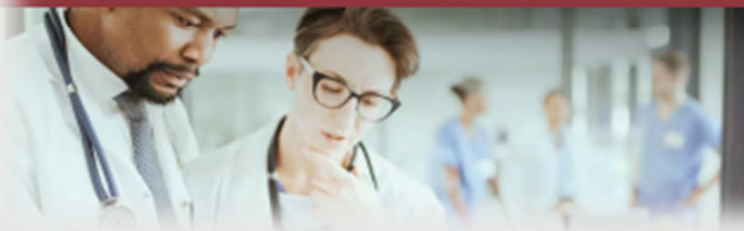


October 16, 2024



## Integrating HIV Testing, Management, and Prevention in Primary Care



Presented by: Jennifer Sobolik, CNP, AACRN, AAHIVS

## SEMINAR AGENDA



Jenn | *she/her/hers*

Jenn Sobolik has no financial disclosures

9:00 am – 10:00 am CT

*10-minute break*

10:10 am – 11:10 am CT

*10-minute break*

11:20 am – 12:30 pm CT

HIV Pathophysiology and HIV Testing

HIV Management in Primary Care

HIV Prevention – Medications and Harm Reduction Strategies



# FUNDING ACKNOWLEDGEMENT

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The content in this presentation are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, HRSA, HHS, or the U.S. Government.

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# UNCONSCIOUS BIAS DISCLOSURE

MWAETC recognizes that language is constantly evolving, and while we make every effort to avoid bias and stigmatizing terms, we acknowledge that unintentional lapses may occur in our presentations.

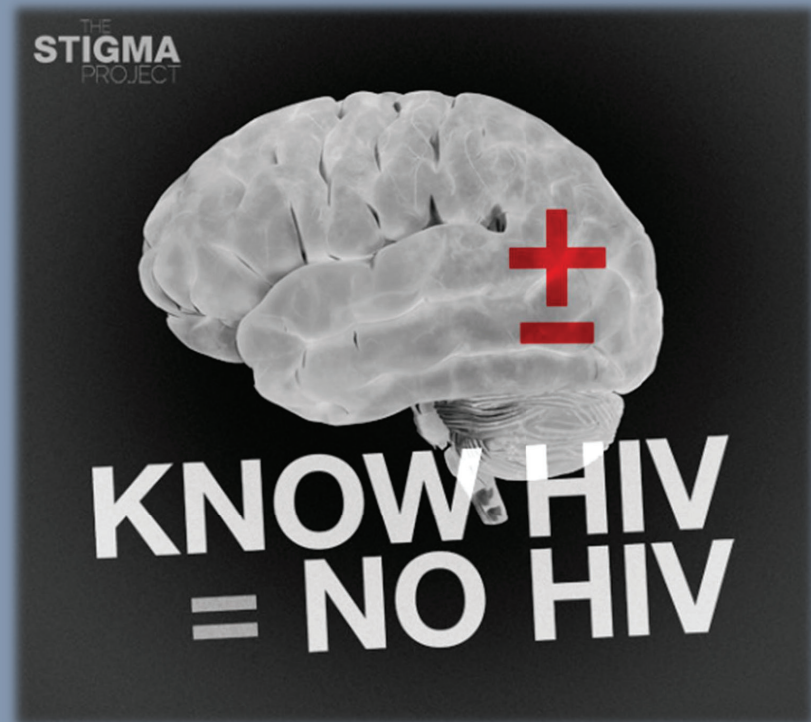
We value your feedback and encourage you to share any concern related to language, images, or concepts that may be offensive or stigmatizing.

Your input will help us refine and improve our presentations, ensuring they remain inclusive and respectful to participants.



- Pathophysiology of HIV
- Common symptoms
- How HIV is acquired and not acquired
- Person-first language
- CDC testing guidelines
- Laboratory tests

## HIV PATHOPHYSIOLOGY AND HIV TESTING



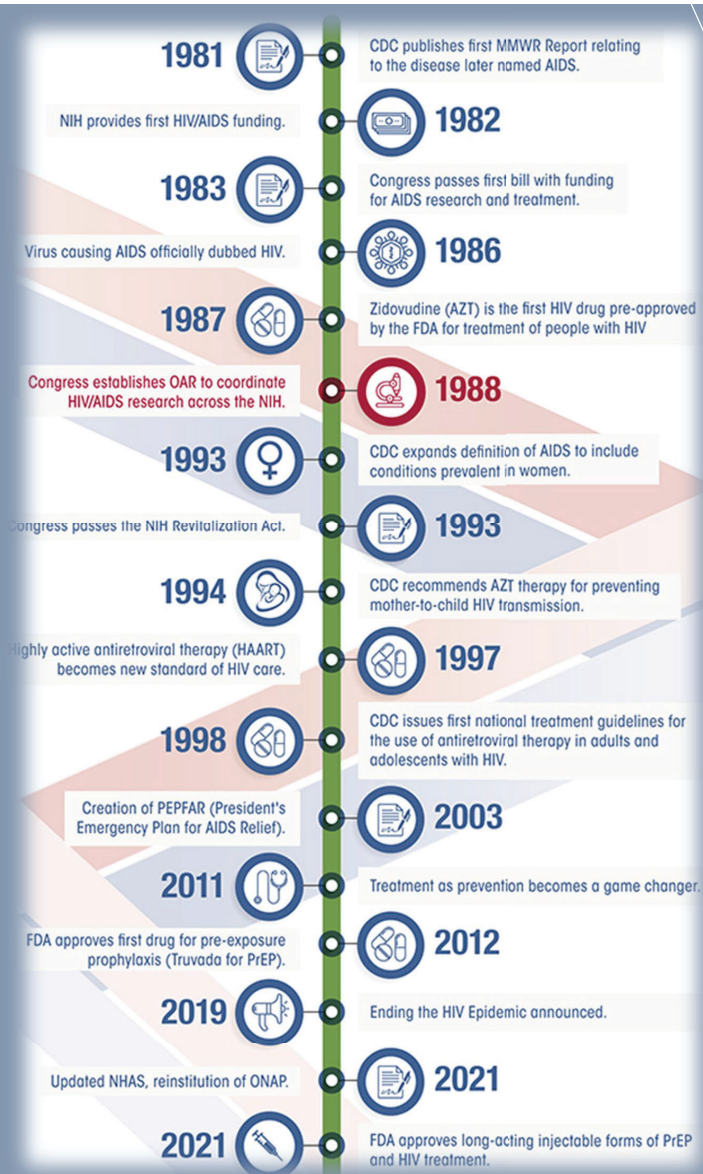


## HIV CARE CONTINUUM:

The series of steps a person with HIV takes from initial diagnosis through their successful treatment with HIV medication.

# HIV HISTORY

## [A Pictorial Timeline of the HIV/AIDS Pandemic](#)





Ryan White was a hemophiliac who contracted AIDS through a blood transfusion at age 13

Program Parts	Grant Recipients	Funding Purpose
<a href="#">Part A</a>	<ul style="list-style-type: none"> <li>Eligible Metropolitan Areas (EMAs)</li> <li>Transitional Grant Areas (TGAs)</li> </ul>	Provide medical and support services to cities and counties most severely affected by HIV
<a href="#">Part B</a>	All 50 states, District of Columbia, Puerto Rico, U.S. Virgin Islands, and six U.S. territories	<ul style="list-style-type: none"> <li>Improve the quality of and access to HIV health care and support in the U.S.</li> <li>Provide medications to low-income people with HIV through AIDS Drug Assistance Program</li> </ul>
<a href="#">Part C</a>	Local community-based groups	<ul style="list-style-type: none"> <li>Provide outpatient ambulatory health services and support for people with HIV</li> <li>Help for community-based groups to strengthen their capacity to deliver high-quality HIV care</li> </ul>
<a href="#">Part D</a>	Local community-based organizations	<ul style="list-style-type: none"> <li>Provide medical care for low-income women, infants, children and youth with HIV</li> <li>Offer support services for people with HIV and their family members</li> </ul>
Part F	<p><i>AETCs and SPNS</i></p> <ul style="list-style-type: none"> <li>Domestic public or private, non-profit organizations, schools, academic health science centers, faith-based organizations, tribes, and tribal organizations</li> </ul> <p><i>Dental Programs</i></p> <ul style="list-style-type: none"> <li>Dental schools</li> <li>Hospitals with postdoctoral dental residency programs</li> <li>Community colleges with dental hygiene programs</li> </ul> <p><i>Minority AIDS Initiative</i></p> <ul style="list-style-type: none"> <li>RWHAP recipients</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">AIDS Education and Training Center (AETC) Program</a> – Provide training and technical assistance to providers treating patients with or at risk for HIV</li> <li><a href="#">Special Projects of National Significance (SPNS)</a> – Develop innovative models of HIV care and treatment to respond to RWHAP client needs</li> <li><a href="#">Dental Programs</a> – Provide oral health care for people with HIV and education about HIV for dental care providers</li> <li><a href="#">Minority AIDS Initiative</a> – Help RWHAP recipients improve access to HIV care and health outcomes for minorities</li> </ul>

