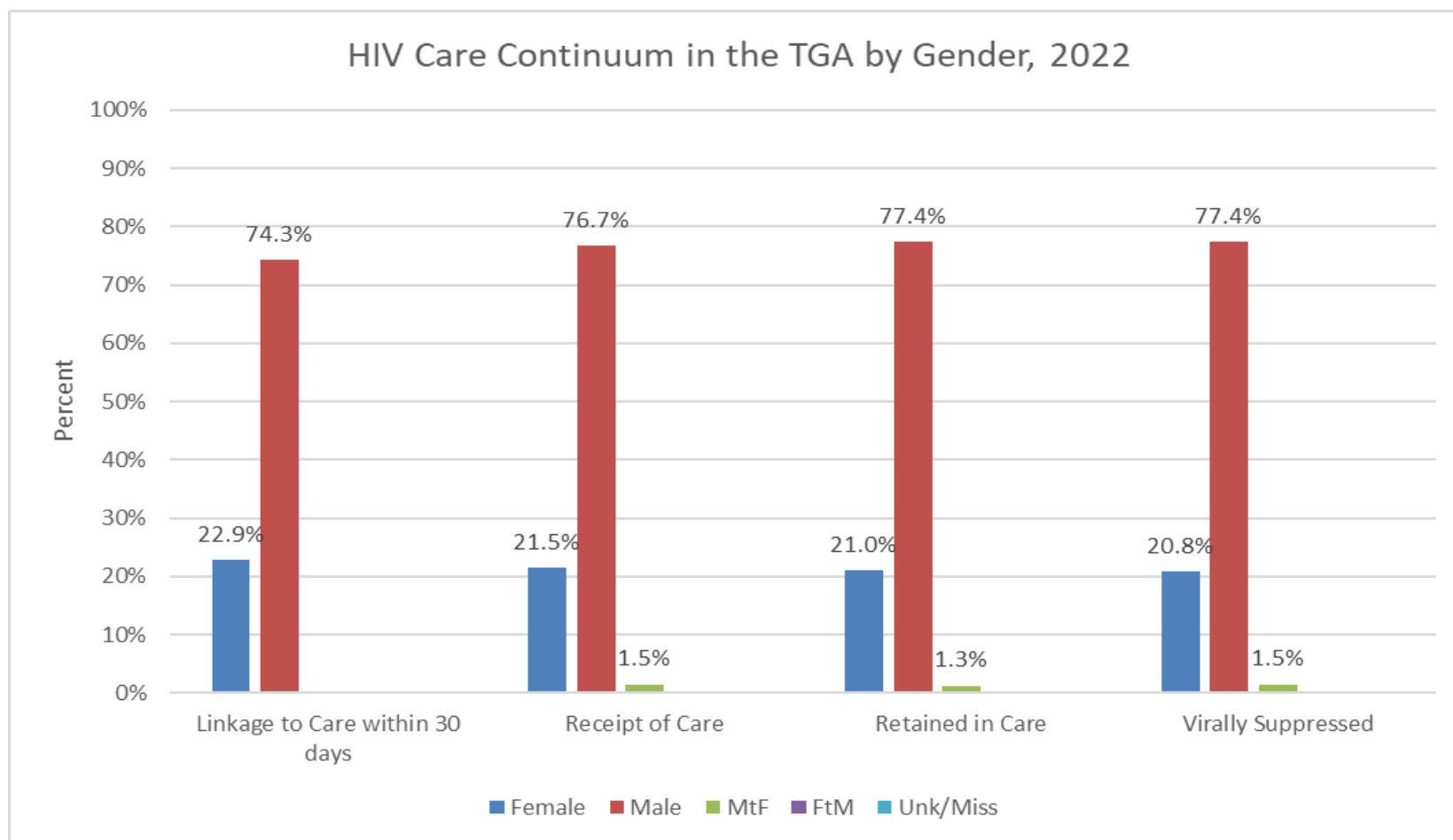
- Among the 4075 people that were virally suppressed during CY 2022:
 - By County: 82.6% were from Marion County
 - By Gender: 77.4% were Male
 - By Race/Ethnicity: 43.5% were Black not-Hispanic, 39.9% were White not- Hispanic, and 10.1% were Hispanic
 - By Age Groups: People aged 25-54 represented 61.3%
 - By Exposure Status: 56.7% were MSM
 - By Nativity Status: 70.7% were Native Born

HIV Care Continuum in the TGA by County, 2022

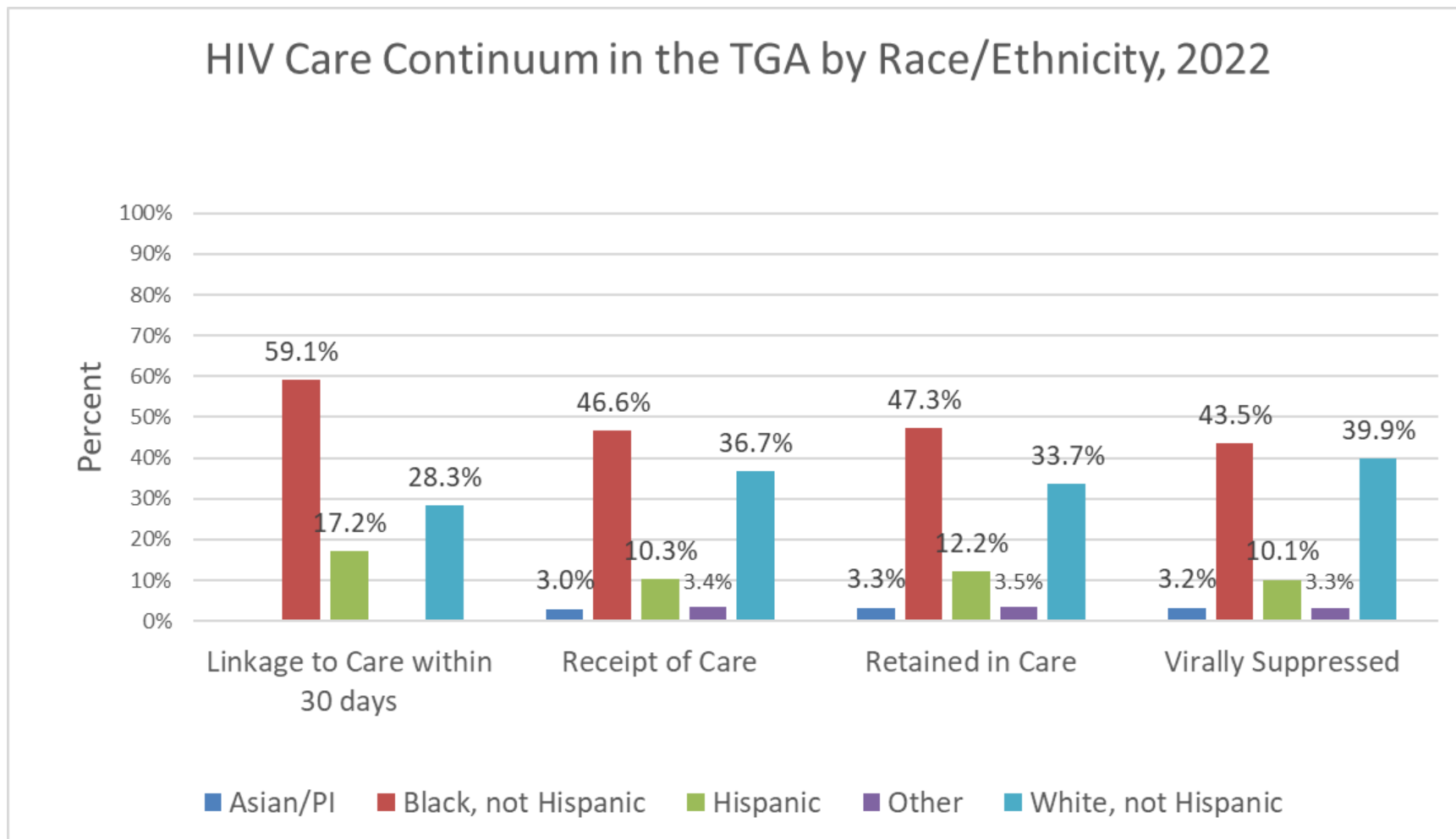
HIV Care Continuum in the TGA by County, 2022



