

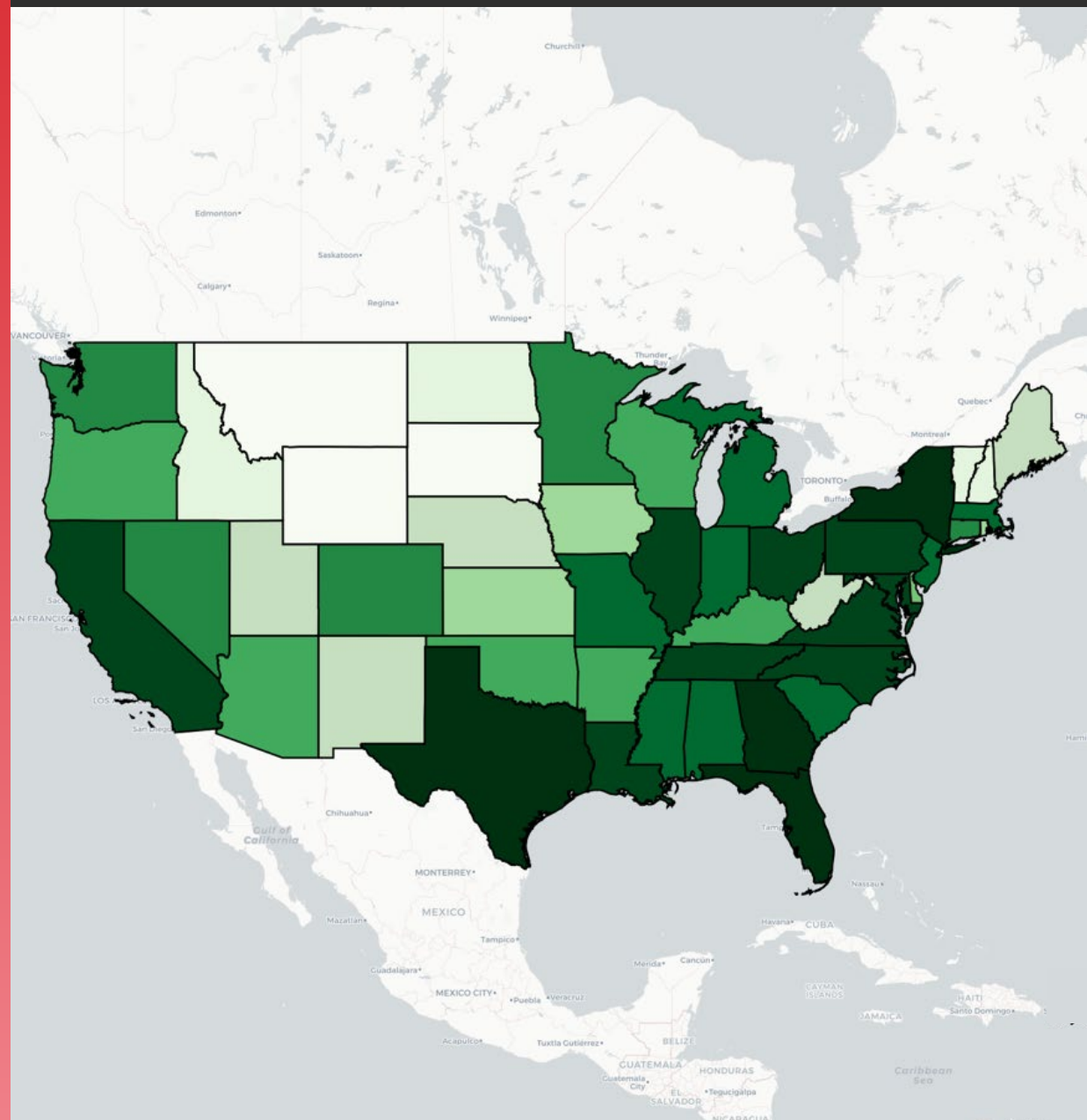


# State PrEP Use Data by Race/Ethnicity

August 16, 2022

[AIDSVu.org](https://AIDSVu.org) | [Facebook.com/AIDSVu](https://Facebook.com/AIDSVu) | [@AIDSVu](https://twitter.com/AIDSVu)

Number of Black People Using PrEP, 2021



3 - 10	11 - 25	26 - 51	52 - 93	94 - 169
170 - 291	292 - 528	529 - 1,099	1,100 - 2,626	2,627+

# Today's Panelists



**AIDSVu Principal Scientist:  
Patrick Sullivan, DVM, PhD**

Professor, Department of Epidemiology, Rollins  
School of Public Health,  
Emory University



**Panel Moderator:  
Aaron Siegler, PhD**

Associate Professor, Department of Epidemiology,  
Emory University  
Associate Director, Prevention and  
Implementation Sciences Core, Emory CFAR



**AIDSVu Scientist:  
Amanda D. Castel, MD, MPH, AAHIVS**

Professor, Department of Epidemiology, Milken  
Institute School of Public Health, George  
Washington University



**Dawn Smith, MD, MPH**

Division of HIV Prevention, Centers for Disease  
Control and Prevention

# Agenda

- 1 Background
- 2 Paper and Findings
- 3 PrEP on AIDSVu
- 4 Discussion
- 5 Questions

# Background

# Introduction to AIDSVu

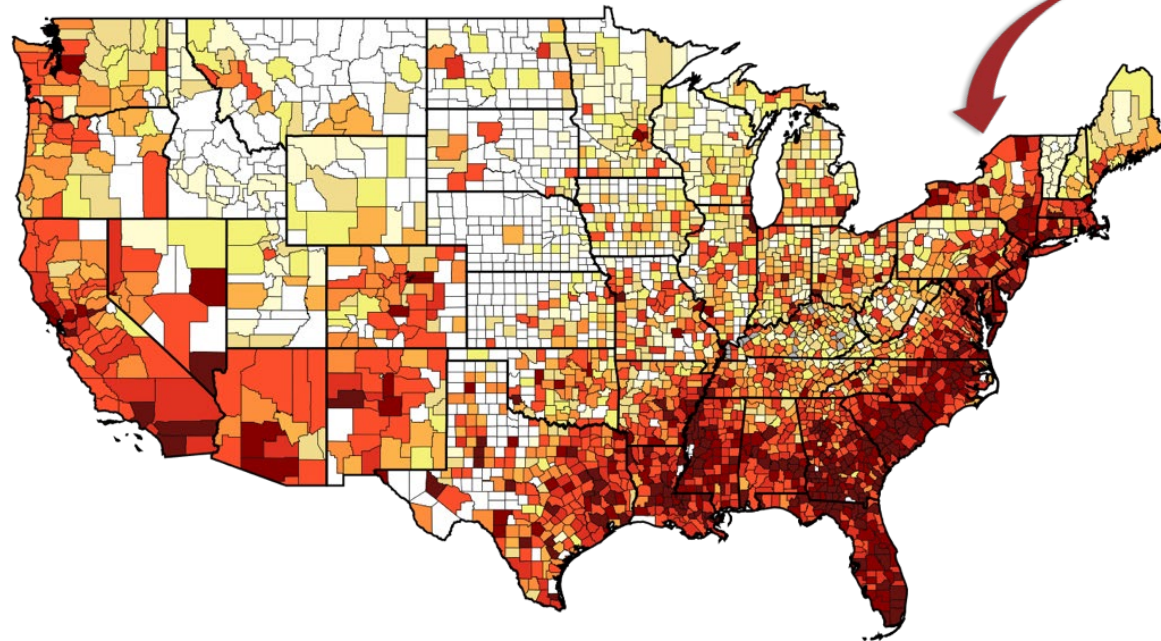


Table 1a. Diagnoses of HIV infection, 2014, and persons living with diagnosed HIV infection (prevalence), year-end 2013, adults and adolescents, by metropolitan statistical area of residence—United States and Puerto Rico