[Ryan White HIV/AIDS Program Timeline](#)

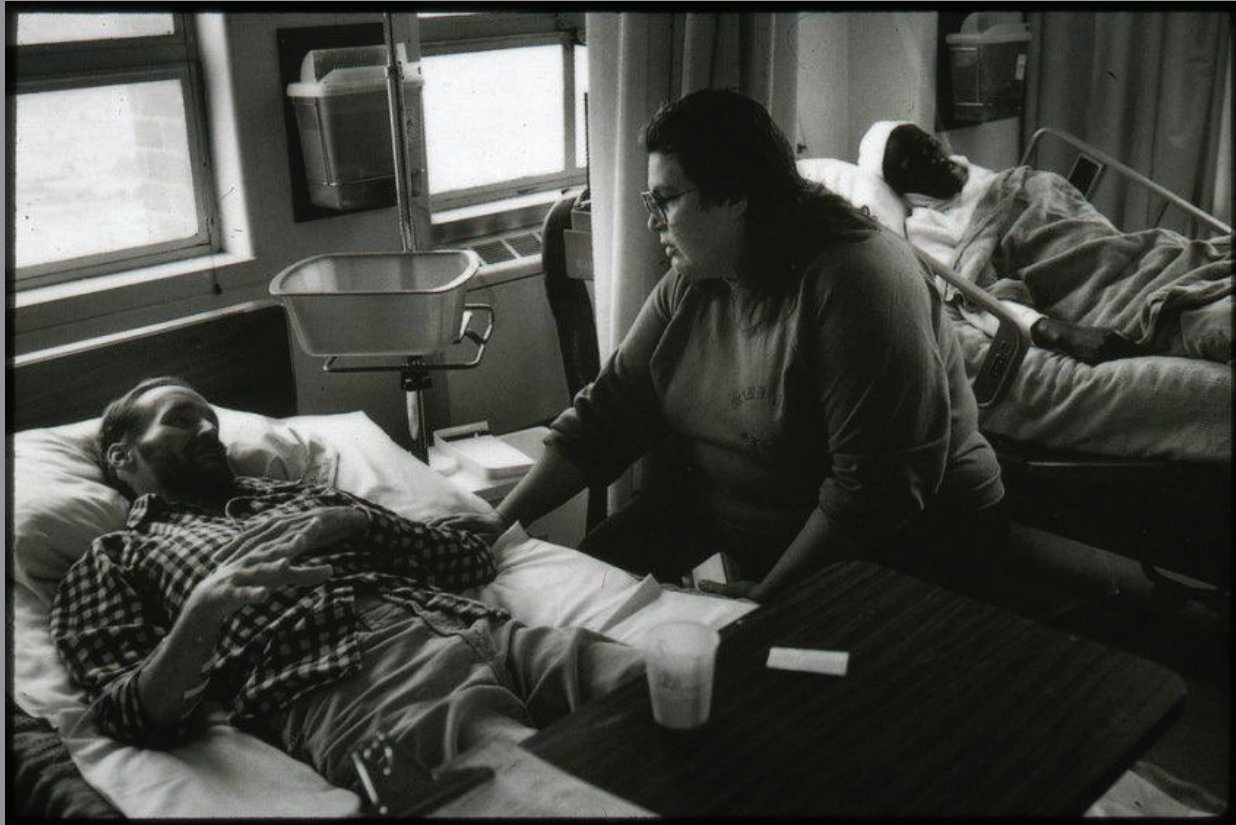
Read more about the [Ryan White HIV/AIDS Program](#)

Learn more about the [program's history](#)





The Photo that Changed the AIDS Epidemic  
Life Magazine, November 1990



## San Francisco General Hospital

Pharmacist Deb Gumbley checks on the condition of an HIV patient participating in a clinical drug trial

1994





## ANTIRETROVIRAL THERAPY

1996

---

At first, thought to eradicate the virus... later learned it still lived dormant in cells

AIDS-related deaths decreased by 40%

Having a **NEGATIVE** family  
can be the most **POSITIVE**  
thing in your life.



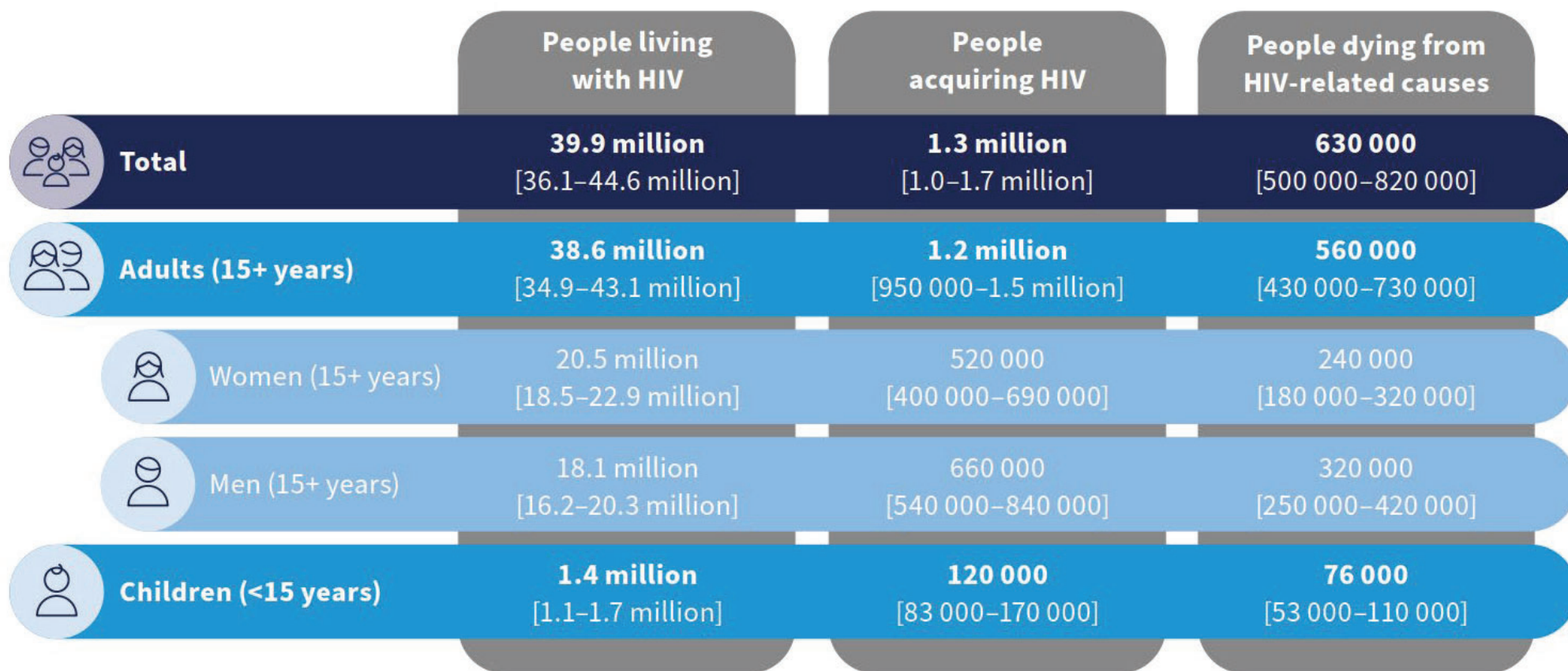
Facebook.com/Andrew Pulsipher





# HIV STATISTICS

## Summary of the global HIV epidemic, 2023



Source: UNAIDS/WHO estimates, 2024.