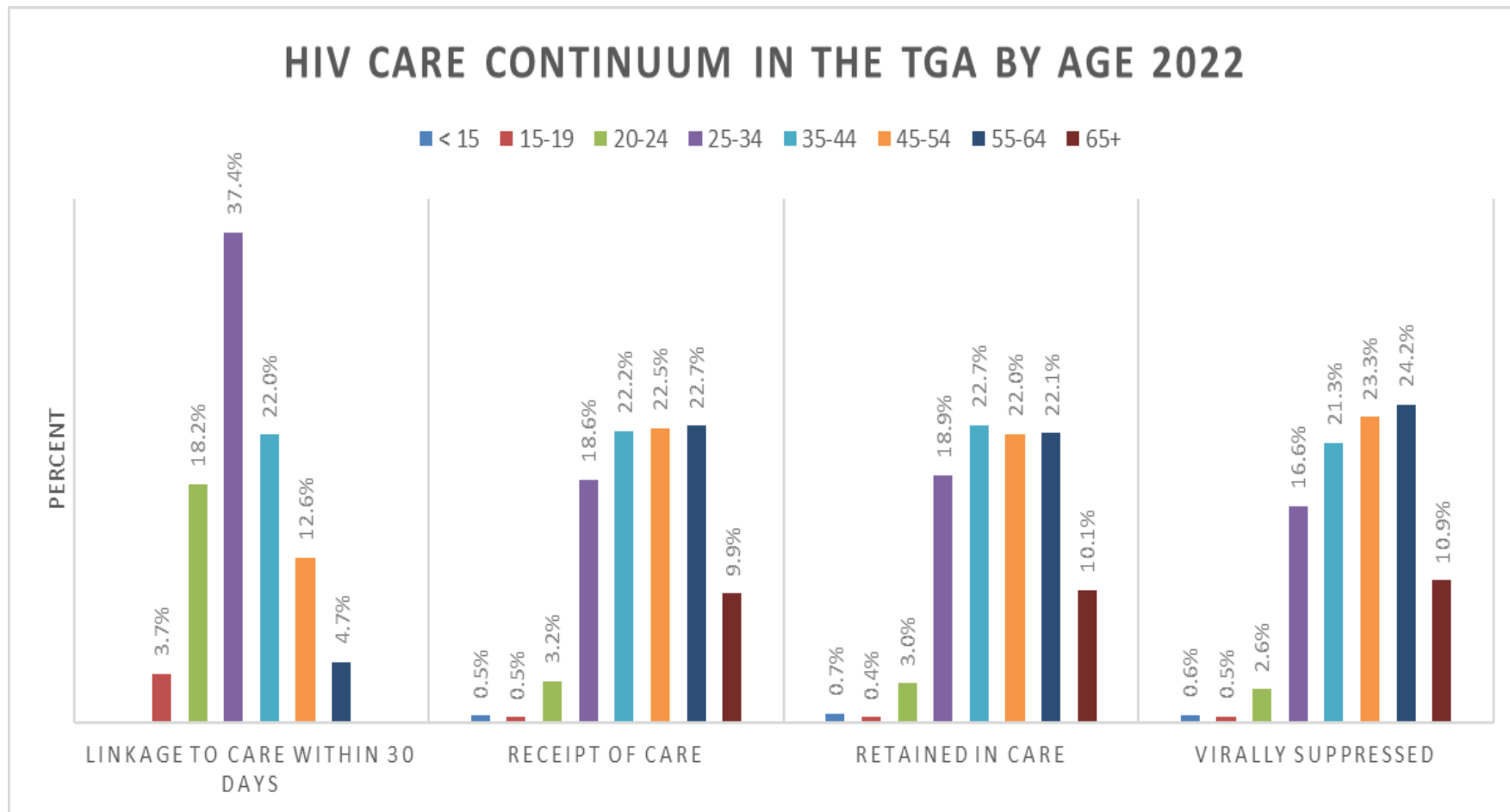
HIV Care Continuum in the TGA by Gender, 2022



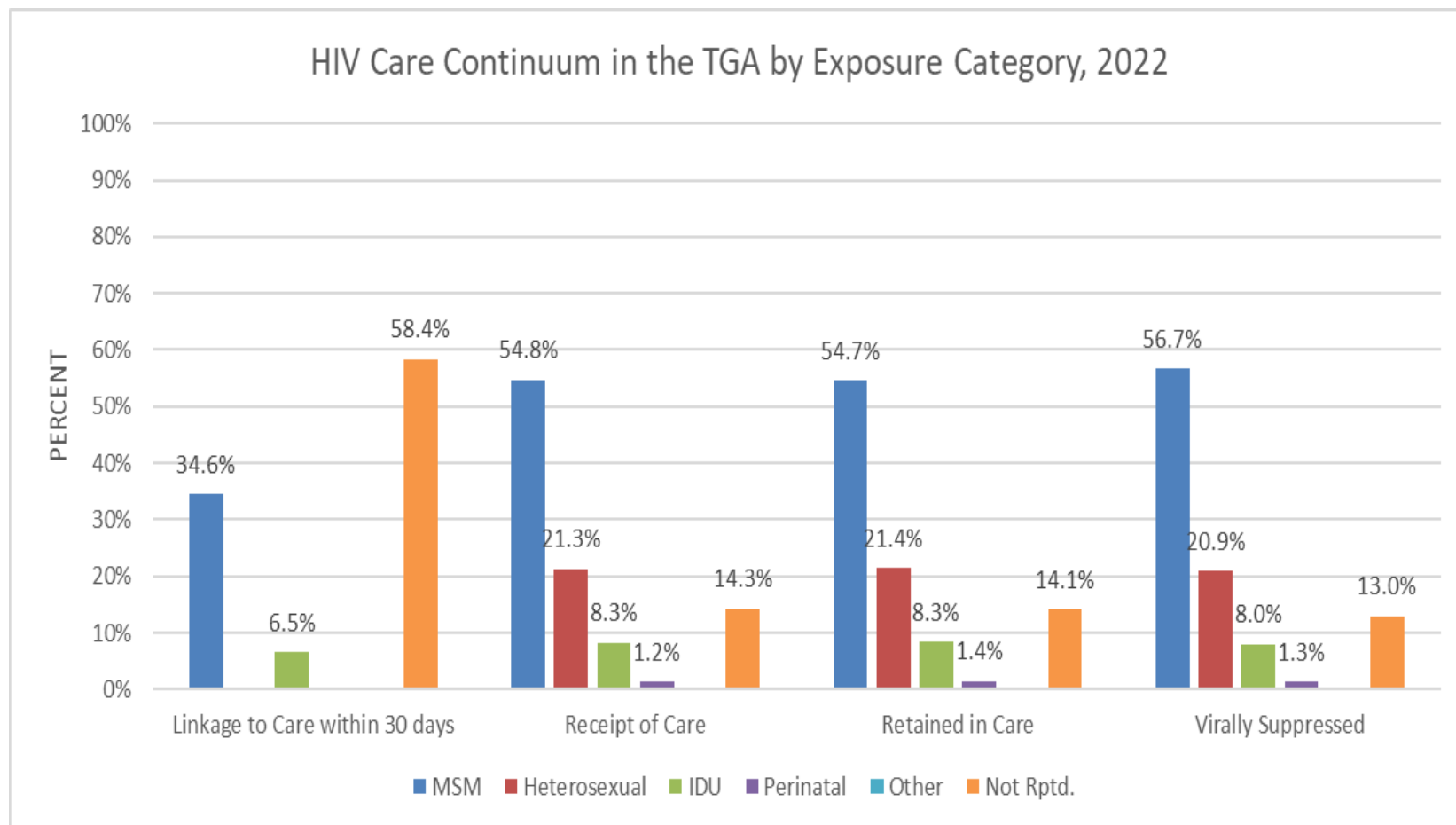
HIV Care Continuum in the TGA by Race/Ethnicity, 2022