Metropolitan area of residence	Diagnoses, 2014			Prevalence of diagnosed HIV infection, year-end 2013		
	No.	%	Rate <sup>a</sup>	No.	%	Rate <sup>a</sup>
All U.S.	67,827	82.3	88	867,882	141.3	141.3
Alaska	47	7.8	82	2,252	2,284	278.2
Albuquerque, NM	66	10	82	1,336	1,343	176.7
Albuquerque-Santa Fe, NM	66	10	82	1,336	1,343	176.7
Albuquerque-Santa Fe, NM	1,282	1,632	21.8	7	27,288	27,804
Albuquerque-Santa Fe, NM	77	89	25.6	28	2,114	2,161
Anchorage, AK	362	332	28.8	34	4,356	4,356
Anchorage, AK	111	122	17.8	34	1,778	1,778
Baltimore-Washington, MD	847	878	28.8	11	18,327	18,711
Baltimore-Washington, MD	349	349	83.8	1	4,840	4,875
Baltimore-Washington, MD	152	158	17.8	36	5,534	5,767
Baltimore-Washington, MD	10	10	10	104	488	487
Boston-Cambridge-Newton, MA-NH	409	553	13.7	54	12,336	12,336
Boston-Cambridge-Newton, MA-NH	349	349	13.7	—	7,762	7,762
Boston-Cambridge-Newton, MA-NH	104	211	10.6	—	4,574	5,287
Boston-Cambridge-Newton, MA-NH	64	101	12.8	40	2,714	2,438
Boston-Cambridge-Newton, MA-NH	109	118	11.8	84	3,316	3,316
Boston-Cambridge-Newton, MA-NH	104	102	11.2	40	1,880	1,880
Boston-Cambridge-Newton, MA-NH	109	147	24.2	18	2,389	2,389
Boston-Cambridge-Newton, MA-NH	403	447	33.8	33	1,253	1,253
Boston-Cambridge-Newton, MA-NH	104	40	10	104	1,143	1,143
Boston-Cambridge-Newton, MA-NH	1,341	1,337	19.3	30	38,482	38,482
Boston-Cambridge-Newton, MA-NH	1,341	1,337	22.3	—	27,781	27,781
Boston-Cambridge-Newton, MA-NH	81	86	10.9	—	627	628
Boston-Cambridge-Newton, MA-NH	40	40	10.9	—	1,234	1,234
Boston-Cambridge-Newton, MA-NH	40	80	8.9	—	882	882
Boston-Cambridge-Newton, MA-NH	307	319	13.3	42	3,374	3,433
Boston-Cambridge-Newton, MA-NH	231	244	10.8	83	4,837	4,844
Boston-Cambridge-Newton, MA-NH	39	41	7.3	83	812	804
Boston-Cambridge-Newton, MA-NH	1,084	208	28.8	8	4,522	4,527
Boston-Cambridge-Newton, MA-NH	343	287	18.6	48	5,281	5,231
Boston-Cambridge-Newton, MA-NH	1,239	1,486	28.7	14	22,484	22,749
Boston-Cambridge-Newton, MA-NH	1,284	1,228	33.1	—	17,887	18,128
Boston-Cambridge-Newton, MA-NH	243	247	14.1	—	4,827	4,821
Boston-Cambridge-Newton, MA-NH	47	70	15.4	74	1,478	1,483
Boston-Cambridge-Newton, MA-NH	109	114	21.4	23	1,482	1,488
Boston-Cambridge-Newton, MA-NH	282	238	13.1	84	8,284	8,284
Boston-Cambridge-Newton, MA-NH	38	38	7.2	84	814	817
Boston-Cambridge-Newton, MA-NH	628	658	10.9	18	18,351	18,351
Boston-Cambridge-Newton, MA-NH	363	384	28.2	—	7,328	7,278
Boston-Cambridge-Newton, MA-NH	363	363	8.1	—	2,712	2,712
Boston-Cambridge-Newton, MA-NH	40	84	14.4	33	2,343	2,323
Boston-Cambridge-Newton, MA-NH	108	118	17.8	38	1,873	1,877
Boston-Cambridge-Newton, MA-NH	18	21	8.1	102	108	108
Boston-Cambridge-Newton, MA-NH	110	121	16.9	44	1,831	1,827
Boston-Cambridge-Newton, MA-NH	44	44	8.1	49	1,887	1,887
Boston-Cambridge-Newton, MA-NH	114	122	19.2	31	2,459	2,398
Boston-Cambridge-Newton, MA-NH	102	102	18.2	49	1,876	1,876
Boston-Cambridge-Newton, MA-NH	49	52	11.1	1,341	1,341	1,341
Boston-Cambridge-Newton, MA-NH	50	86	8.2	83	3,482	3,482
Boston-Cambridge-Newton, MA-NH	17	81	8.8	79	1,478	1,478



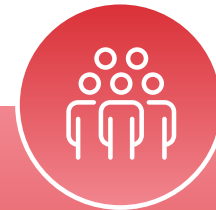
**Partnership since 2010**  
between Gilead and  
Emory University



Online platform that  
**visualizes data and**  
**disseminate insights**  
on the U.S. HIV  
epidemic

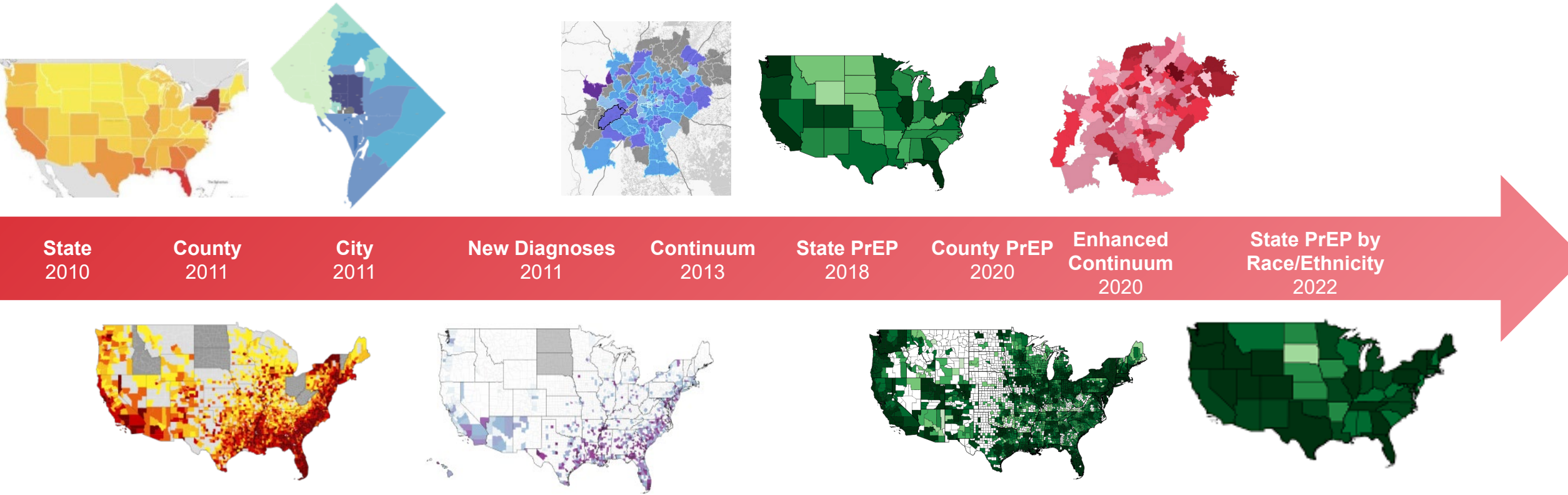


Mission to make data widely  
available, easily accessible, and  
locally relevant to **increase**  
**awareness and inform public**  
health decision making



**Broad user base**, including  
public health officials,  
policymakers, advocates,  
researchers, people impacted  
by HIV, and general public

# AIDSVu's History





# Background

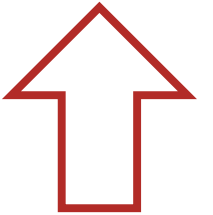
**PrEP was approved** for HIV prevention in the U.S. in 2012.



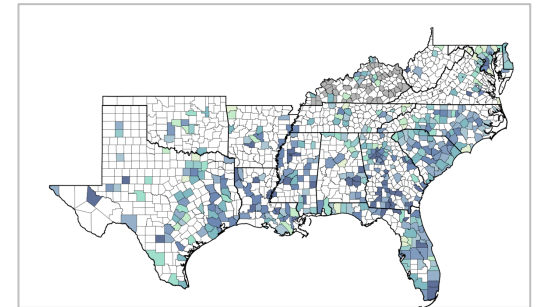
**Models suggest that 40% coverage of PrEP use** among indicated MSM would result in a 33% reduction in HIV incidence, but through 2017, PrEP uptake fell short of this goal.



**Black and Hispanic/Latinx people have higher rates** of new HIV diagnoses than White non-Hispanic people in the U.S.



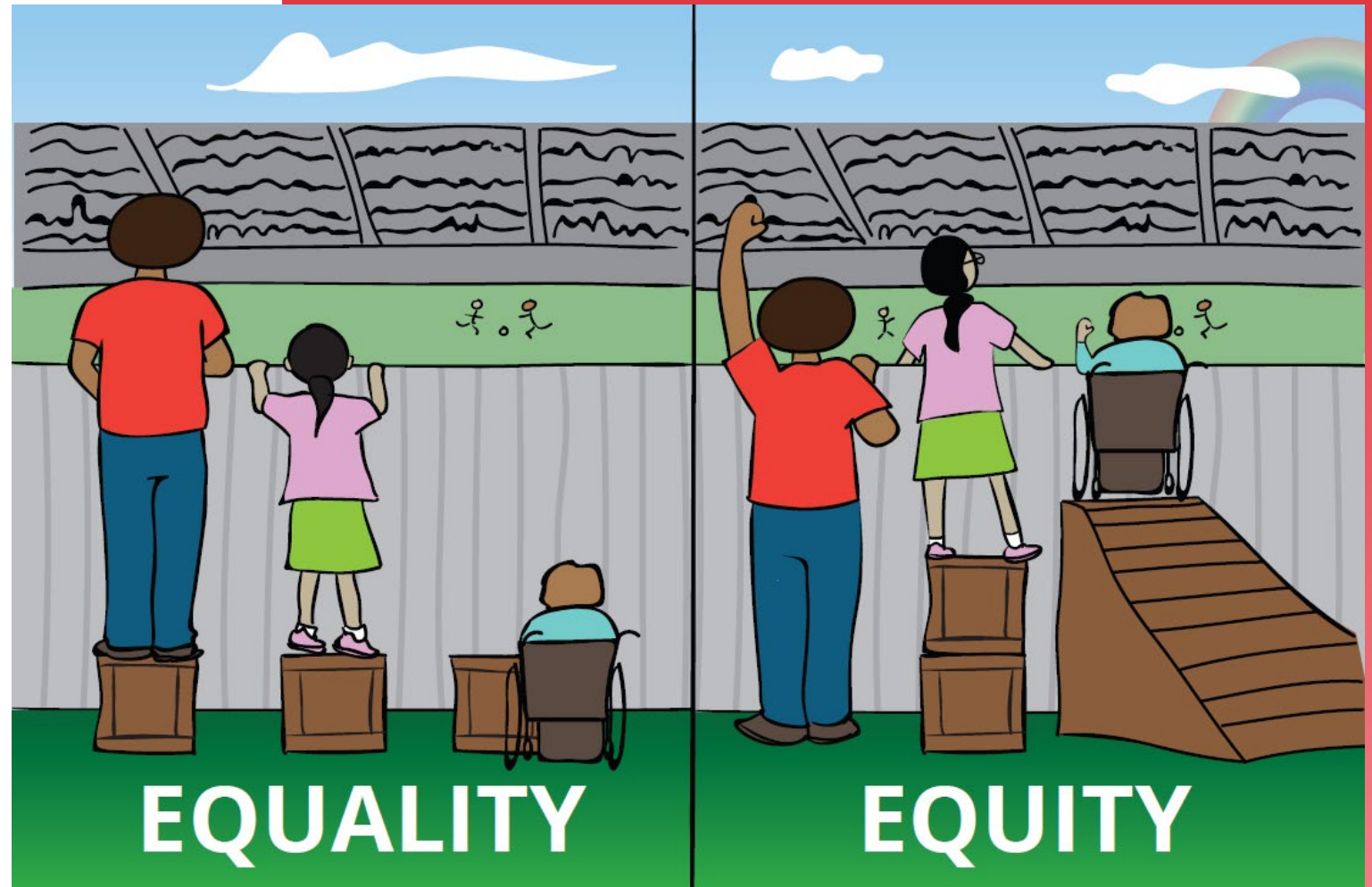
**People in the U.S. South** have higher rates of new HIV diagnoses than people in other U.S. regions.