## Estimated HIV infections in the US by transmission category, 2022

There were **31,800** estimated new HIV infections in the US in 2022. Of those:



\* Includes infections attributed to male-to-male sexual contact and injection drug use (men who reported both risk factors).

Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29(1).

# Statistics Don't Tell the Whole Story

SOURCE: [CDC.GOV/HIV/DATA](https://www.cdc.gov/hiv/data)

## DATA CONSIDERATION

*Data in this presentation offer a limited perspective of how systemic, social, and economic factors impact health. We recognize that racism, not race, creates and perpetuates health disparities.*



**To Learn More:**  
<https://www.cdc.gov/minorityhealth/racism-disparities>

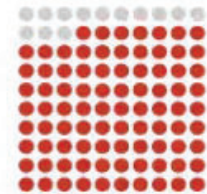


## Knowledge of HIV status in the US, 2022\*



In 2022, an estimated  
**1.2 million people** had HIV.

For every 100 people with HIV



**87**  
knew their  
HIV status.

\* Among people aged 13 and older.

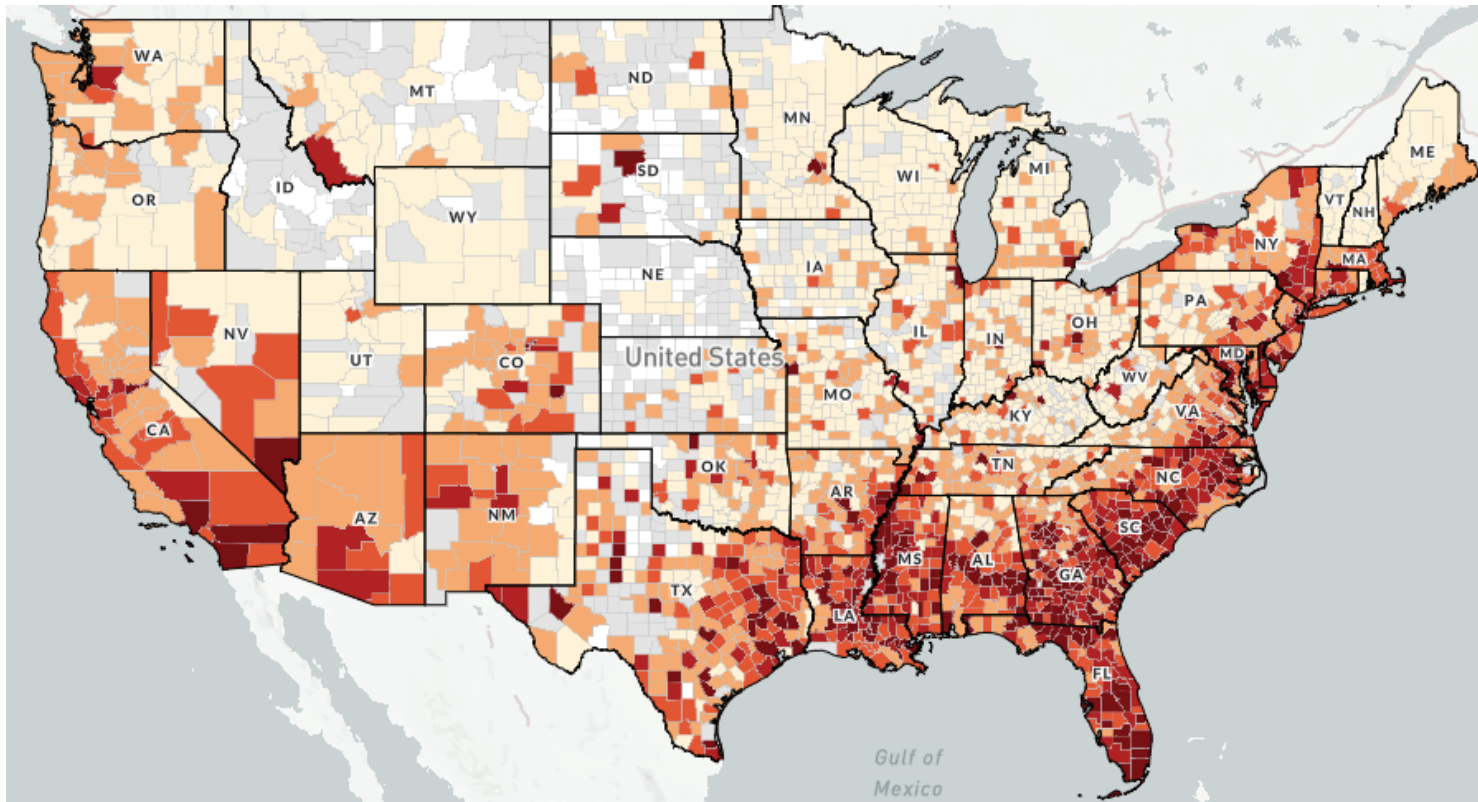
Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29(1).

Ending  
the  
HIV  
Epidemic

**Overall Goal: Increase the estimated percentage of people with HIV who have received an HIV diagnosis to at least 95% by 2025 and remain at 95% by 2030.**



# AIDSVu Interactive Map

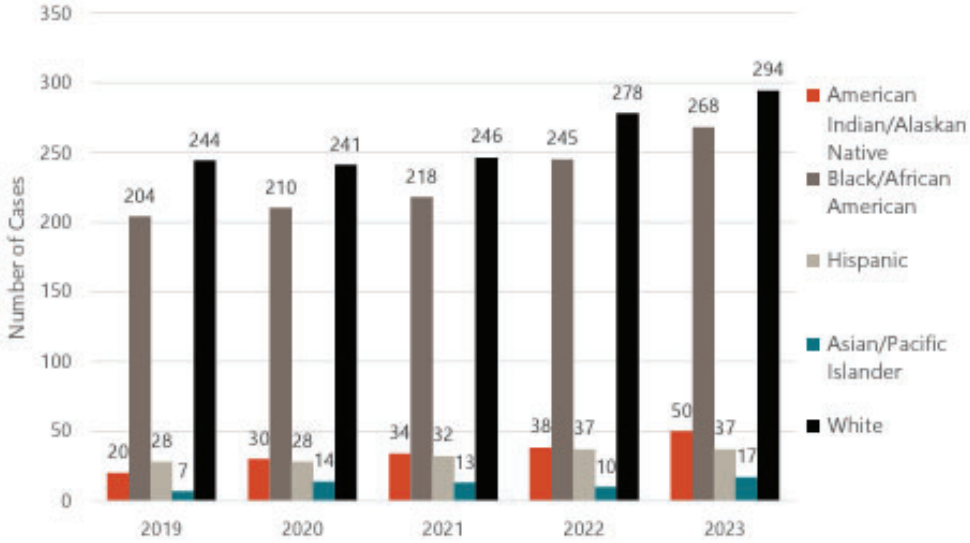


[UNAIDS Fact Sheet](#)

