October 16, 2024

Presented by: Jennifer Sobolik, CNP, AACRN, AAHIVS

SEMINAR AGENDA

Jenn | *she/her/hers*

9:00 am – 10:00 am CT	HIV Pathophysiology and HIV Testing
10-minute break	
10:10 am – 11:10 am CT	HIV Management in Primary Care
10-minute break	
11:20 am – 12:30 pm CT	HIV Prevention – Medications and Harm Reduction Strategies

Jenn Sobolik has no financial disclosures

FUNDING ACKNOWLEDGEMENT

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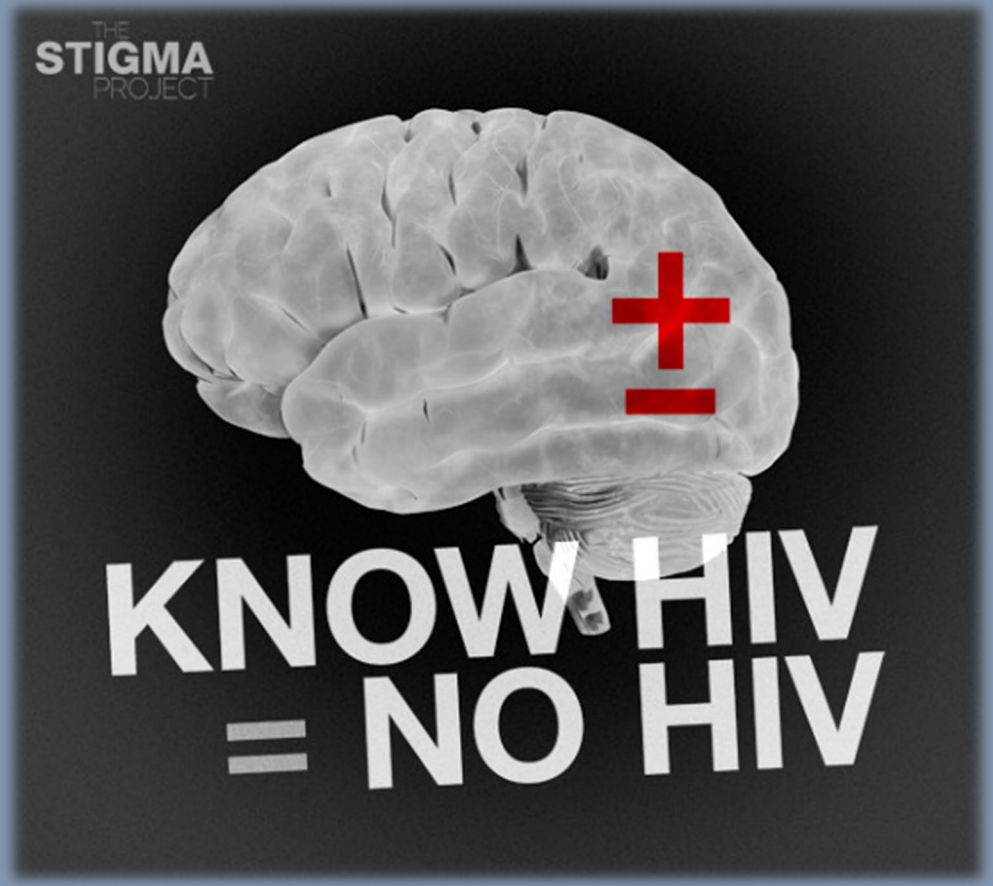
MWAETC recognizes that language is constantly evolving, and while we make every effort to avoid bias and stigmatizing terms, we acknowledge that unintentional lapses may occur in our presentations.

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.

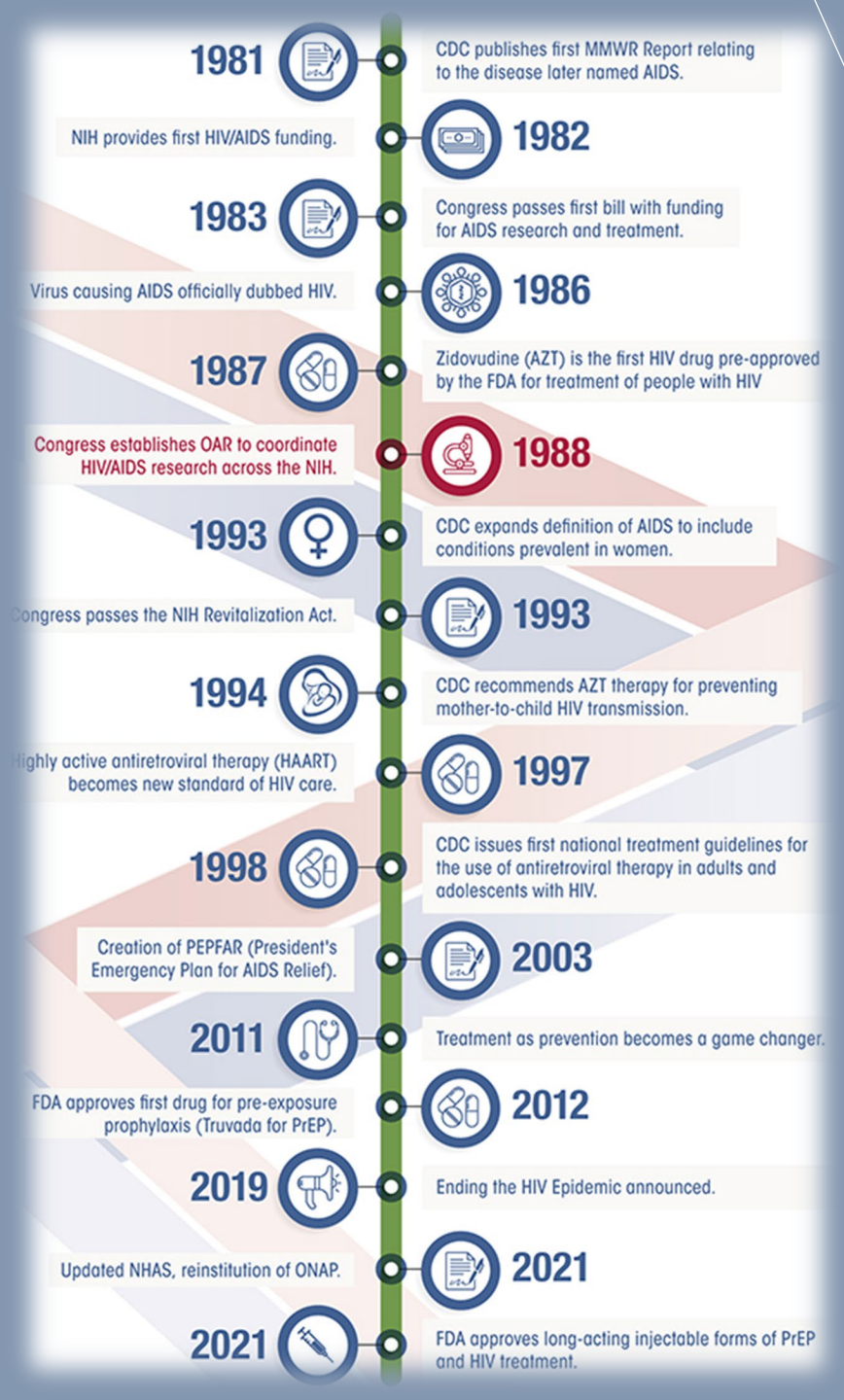
HIV PATHOPHYSIOLOGY AND HIV TESTING

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



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
Part A	• Eligible Metropolitan Areas (EMAs) • Transitional Grant Areas (TGAs)	Provide medical and support services to cities and counties most severely affected by HIV
Part B	All 50 states, District of Columbia, Puerto Rico, U.S. Virgin Islands, and six U.S. territories	• Improve the quality of and access to HIV health care and support in the U.S. • Provide medications to low-income people with HIV through AIDS Drug Assistance Program
Part C	Local community-based groups	• Provide outpatient ambulatory health services and support for people with HIV • Help for community-based groups to strengthen their capacity to deliver high-quality HIV care
Part D	Local community-based organizations	• Provide medical care for low-income women, infants, children and youth with HIV • Offer support services for people with HIV and their family members
Part F	*AETCs and SPNS* • Domestic public or private, non-profit organizations, schools, academic health science centers, faith-based organizations, tribes, and tribal organizations *Dental Programs* • Dental schools • Hospitals with postdoctoral dental residency programs • Community colleges with dental hygiene programs *Minority AIDS Initiative* • RWHAP recipients	• AIDS Education and Training Center (AETC) Program – Provide training and technical assistance to providers treating patients with or at risk for HIV • Special Projects of National Significance (SPNS) – Develop innovative models of HIV care and treatment to respond to RWHAP client needs • Dental Programs – Provide oral health care for people with HIV and education about HIV for dental care providers • Minority AIDS Initiative – Help RWHAP recipients improve access to HIV care and health outcomes for minorities

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

1994

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

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.
HIV +
HIV -
HIV -
HIV -
HIV -
Facebook.com/Andrew Pulsipher

HIV STATISTICS

Summary of the global HIV epidemic, 2023

	People living with HIV	People acquiring HIV	People dying from HIV-related causes
Total	**39.9 million** [36.1–44.6 million]	**1.3 million** [1.0–1.7 million]	**630 000** [500 000–820 000]
Adults (15+ years)	**38.6 million** [34.9–43.1 million]	**1.2 million** [950 000–1.5 million]	**560 000** [430 000–730 000]
Women (15+ years)	20.5 million [18.5–22.9 million]	520 000 [400 000–690 000]	240 000 [180 000–320 000]
Men (15+ years)	18.1 million [16.2–20.3 million]	660 000 [540 000–840 000]	320 000 [250 000–420 000]
Children (<15 years)	**1.4 million** [1.1–1.7 million]	**120 000** [83 000–170 000]	**76 000** [53 000–110 000]

Source: UNAIDS/WHO estimates, 2024.

Statistics Don’t Tell the Whole Story

SOURCE: 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.

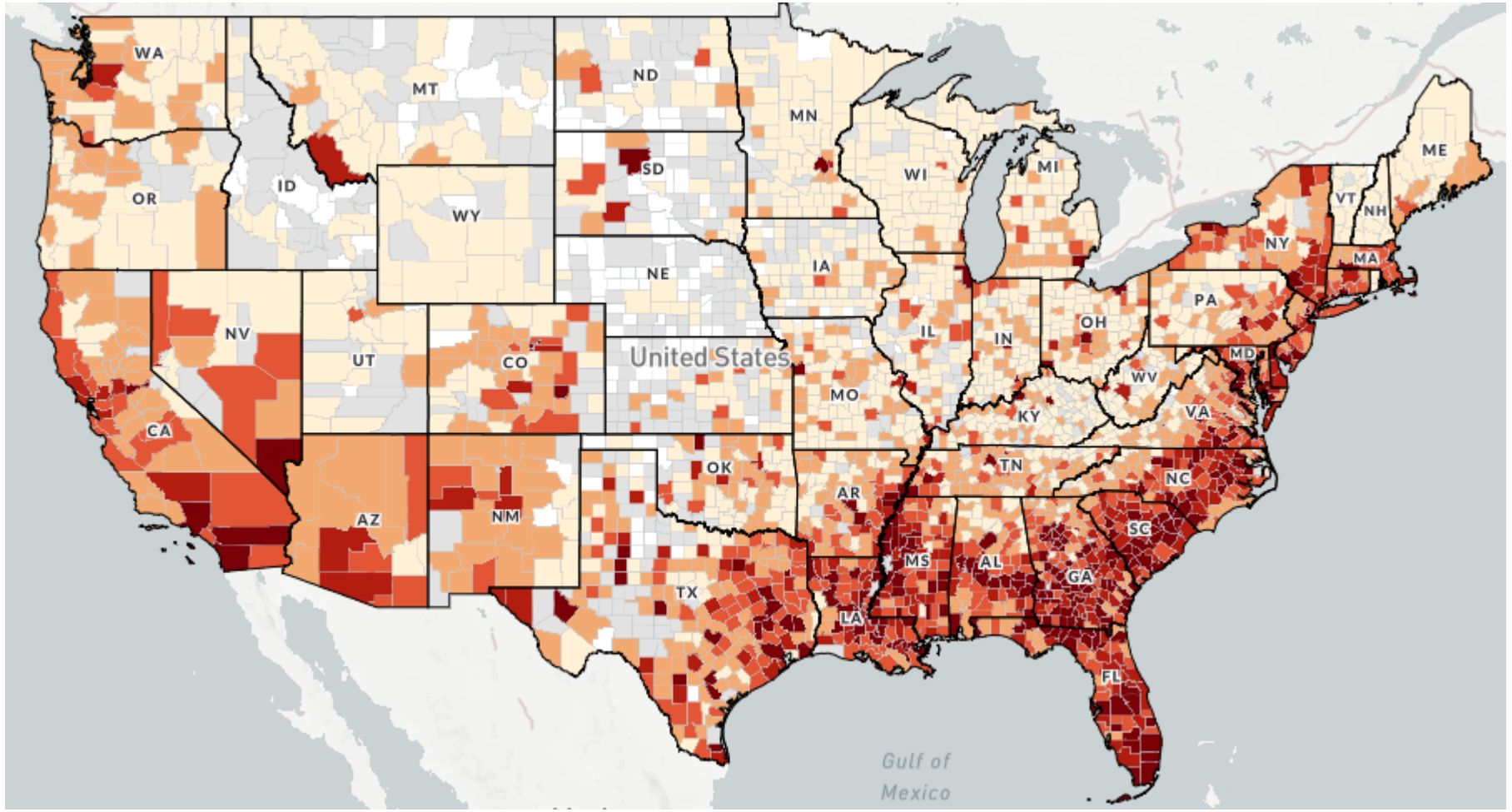
* Among people aged 13 and older.