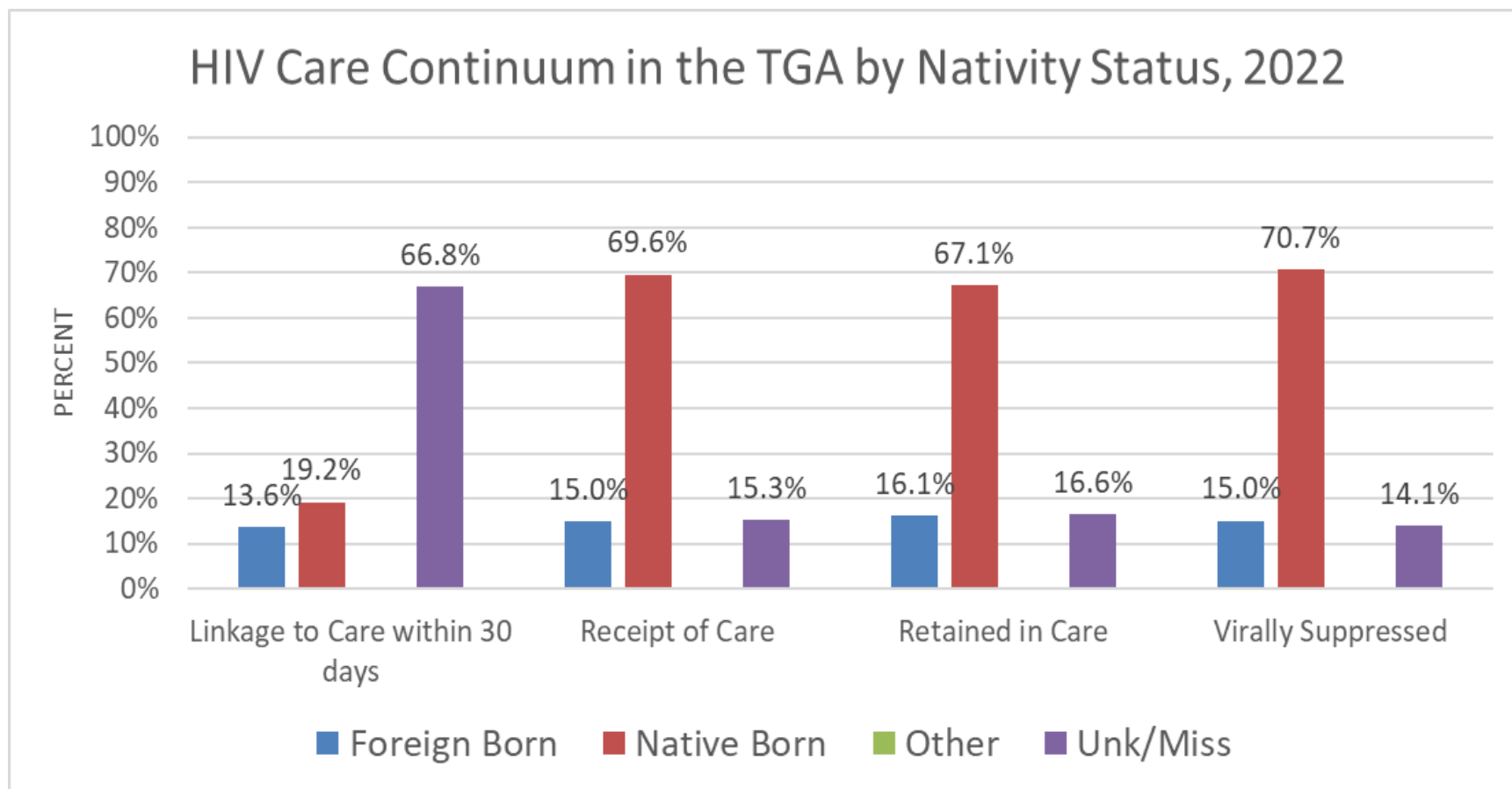
HIV Care Continuum in the TGA by Age



HIV Care Continuum in the TGA by Exposure Category



HIV Care Continuum in the TGA by Nativity Status



HIV Care Continuum in the TGA within each County, 2022

- Johnson County had the lowest percentage of linkage to Care within 30 days (42.9%), followed by Hamilton County (54.6%)
- Putnam County had the lowest percent of receipt of Care (75.9%)
- Brown County had the lowest percent of retained in Care (20%), followed by Hancock County (25%), then Morgan County (28%)
- Shelby County had the lowest percent of viral load suppression (59.5%) followed by Marion County (62.1%)

HIV Care Continuum in the TGA within each Gender, 2022

- MtF had the lowest percentage of linkage to Care within 30 days (66.7%) followed by Male (70.7%)
- Female had the lowest percent of receipt of Care (76.5%) followed by Male (77.2%)
- MtF had the lowest percent of retained in Care (36.4%) followed by Female(38.3%)
- Female had the lowest percent of viral load suppression (60.6%)

HIV Care Continuum in the TGA within each Race/Ethnicity, 2022

- Asian/Pacific had the lowest percentage of linkage to Care within 30 days (25%) followed by Black, not-Hispanic (68%)
- Black, not Hispanic had the lowest percent of receipt of Care (74.6%) followed by Hispanic (75.4%)
- White, not Hispanic had the lowest percent of retained in Care (37.9%) followed by Black, not-Hispanic (38.8%)
- Black, not-Hispanic had the lowest percent of viral load suppression (57%) followed by Hispanic (60.6%)

HIV Care Continuum in the TGA within each age group, 2022

- People aged 55-64 had the lowest percentage of linkage to Care within 30 days (58.8%), followed by people aged 15-19 (61.5%), then people aged 20-24 (67.2%)
- People aged 15-19 had the lowest percent of receipt of Care (71.9%) followed by people aged 20-24 (73.8%), then people aged 25-34 (74.10%)
- People aged 15-19 had the lowest percent of retained in Care (34.4%) followed by people aged 20-24 (36%), then people aged 25-34 (38.7%)
- People aged 20-24 had the lowest percent of viral load suppression (48.6%) followed by people aged 25-34 (54.1%)

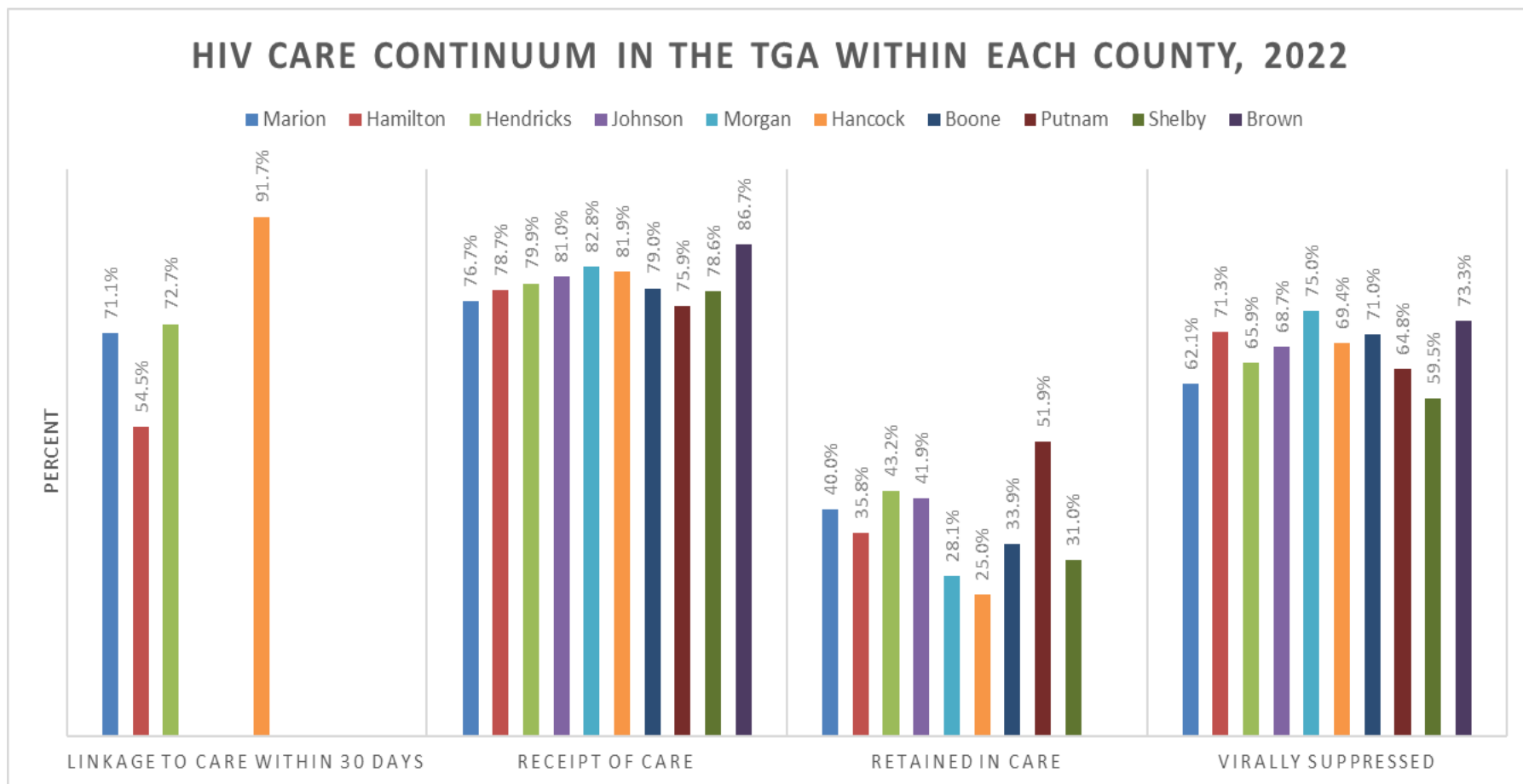
HIV Care Continuum in the TGA within each Exposure Category, 2022