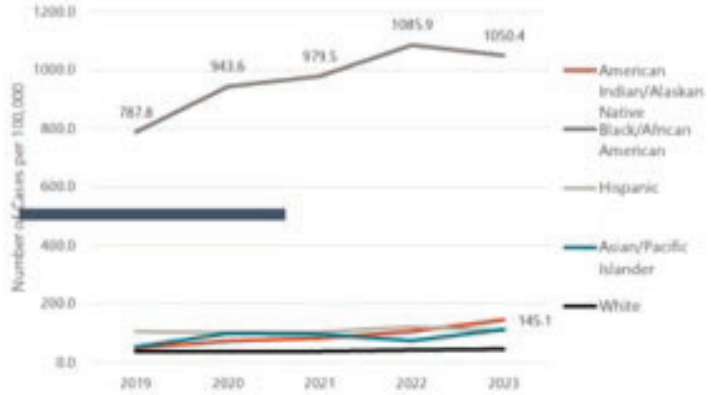
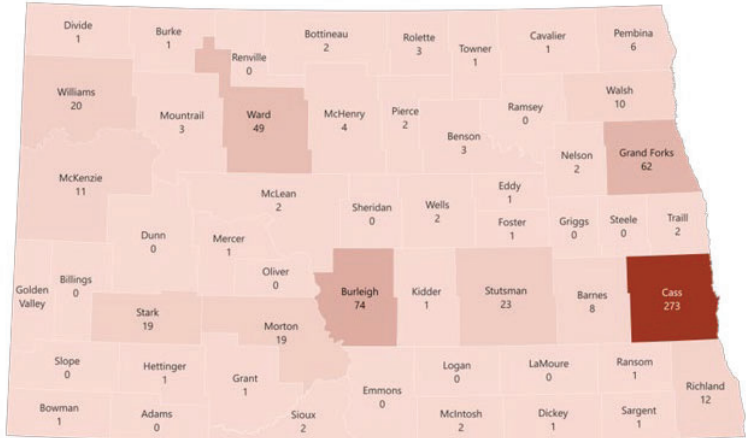




# North Dakota STI Data



Source: NDHHS Sexually Transmitted and Bloodborne Diseases Unit

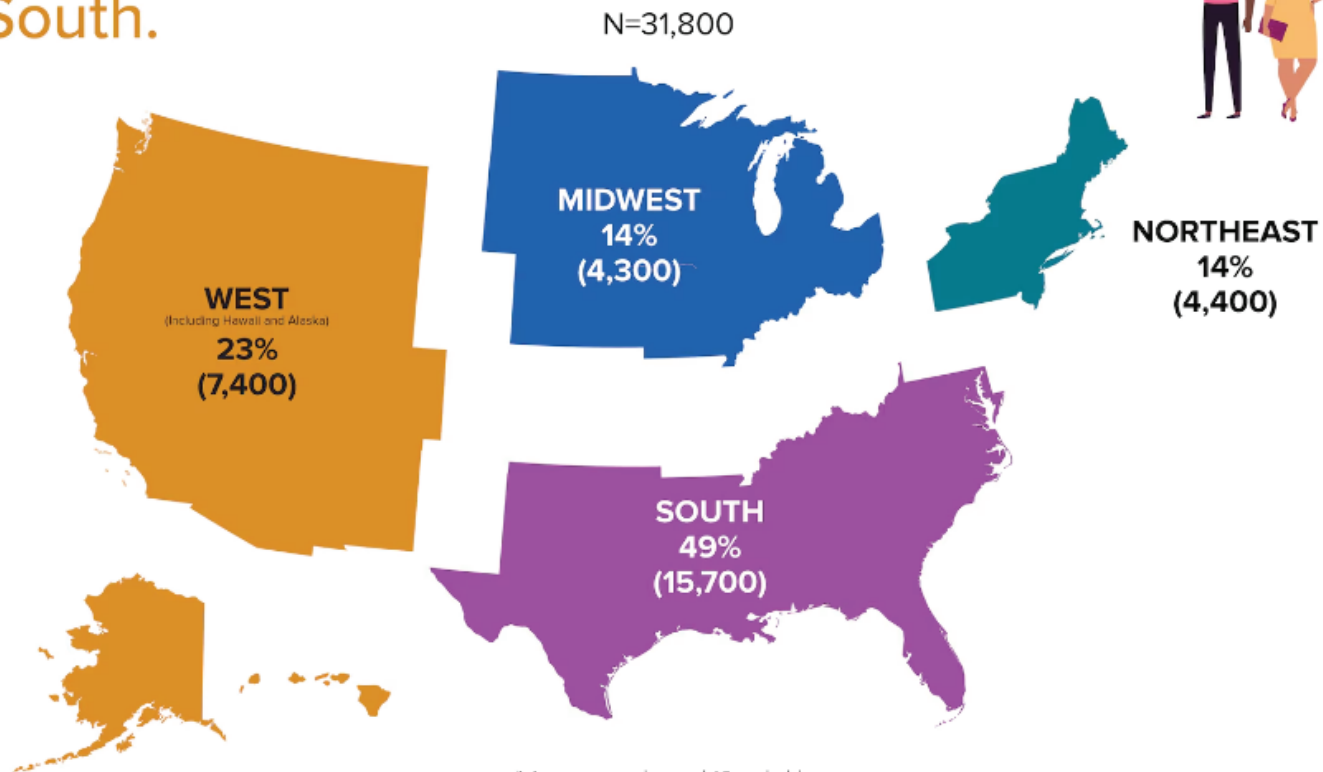


Source: NDHHS Sexually Transmitted and Bloodborne Diseases Unit



## Estimated HIV infections in the US by region, 2022\*

Nearly half (49%) of new HIV infections were in the South.



\* Among people aged 13 and older.

Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29(1).

The image features a solid blue background. Two thin, black lines intersect: one line runs diagonally from the top-left towards the bottom-right, and the other runs from the top-right towards the bottom-left. The text 'HIV BASICS' is positioned to the right of the intersection point.