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

Ending the HIV Epidemic

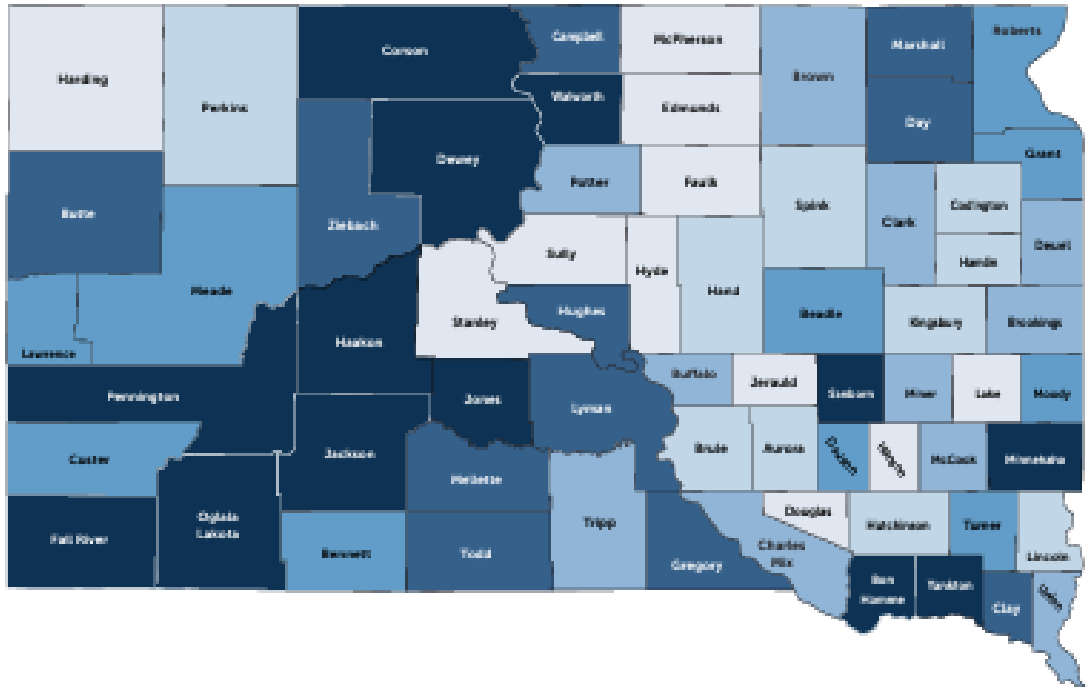
Overall Goal: Increase the estimated percentage of people with HIV who have received an HIV diagnosis to at least 95% by 2025 and remain at 95% by 2030.

AIDSVu Interactive Map



UNAIDS Fact Sheet

SD 2023 HIV/AIDS SURVEILLANCE REPORT



Characteristics of persons living with HIV in South Dakota

According to data available in March, 2023

As of December 31, 2022, there were 725 people with HIV and/or AIDS known to be living in South Dakota.

Prevalence Rate by Race and Ethnicity

*Based on 2021 SD population estimates from the US Census Bureau [1]

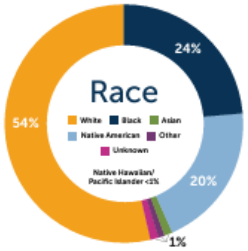
BLACK/AFRICAN AMERICAN: 102.2 per 10,000

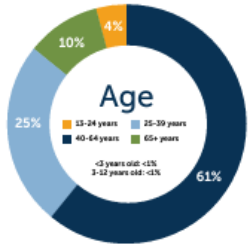
NATIVE AMERICAN/AMERICAN INDIAN: 20.7 per 10,000

WHITE: 5.7 per 10,000

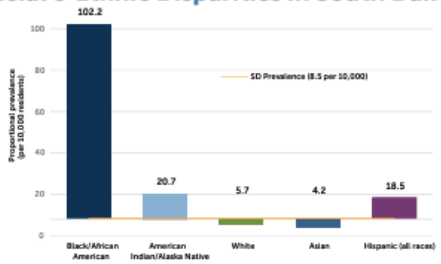
ASIAN: 4.2 per 10,000

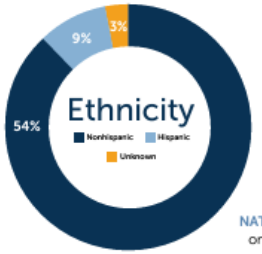
HISPANIC: 18.5 per 10,000

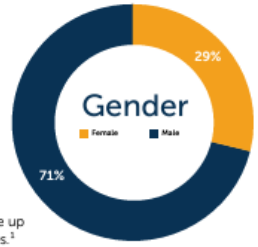




Racial & Ethnic Disparities in South Dakota





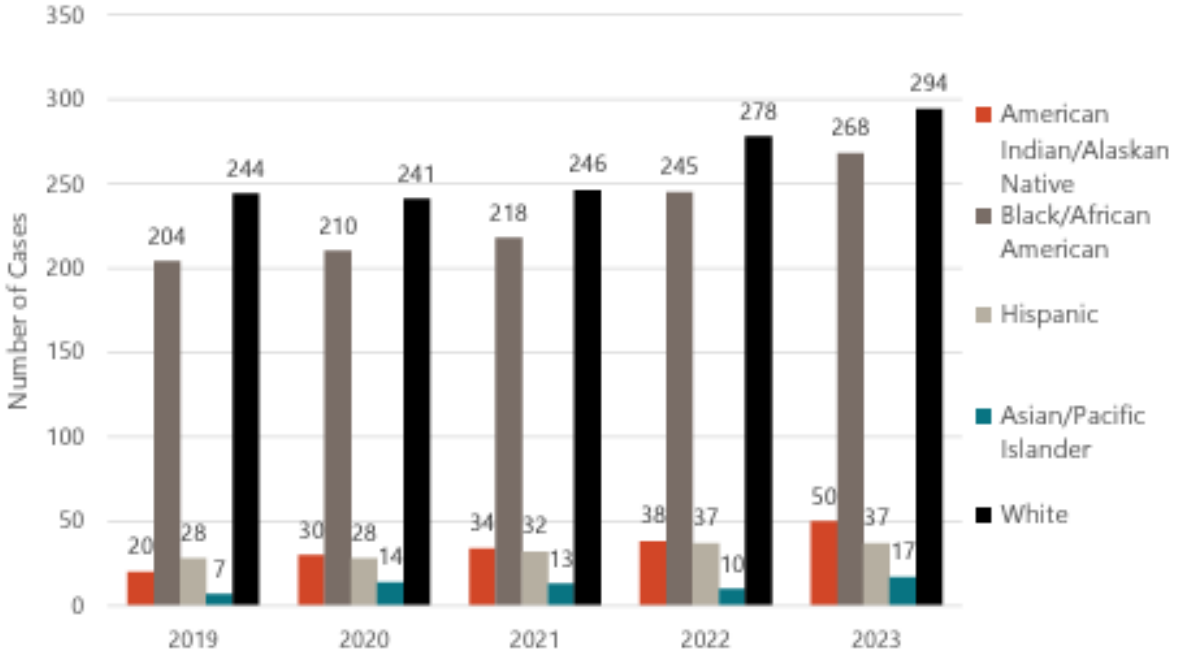


BLACK/AFRICAN AMERICAN: Black/African Americans make up only **2.0%** of South Dakota's population, but account for **24%** of SD HIV/AIDS cases.[1]

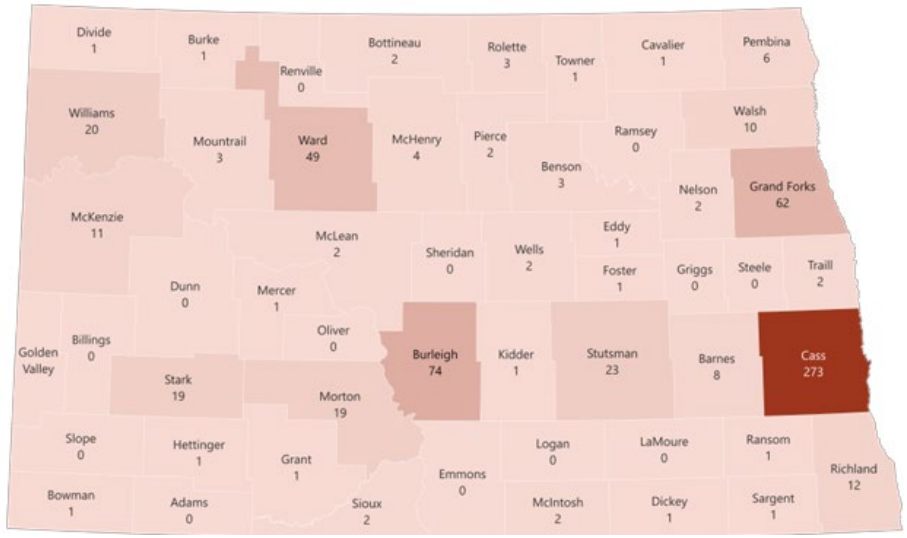
NATIVE AMERICAN/AMERICAN INDIAN: Native Americans/American Indians make up only **9%** of South Dakota's population, but account for **20%** of SD HIV/AIDS cases.[1]

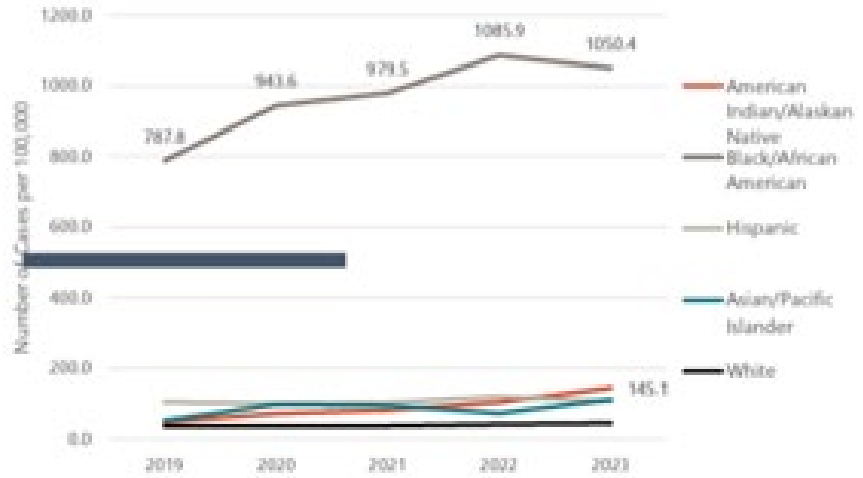
HISPANIC ETHNICITY: Individuals of Hispanic ethnicity make up only **4.5%** of South Dakota's population, but account for **9%** of SD HIV/AIDS cases.[1]