- Heterosexual had the lowest percentage of linkage to Care within 30 days (50%) followed by IDU (56%)
- MSM had the highest percent of receipt of Care (79.6%)
- Perinatal exposure had the highest percent of retained in Care (45.7%)
- MSM had a highest percent of viral load suppression of (67.5%) followed by Perinatal exposure (65.4%)

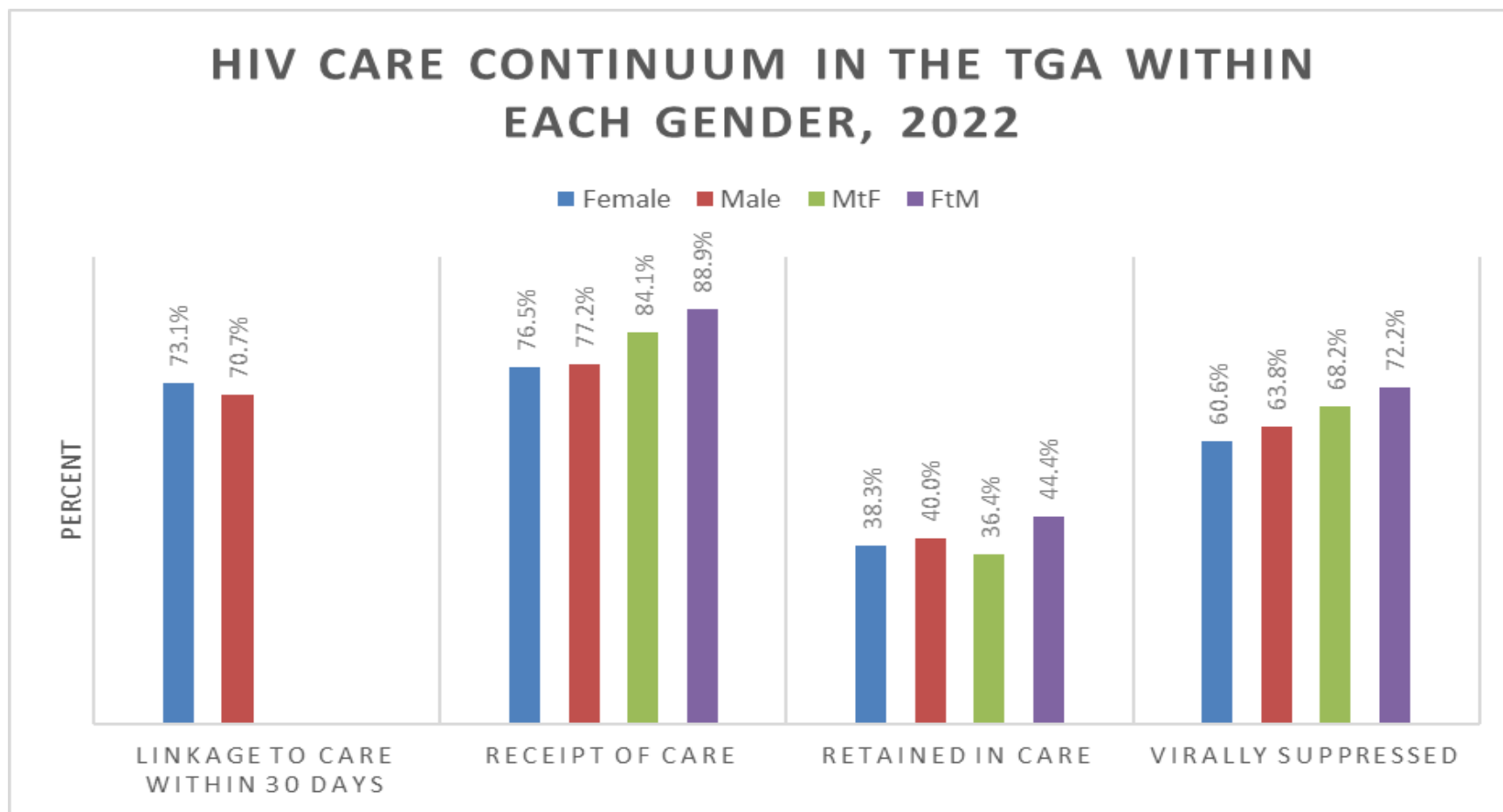
HIV Care Continuum in the TGA within each Nativity Status, 2022

- Native Born had the lowest percentage of linkage to Care within 30 days (56.2%)
- Foreign Born had the lowest percent of receipt of Care (73.6%)
- Native Born had the lowest percent of retained in Care (38.4%)
- People with Unknow Nativity Status had the lowest percent of viral load suppression (59.3%)

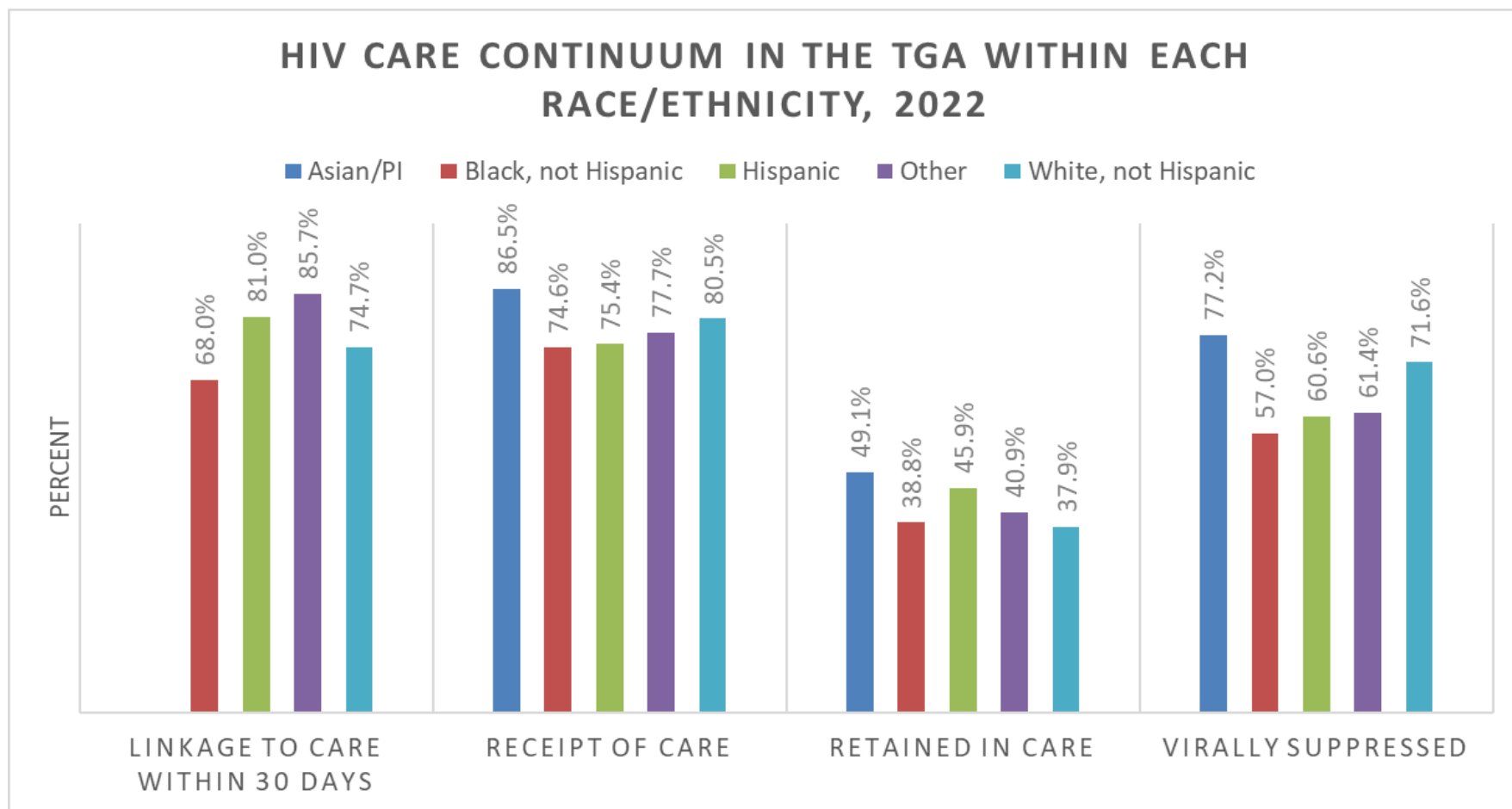
HIV Care Continuum in the TGA within each County, 2022