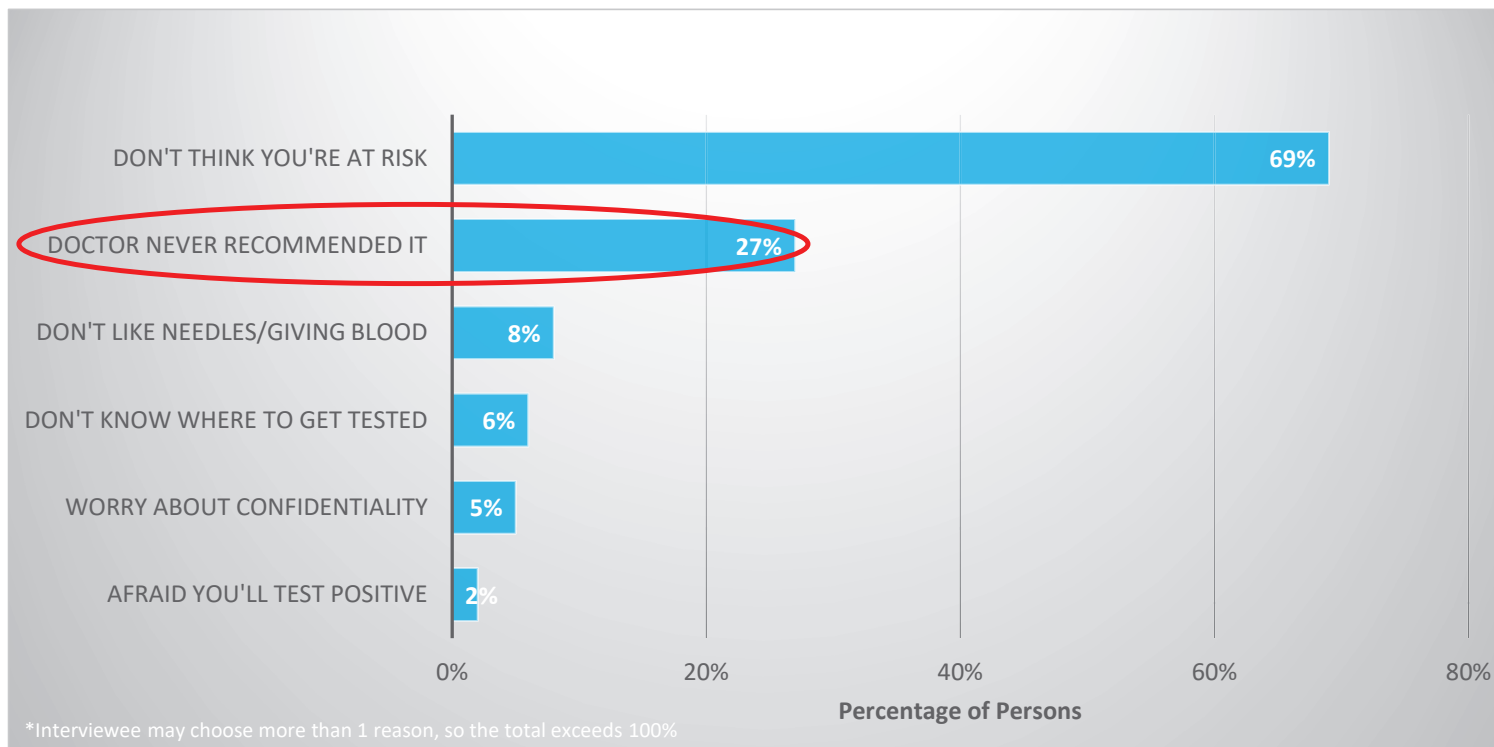
# HIV BASICS

## WHY SO SCARY?

- Unfamiliarity with current recommendations
- “So many” drug interactions
- “What if I mess it up?”
- Complexity of patient population
- “The meds have so many complications and side-effects”
- “Rare” in clinical practice
- “It doesn’t happen here”



# Reasons People Avoid Testing





## STIGMA AND HIV

- HIV stigma is negative attitudes and beliefs about people with HIV
- Stigma can lead to discrimination, treating people with HIV differently than those without HIV
- HIV stigma can affect people's health and wellbeing, and discourage people from engaging in HIV testing, prevention, and care



*Let's Stop HIV Together* raises awareness that we all have a role to play in stopping HIV stigma. When we support people with HIV, we make it easier for them to live healthy lives.

### What is HIV stigma?

HIV stigma is negative attitudes and beliefs about people with HIV. It is the prejudice that comes with labeling an individual as part of a group that is believed to be socially unacceptable.

Here are a few examples:

- 1 Believing that only certain groups of people can get HIV
- 2 Making moral judgments about people who take steps to prevent HIV transmission
- 3 Feeling that people deserve to get HIV because of their choices

### What is discrimination?

While stigma refers to an attitude or belief, discrimination is the behaviors that result from those attitudes or beliefs. HIV discrimination is the act of treating people with HIV differently than those without HIV.

Here are a few examples:

- 1 A health care professional refusing to provide care or services to a person living with HIV
- 2 Refusing casual contact with someone living with HIV
- 3 Socially isolating a member of a community because they are HIV positive

### What are the effects of HIV stigma and discrimination?

HIV stigma and discrimination affect the emotional well-being and mental health of people with HIV. People with HIV often internalize the stigma they experience and begin to develop a negative self-image. They may fear they will be discriminated against or judged negatively if their HIV status is revealed.

"Internalized stigma" or "self-stigma" happens when a person takes in the negative ideas and stereotypes about people with HIV and start to apply them to themselves. HIV internalized stigma can lead to feelings of shame, fear of disclosure, isolation, and despair. These feelings can keep people from getting tested and treated for HIV.

### [HIV Stigma Fact Sheet](#)



## PERSON-FIRST LANGUAGE

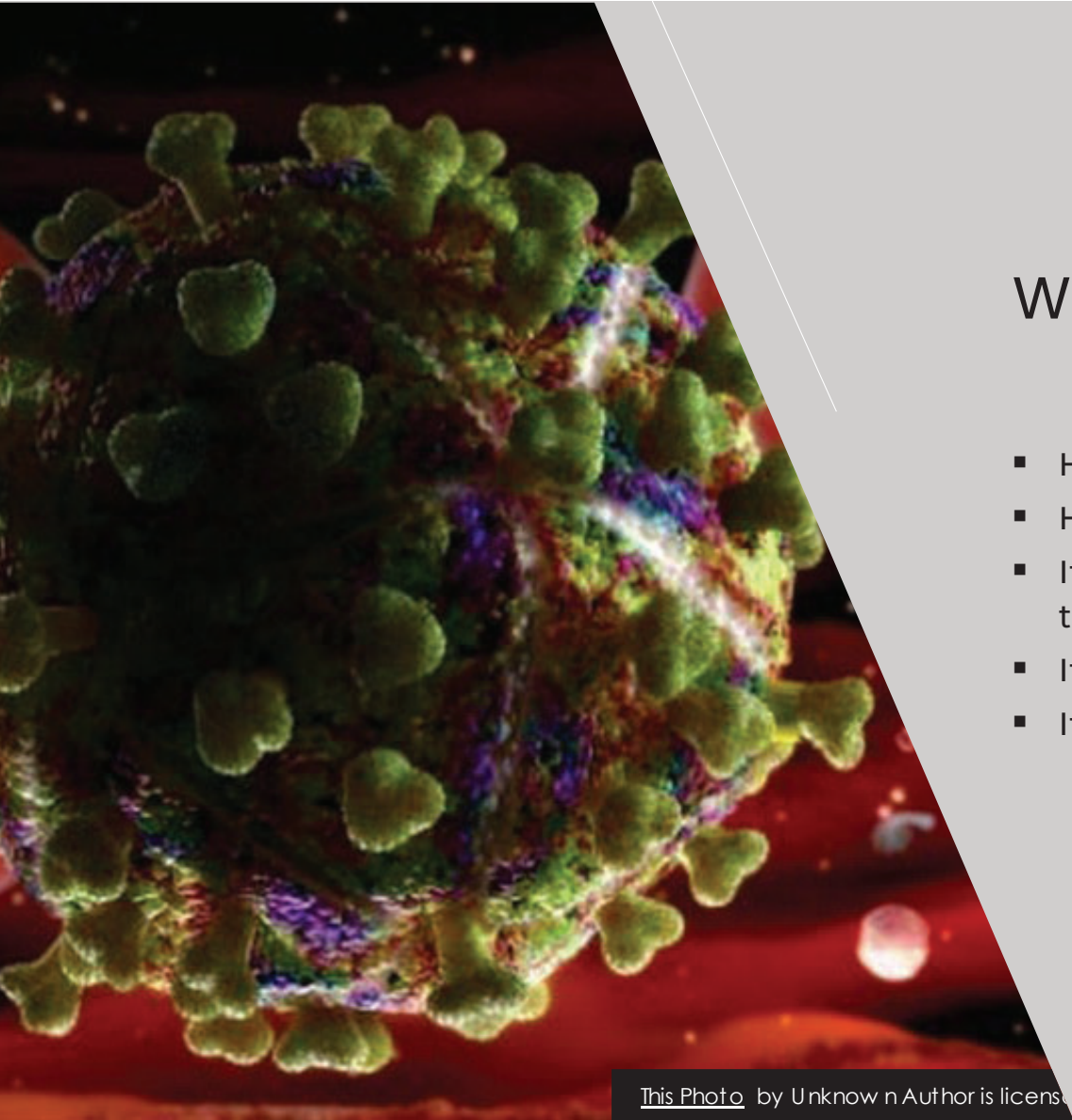
*Person-first language is a way to emphasize the person and view the disorder, disease, condition, or disability as only one part of the whole person. Describe what the person “has” rather than what the person “is.” Person-first language avoids using labels or adjectives to define someone.*

- [National Institute of Health \(NIH\) Style Guide](#)
- [HIV Language Guide](#)

Stigmatizing Terms To Avoid	Use These Alternatives	Here's Why
<p>HIV infection/HIV-infected</p> <p><i>Related terms to avoid: HIV-infected people, HIV positives, HIV carriers, people infected with HIV, HIV-uninfected people</i></p>	<ul style="list-style-type: none"> <li>✓ HIV</li> <li>✓ People/person living with HIV</li> <li>✓ People/person with HIV</li> <li>✓ HIV status</li> <li>✓ HIV diagnoses</li> <li>✓ HIV acquisition</li> <li>✓ HIV transmission</li> </ul>	<p>“Infection” carries the stigma of being contagious, a threat, or unclear. HIV advocates frequently highlight the damaging consequences of this word choice. In specific situations, the term “HIV infection” is necessary to describe the biological process. In most cases, however, “HIV” alone accomplishes the necessary communication.</p> <p>Person-first language emphasizes humanity. “Living with” is an affirmation of life many advocates prefer. “Poz” is also sometimes used by community members themselves.</p>