North Dakota STI Data



Source: NDHHS Sexually Transmitted and Bloodborne Diseases Unit



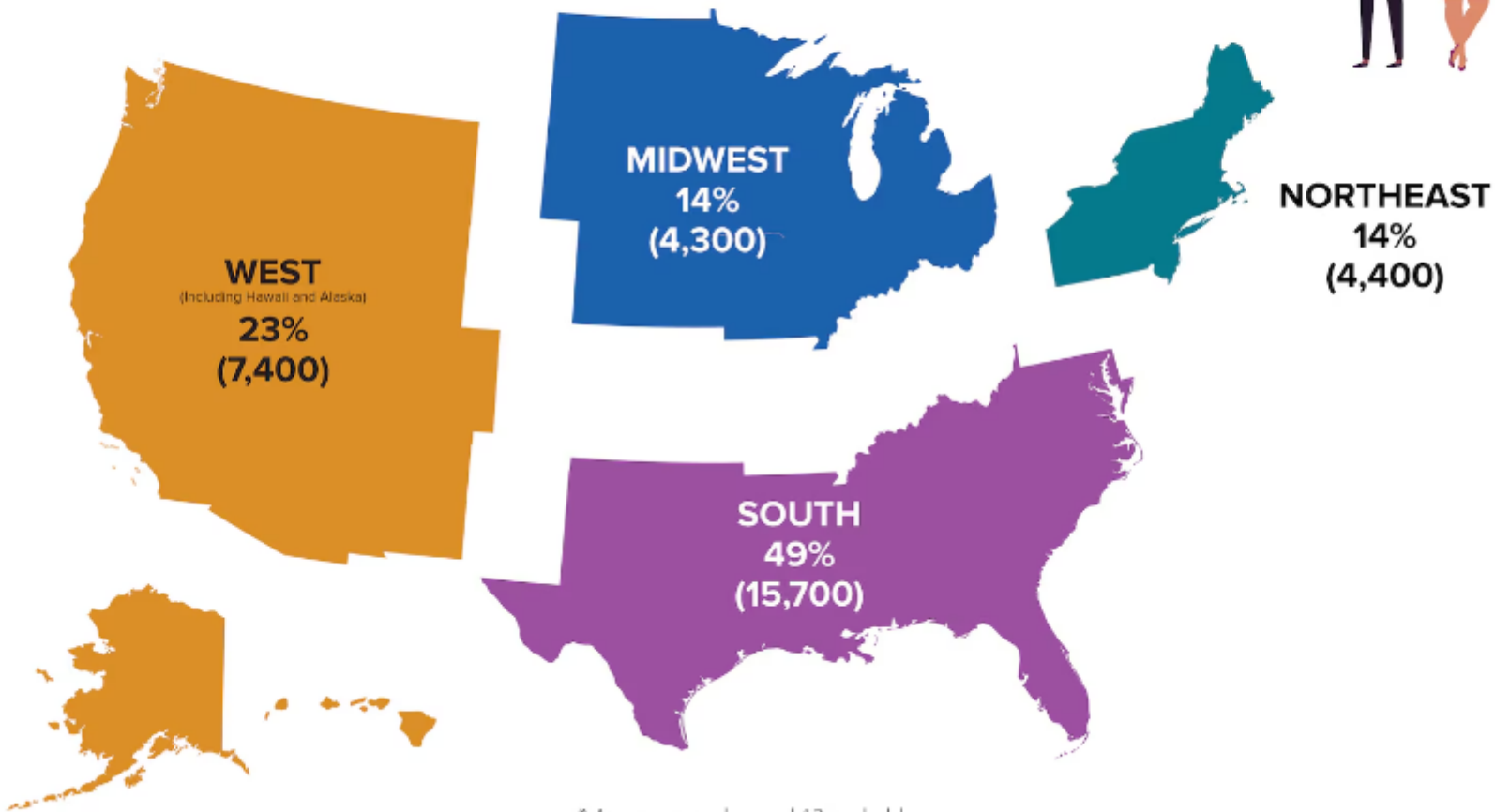


Source: NDHHS Sexually Transmitted and Bloodborne Diseases Unit

Estimated HIV infections in the US by region, 2022*

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

N=31,800



* Among people aged 13 and older.

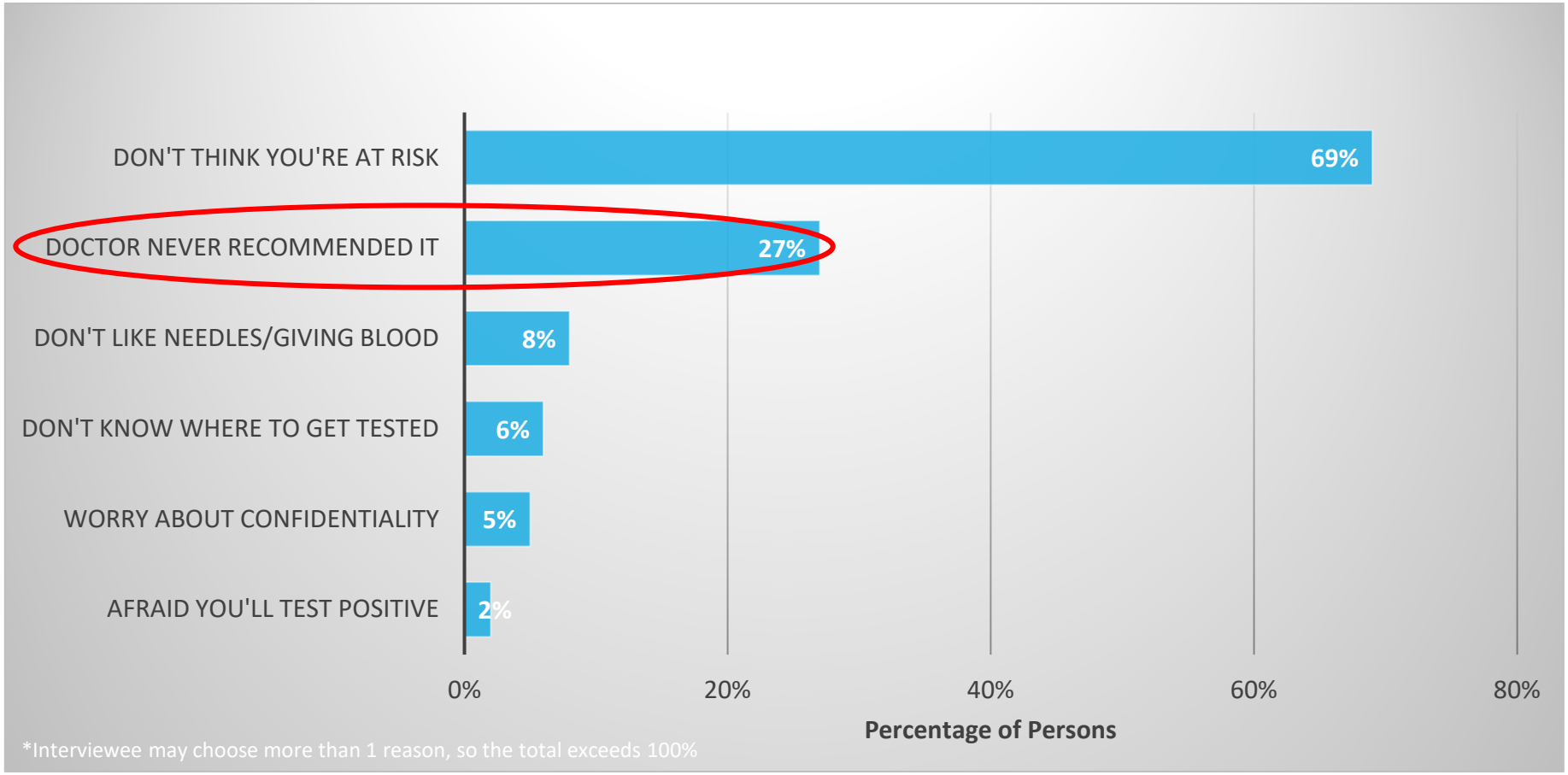
Source: CDC. Estimated HIV incidence and prevalence in the United States, 2018–2022. *HIV Surveillance Supplemental Report*, 2024; 29(1).

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



SOURCE: Kaiser Family Foundation Survey

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

HIV Stigma Fact Sheet

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

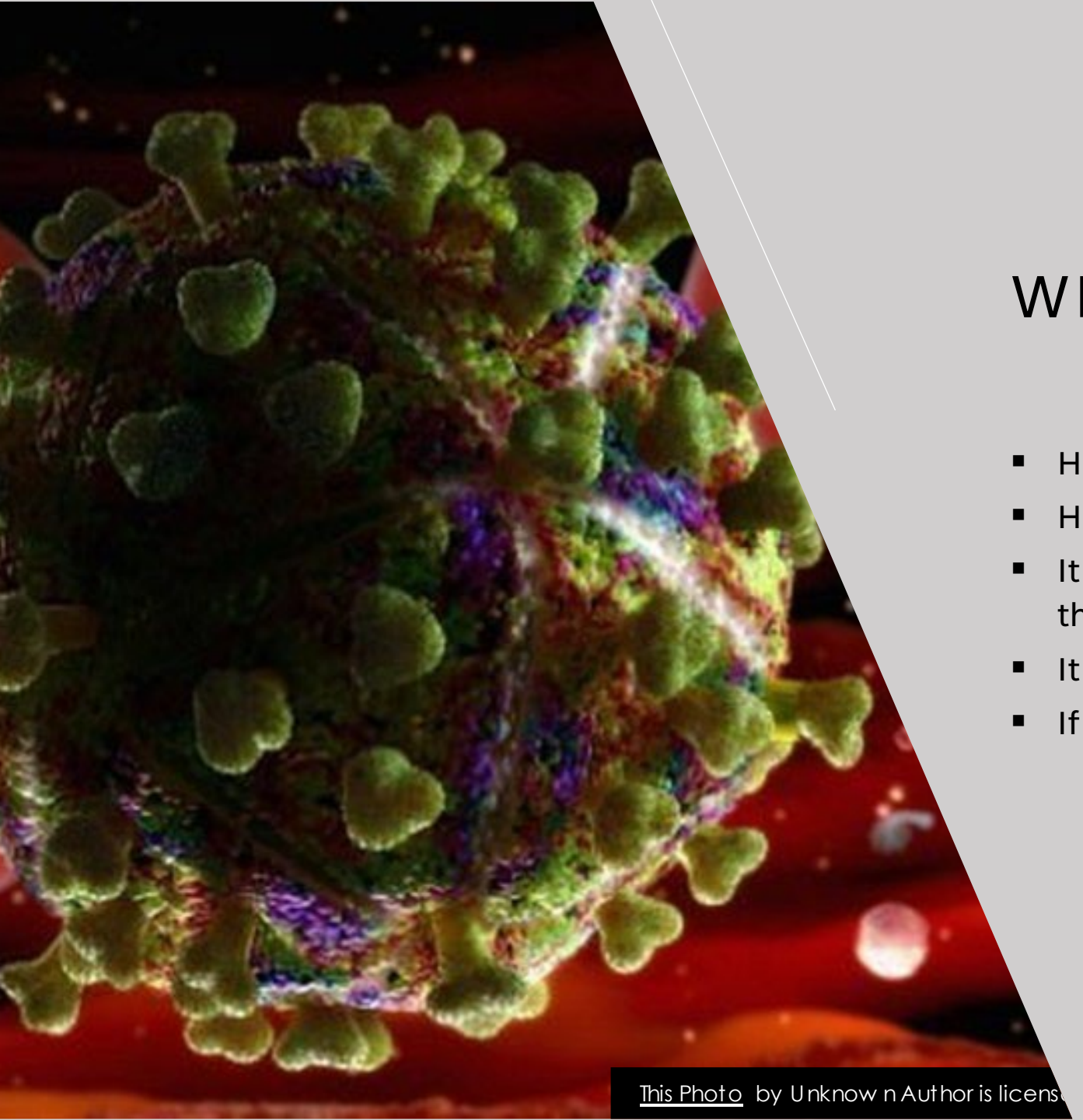
PERSON-FIRST LANGUAGE

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
HIV infection/HIV-infected ***Related terms to avoid:*** *HIV-infected people, HIV positives, HIV carriers, people infected with HIV, HIV-uninfected people*	✓ HIV ✓ People/person living with HIV ✓ People/person with HIV ✓ HIV status ✓ HIV diagnoses ✓ HIV acquisition ✓ HIV transmission	"Infection" carries the stigma of being contagious, a threat, or unclean. 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. Person-first language emphasizes humanity. "Living with" is an affirmation of life many advocates prefer. "Poz" is also sometimes used by community members themselves.