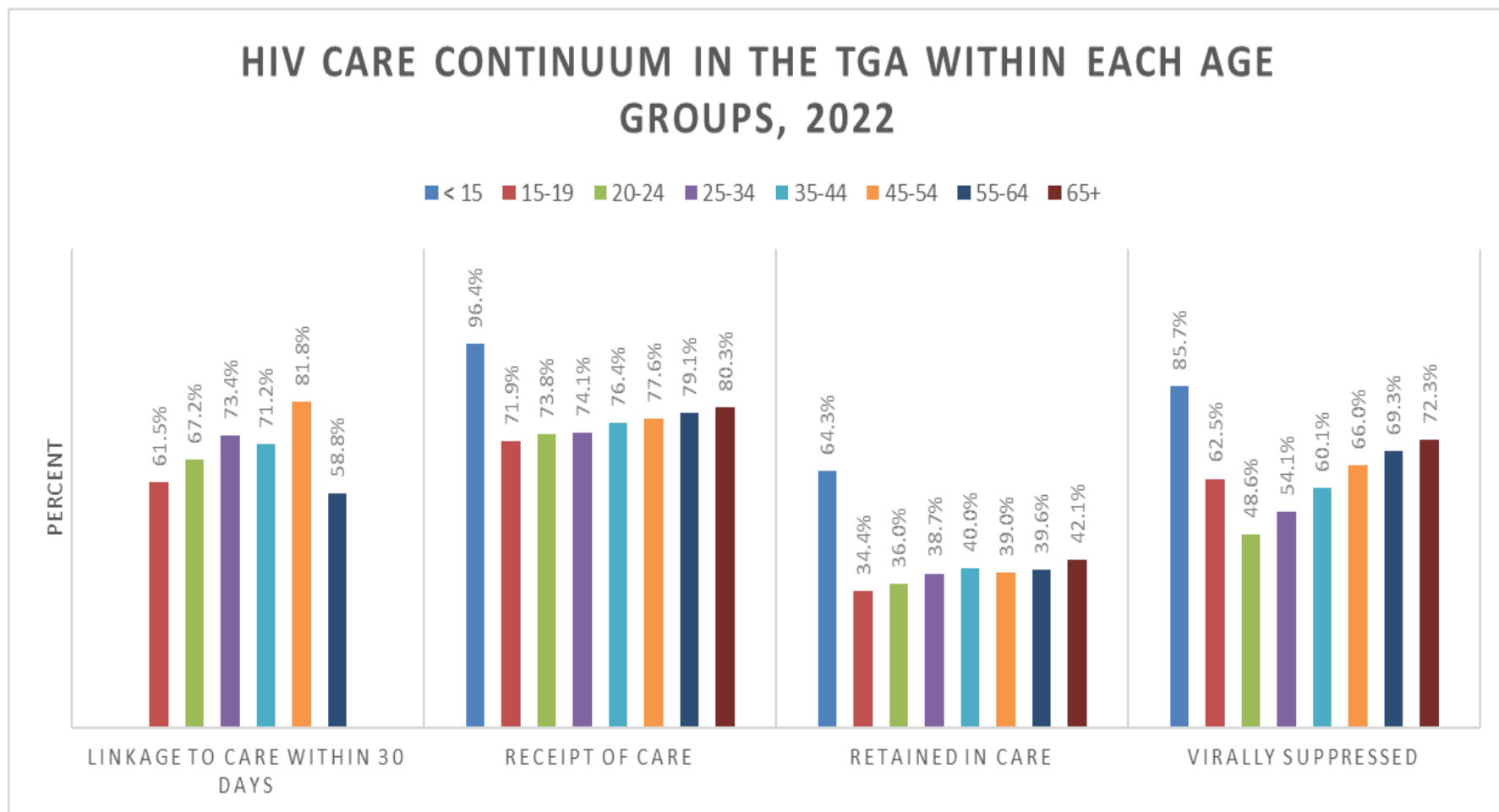
HIV Care Continuum in the TGA within each Gender, 2022



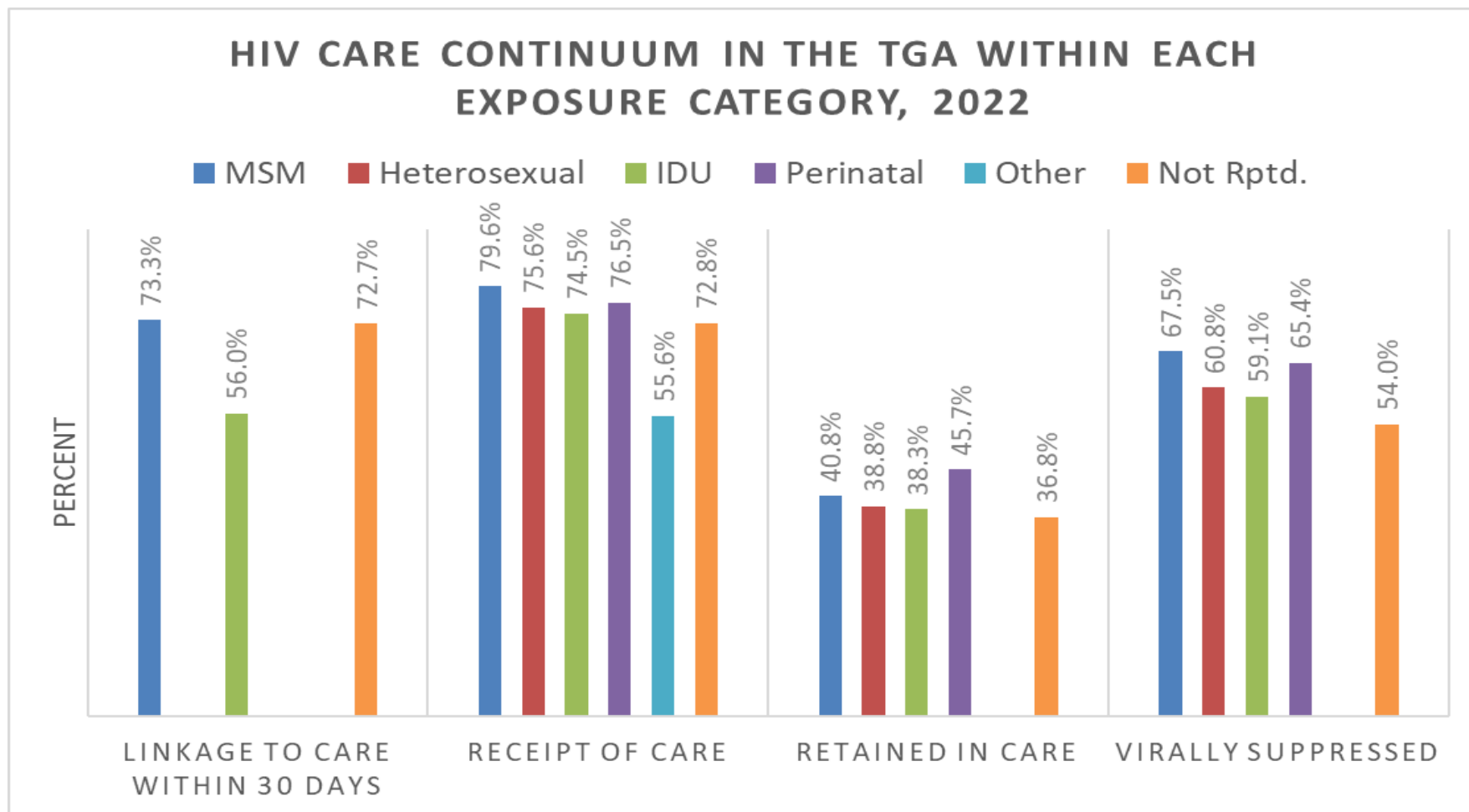
HIV Care Continuum in the TGA within each Race/Ethnicity, 2022