Stigmatizing Terms To Avoid	Use These Alternatives
HIV-infected, HIV-infection*, HIV-positive [people, individuals, populations]	People living with HIV, people with HIV (*see page 8 for comments on use of “HIV-infection”)
Subject	Participant, volunteer
Sterilizing cure	HIV eradication, HIV clearance
AIDS (when referring to the virus, HIV)	HIV, HIV and AIDS when referring to both
Mother-to-child transmission	Perinatal transmission
Verticals	Lifetime survivors
At-risk or high-risk person/population	Person/population with greater likelihood of ..., high incidence population, affected community
Target population	Key population/engage or prioritize a population
Hard-to-reach population	Under-resourced, underserved by [specific resource/service], population(s) experiencing discrimination/racism/transphobia





## WHAT IS HIV?

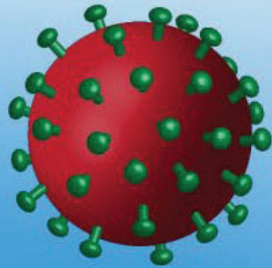
- Human Immunodeficiency Virus
- HIV is a virus that attacks the body's immune system
- It attacks the CD4 cells in a person's immune system – this makes it difficult for them to fight infections
- It is not curable, but it is treatable
- If not treated, it can lead to AIDS

This Photo by Unknown Author is licensed under CC BY

# HIV and AIDS: What's the Difference?

## HIV

- HIV is the virus that causes HIV infection.
- HIV damages the immune system by killing CD4 cells.



## CD4 Cells

- CD4 cells are part of the immune system.
- HIV attacks and kills CD4 cells.
- Loss of CD4 cells makes it hard for the body to fight off infections.

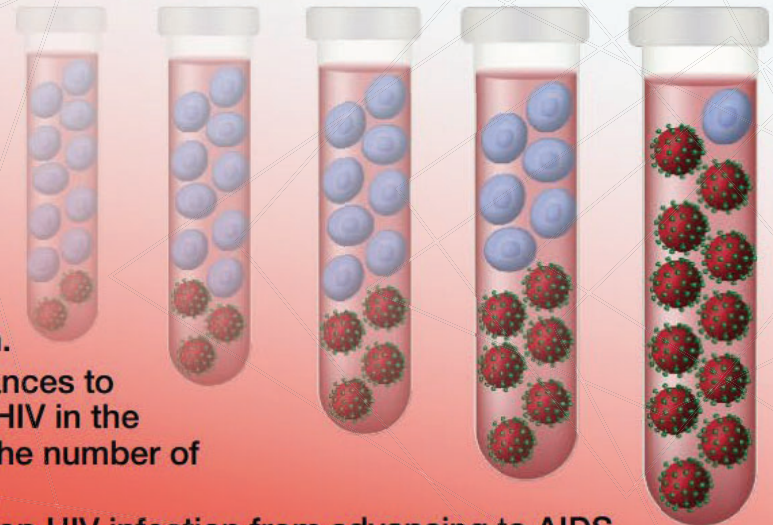


## AIDS

- AIDS is the last stage of HIV infection.
- As HIV infection advances to AIDS, the amount of HIV in the body increases and the number of CD4 cells decreases.
- HIV medicines can stop HIV infection from advancing to AIDS.
- Without HIV medicines, HIV advances to AIDS in about 10 years.
- ART (Antiretroviral treatment) can prevent HIV from spreading, and prevent HIV from advancing to AIDS.

### Years without HIV medicines

2 4 6 8 10



For more information, visit [HIVinfo.NIH.gov](http://HIVinfo.NIH.gov).

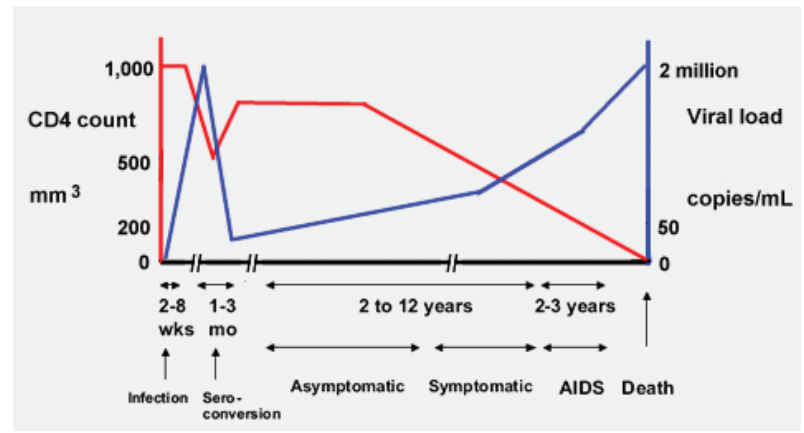
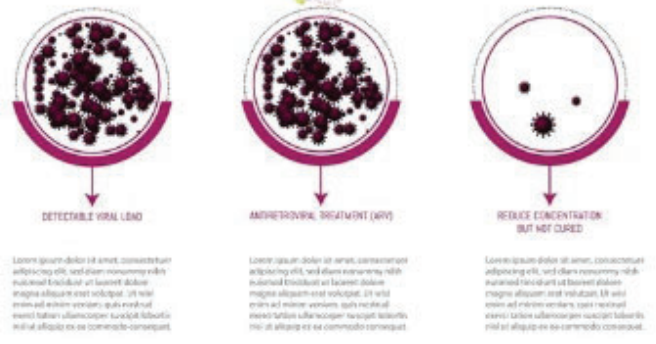




# THE NUMBERS

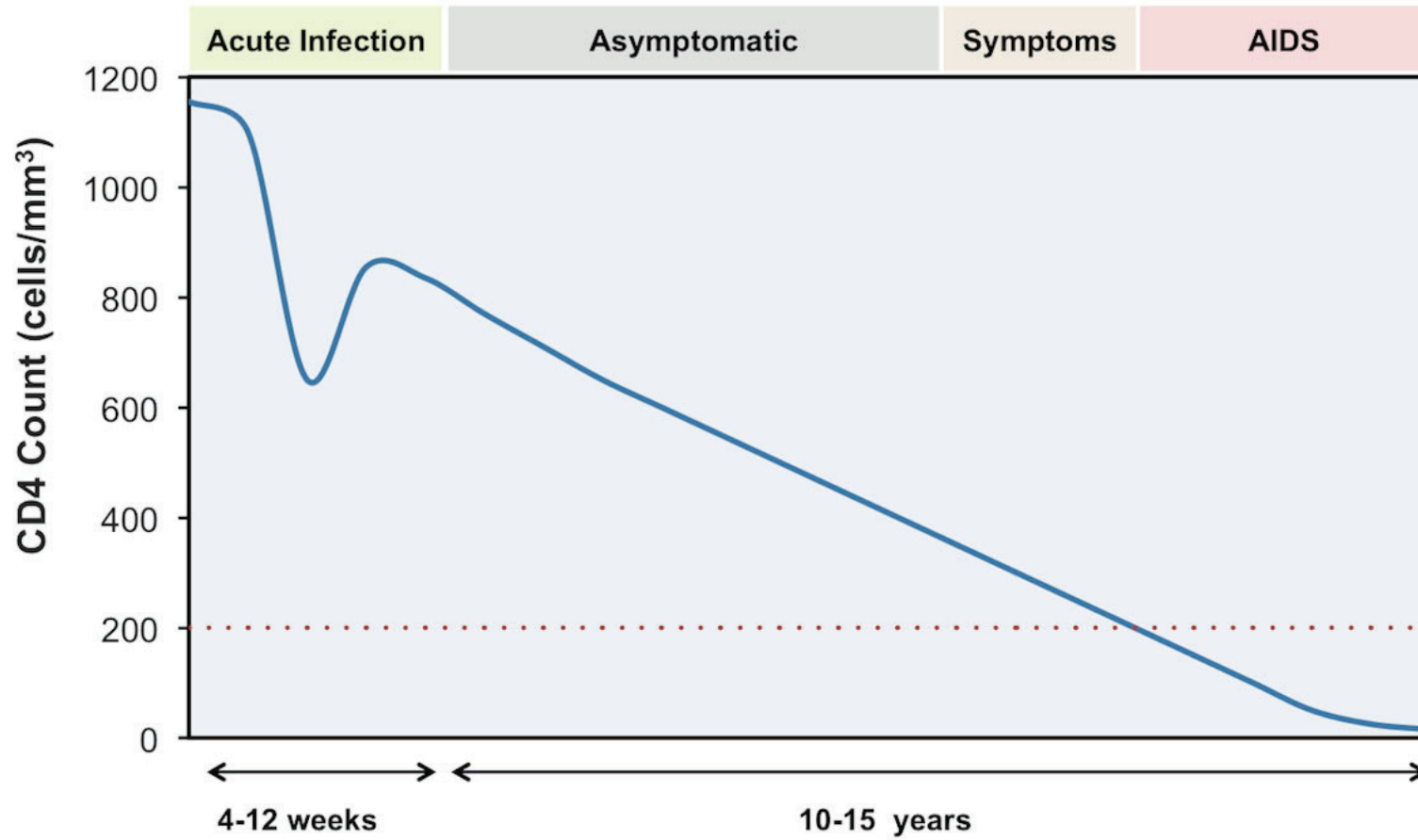
**CD4** – How well immune system is functioning (Normal 500 – 1200)