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

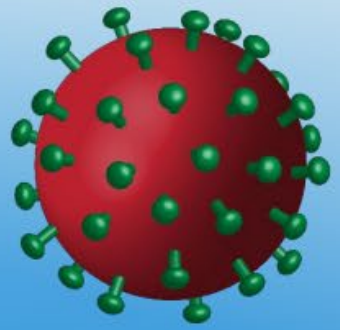


WHAT IS HIV?

- 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

HIV and AIDS: What's the Difference?

HIV

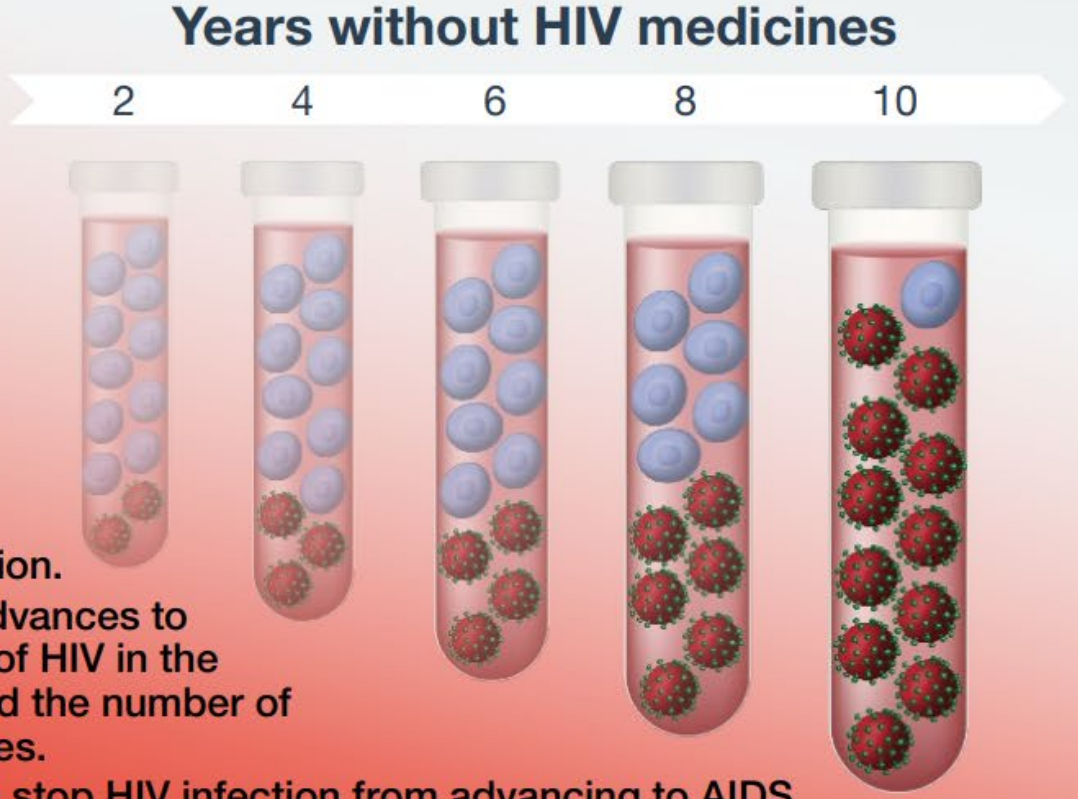


- HIV is the virus that causes HIV infection.
- HIV damages the immune system by killing CD4 cells.

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.

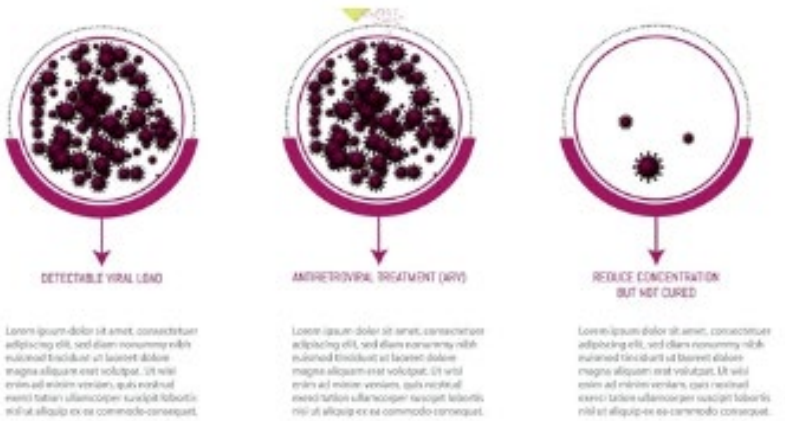
AIDS



- 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.

For more information, visit HIVinfo.NIH.gov.

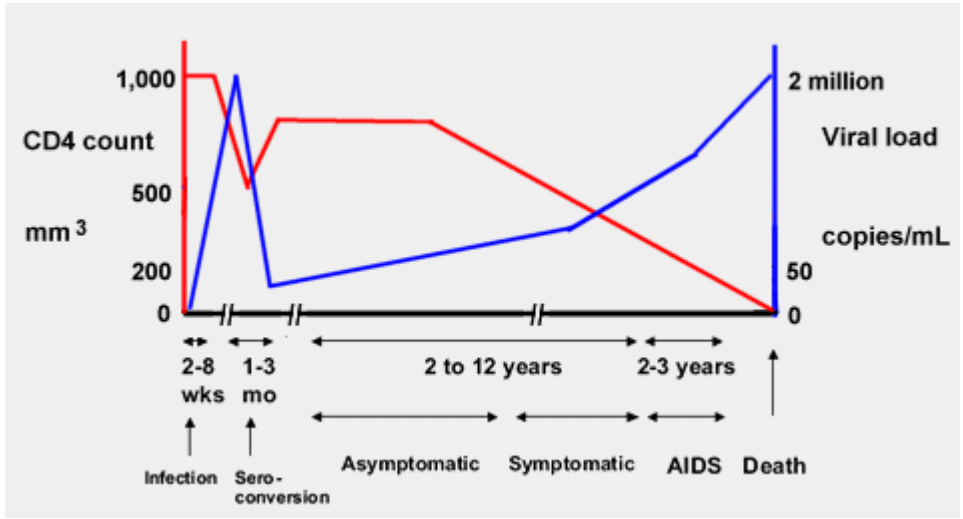
HIVinfo.NIH.gov



THE NUMBERS

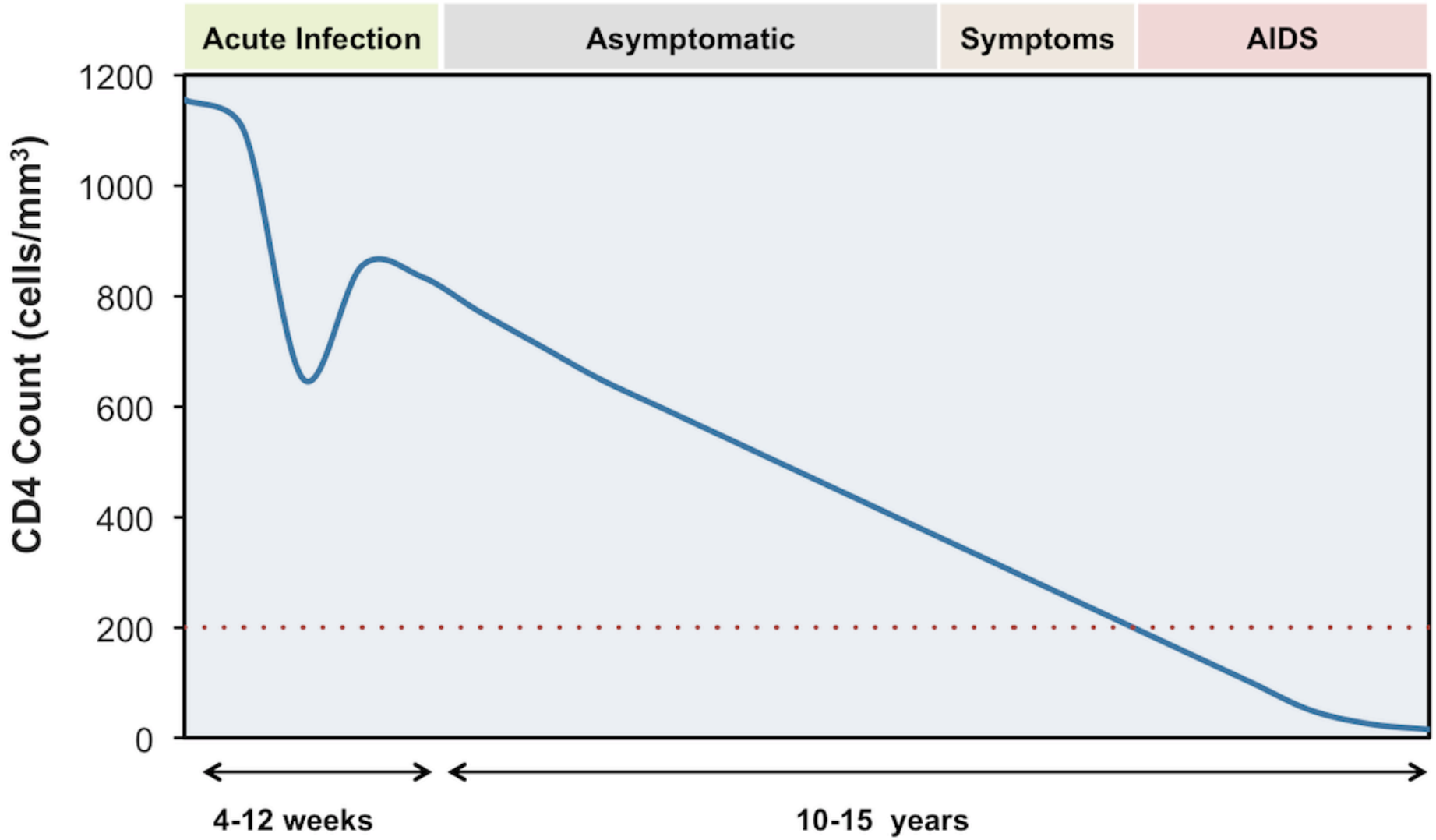
CD4 – How well immune system is functioning (Normal 500 – 1200)