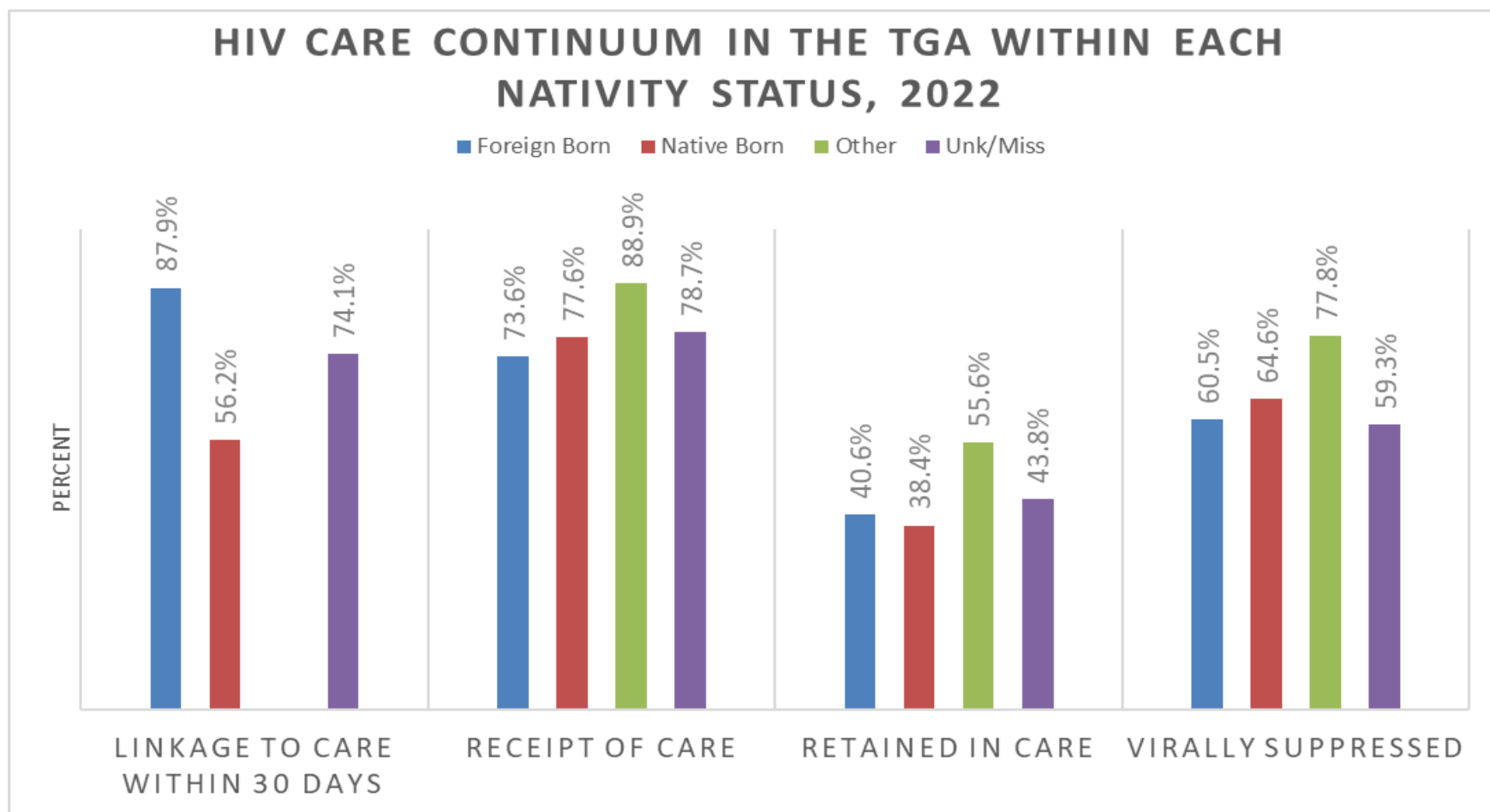
HIV Care Continuum in the TGA within each age groups, 2022



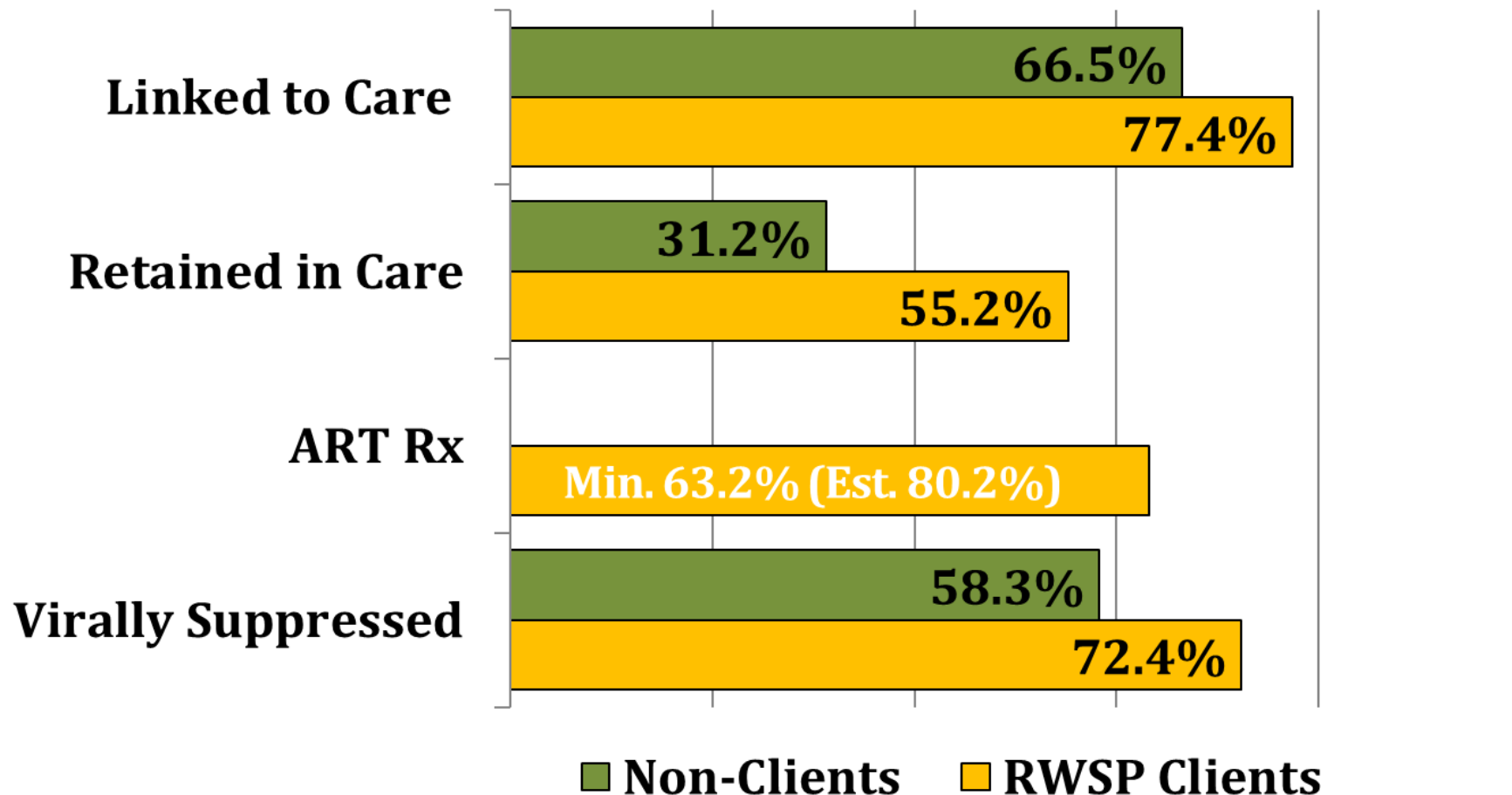
HIV Care Continuum in the TGA within each Exposure Category, 2022