**Viral Load** – How much HIV is circulating per ml of blood



Typically, as the viral load increases, the CD4 decreases

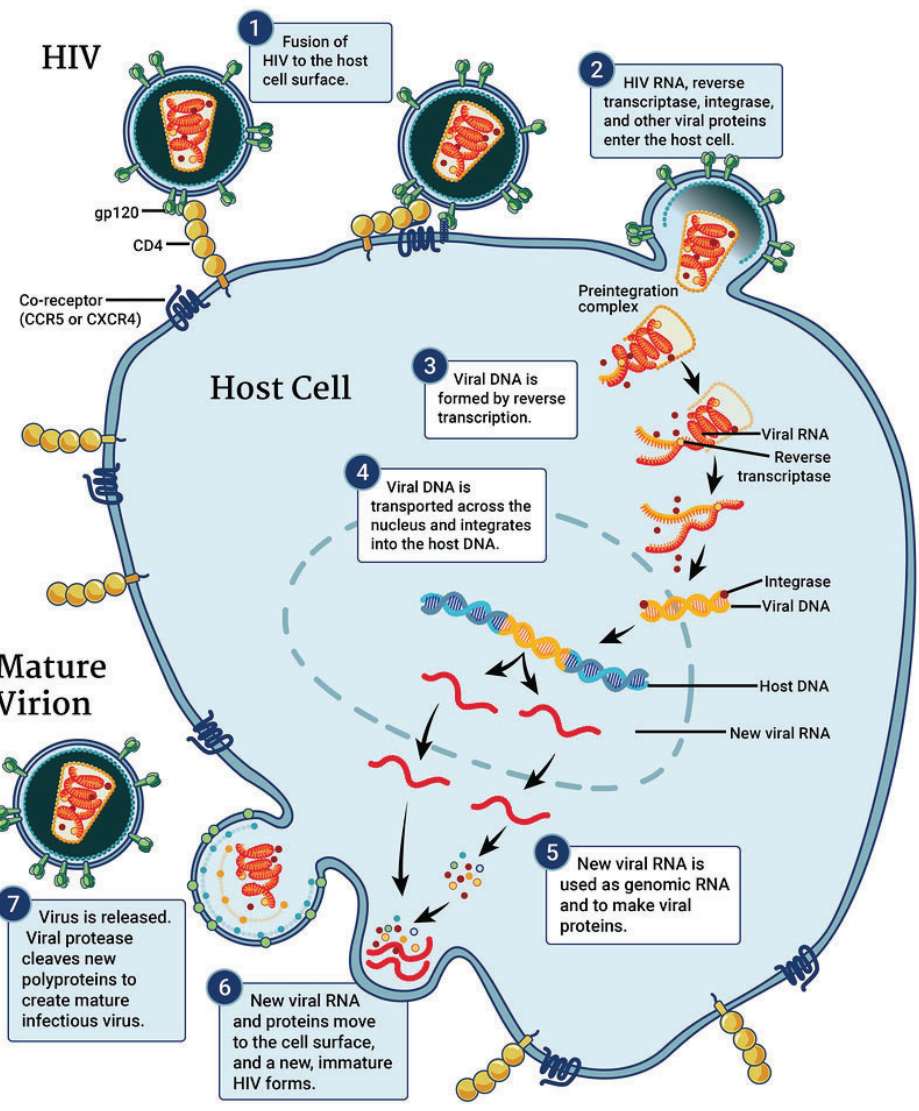
## NATURAL HISTORY OF HIV INFECTION WITHOUT ART



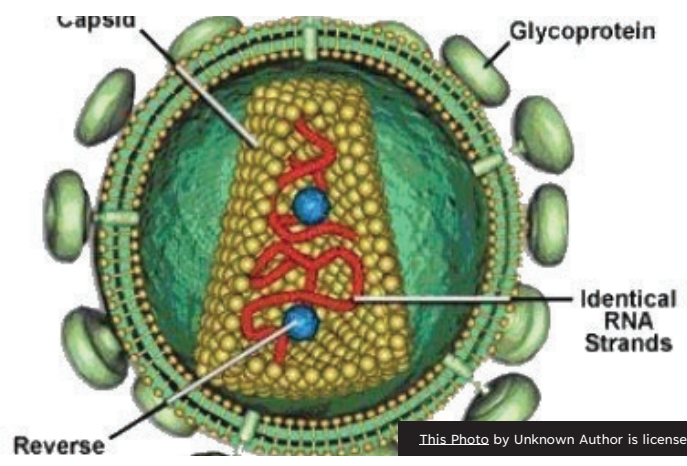
# OPPORTUNISTIC INFECTIONS

CD4 Count	Organisms to Consider	Clinical Clues
>500	Community acquired organisms	More likely to acquire bacterial pneumonia, more likely to have HSV and zoster reactivation
200 - 500	Tuberculosis	Hemoptysis, night sweats, weight loss
<200	<i>Pneumocystis jiroveci</i>	Hypoxia induced by activity, interstitial infiltrates, ↑ LDH
	<i>Cryptosporidium</i>	Profuse watery diarrhea
	<i>Candida</i>	Oral thrush, oral lesions
	Fungal pneumonia	Cavitary lesions or diffuse infiltrates on X-ray
<100	Toxoplasmosis	Ring enhancing lesions on CT brain
	Candidal, HSV or CMV esophagitis	Odynophagia, dysphagia
<50	Cytomegalovirus	Visual changes, esophagitis, enteritis, encephalitis
	<i>Cryptococcus</i>	Headache, altered mentation, +India ink
	<i>Mycobacterium avium</i> complex	Night sweats, weight loss, diarrhea, malaise
	Primary CNS lymphoma (EBV assoc.)	Focal neuro deficits, seizures, weight loss, confusion