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



Typically, as the viral load increases, the CD4 decreases

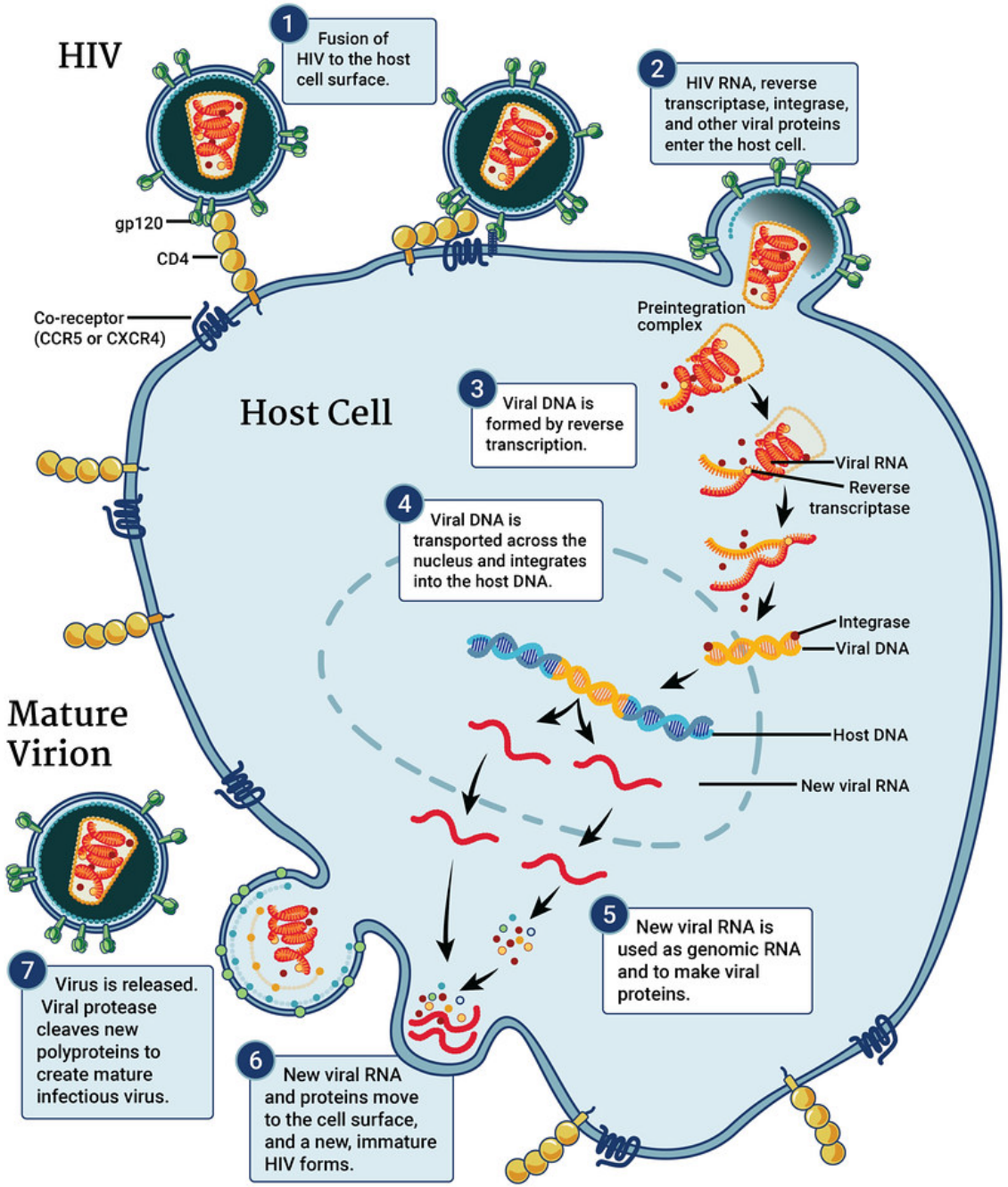
NATURAL HISTORY OF HIV INFECTION WITHOUT ART

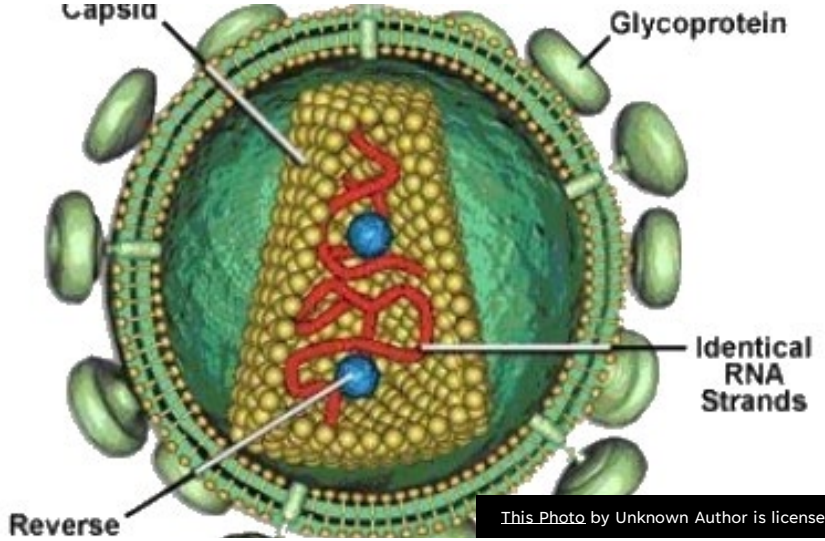


OPPORTUNISTIC INFECTIONS

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	Pneumocystis jiroveci	Hypoxia induced by activity, interstitial infiltrates, ↑ LDH
	Cryptosporidium	Profuse watery diarrhea
	Candida	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
	Cryptococcus	Headache, altered mentation, +India ink
	Mycobacterium avium complex	Night sweats, weight loss, diarrhea, malaise
	Primary CNS lymphoma (EBV assoc.)	Focal neuro deficits, seizures, weight loss, confusion

HOW HIV INFECTS HUMANS

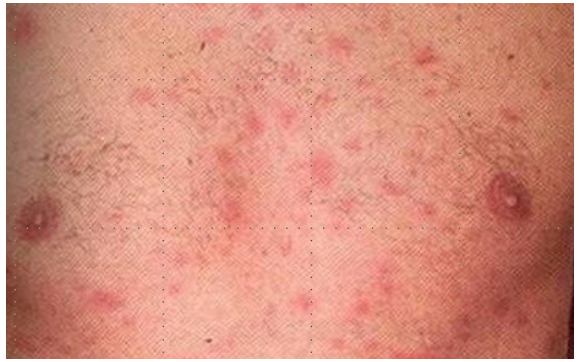


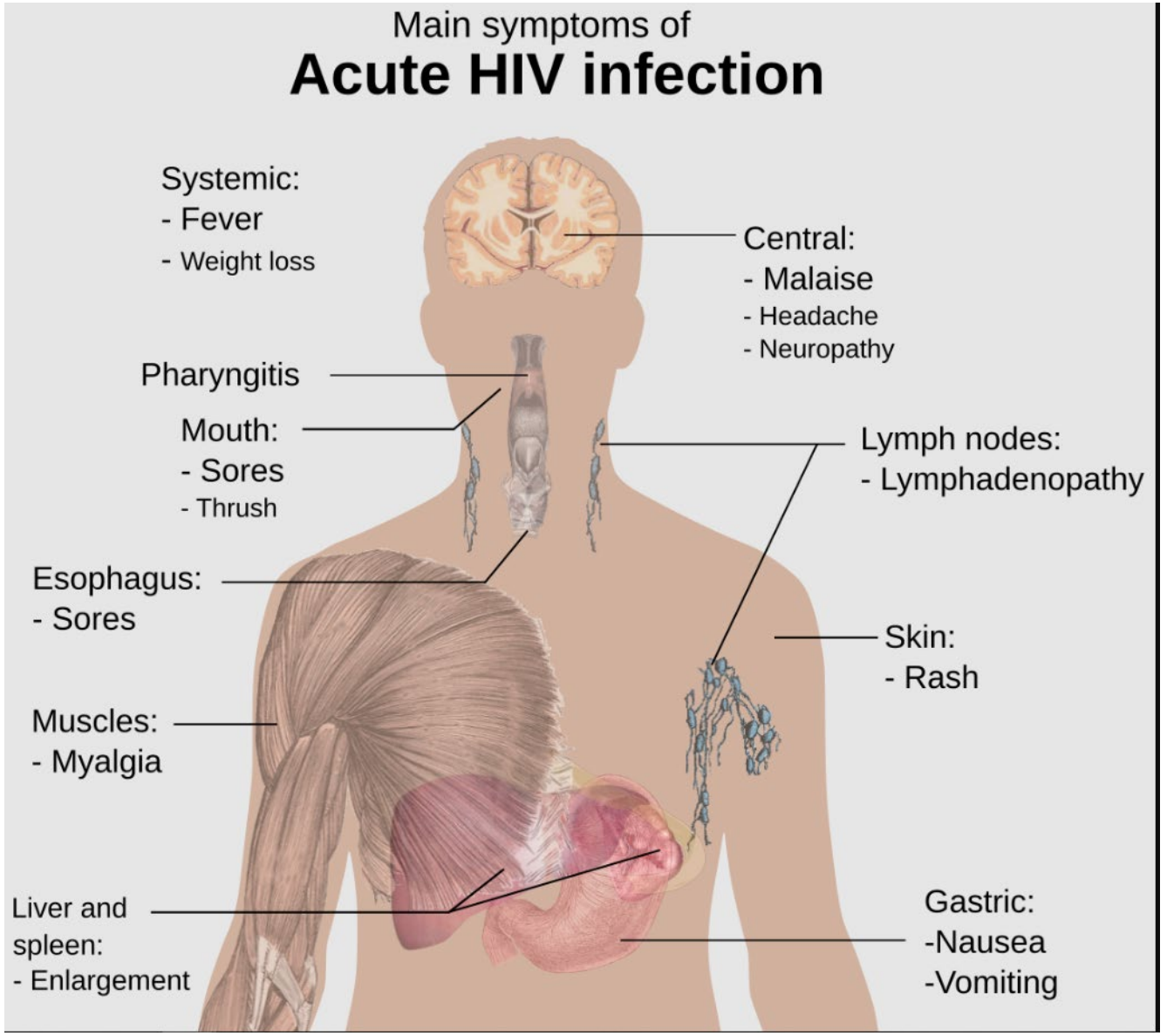


ACUTE HIV INFECTION

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

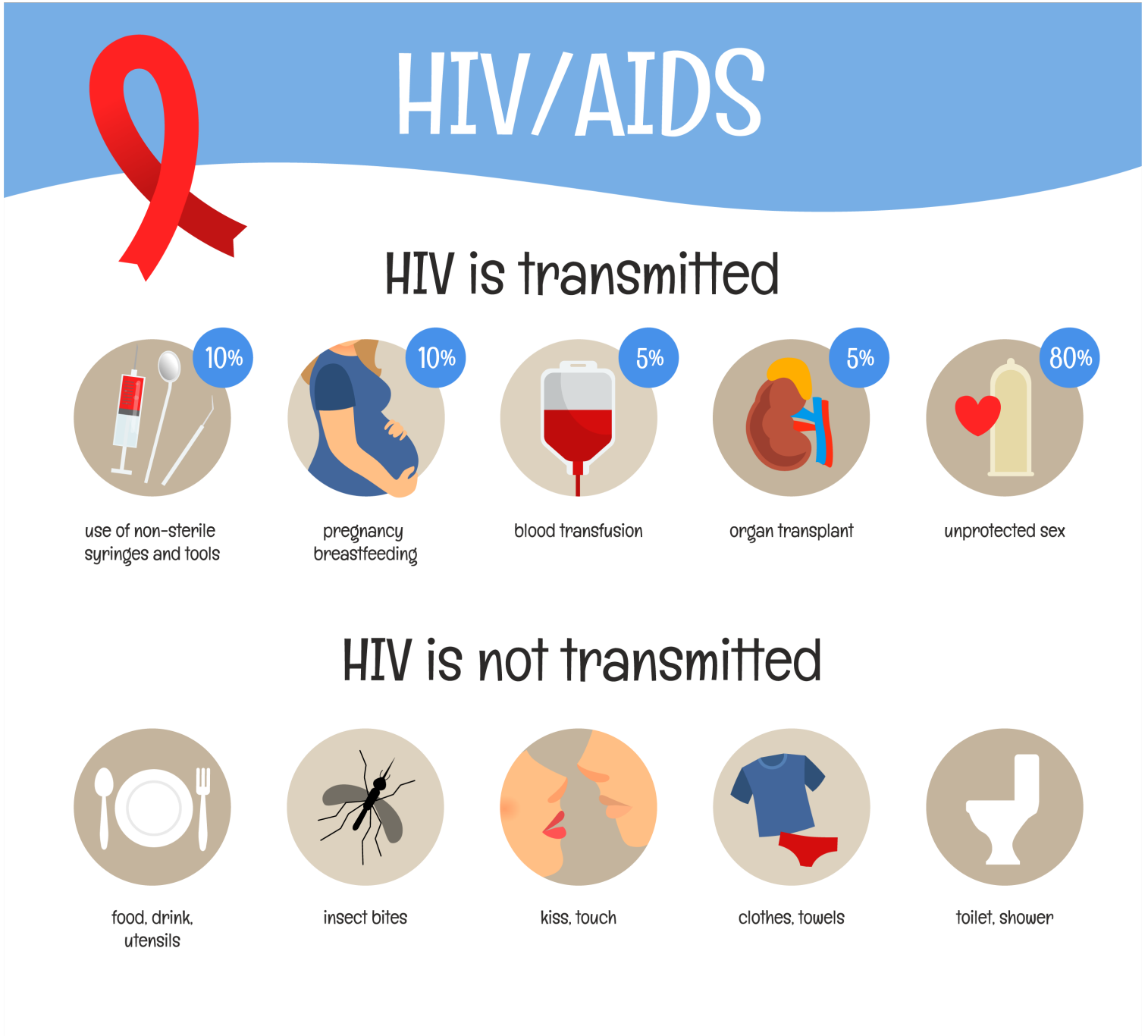
Acute HIV Syndrome: Exanthem





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



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.