HIV Care Continuum in the TGA within each Nativity Status, 2022

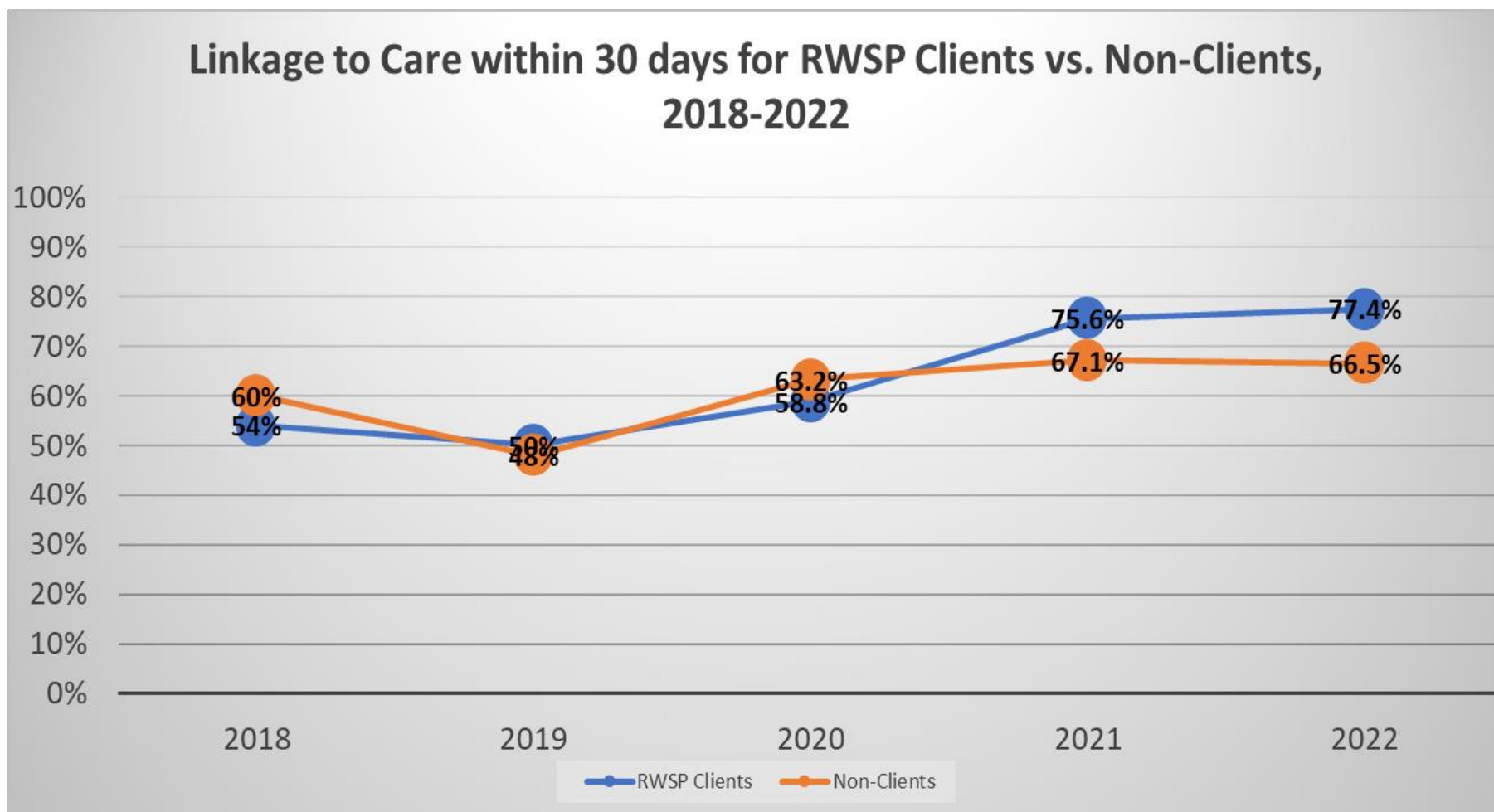


Ryan White Clients v. Non-Client PLWH/A

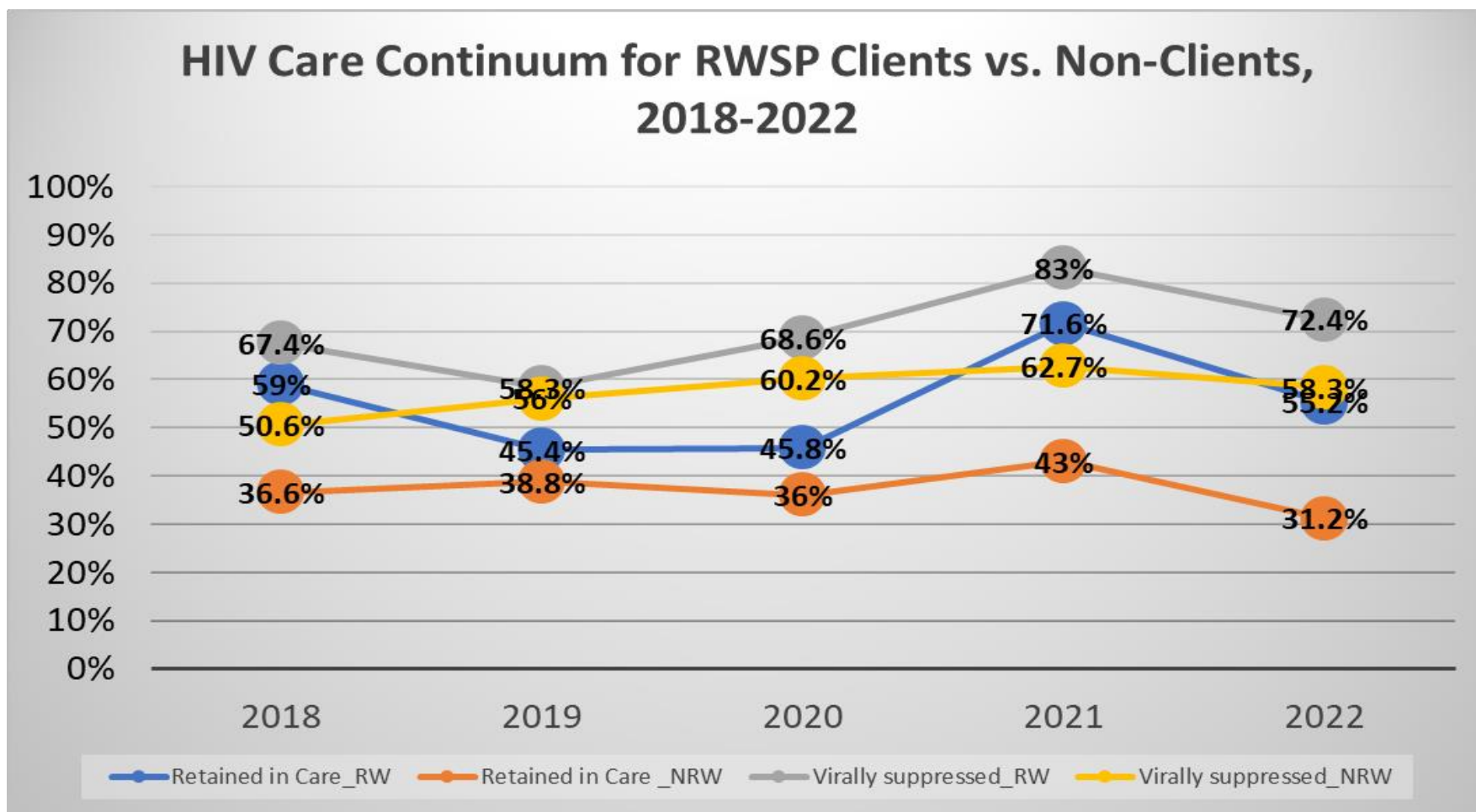


*Linkage to care within 90 days was 91% for RWSP clients and 74.9 % for non-RWSP clients.

