



HIV VACCINE  
TRIALS NETWORK

# The State of the Epidemic & The Faith Response



Inquiries to [ulyssesburley@ubthecure.com](mailto:ulyssesburley@ubthecure.com)



12/17/2021

1

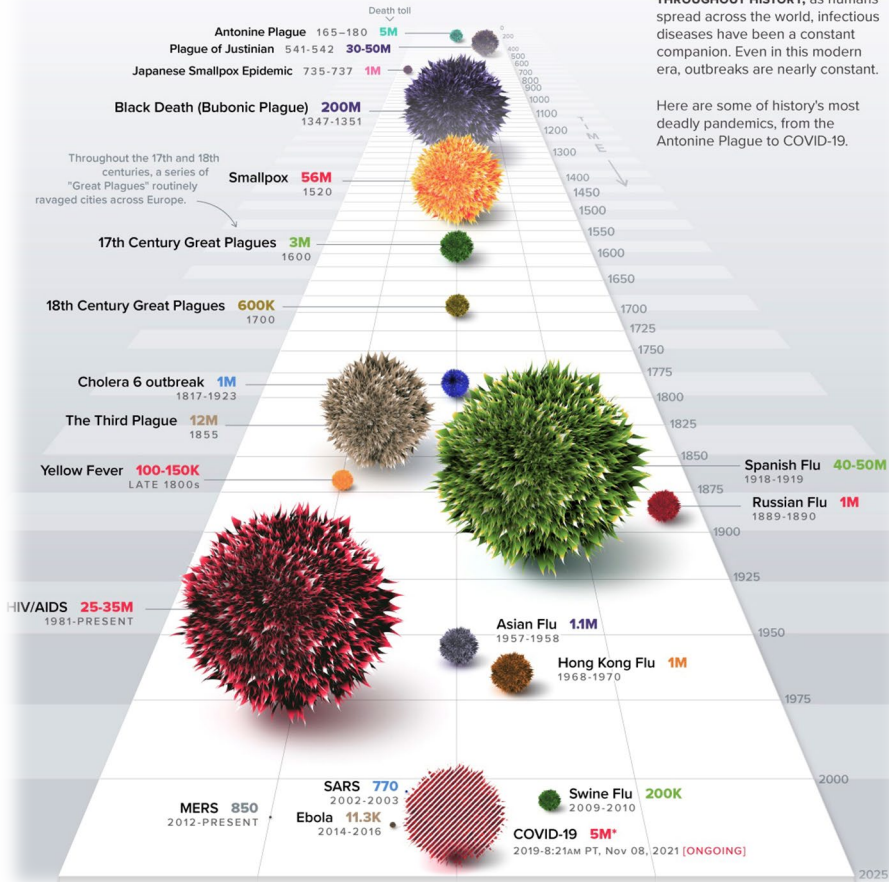
HIV VACCINE  
TRIALS NETWORK

# World Without HIV



# HISTORY OF PANDEMICS

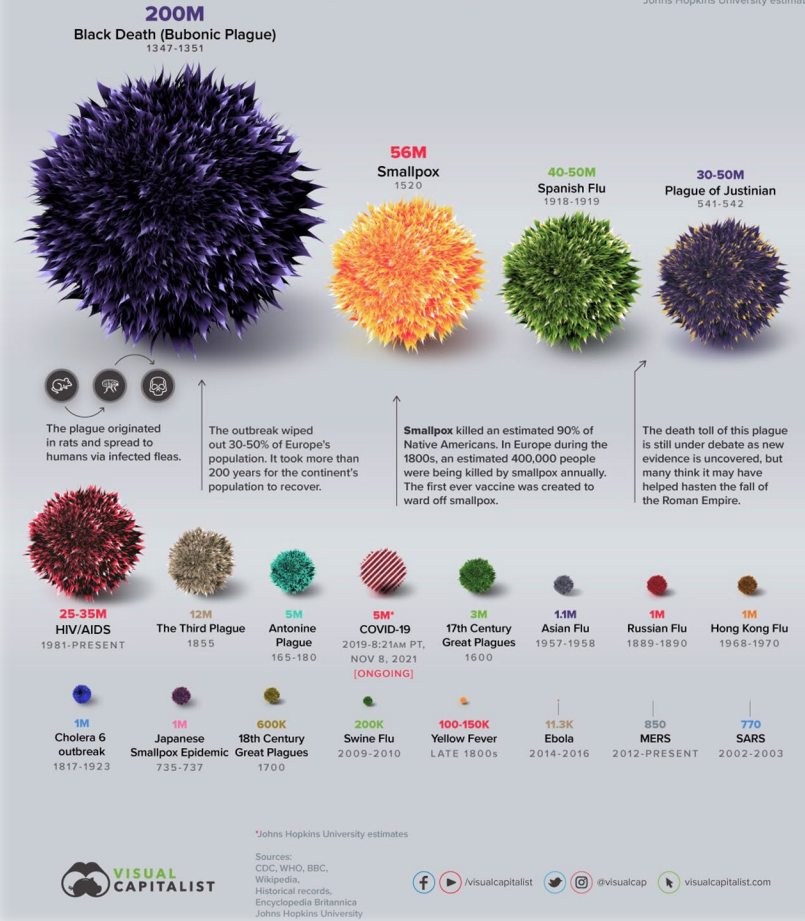
PAN-DEM-IC (of a disease) prevalent over a whole country or the world.