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

Contact your local health department

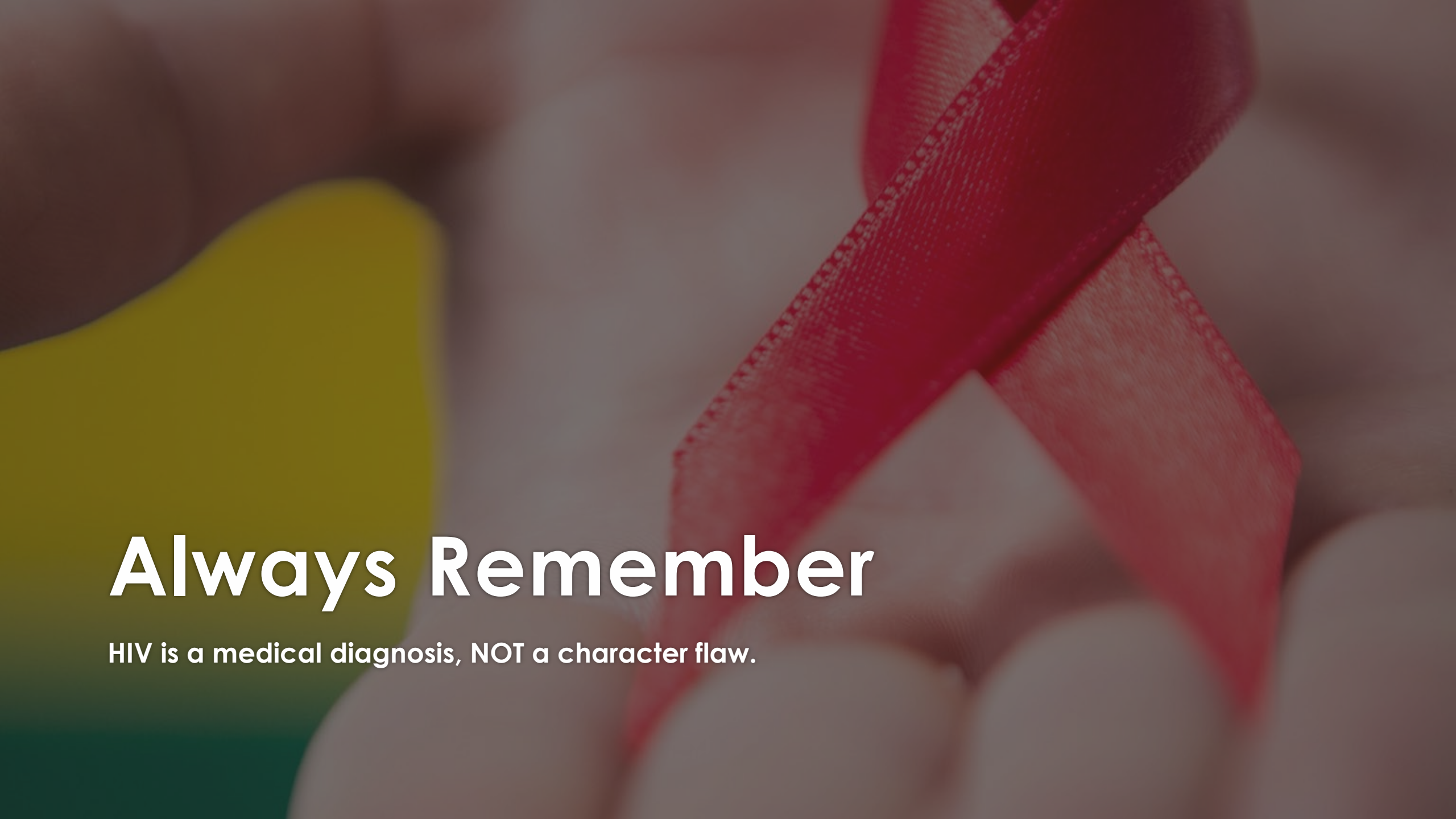
Ask your health care provider

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.

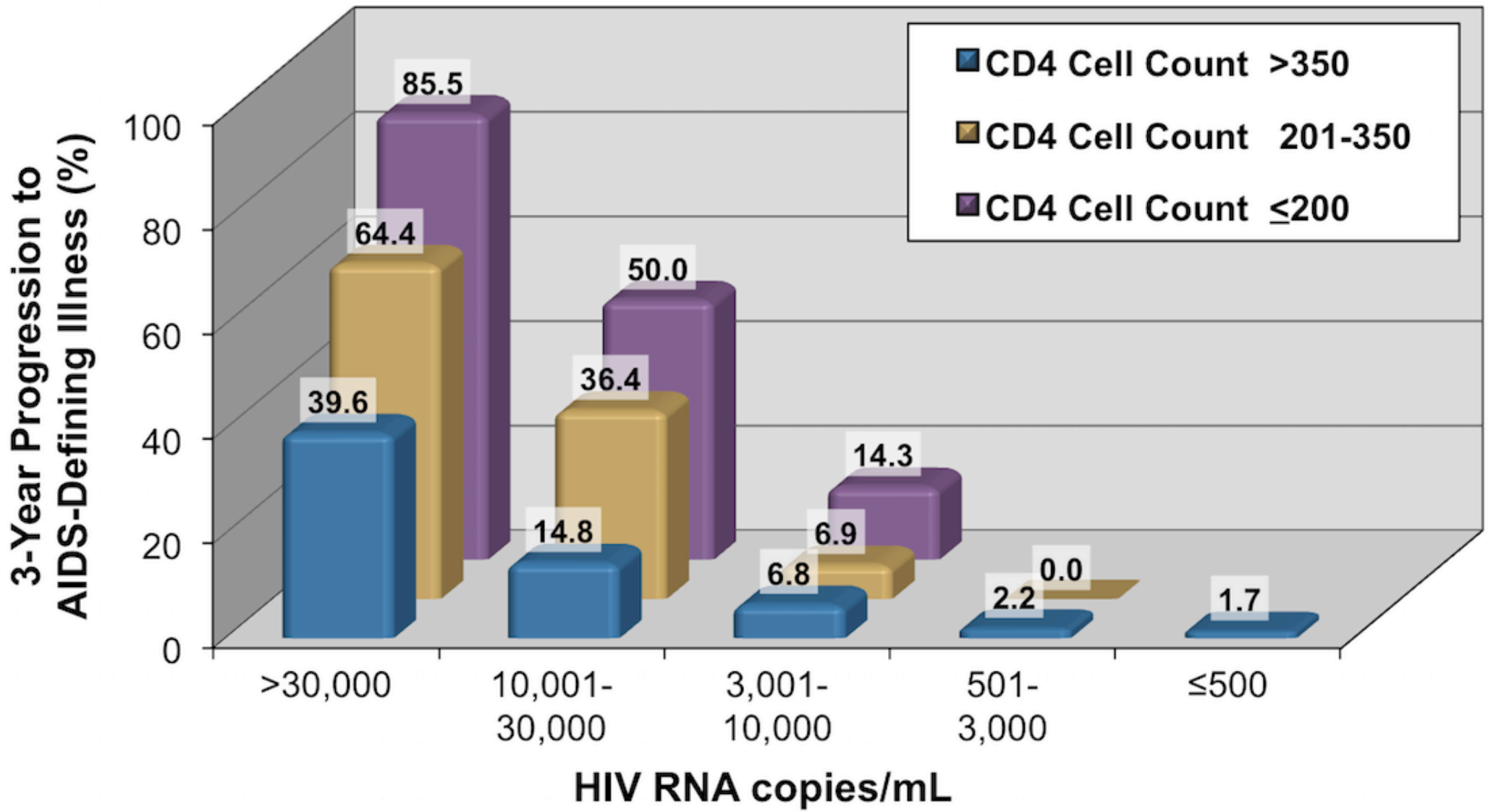
BREAK

HIV MANAGEMENT IN PRIMARY CARE

- Review HIV Care Continuum
- Basics of antiretroviral therapy (ART)
- Rapid-start ART
- When to delay start of meds
- Opportunistic infection prophylaxis
- Co-administration of other meds
- Vaccine schedules
- Health maintenance

HIV CARE CONTINUUM:

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



Source: Mellors JW, Rinaldo CR Jr, Gupta P, White RM, Todd JA, Kingsley LA. Prognosis in HIV-1 infection predicted by the quantity of virus in plasma. Science. 1996;272:1167-70.

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”

Antiretroviral Therapy: What Does It Do?

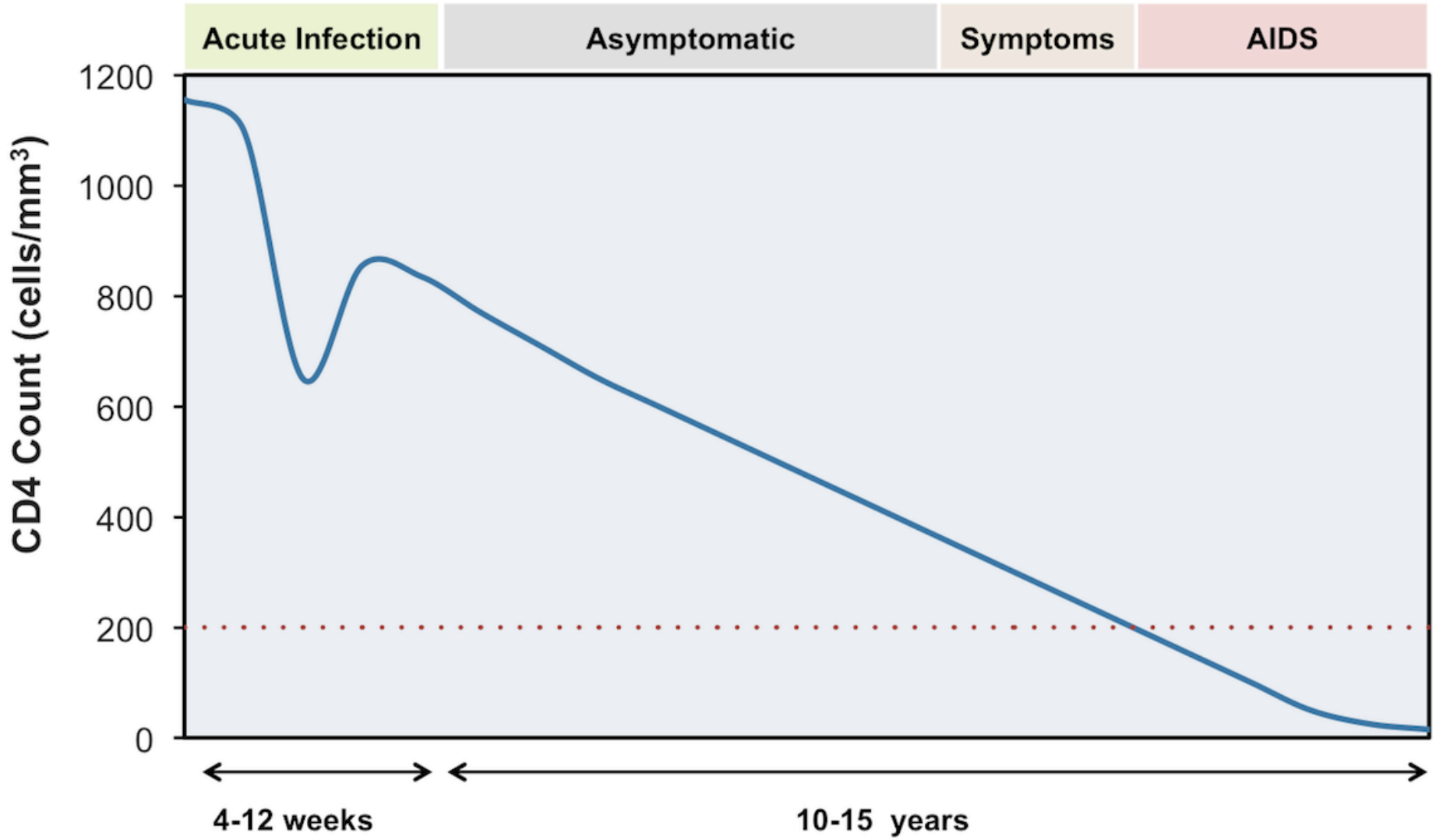
Antiretroviral therapy (ART) is the daily use of a combination of HIV medicines to treat HIV.