Linkage to Care within 30 days for RWSP Clients vs. Non-Clients, 2018-2022



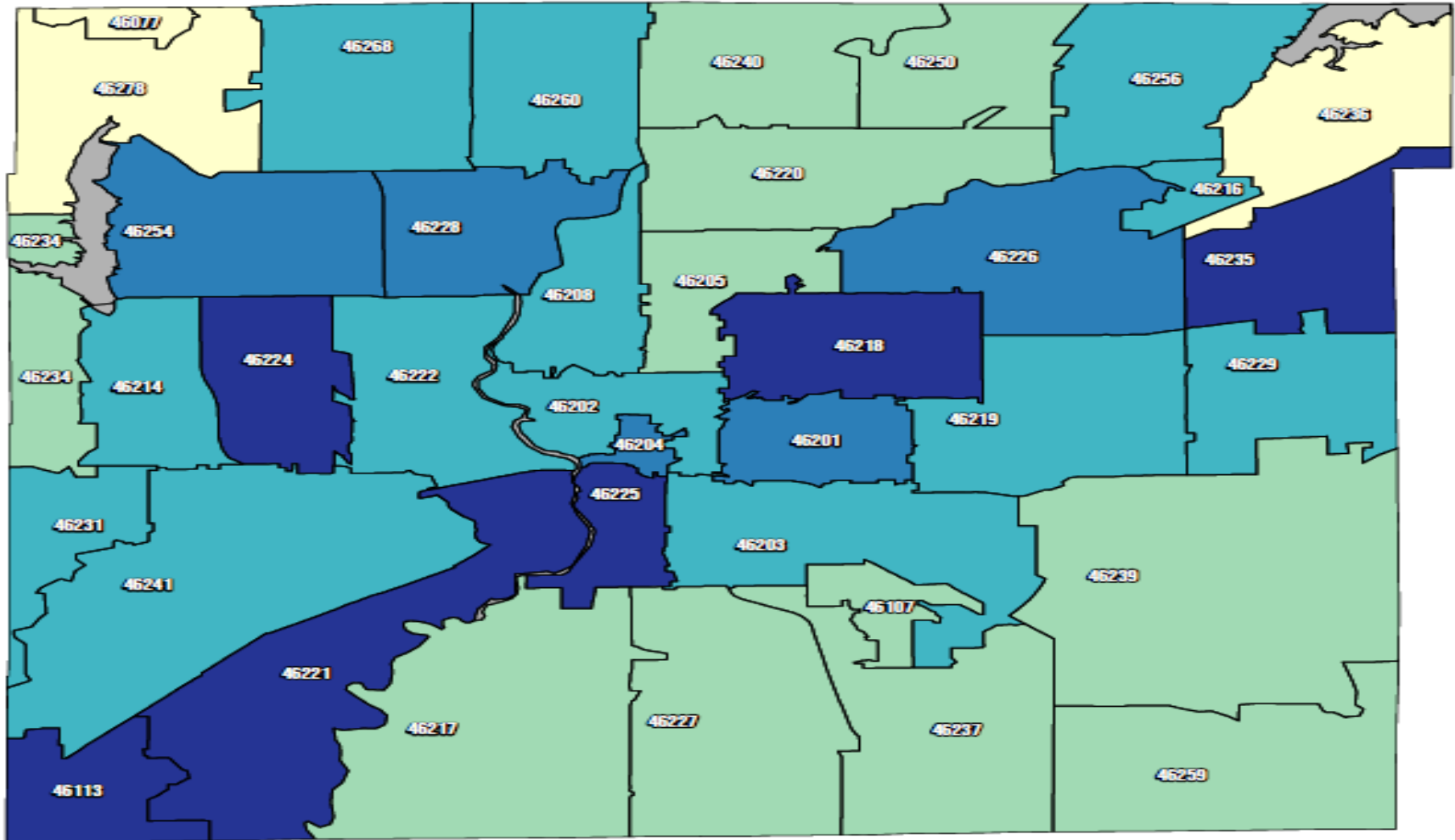
HIV Care Continuum for RWSP Clients vs. Non-Clients, 2018-2022



Community Viral Load

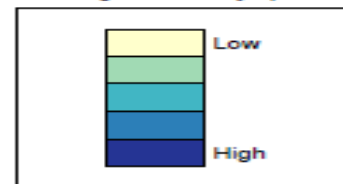
- Geometric means were used for comparisons of viral load
 - Geometric means are always smaller than arithmetic means because the effect of very large values is diminished
 - Geometric means are more stable from year to year
- All results are based on the last reported viral load test during 2022 for all residents with ≥ 1 viral load test
- Results were standardized such that:
 - Results reported as 0 or < 20 were set to half the lower limit of detection possible for the assay used according to CDC recommendations²⁸

GEOMETRIC MEAN OF MOST RECENT 2022 VIRAL LOAD (BY ZIPCODE FOR MARION COUNTY, INDIANA)



Zipcodes with ≤ 5 individuals reported or with geometric mean outside the standard range of statistical significance ($\alpha=0.5$) were excluded.

Average Viral Load by Zipcode



Community Viral Load by Gender

- Number and percent with suppressed viral load (<200 copies/mL) at last CY 2022 test, by gender

Gender	N	% at <200 copies/mL**	Geometric Mean Viral Load	95% Confidence Interval (GM)
Male	3642	63.5	57	53-62
Female	1010	60.4	68	58-79
MtF Transgender	70	67.4	*	34-121
FtM Transgender	16	72.2	*	21-194

*Point estimate suppressed due to wide confidence interval

**Percentage includes unknown/missing viral loads in denominator

Community Viral Load by Race/Ethnicity

- Number and percent with suppressed viral load (<200 copies/mL) at last CY 2022 test, by race/ethnicity

Race/Ethnicity	N	% at <200 copies/mL**	Geometric Mean Viral Load	95% Confidence Interval (GM)
White	1,786	71	41	37-45
Black	2,179	56.8	81	73-91
Hispanic	468	60.4	61	49-77
Asian/PI	142	77.2	34	27-44
Other	164	61.2	77	50-117

*Point estimate suppressed due to wide confidence interval

**Percentage includes unknown/missing viral loads in denominator

Community Viral Load by Age

- Number and percent with suppressed viral load (<200 copies/mL) at last CY 2022 test, by current age (Yrs.)

Current Age (Yrs.)	N	% at <200 copies/mL**	Geometric Mean Viral Load	95% Confidence Interval (GM)
<15	27	85.7	*	22-157
15-19	23	65.6	*	18-195
20-24	151	48.6	*	140-446
25-34	860	54.1	*	84-124
35-44	1047	60.1	78	66-92
45-54	1061	66	48	42-54
55-64	1079	69.3	38	34-42
65+	464	72.3	31	27-36
Unk/Miss	27	28.8	*	70-1636

*Point estimate suppressed due to wide confidence interval

**Percentage includes unknown/missing viral loads in denominator

Community Viral Load by County

- Number and percent with suppressed viral load (<200 copies/mL) at last CY 2022 test, by county of residence

County of Residence	N	% at <200 copies/mL**	Geometric Mean Viral Load	95% Confidence Interval (GM)
Boone	47	71	*	19-58
Brown	13	73.3	*	11-1186
Hamilton	232	71.3	31	26-36
Hancock	58	69.4	*	31-110
Hendricks	175	65.9	*	47-102
Johnson	138	68.7	*	33-66
Marion	3924	62.1	61	57-66
Morgan	53	75	*	25-109
Putnam	40	64.8	*	32-151
Shelby	32	59.5	*	32-355

*Point estimate suppressed due to wide confidence interval

**Percentage includes unknown/missing viral loads in denominator

Community Viral Load by RWSP Status

- Number and percent with suppressed viral load (<200 copies/mL) at last CY 2022 test, by Ryan White HIV Services Program enrollment status

RWSP Enrollment Status: CY 2021	N	% at <200 copies/mL**	Geometric Mean Viral Load	95% Confidence Interval (GM)
Not Enrolled	2779	58	50.7	47-55
Enrolled	1960	72	74	66-83

** Point estimate suppressed due to wide confidence interval*

***Percentage includes unknown/missing viral loads in denominator*

Undetectable = Untransmittable (U=U)

“Getting and keeping an undetectable viral load* is the best thing people with HIV can do to stay healthy” ³²⁻³³

CDC: Risk of HIV Transmission With Undetectable Viral Load by Transmission Category ³²

Transmission Category	Risk for People Who Keep an Undetectable Viral Load
Sex (oral, anal, or vaginal)	Effectively no risk
Pregnancy, labor, and delivery	1% or less [†]
Sharing syringes or other drug injection equipment	Unknown, but likely reduced risk
Breastfeeding	Substantially reduces but does not eliminate risk.

Pre-Exposure Prophylaxis (PrEP)

- PrEP is a prevention option for people at risk of HIV exposure to prevent getting HIV by taking one pill a day
- PrEP can lower the risk of getting HIV from sex by 99 % and by 74% for IDUs if taken consistently (as prescribed) ⁴⁰
- PrEP is covered by most insurance companies
- Possible situations for taking PrEP⁴² :
- HIV negative and any of the following apply to you
 - **have had anal or vaginal sex in the past 6 months and you:**
 - ❖ have sexual partner with HIV (especially if the partner has an unknown or detectable VL)
 - ❖ have not consistently used condoms
 - ❖ have been diagnosed with an STD in the past 6 months
 - **You inject drugs and you:**
 - ❖ have an injection partner with HIV
 - ❖ share needles, syringes, or other equipment to inject drugs
 - **You have been prescribed PEP (post-exposure prophylaxis) and you:**
 - ❖ Report continued risk behavior, or
 - ❖ have used multiple courses of PEP
- Although PrEP is effective in preventing HIV, it is recommended to use condoms to protect against other STDs

Post-Exposure Prophylaxis (PEP)

- PEP is the use of an emergency medicine to prevent HIV after a recent possible exposure.
- PEP should be started within 72 hours after possible exposure
- PEP is taken daily for 28 days
- Possible exposures can be the following:
 - During sex (for example, if the condom broke),
 - Through sharing needles, syringes, or other equipment to inject drugs (for example, cookers), or
 - If you've been sexually assaulted.

Vision for the National HIV/AIDS Strategy

“The United States will be a place where new HIV infections are prevented, every person knows their status, and every person with HIV has high-quality care and treatment, lives free from stigma and discrimination, and can achieve their full potential for health and well-being across the lifespan. This vision includes all people, regardless of age, sex, gender identity, sexual orientation, race, ethnicity, religion, disability, geographic location, or socioeconomic circumstance.”¹⁴



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Prevent. Promote. Protect.

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