**Health equity** dictates that access and use of prevention interventions should be proportional to the impact of the health concern in the population.



# Health Equality vs Health Equity

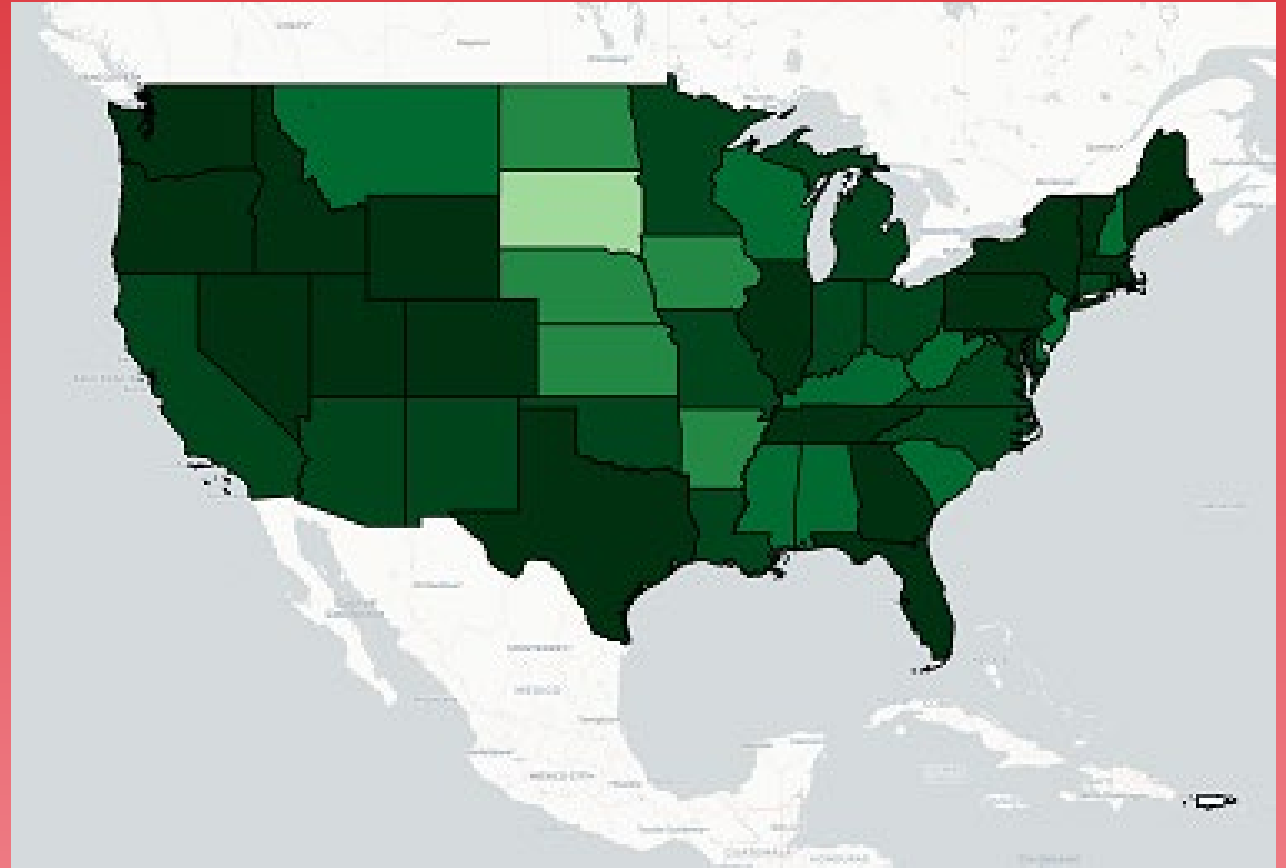




# IAS Analysis and Findings

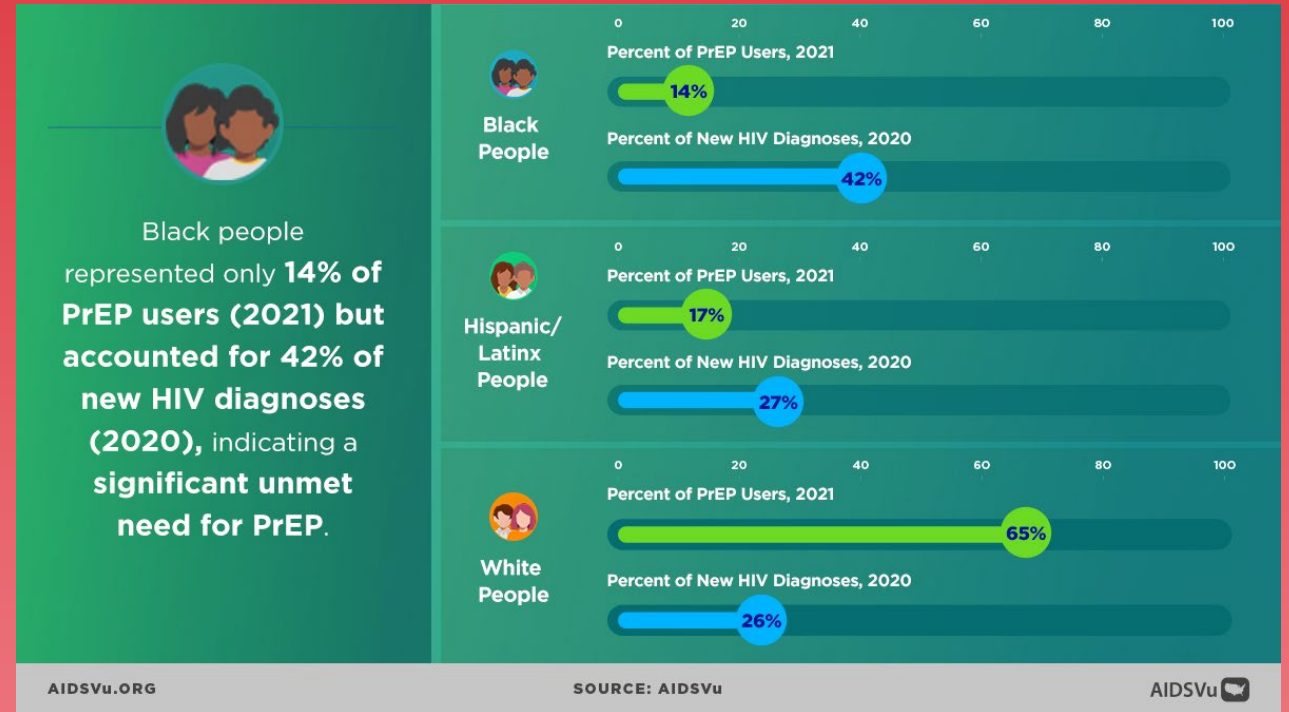
# Methods

- We used commercial pharmacy data to enumerate PrEP users by race and U.S. Census region from 2012-2021
- Race/ethnicity data were available for 124,835 (34%) of PrEP users in 2021
  - To estimate total PrEP users by race each year, we assumed the racial distribution was the same in PrEP users with missing race data as in those with reported race data