ART saves lives, but does not cure HIV.

When a person with HIV has access to ART and takes it as prescribed, ART...

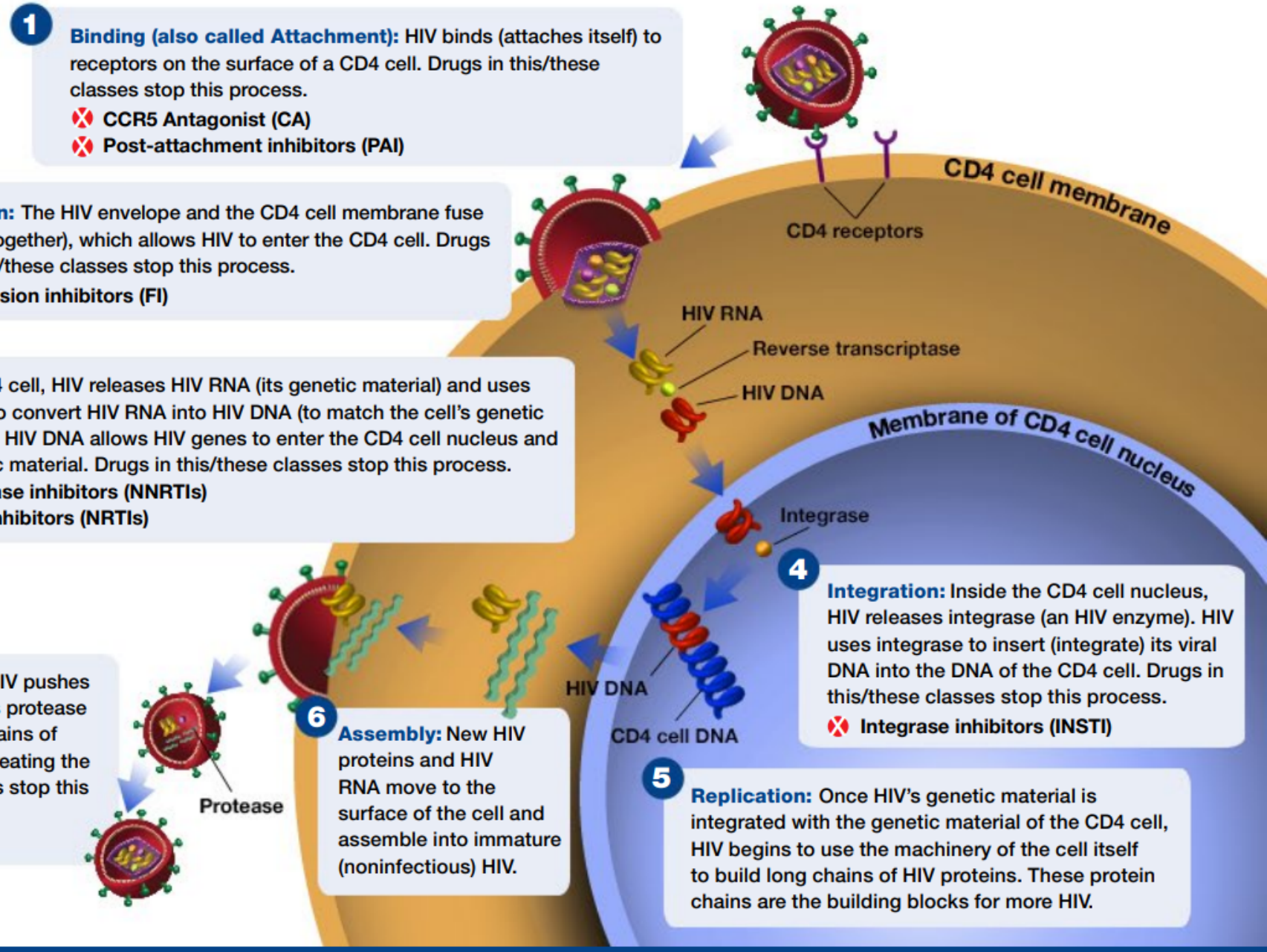
- **Reduces the amount of HIV in the body**
- **Reduces the risk of HIV transmission**
- **Prevents HIV from advancing to AIDS**
- **Protects the immune system**
- **Prolongs life expectancy to near-normal**

NATURAL HISTORY OF HIV INFECTION WITHOUT ART



The HIV Life Cycle

HIV medicines in seven drug classes stop (X) HIV at different stages in the HIV life cycle.



1 **Binding (also called Attachment):** HIV binds (attaches itself) to receptors on the surface of a CD4 cell. Drugs in this/these classes stop this process.

- **CCR5 Antagonist (CA)**
- **Post-attachment inhibitors (PAI)**

2 **Fusion:** The HIV envelope and the CD4 cell membrane fuse (join together), which allows HIV to enter the CD4 cell. Drugs in this/these classes stop this process.

- **Fusion inhibitors (FI)**

3 **Reverse Transcription:** Inside the CD4 cell, HIV releases HIV RNA (its genetic material) and uses reverse transcriptase (an HIV enzyme) to convert HIV RNA into HIV DNA (to match the cell's genetic material). The conversion of HIV RNA to HIV DNA allows HIV genes to enter the CD4 cell nucleus and be combined with the cell's own genetic material. Drugs in this/these classes stop this process.

- **Non-nucleoside reverse transcriptase inhibitors (NNRTIs)**
- **Nucleoside reverse transcriptase inhibitors (NRTIs)**

4 **Integration:** Inside the CD4 cell nucleus, HIV releases integrase (an HIV enzyme). HIV uses integrase to insert (integrate) its viral DNA into the DNA of the CD4 cell. Drugs in this/these classes stop this process.

- **Integrase inhibitors (INSTI)**

5 **Replication:** Once HIV's genetic material is integrated with the genetic material of the CD4 cell, HIV begins to use the machinery of the cell itself to build long chains of HIV proteins. These protein chains are the building blocks for more HIV.

6 **Assembly:** New HIV proteins and HIV RNA move to the surface of the cell and assemble into immature (noninfectious) HIV.

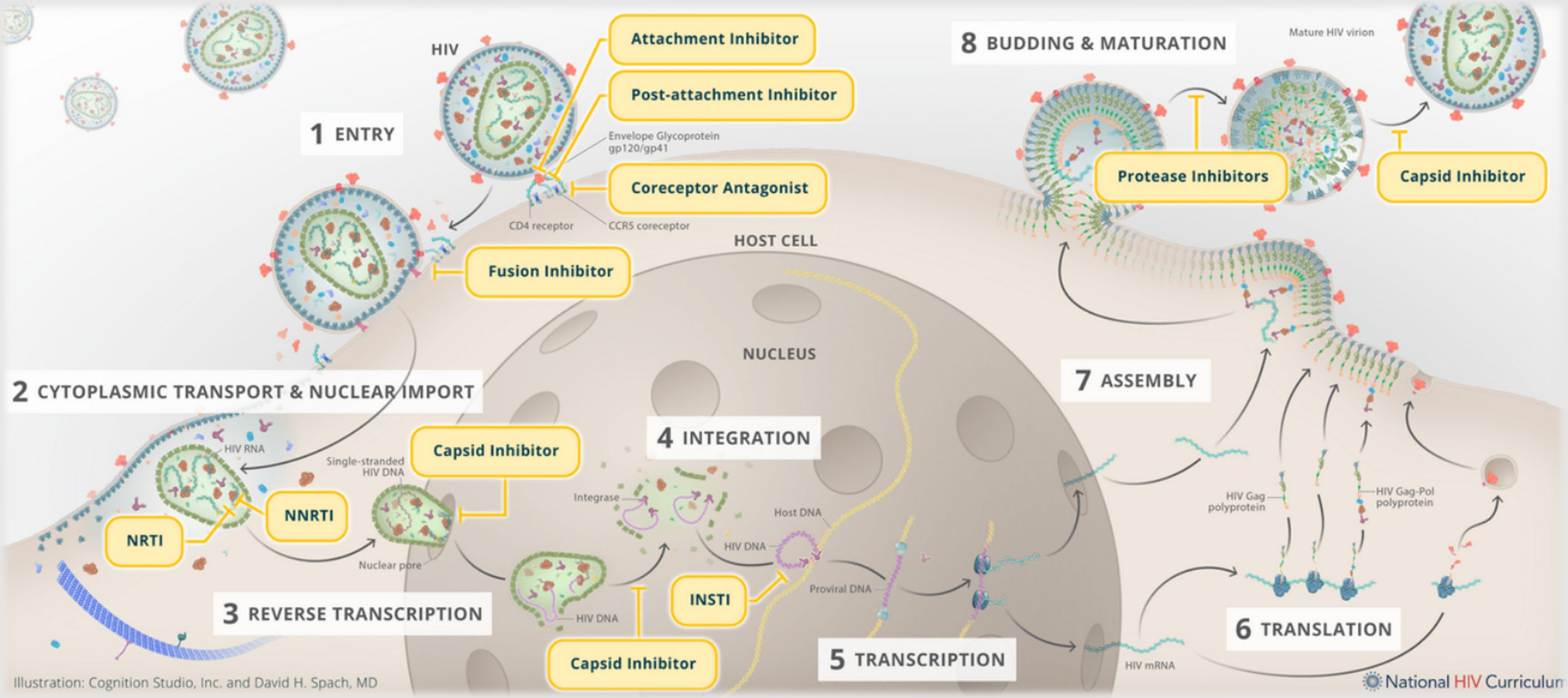
7 **Budding:** Newly formed immature (noninfectious) HIV pushes itself out of the host CD4 cell. The new HIV releases protease (an HIV enzyme). Protease breaks up the protein chains of the immature virus into smaller functional pieces, creating the mature (infectious) virus. Drugs in this/these classes stop this process.

- **Protease inhibitors (PIs)**

For more information, visit HIVinfo.NIH.gov.