HIV



# HOW HIV INFECTS HUMANS



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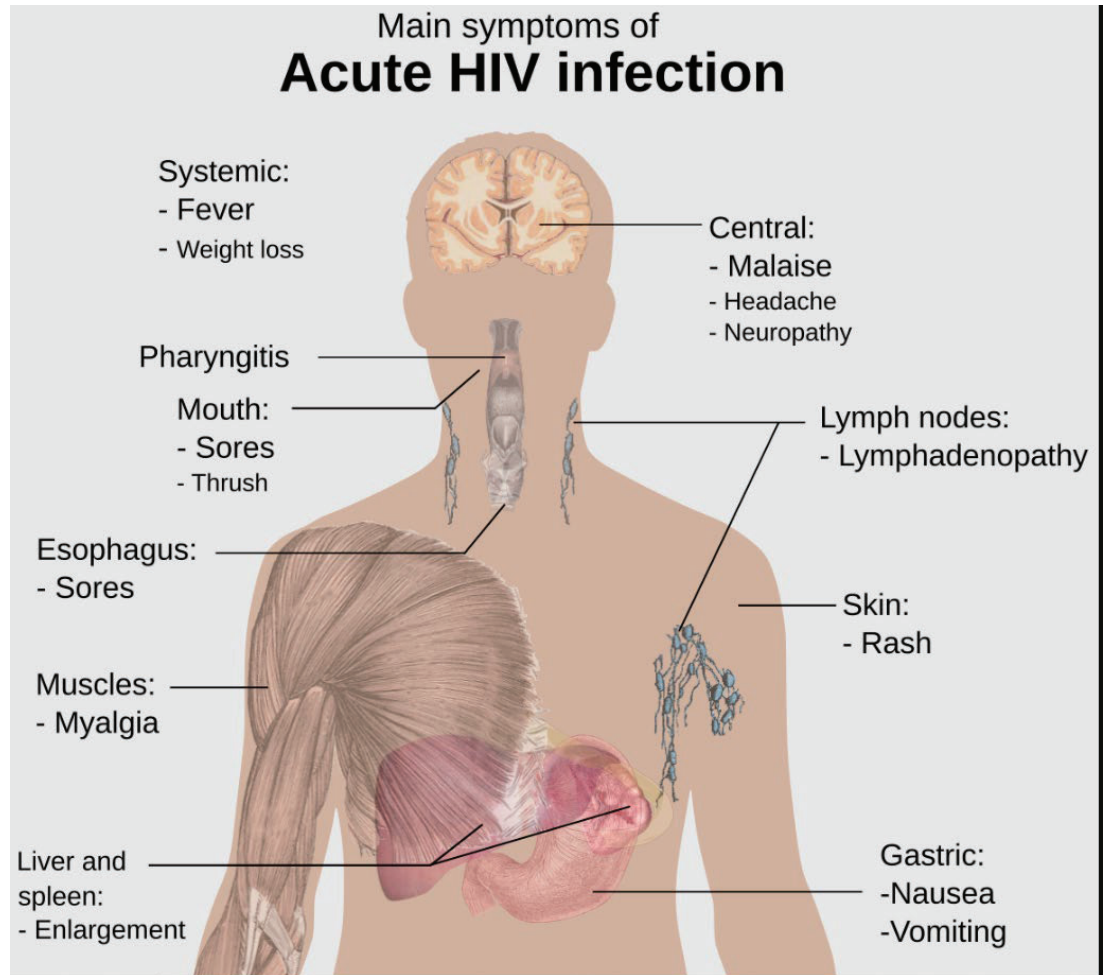
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# ACUTE HIV INFECTION

- Short, flu-like illness
  - *occurs one to six weeks after infection*
- Mild symptoms
- Infected person can infect other people

Acute HIV Syndrome: Exanthem



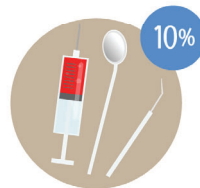
## HIV IS TRANSMITTED THROUGH:

- Blood
- Semen and pre-seminal fluid
- Rectal fluids / anal sex
- Vaginal fluids / vaginal sex
- Oral sex
- IV drug use or sharing injection equipment
- Needle sticks
- Pregnancy
- Breast milk



# HIV/AIDS

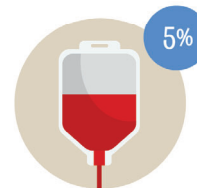
## HIV is transmitted



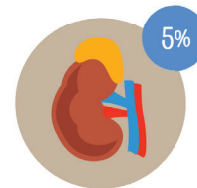
use of non-sterile syringes and tools



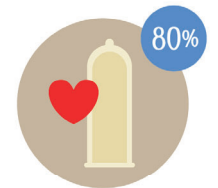
pregnancy breastfeeding



blood transfusion



organ transplant



unprotected sex

## HIV is not transmitted



food, drink, utensils



insect bites



kiss, touch



clothes, towels



toilet, shower



## TYPES OF TESTS

- **Rapid HIV Ab testing** - detects HIV Ab, 6–8 week window period s/p exposure; some false positives (particularly in pregnant women); inexpensive; easy to run; results in 10-15 minutes; available OTC at the pharmacy
- **p24 Ag/Ab testing** - detects p24 Ag and HIV Ab, 10–14 day window period; serum test; high sensitivity and specificity; increased cost; need a lab to run (usually back in 24 hours)
- **HIV PCR** - detects HIV virus itself, better known as a VL; confirmatory test for all HIV screening tools; sensitive testing can detect HIV within days of exposure; very expensive; back in 72 hours

Blood Draw | Saliva | Finger Prick



# What Do My Lab Results Mean? HIV and Laboratory Tests

## What are some other important tests?

### Drug Resistance Test

- HIV can change form, making it resistant to some HIV medicines.
- The drug resistance test helps your health care provider choose the HIV medicines that will work for you.

### Tests for Other Infections

- HIV weakens the immune system, leaving people vulnerable to other infections.
- Health care providers test for tuberculosis, hepatitis B and C infections, and other potential illnesses.
- The treatment for another infection may affect HIV treatment.

### Complete Blood Count

- Measures how many red blood cells (carry oxygen around the body), white blood cells (fight infections), platelets (help blood clot to stop bleeding).
- This helps health care providers keep track of your overall health and spot potential medical problems.

### Blood Chemistry Tests

- This group of tests measures several different chemicals in your blood to help monitor the health of your organs, especially your liver, kidneys, and electrolytes.
- Health care providers use blood chemistry tests to look for side effects caused by HIV medicines.

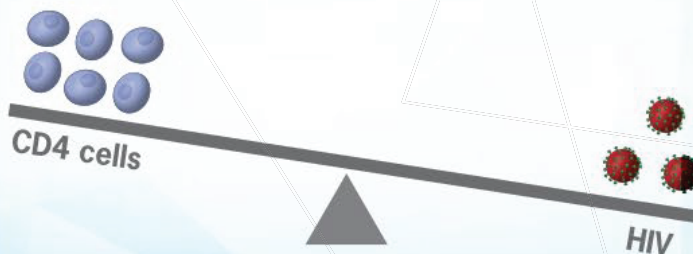
Check with your healthcare provider on how often these tests should be done.

Taking ART (antiretroviral treatment) as directed prevents HIV from destroying CD4 cells and helps lower your viral load.

You want your CD4 count to be

**HIGH**  
**CD4 Cell Count**

CD4 cells are specialized cells of the immune system destroyed by HIV. A CD4 cell count measures how many CD4 cells are in your blood. The higher your CD4 cell count, the healthier your immune system.



You want your viral load to be

**LOW**  
**HIV Viral Load Test**

An HIV viral load test, also called an HIV RNA test, tracks how many HIV particles are in a sample of your blood. This is called your viral load. The lower your viral load, the lower the amount of HIV that is detectable in your blood.

For more information, visit [HIVinfo.NIH.gov](http://HIVinfo.NIH.gov).



# HOW DO I FIND AN HIV TEST?

There are many ways to find an HIV test near you. And most HIV tests are available for **free** or at a **reduced cost**.



**Visit** [gettested.cdc.gov](http://gettested.cdc.gov)



**Contact** your local health department



**Ask** your health care provider



**Call** 1-800-CDC-INFO  
(1-800-232-4636)



**Buy** an HIV self-test



## NURSING DUTIES RELATED TO HIV TESTING

- Offer testing
- Detailed medical history
- Sexual health history
- Offer to every patient at least once in lifetime
  - Others more often
  - Advocate that it is part of ROUTINE medical care



# Always Remember

HIV is a medical diagnosis, NOT a character flaw.