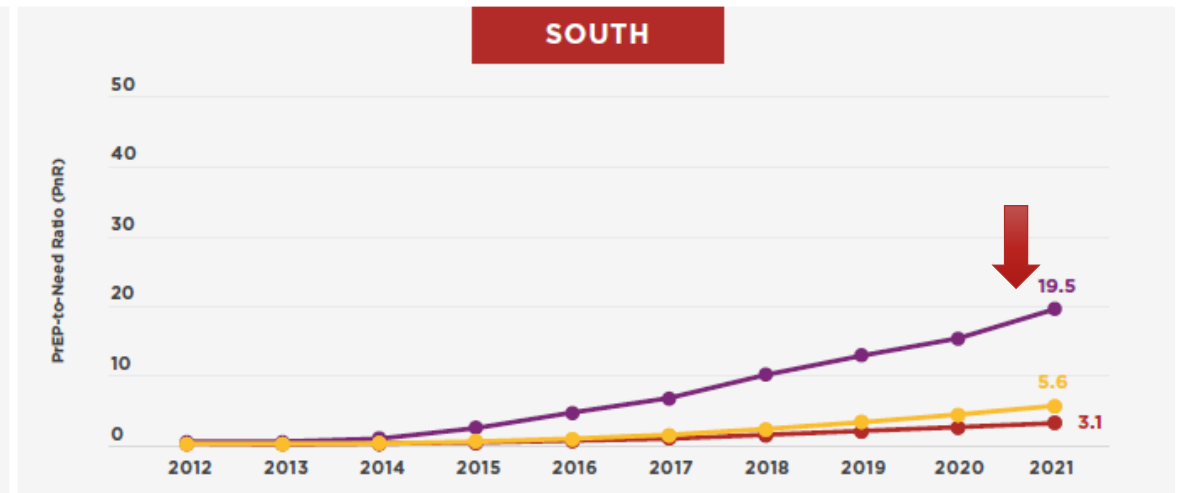
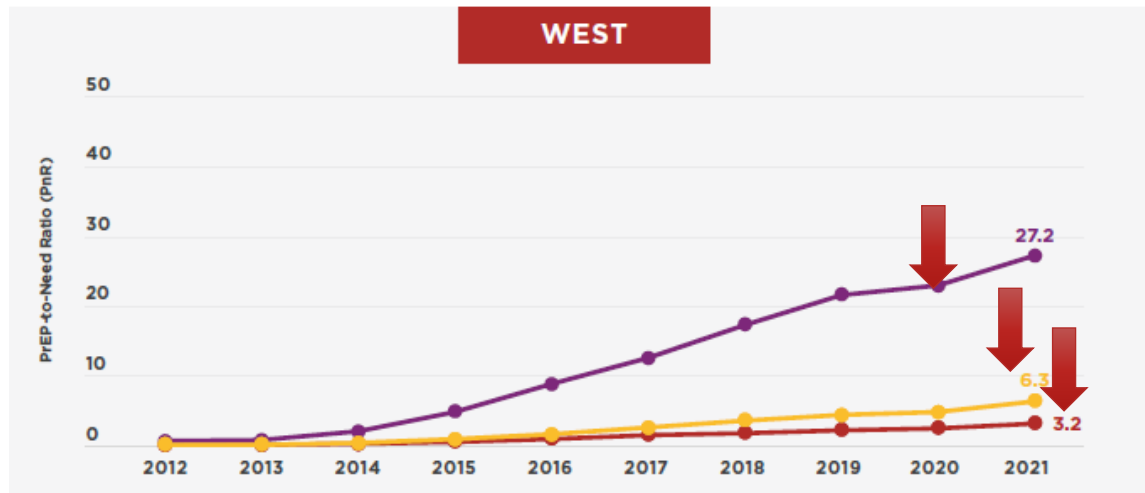
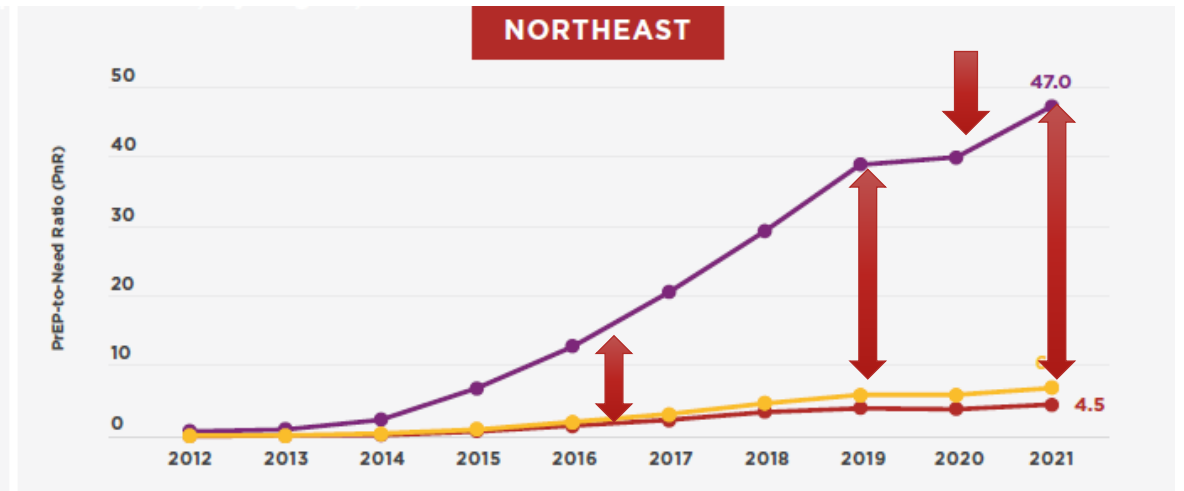
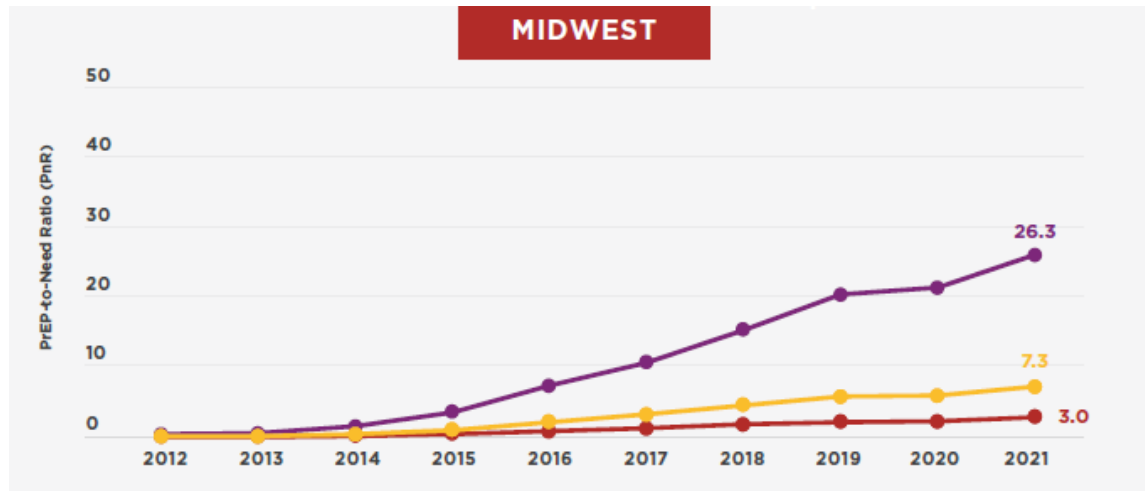


# Methods (cont.)

- The PrEP-to-Need Ratio (PnR) is a metric of PrEP equity
- PnR is defined as the number of PrEP users in a group divided by the number of new diagnoses in that group in the same year
- For the years 2020 and 2021, the PnR ratio reflects the number of PrEP users over the number of people newly diagnosed with HIV in 2019 (since 2019 new diagnoses was the most current data available at the time)
- The ratio is used to describe the distribution of prescriptions relative to the epidemic need



# PnR by Race/Ethnicity and US Region, 2012-2021

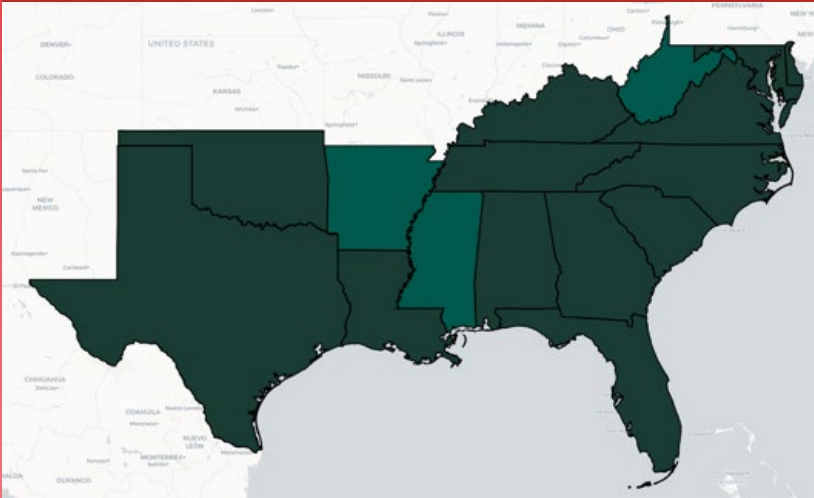


● Black ● White ● Hispanic

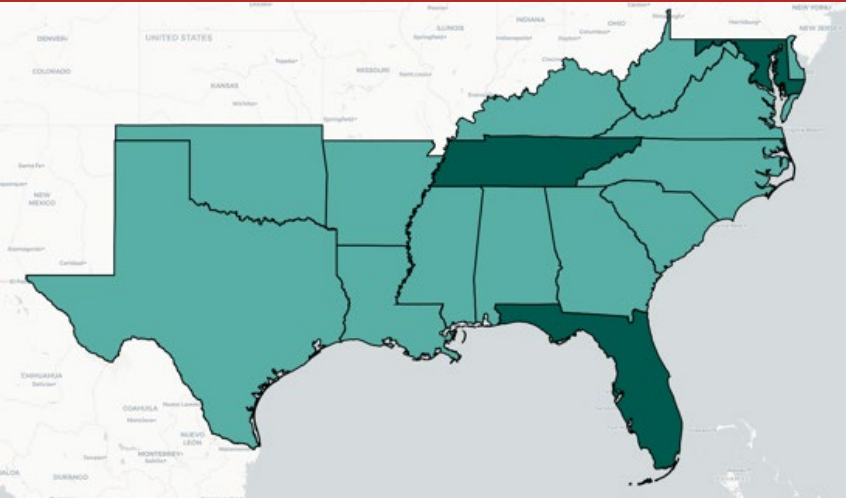
The PrEP-to-Need Ratio (PnR) is the number of PrEP users divided by the number of new diagnoses in a given year. PnR serves as a measurement of how PrEP use compares to the need for PrEP in a population.