THROUGHOUT HISTORY, as humans spread across the world, infectious diseases have been a constant companion. Even in this modern era, outbreaks are nearly constant.

Here are some of history's most deadly pandemics, from the Antonine Plague to COVID-19.

## DEATH TOLL [HIGHEST TO LOWEST]



WHO officially declared COVID-19 a pandemic on Mar 11, 2020. It is hard to calculate and forecast the impact of COVID-19 because the disease is new to medicine, and data is still coming in.

\*Johns Hopkins University estimates








Sources: CDC, WHO, BBC, Wikipedia, Historical records, Encyclopedia Britannica, Johns Hopkins University

Facebook: /visualcapitalist, Twitter: @visualcap, Instagram: @visualcap, LinkedIn: visualcapitalist



HIV VACCINE TRIALS NETWORK

# Summary of the global HIV epidemic, 2020

	People living with HIV in 2020	People acquiring HIV in 2020	People dying from HIV-related causes in 2020
 <b>Total</b>	<b>37.7 million</b> [30.2–45.1 million]	<b>1.5 million</b> [1.0–2.0 million]	<b>680 000</b> [480 000–1.0 million]
 <b>Adults</b> (15+ years)	<b>36.0 million</b> [28.9–43.2 million]	<b>1.3 million</b> [910 000–1.8 million]	<b>580 000</b> [400 000–850 000]
 <b>Women</b> (15+ years)	<b>19.3 million</b> [15.5–23.1 million]	<b>660 000</b> [450 000–920 000]	<b>240 000</b> [170 000–360 000]
 <b>Men</b> (15+ years)	<b>16.7 million</b> [13.3–20.1 million]	<b>640 000</b> [460 000–890 000]	<b>340 000</b> [230 000–490 000]
 <b>Children</b> (<15 years)	<b>1.7 million</b> [1.2–2.2 million]	<b>150 000</b> [100 000–240 000]	<b>99 000</b> [68 000–160 000]

Source: UNAIDS/WHO estimates



# HIV and COVID

- Risk of dying from COVID-19 among people with HIV was 2x that of the general population.
- 67% of people living with HIV in Sub-Saharan Africa
- In July 2021, less than 3% of people in Africa had received at least one dose of a COVID-19 vaccine.
- HIV testing declined by 41%
- Referrals for diagnosis and treatment declined by 37%

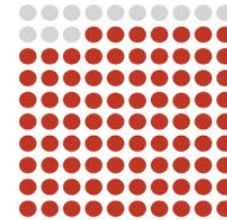


# HIV in the U.S.



In 2019, an estimated **1,189,700 PEOPLE** had HIV.

For every 100 people with HIV

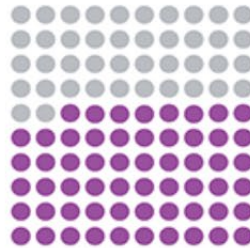


**87**  
knew their  
HIV status.

Although more than half of adults and adolescents with diagnosed HIV are virally suppressed, more work is needed to increase these rates. For every 100 adults and adolescents with diagnosed HIV in 2019:



**76**  
received  
some  
HIV care



**58**  
were  
retained  
in care †

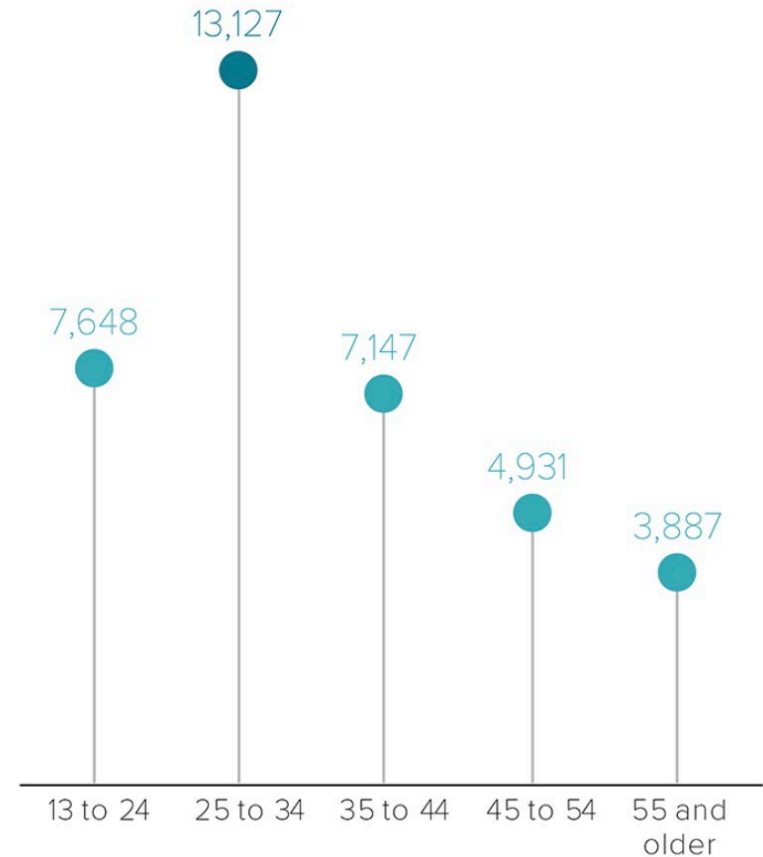


**66**  
were virally  
suppressed ‡



# HIV in the U.S.

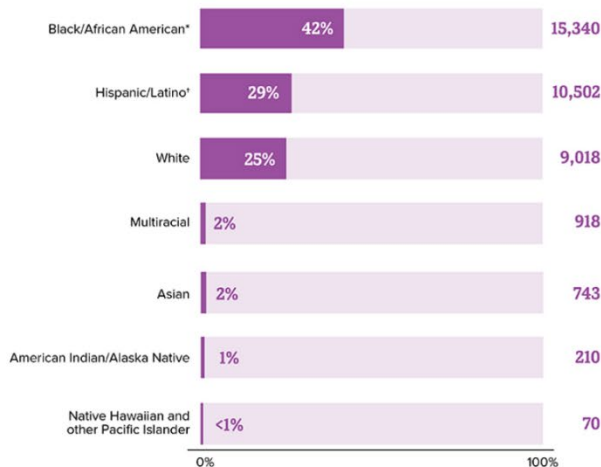
The number of new HIV diagnoses was highest among people aged 25 to 34.