# 2021 PnR by Race/Ethnicity in the South

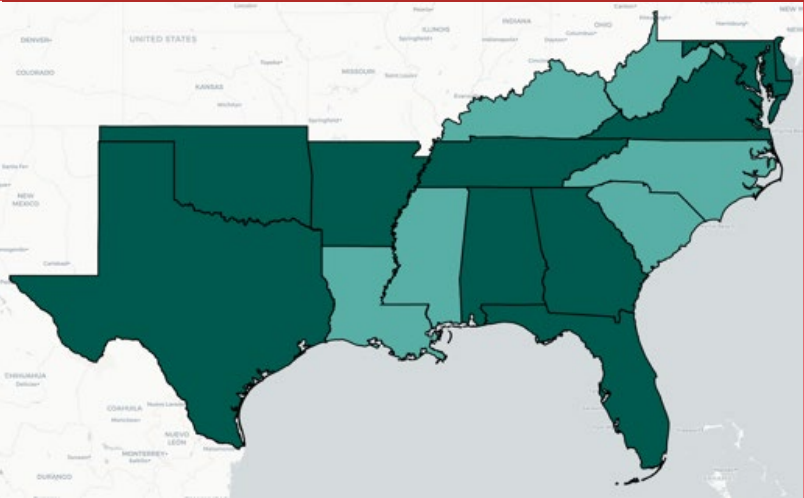
WHITE



BLACK



HISPANIC



Title of Map Goes Here

0.00 – 0.41

0.42 – 1.38

1.39 – 3.05

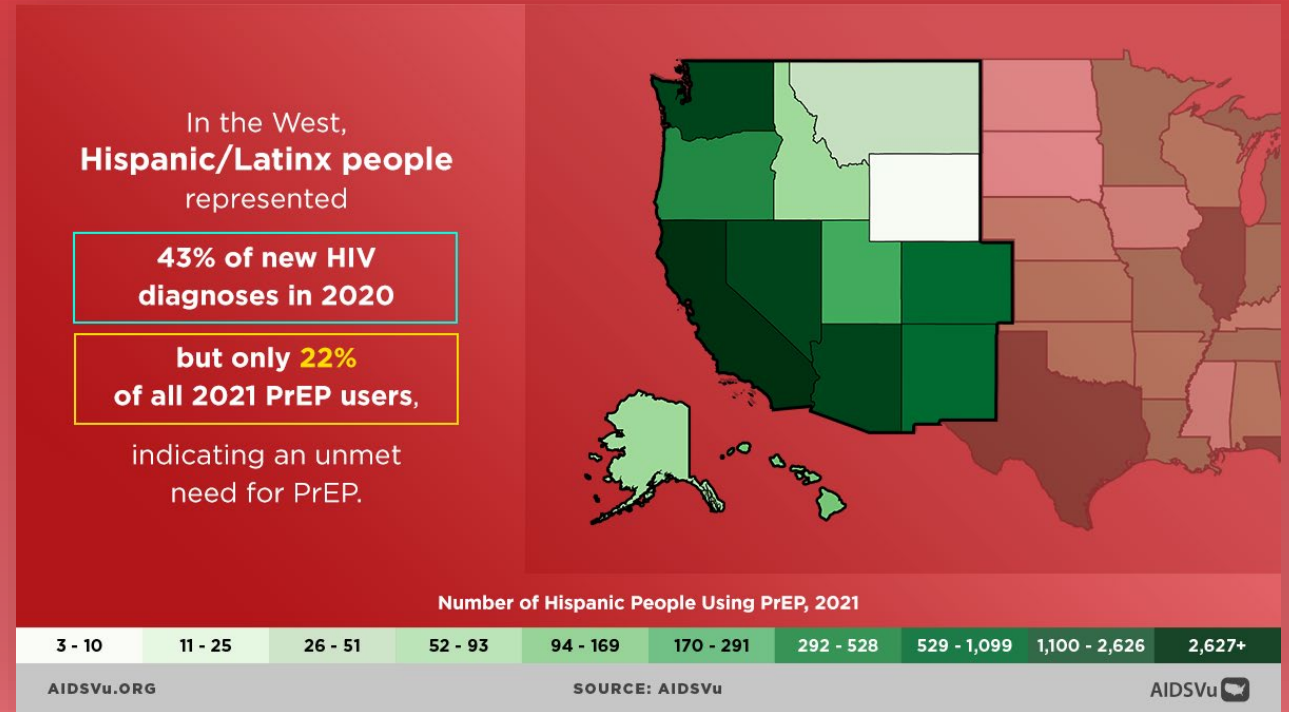
3.06 – 8.30

8.31+



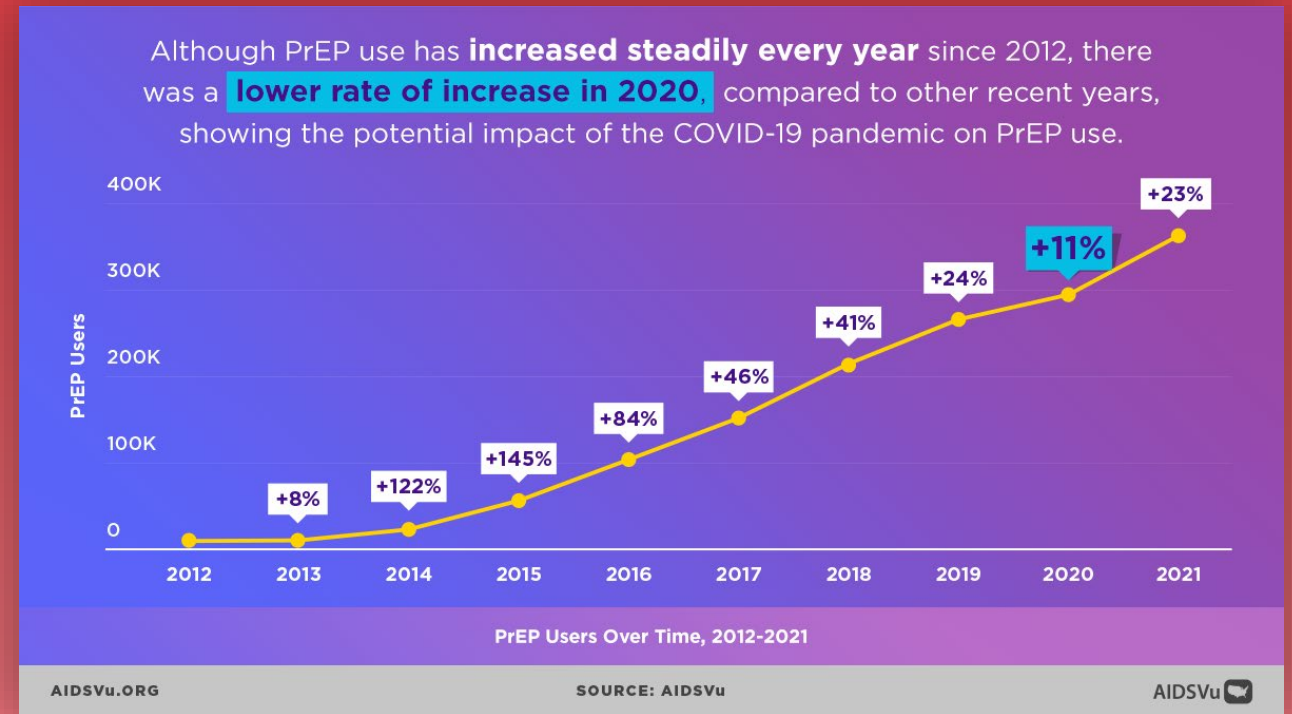
# Data Insights

- Black people represented 14% of PrEP users, but 42% of new HIV diagnoses
- Hispanic/Latinx people represented 17% of PrEP users and 27% of new HIV diagnoses
- White people represented 65% of PrEP users and 26% of new HIV diagnoses
- Black people made up 52% of new HIV diagnoses in the South, but only 21% of PrEP users in the South
- Black people made up 48% of new HIV diagnoses, but only 12% of PrEP users in the Midwest
- In the West, Hispanic/Latinx people represented 43% of new HIV diagnoses but only represented 22% of all PrEP users

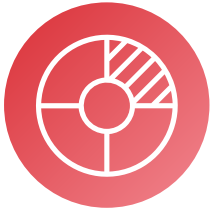


# Data Insights

- Although PrEP use has increased steadily every year since 2012, there was a much lower rate of increase in 2020 of only 11% from 2019. This lower pace of growth occurred during the COVID-19 pandemic
- The South accounted for 52% of HIV diagnoses but only accounted for 39% of PrEP users
- In 2021, states that had expanded their Medicaid programs had rates of PrEP use that were 1.5X higher than states that did not expand Medicaid
- Among all PrEP users in the U.S., 92% were male and only 8% were female, despite the fact that women comprised 18% of new HIV diagnoses
- Teenagers and young adults (aged 13-24 years) had the greatest unmet need for PrEP among all age groups, with a PNR of 6\*accounting for 20% of new HIV diagnoses but only 13% of PrEP users



# Data Limitations



There were substantial amounts of missing race data in the commercial pharmacy data; however, missingness did not vary substantially by region

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PnR is solely an equity metric, there is no “target” level of PnR, and this analysis of our data does not address directly the levels of PrEP use that would be required to achieve targets of reducing HIV incidence

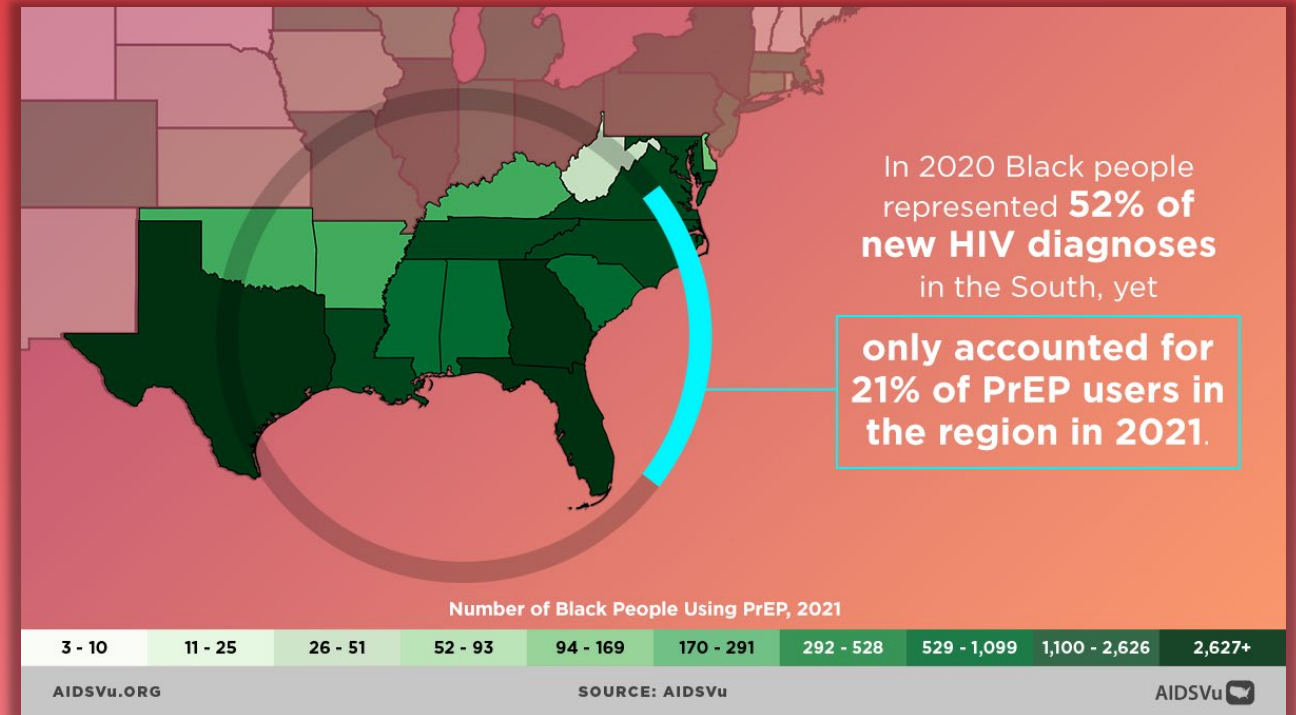
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Our PnR calculations might be impacted by under-reporting of HIV diagnoses, or misclassifications

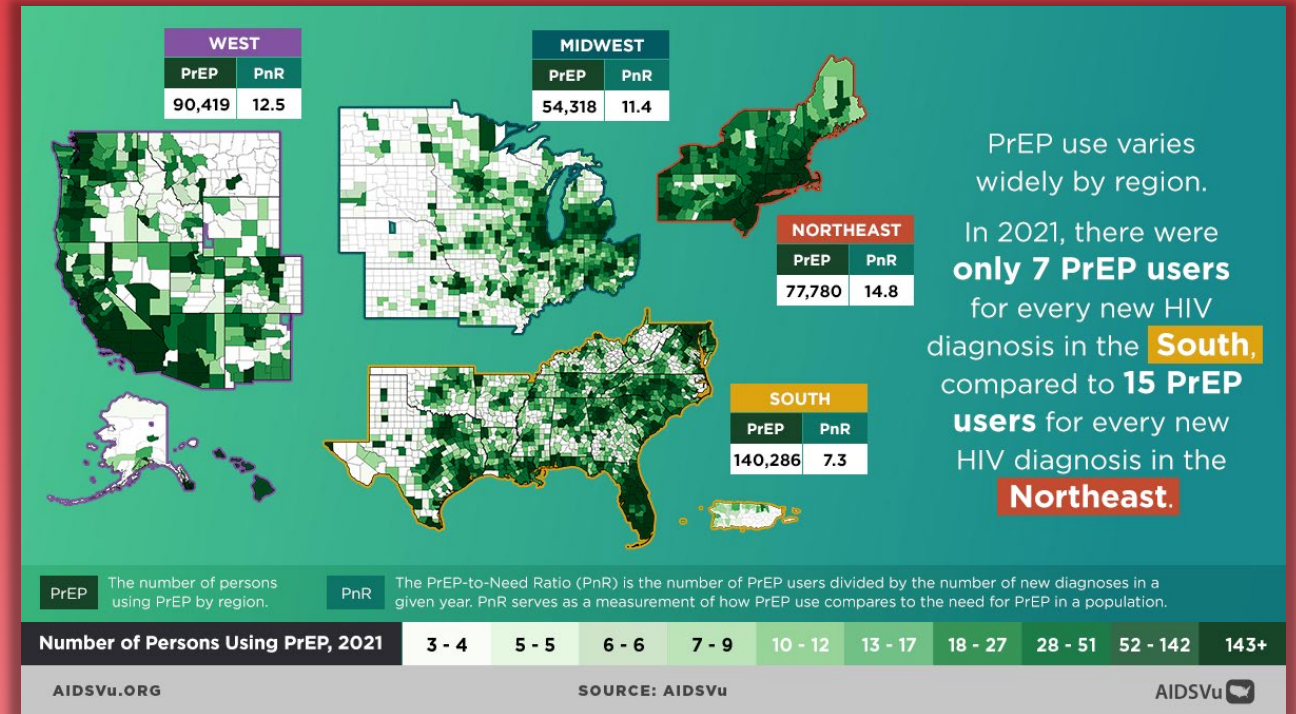
# Conclusions

- Prevention programs should be guided by PrEP equity (use relative to epidemic impact), not PrEP equality (equal use in groups, regardless of HIV diagnosis proportion).
- By this measure, U.S. prevention programs in all regions demonstrated decreasing PrEP equity over time (e.g., larger gaps in PnR by race/ethnicity).
- The U.S. South lagged all regions in equitable PrEP use, with the lowest PnR overall compared to other U.S. regions.
- Better programs are needed to provide PrEP to communities and people at greatest risk for HIV infection.



# Conclusions

- An ecological study demonstrated that PnR was higher (e.g., PrEP use was more equitable) in states that had PrEP-DAP programs, Medicaid expansion, or both.
- PrEP equity metrics may be a more meaningful way to assess the impact of PrEP programs than counts of PrEP users and should be assessed and reported routinely in monitoring PrEP programs.
- Additional research is needed on the extent to which interventions and policies impact PrEP equity.





# PrEP on AIDSVu

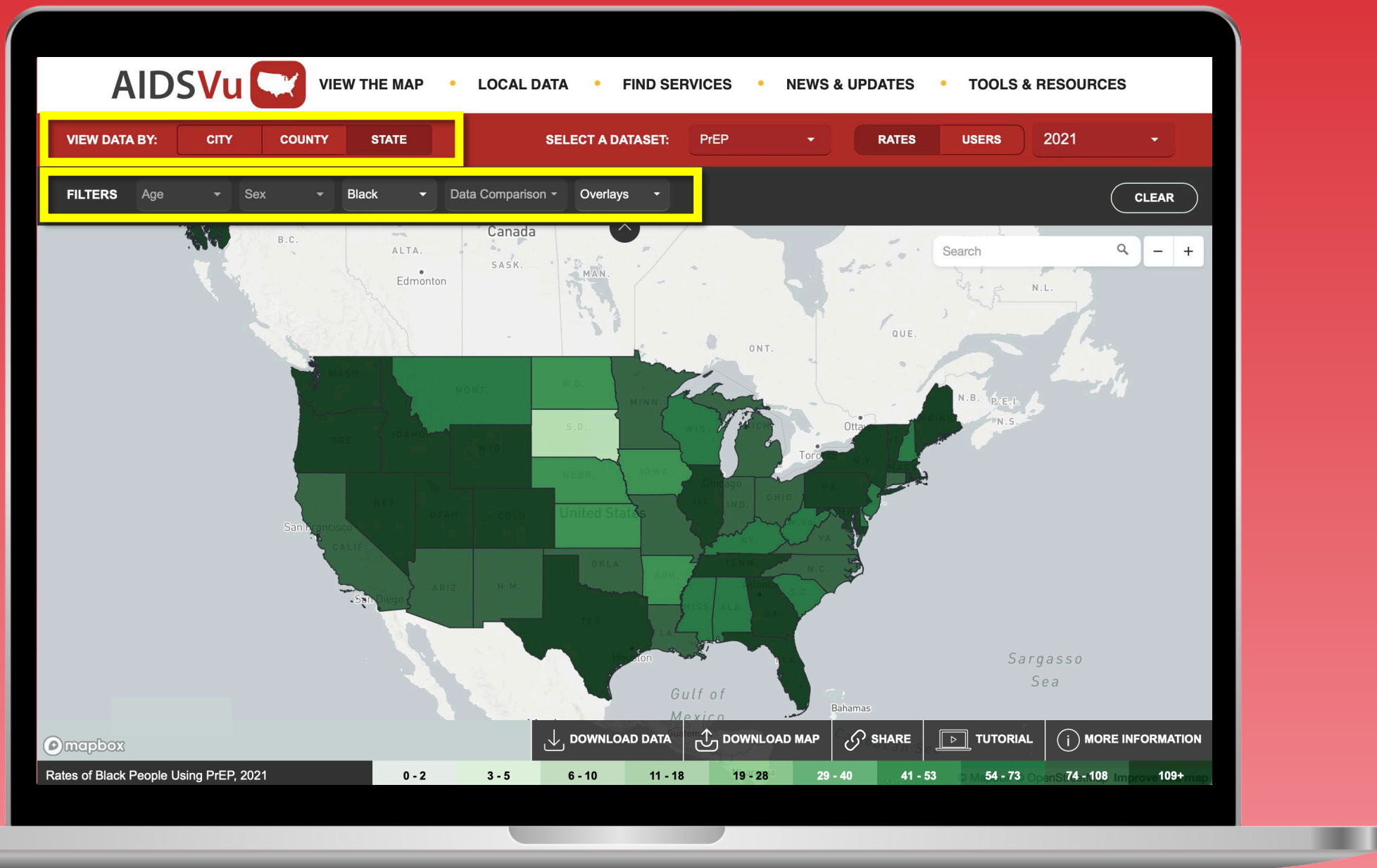
[AIDSVu.org](https://AIDSVu.org) | [Facebook.com/AIDSVu](https://Facebook.com/AIDSVu) | [@AIDSVu](https://@AIDSVu)



# Race/Ethnicity Data on AIDSVu

AIDSVu can stratify key HIV metrics by race/ethnicity at the city, state and county level

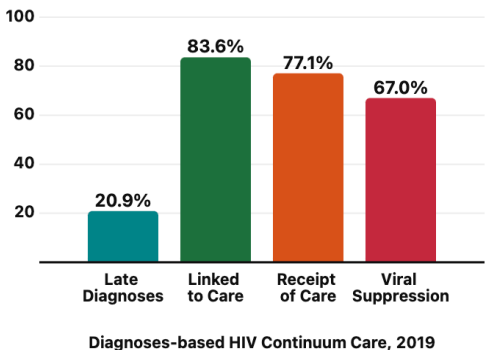
Race/Ethnicity	City Level	State Level	County Level
HIV Prevalence	✓	✓	✓
New HIV Diagnoses	✓	✓	✓
HIV Mortality	✓	✓	
HIV Testing		✓	
HIV Care Continuum Indicators	✓		
PrEP Use		✓	



# Local Profiles: State Data

## HIV Continuum of Care, 2019

Late Diagnoses and Linked to Care are among people newly diagnosed with HIV and Receipt of Care and Viral Suppression are among all people living with HIV.