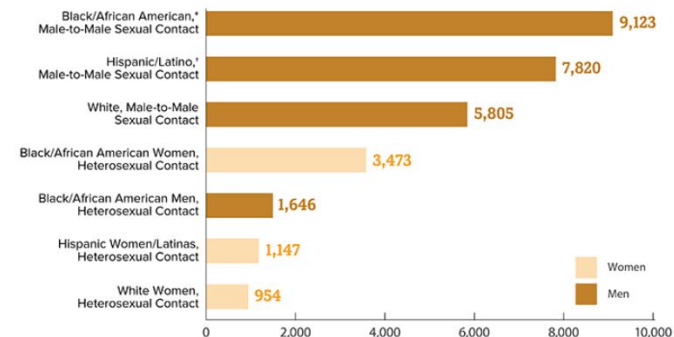


# HIV in the U.S.

**Black/African American and Hispanic/Latino people are disproportionately affected by HIV.**



**Gay and bisexual men are the population most affected by HIV.**

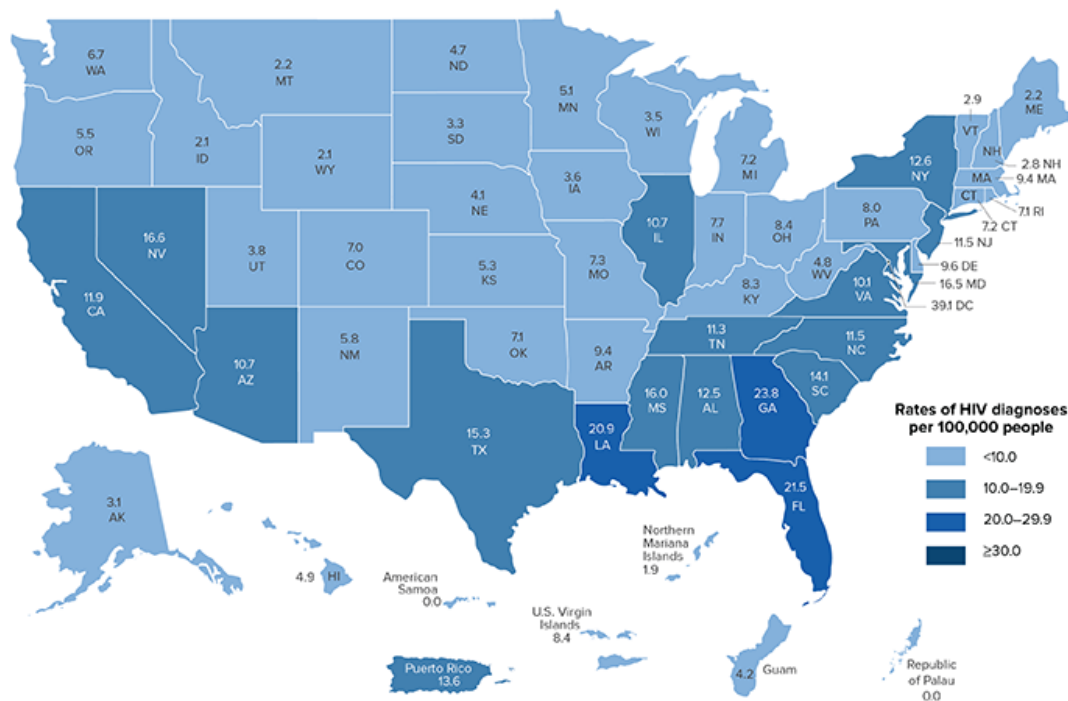






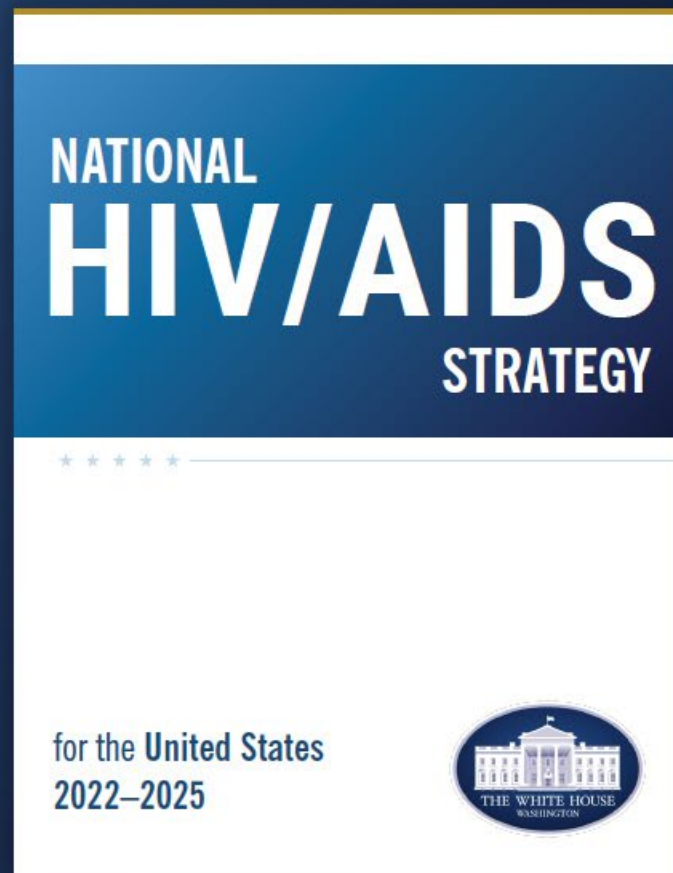
## Rates of New HIV Diagnoses in the US and Dependent Areas, 2018

The highest rates of  
new HIV diagnoses were  
mainly in the South.



Source: CDC. Diagnoses of HIV infection in the United States and dependent areas, 2018. *HIV Surveillance Report* 2020;31.