### Late HIV Diagnoses

A late HIV diagnosis is defined as having an AIDS diagnosis within three months of initial HIV diagnosis.

Number of new HIV diagnoses that were diagnosed late, 2019  
**917**

Percent of new HIV diagnoses that were diagnosed late, 2019  
**20.9%**

### Linked to HIV Care

Linkage to care is defined as having a visit with an HIV health care provider within one month of being diagnosed with HIV.

Number of people diagnosed with HIV and linked to HIV care, 2019  
**3,662**

Percent of people diagnosed with HIV and linked to HIV care, 2019  
**83.6%**

### Receipt of HIV Care

Receipt of HIV care is defined as those living with diagnosed HIV who received medical care for HIV and had at least one CD4 count or HIV viral load test in that year.

Number of people living with HIV who received HIV care, 2019  
**84,213**

Percent of people living with HIV who received HIV care, 2019  
**77.1%**

### HIV Prevalence

Number of people living with HIV, 2019  
**113,478**

Rate of people living with HIV per 100,000 population, 2019  
**615**

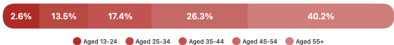
Percent of people living with HIV, by Sex, 2019



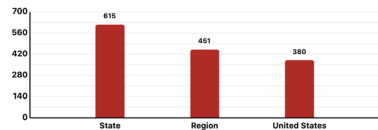
Percent of people living with HIV, by Race/Ethnicity, 2019



Percent of people living with HIV, by Age, 2019



Rate of people living with HIV per 100,000 population, by Geography, 2019



### New HIV Diagnoses

Number of new HIV diagnoses, 2019  
**4,378**

Rate of new HIV diagnoses per 100,000 population, 2019  
**24**

Percent of people newly diagnosed with HIV, by Sex, 2019



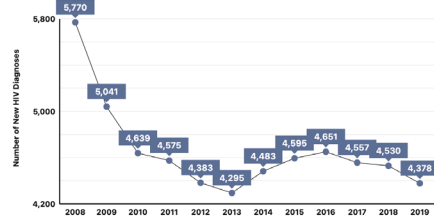
Percent of people newly diagnosed with HIV, by Race/Ethnicity, 2019



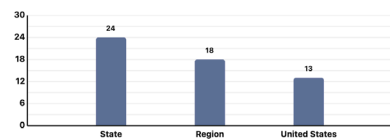
Percent of people newly diagnosed with HIV, by Age, 2019



Number of New HIV Diagnoses, 2008-2019



Rate of people newly diagnosed with HIV per 100,000 population, by Geography, 2019



### Viral Suppression

Viral suppression is defined as those living with diagnosed HIV who had suppressed HIV viral load (<200 copies/mL).

Number of people living with HIV who were virally suppressed, 2019  
**73,187**

Percent of people living with HIV who were virally suppressed, 2019  
**67.0%**

### PrEP-to-Need Ratio (PNR)

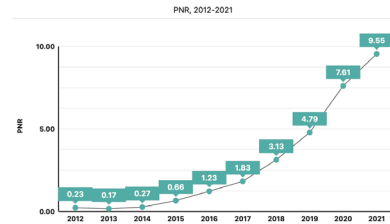
The 2021 PrEP-to-Need Ratio (PNR) is the ratio of the number of PrEP users in 2021 to the number of people newly diagnosed with HIV in 2019. PNR serves as a measurement for whether PrEP use appropriately reflects the need for HIV prevention. A lower PNR indicates more unmet need.

PNR, 2021  
**9.55**

PNR, by Sex, 2021  
Male: 10.10  
Female: 7.44

PNR, by Race/Ethnicity, 2021  
Black: 4.99  
Hispanic/Latino: 7.22  
White: 20.76

PNR, by Age, 2021  
Aged 13-24: 6.48  
Aged 25-34: 9.31  
Aged 35-44: 10.87  
Aged 45-54: 9.75  
Aged 55+: 11.61

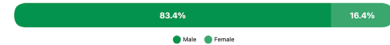


### PrEP (Pre-Exposure Prophylaxis)

Number of PrEP users, 2021  
**41,821**

Rate of PrEP users per 100,000 population, 2021  
**226**

Percent of PrEP users, by Sex, 2021



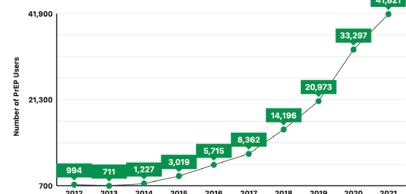
Percent of PrEP users, by Race/Ethnicity, 2021



Percent of PrEP users, by Age, 2021



Number of PrEP Users, 2012-2021



# Deeper Look: PrEP

## DEEPER LOOK: PrEP

The PrEP utilization data on AIDSvu reveal that the number of PrEP users in the U.S. increased by 23% from 2020 to 2021, continuing a trend of consistent growth in PrEP use since 2012. In addition, AIDSvu's PrEP use data by race/ethnicity reveal that Black people represented 14% of PrEP users in 2021, but 42% of new HIV diagnoses in 2020, while Hispanic/Latinx people represented 17% of PrEP users in 2021 and 27% of new HIV diagnoses in 2020.

PrEP, or pre-exposure prophylaxis, is when people at risk for HIV take or receive HIV medicine regularly to lower their chances of getting infected with HIV. The Centers for Disease Control and Prevention (CDC) has estimated that approximately 1.2 million people are at high risk for HIV exposure and could benefit from comprehensive HIV prevention strategies, including PrEP.

What is Pre-exposure prophylaxis (PrEP)?

- 1 Pre = before
- 2 Exposure = coming into contact with HIV
- 3 Prophylaxis = treatment to prevent an infection from happening

The PrEP utilization data on AIDSvu reveal a 56% average annual increase in persons using PrEP across the U.S. — including a 23% increase from 2020 to 2021. While these data point to significant growth in PrEP use nationwide, they also highlight important disparities in PrEP use across different sexes, races/ethnicities, age groups, geographic location, socioeconomic status, and access to care. In the United States, 30,346 people were diagnosed with HIV in 2020, underscoring the need to continue expanding the use of PrEP and other comprehensive HIV prevention strategies.



## What These Data Tell Us

(PrEP use data is from 2021, and new diagnoses data is from 2020, unless otherwise noted. Due to the COVID-19 pandemic, all data from 2020 should be interpreted with caution)

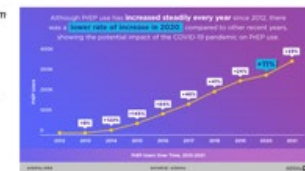
Overall PrEP Use

- 1 The number of PrEP users in the U.S. increased by 23% from 2020 to 2021, continuing a trend of consistent growth in PrEP use since 2012.
- 2 Although PrEP use has increased steadily every year since 2012, there was a much lower rate of increase in 2020 of only 11% from 2019. This lower pace of growth occurred during the COVID-19 pandemic.
- 3 The South accounted for 52% of HIV diagnoses but only accounted for 39% of PrEP users.
- 4 In 2021, states that had expanded their Medicaid programs had rates of PrEP use that were 1.5X higher than states that did not expand Medicaid.
- 5 Among all PrEP users in the U.S., 92% were male and only 8% were female, despite the fact that women comprised 18% of new HIV diagnoses.
- 6 Teenagers and young adults (aged 13-24 years) had the greatest unmet need for PrEP among all age groups, with a PNR of 6\* accounting for 20% of new HIV diagnoses but only 13% of PrEP users.

\* PrEP-to-Need Ratio (PNR) is the ratio of the number of PrEP users in 2021 to the number of people newly diagnosed with HIV in 2019. It is a measurement for whether PrEP use appropriately reflects the need for HIV prevention. A lower PNR indicates more unmet need.

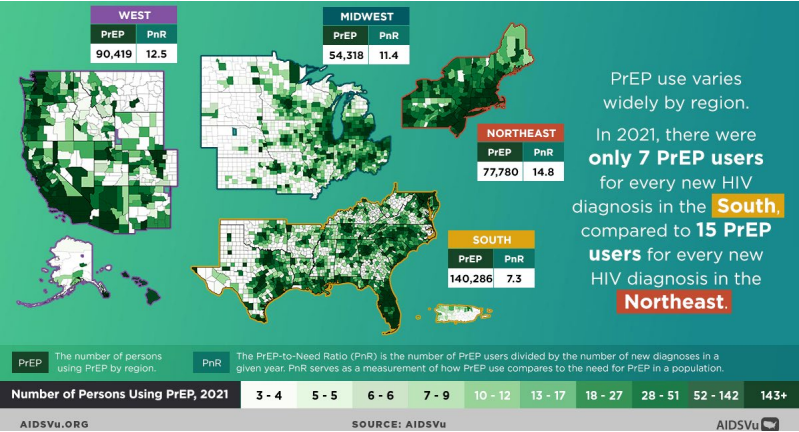
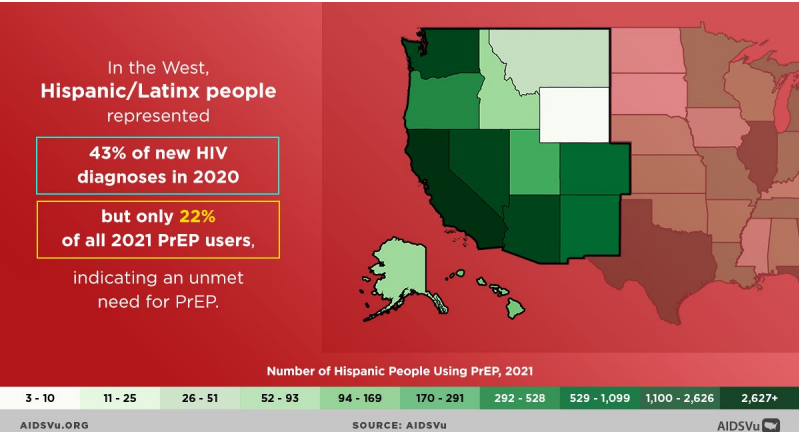
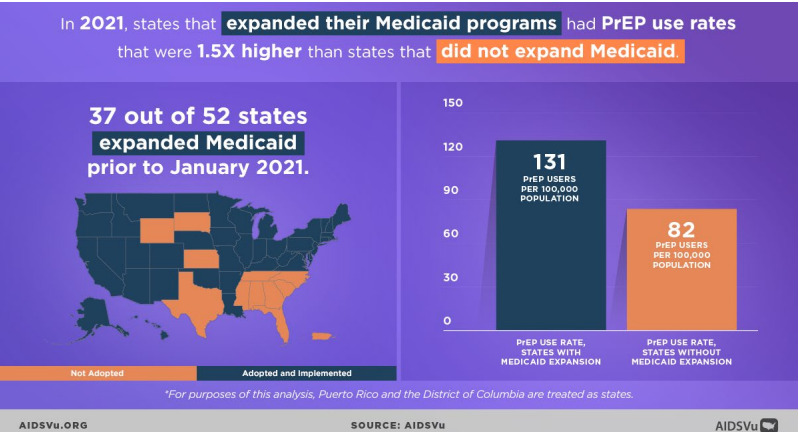
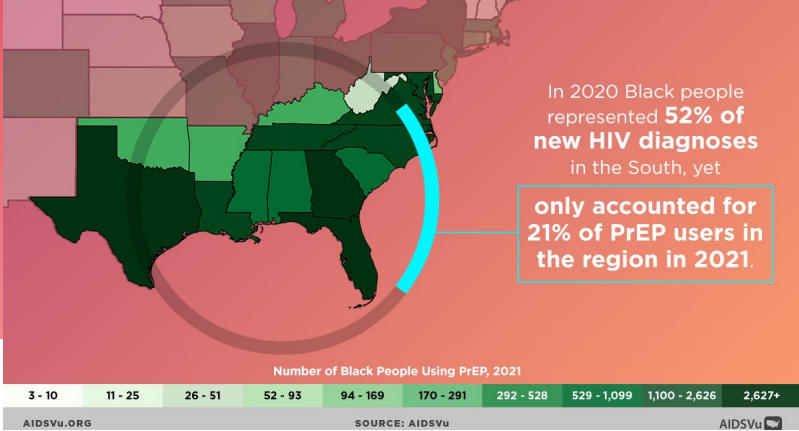
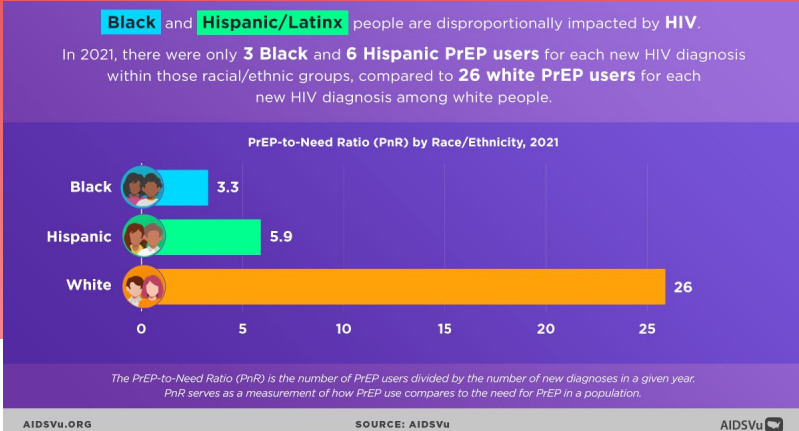
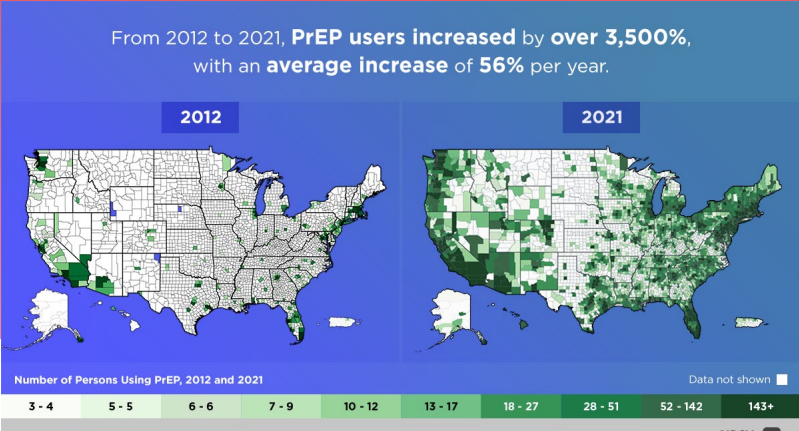
PrEP Use by Race/Ethnicity

- 1 Black people represented 14% of PrEP users, but 42% of new HIV diagnoses.
- 2 Hispanic/Latinx people represented 17% of PrEP users and 27% of new HIV diagnoses.
- 3 White people represented 65% of PrEP users and 26% of new HIV diagnoses.
- 4 Regionally, Black people made up 52% of new HIV diagnoses in the South, but only 21% of PrEP users in the South; in the Midwest, Black people made up 48% of new HIV diagnoses, but only 12% of PrEP users.
- 5 Of the 7 states with the greatest unmet need for PrEP among Black people, three were in the South (Arkansas, Mississippi, and Alabama) and three were in the Midwest (North Dakota, South Dakota, and Iowa). These states have a PrEP-to-Need Ratio (PNR) of less than 2 (i.e., fewer than 2 PrEP users for every new HIV diagnosis).
- 6 In the West, Hispanic/Latinx people represented 43% of new HIV diagnoses but only represented 22% of all PrEP users.





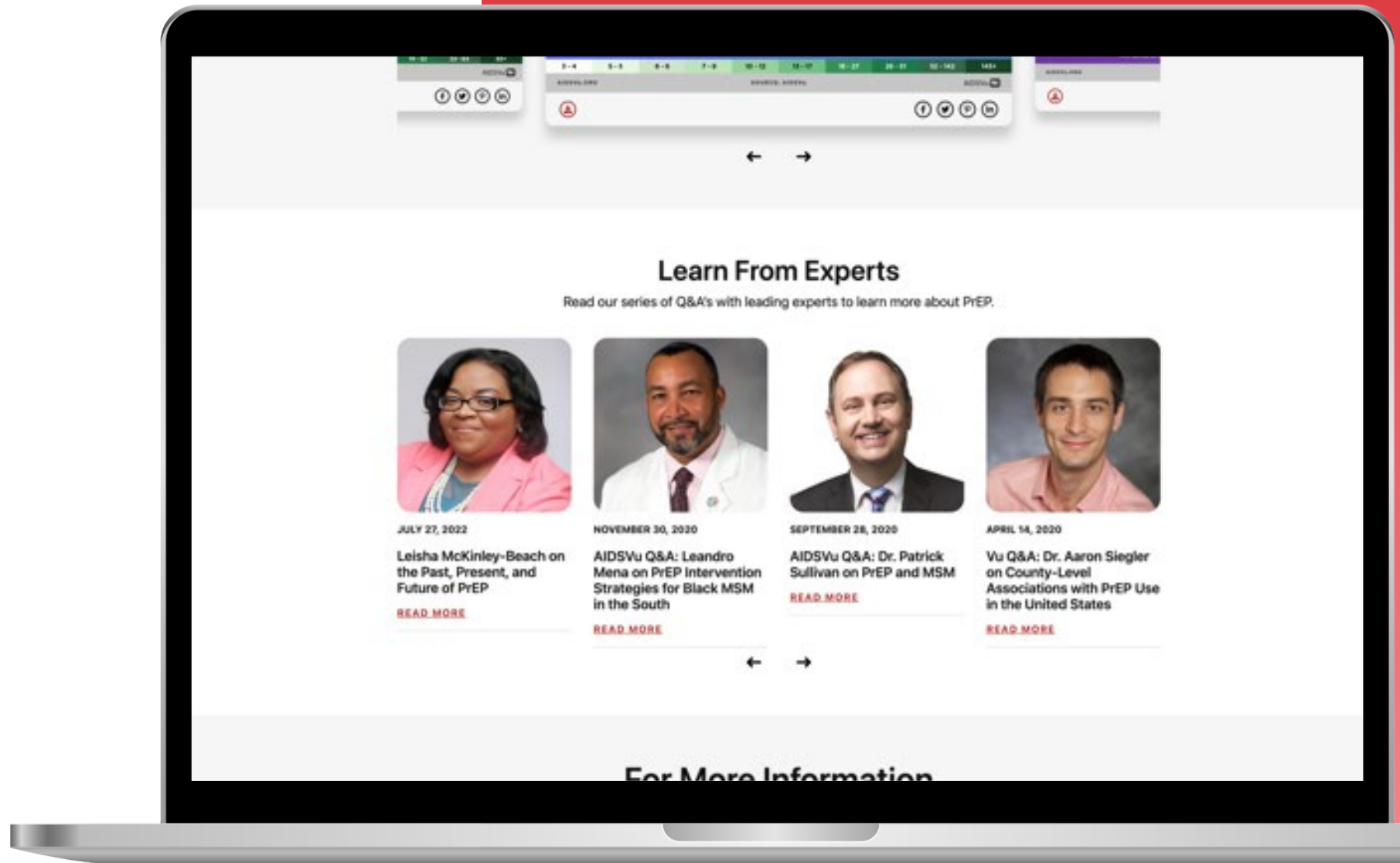
# Infographics



# Q&As

## Learn from the experts

Read our series of Q&A's with leading experts to learn more about PrEP.



# Discussion

# Questions?

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