# National HIV/AIDS Strategy 2022–2025



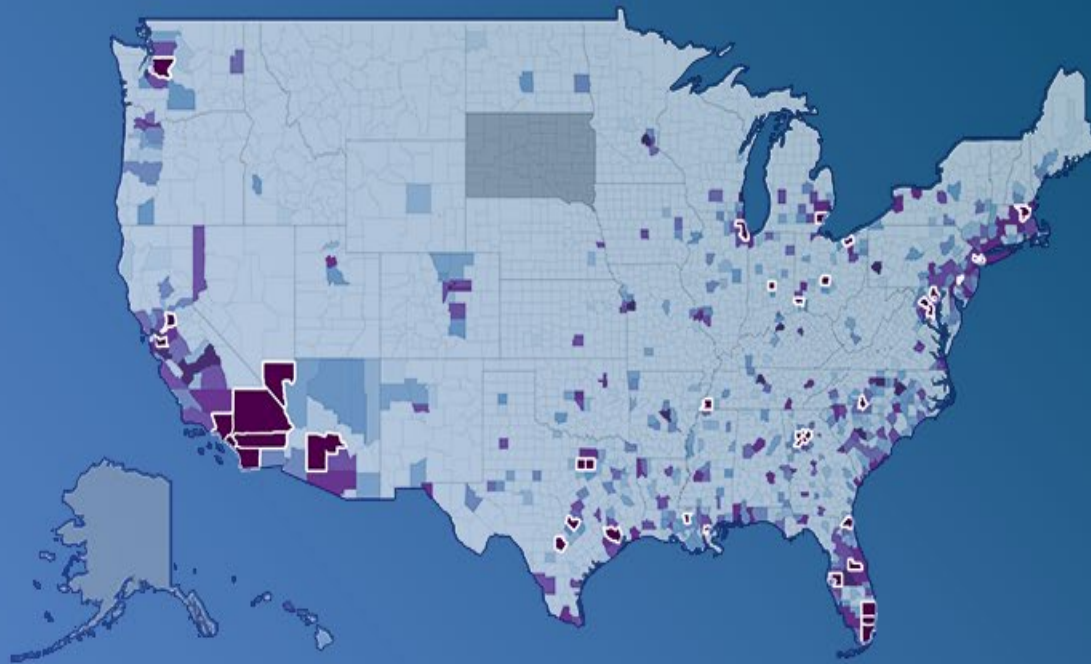
12/17/2021

10

HIV VACCINE  
TRIALS NETWORK

# Ending the HIV Epidemic: A Plan for America

48 Highest Burden Counties + DC + San Juan + 7 States with Substantial Rural HIV Burden



NUMBER OF PERSONS NEWLY DIAGNOSED WITH HIV, 2016



SAN JUAN - NUMBER OF PERSONS NEWLY DIAGNOSED WITH HIV, 2012-2016



ALABAMA

ARKANSAS

KENTUCKY



MISSISSIPPI



MISSOURI

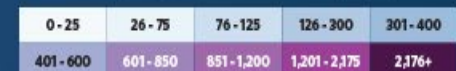


OKLAHOMA



SOUTH CAROLINA

NUMBER OF PERSONS NEWLY DIAGNOSED WITH HIV, 2016



AIDSVU.ORG

SOURCE: U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

AIDSVU





HIV VACCINE  
TRIALS NETWORK

Ending  
the  
HIV  
Epidemic  
A PLAN FOR AMERICA

**GOAL:**

**75%**

reduction in new  
HIV infections  
by 2025

and at least  
**90%**  
reduction  
by 2030.

[www.hiv.gov](http://www.hiv.gov)



12/17/2021

12

HIV VACCINE  
TRIALS NETWORK

# Key Strategies from *Ending the HIV Epidemic: A Plan for America*



## DIAGNOSE

all individuals with HIV as early as possible after infection.



## TREAT

the infection rapidly and effectively after diagnosis, achieving sustained viral suppression.



## PREVENT

new HIV transmissions by using proven interventions, including pre-exposure prophylaxis (PrEP) and syringe services programs (SSPs).



## RESPOND

rapidly to detect and respond to growing HIV clusters and prevent new HIV infections.

**Cure**



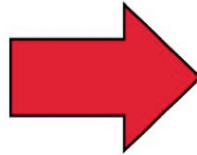
**Treatment**

**+**

**Prevention**



**Vaccine**



**World Without HIV**



This quick-reference chart compares antiretroviral (ARV) options for the treatment of HIV, including adult dosing and dietary restrictions. Visit [poz.com/drugchart](http://poz.com/drugchart) for more info.

\*Generic version available in the U.S. (Pills not shown actual size)

**Complete Regimens**

**ATRIPLA\***  
efavirenz + tenofovir disoproxil fumarate + emtricitabine  
One tablet once a day. Each tablet contains 600 mg efavirenz + 300 mg tenofovir disoproxil fumarate + 200 mg emtricitabine. Take on an empty stomach. Dose should be taken at bedtime to minimize dizziness, drowsiness and impaired concentration.

**BIKTARVY**  
bictegravir + tenofovir alafenamide + emtricitabine  
One tablet once a day. Each tablet contains 50 mg bictegravir + 25 mg tenofovir alafenamide + 200 mg emtricitabine. Take with or without food.

**CABENUVA**  
cabotegravir + rilpivirine  
A long-acting injectable regimen administered as two intramuscular injections every four weeks (or eight weeks pending FDA approval) after a one-month lead-in period with oral Vocabria (cabotegravir + Edurant (rilpivirine)). Take with food.

**COMPLERA**  
rilpivirine + tenofovir disoproxil fumarate + emtricitabine  
One tablet once a day. Each tablet contains 25 mg rilpivirine + 300 mg tenofovir disoproxil fumarate + 200 mg emtricitabine. Take with a meal.

**DELSTRIGO**  
doravirine + tenofovir disoproxil fumarate + lamivudine  
One tablet once a day. Each tablet contains 100 mg doravirine + 300 mg tenofovir disoproxil fumarate + 300 mg lamivudine. Take with or without food.

**DOVATO**  
dolutegravir + lamivudine  
One tablet once a day. Each tablet contains 50 mg dolutegravir + 300 mg lamivudine. Take with or without food.

**GENVOYA**  
elvitegravir + cobicistat + tenofovir alafenamide + emtricitabine  
One tablet once a day. Each tablet contains 150 mg elvitegravir + 150 mg cobicistat + 10 mg tenofovir alafenamide + 200 mg emtricitabine. Take with food.

**Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs, or non-nukes)**

**CIMDUO**  
tenofovir disoproxil fumarate + lamivudine  
One tablet once a day. Each tablet contains 300 mg tenofovir disoproxil fumarate + 300 mg lamivudine. Take with or without food.

**COMBIVIR\***  
zidovudine + lamivudine  
One tablet twice a day. Each tablet contains 300 mg zidovudine + 150 mg lamivudine. Take with or without food.

**DESCOVY**  
tenofovir alafenamide + emtricitabine  
One tablet once a day. Each tablet contains 25 mg tenofovir alafenamide + 200 mg emtricitabine. Take with or without food.

**EMTRIVA\***  
emtricitabine (also known as FTC)  
One 200 mg capsule once a day. Take with or without food.

**EPIVIR\***  
lamivudine (also known as 3TC)  
One 300 mg tablet once a day, or one 150 mg tablet twice a day. Take with or without food. Also approved for the treatment of hepatitis B virus but at a lower dose. People living with both viruses should use the HIV dose.

**EPZICOM\***  
abacavir + lamivudine  
One tablet once a day. Each tablet contains 600 mg abacavir + 300 mg lamivudine. Take with or without food. Should be used only by individuals who are HLA-B\*57:01 negative.

**RETROVIR\***  
zidovudine (also known as AZT)  
One 300 mg tablet twice a day. Take with or without food.

**TEMIXYS**  
tenofovir disoproxil fumarate + lamivudine  
One tablet once a day. Each tablet contains 300 mg tenofovir disoproxil fumarate + 300 mg lamivudine. Take with or without food.

**TRUVADA\***  
tenofovir disoproxil fumarate + emtricitabine  
One tablet once a day. Each tablet contains 300 mg tenofovir disoproxil fumarate + 200 mg emtricitabine. Take with or without food.

**Protease Inhibitors (PIs)**

**EDURANT**  
rilpivirine  
One 25 mg tablet once a day. Take with food.

**INTELENCE**  
etravirine  
One 200 mg tablet twice a day. Take with food.

**PIFELTRO**  
doravirine  
One 100 mg tablet once a day. Take with or without food.

**SUSTIVA\***  
efavirenz  
One 600 mg tablet once a day, or three 200 mg capsules once a day. Take on an empty stomach or with a low-fat snack. Dose should be taken at bedtime to minimize dizziness, drowsiness and impaired concentration.

**EVOTAZ**  
atazanavir + cobicistat  
One tablet once a day. Each tablet contains 300 mg atazanavir + 150 mg cobicistat. Take with food.

**KALETRA\***  
lopinavir + ritonavir  
Two tablets twice a day, or four tablets once a day, depending on HIV drug resistance. Each tablet contains 200 mg lopinavir + 50 mg ritonavir. Take with or without food.

**PREZCOBIX**  
darunavir + cobicistat  
One tablet once a day. Each tablet contains 800 mg darunavir + 150 mg cobicistat. Take with food.

**PREZISTA**  
darunavir  
One 800 mg tablet (or two 400 mg tablets) plus one 100 mg Norvir tablet twice a day, depending on drug resistance. Take with food.

**Complete Regimens**

**JULUCA**  
dolutegravir + rilpivirine  
One tablet once a day. Each tablet contains 50 mg dolutegravir + 25 mg rilpivirine. Take with a meal.

**ODEFSEY**  
rilpivirine + tenofovir alafenamide + emtricitabine  
One tablet once a day. Each tablet contains 25 mg rilpivirine + 25 mg tenofovir alafenamide + 200 mg emtricitabine. Take with a meal.

**STRIBILD**  
elvitegravir + cobicistat + tenofovir disoproxil fumarate + emtricitabine  
One tablet once a day. Each tablet contains 150 mg elvitegravir + 150 mg cobicistat + 300 mg tenofovir disoproxil fumarate + 200 mg emtricitabine. Take with food.

**SYMFI AND SYMFILO**  
efavirenz + tenofovir disoproxil fumarate + lamivudine  
One tablet of either Symfi or Symfi Lo once a day. Each tablet of Symfi contains 600 mg efavirenz + 300 mg tenofovir disoproxil fumarate + 300 mg lamivudine. Each tablet of Symfi Lo (above) contains 400 mg efavirenz + 300 mg tenofovir disoproxil fumarate + 300 mg lamivudine. Take on an empty stomach. Dose should be taken at bedtime to minimize dizziness, drowsiness and impaired concentration.

**SYMTUZA**  
darunavir + cobicistat + tenofovir alafenamide + emtricitabine  
One tablet once a day. Each tablet contains 800 mg darunavir + 150 mg cobicistat + 10 mg tenofovir alafenamide + 200 mg emtricitabine. Take with food.

**TRIUCEO**  
dolutegravir + abacavir + lamivudine  
One tablet once a day. Each tablet contains 50 mg dolutegravir + 600 mg abacavir + 300 mg lamivudine. Take with or without food. Should be used only by individuals who are HLA-B\*57:01 negative.

**Integrase Inhibitors**

**VIREAD\***  
tenofovir disoproxil fumarate  
One 300 mg tablet once a day. Take with or without food.

**ZIAGEN\***  
abacavir  
One 300 mg tablet twice a day, or two 300 mg tablets once a day. Take with or without food. Should be used only by individuals who are HLA-B\*57:01 negative.

**RUKOBIA**  
fostemsavir  
One 600 mg tablet twice a day for people with HIV treatment experience. Take with or without food.

**SELZENTRY**  
maraviroc  
One 150 mg, 300 mg or 600 mg tablet twice a day, depending on other meds used, for people with HIV treatment experience. Take with or without food.

**TROGARZO**  
ibalizumab  
A long-acting injectable administered intravenously as a single loading dose of 2,000 mg followed by a maintenance dose of 800 mg every two weeks for people with HIV treatment experience.

**NORVIR\***  
ritonavir  
Six 100 mg tablets twice a day. The full dose of Norvir is rarely used. It is most often used at lower doses to boost the levels of other ARVs in the blood. Take with food.

**TYBOST**  
cobicistat  
One 150 mg tablet once a day in combination with ARVs that require boosting. Used only to boost other drugs. Take with food.

**Integrase Inhibitors**

**REYATAZ\***  
atazanavir  
Two 200 mg capsules once a day, or one 300 mg capsule plus one 100 mg Norvir tablet once a day. Take with food.

**ISENTRESS**  
raltegravir  
Two 600 mg Isentress HD tablets (above) once a day for those who are treatment naive or whose virus has been suppressed on an initial regimen of Isentress. One 400 mg Isentress tablet twice daily for people with HIV treatment experience. Take with or without food.

**TIVICAY**  
dolutegravir  
One 50 mg tablet once a day for those first starting ARV therapy or for those who have not used an integrase inhibitor in the past. One 50 mg tablet twice a day for treatment-experienced individuals who have HIV that is resistant to other integrase inhibitors and when taken with certain ARVs. Take with or without food.

**VOCABRIA**  
cabotegravir  
One 30 mg tablet taken once a day with once-daily Edurant injections or for short-term treatment. Take with food.

**These antiretroviral medications are rarely prescribed and no longer recommended:**

**APTIVUS**  
tipranavir

**CRIXIVAN**  
indinavir

**FUZEON**  
efavirenz

**INVIRASE**  
saquinavir

**LEXIVA**  
fosamprenavir

**TRIZIVIR**  
abacavir + zidovudine + lamivudine

**VIRACEPT**  
nelfinavir

**VIRAMUNE**  
nevirapine

**ZERIT**  
stavudine

ART

# Treatment as Prevention

"If you are durably virologically suppressed you will not transmit to your partner... I'll say this again, for somebody who is in a discordant couple, if the person [with HIV] is virologically suppressed, 'durably' --there is no virus in their system, hasn't been for several months -- your chance of acquiring HIV from that person is ZERO. Let's be clear about that: ZERO. If that person the next day stops therapy for two weeks and rebounds, your chance goes up. That's why we talk about 'durable' viral suppression... You're as durably virologically suppressed as good as your adherence."

-Carl W. Dieffenbach, Ph.D., Director, Division of AIDS, NIAID, NIH. [NIH Video interview](#) (November, 2016)







**U=U**

---

**UNDETECTABLE  
=  
UNTRANSMITTABLE**

---

A PERSON LIVING WITH HIV  
WHO HAS AN UNDETECTABLE  
VIRAL LOAD DOES NOT  
TRANSMIT THE VIRUS TO THEIR  
PARTNERS.

The International AIDS Society is proud to endorse the U=U consensus statement of the Prevention Access Campaign.



**Cure**



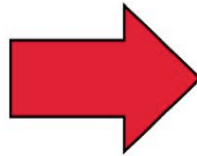
**Treatment**

**+**

**Prevention**



**Vaccine**



**World Without HIV**

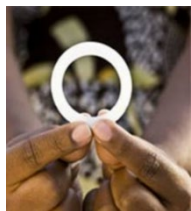
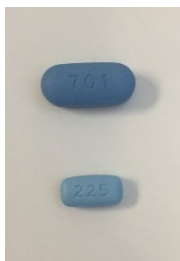




HIV VACCINE  
TRIALS NETWORK

# Prevention research has not slowed

Alternatives for delivery of  
antiretrovirals as PrEP  
(and as treatment)



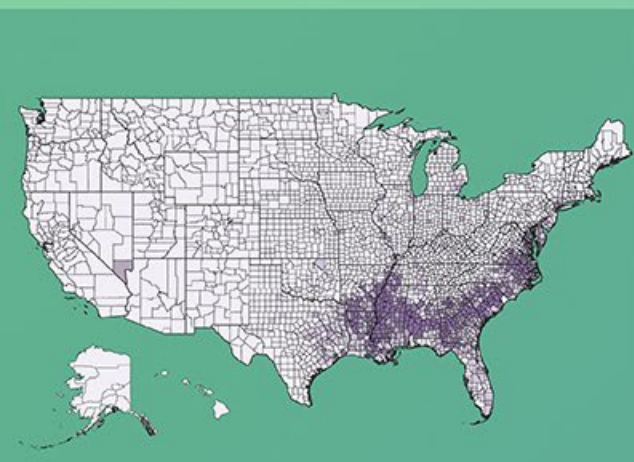
New biologic agents as  
PrEP (and treatment?)

Large studies ongoing of  
HIV vaccine candidates



HIV VACCINE  
TRIALS NETWORK

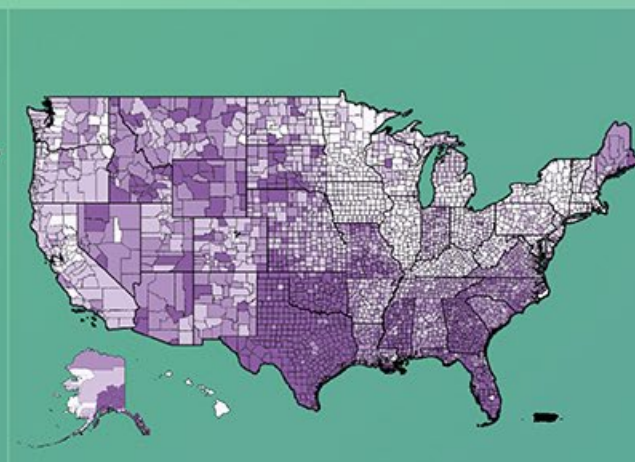
Counties with higher concentrations of **Black** residents, higher levels of **uninsured** residents, or **lower levels of education** had **lower levels of PrEP use** relative to their **need for PrEP**.



Black Population, 2018

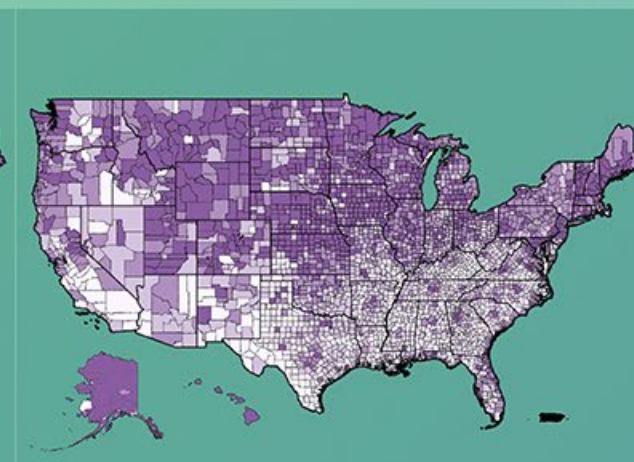
0% - 10%	10% - 20%	20% - 30%
30% - 40%	>40%	

Note: May include people of Hispanic origin.



Percent of Population Lacking Health Insurance, 2016

0 - 7.0	7.1 - 10.5
10.6 - 14.0	14.1+



Percent of Population with a High School Education, 2016

0 - 81.5	81.6 - 87.0
87.1 - 90.5	90.6+

**JUSTICE**

**Stigmatisation**

**Cure**

**Treatment**

**+**

**Prevention**

**Vaccine**

**World Without HIV**



What's  
**Faith?**  
got to do with it



12/17/2021

22

HIV VACCINE  
TRIALS NETWORK



HIV VACCINE  
T R I A L S   N E T W O R K

## Expanded Faith Initiative



HIV VACCINE  
T R I A L S   N E T W O R K

# HVTN Faith Initiative Legacy







Ulysses Burley, MD, MPH  
Project Director, HVTN Faith Initiative



# Initiative Summary

- **8 Faith Ambassadors**
- **56 Faith Consultants**
- **2 administrative staff**
- **HIV & COVID-19 focused messages/education**
- **Ambassador faiths: Christian, Muslim, Baha'i, Buddhism, and Native/Indigenous**
- **Faith Reach: Christian, Muslim, Jewish, Sikhism, Hindu, Baha'i, Buddhism**



# Thank you!



HIV VACCINE  
TRIALS NETWORK



HIV VACCINE  
TRIALS NETWORK