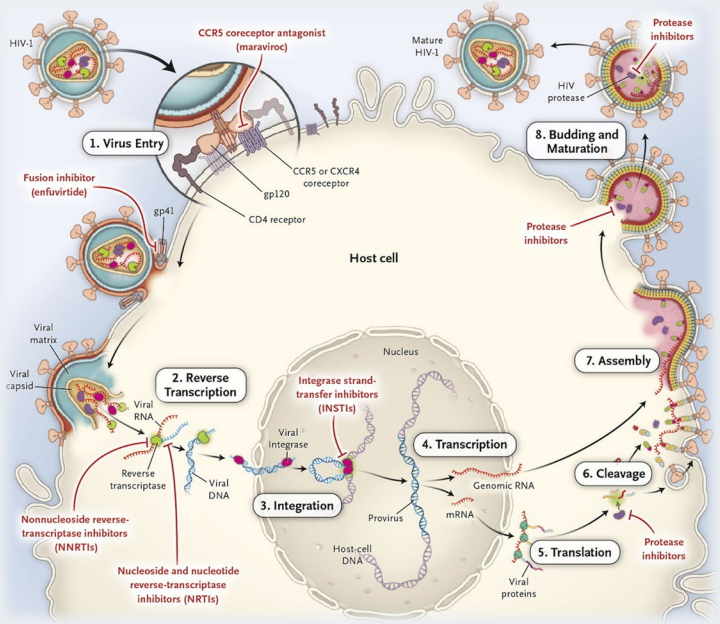
HIVinfo.NIH.gov

HOW ART WORKS

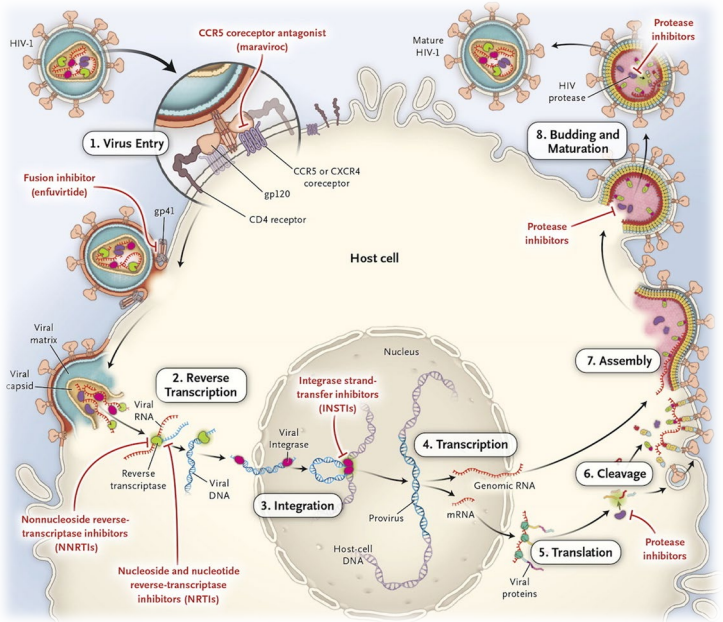


TYPES OF ART?

- Nucleoside/Nucleotide Reverse Transcriptase Inhibitors (NRTI)
- Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTI)
- Integrase Inhibitors (INSTI)
- Protease Inhibitors (PI)
- Entry Inhibitors
- Boosting Agents



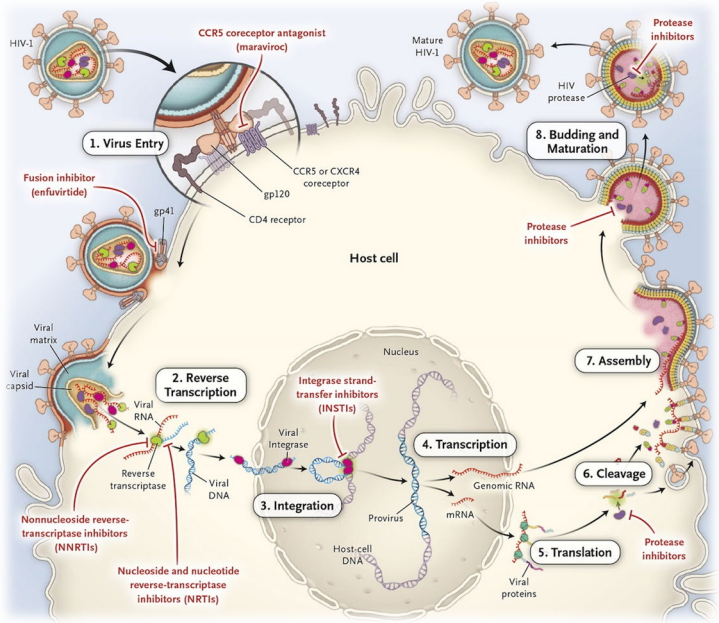
NUCLEOSIDE/NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITORS (NRTI)



- *Emtriva (emtricitabine) -FTC*
- *Epivir (lamivudine) -3TC*
- *Retrovir (zidovudine) -ZDV*
- *Viread (tenofovir DF) –TDF*
- *Vemlidy (tenofovir AF) -TAF*
- *Ziagen* (abacavir) –ABC

Act as host nucleotide decoys and cause termination of the elongating HIV DNA chain

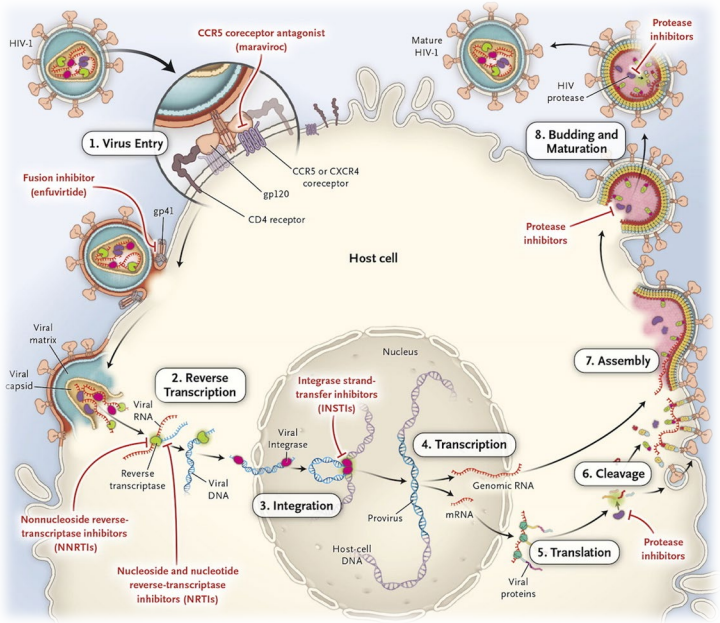
NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NNRTI)



- Edurant (rilpivirine) -RPV
- Intelence (etravirine) -ETR
- Pifeltro (doravirine) -DOR
- Sustiva (efavirenz) -EFV
- Viramune (nevirapine) -NVP

Bind directly to HIV reverse transcriptase enzyme and inhibit the function of the enzyme

INTEGRASE INHIBITORS (INSTI)



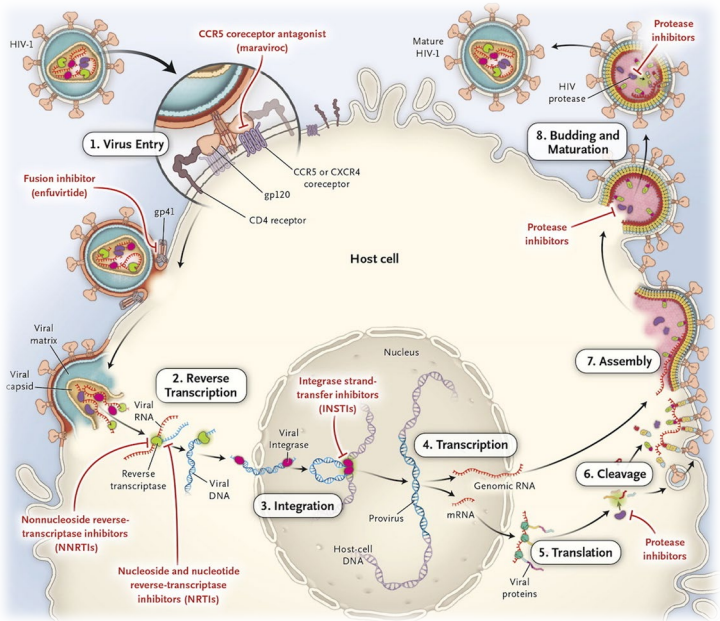
Isentress (raltegravir) – RAL

Isentress HD (Raltegravir) –RAL

Tivicay (dolutengravir) - DTG

Utilize multiple mechanisms to block the integrase enzyme

PROTEASE INHIBITORS (PI)



Lexiva (fosamprenavir) – FPV

Prezista (darunavir) –DRV

Reyataz (atazanavir) –ATV

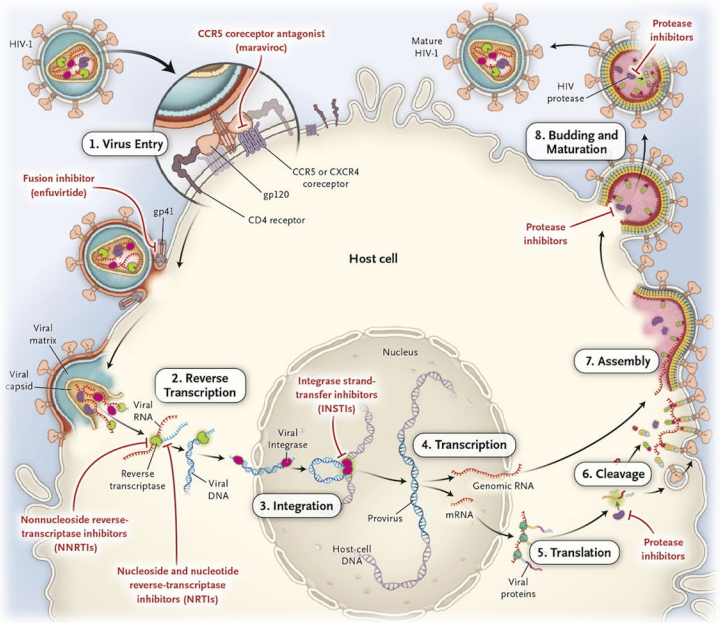
Viracept (nelfinavir) – NFV

Some are boosted Protease inhibitors

- Kaletra (lopinavir with ritonavir) – LPV/RTV
- Evotaz (atazanavir with cobicistat)
- Prezcobix (darunavir with cobicistat)

Bind to the active site of HIV protease and inhibit protease enzyme activity

ENTRY INHIBITORS



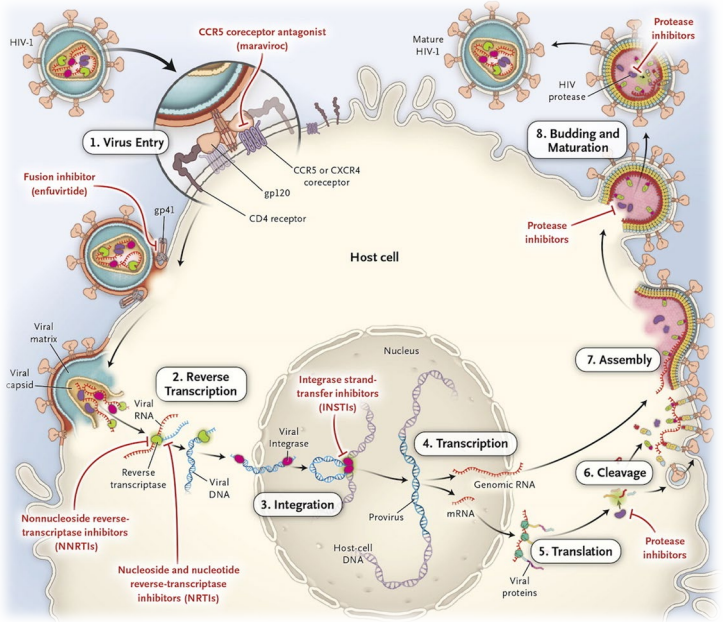
Fuzeon (enfuvirtide) – T-20 - Fusion Inhibitor

Selzentry (maraviroc) – MVC – CCR5 Antagonist

Trozargo (ibalizumab) – IBA - Post attachment inhibitor

In short, they prevent HIV from entering the host cell [*attachment, receptor binding, fusion with membrane*]

BOOSTING AGENTS



Norvir (ritonavir) – RTV

Tybost (cobicistat) - COBI

Act as host nucleotide decoys and cause termination of the elongating HIV DNA chain

COMBINATION MEDS – THE MAJORITY!

Single-Tablet Regimens

Bictegravir-Tenofovir alafenamide-Emtricitabine

Biktarvy

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Darunavir-Cobicistat-Tenofovir alafenamide-Emtricitabine

Symtuza

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Dolutegravir-Abacavir-Lamivudine

Triumeq

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Dolutegravir-Lamivudine

Dovato

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Dolutegravir-Rilpivirine

Juluca

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Doravirine-Tenofovir DF-Lamivudine

Delstrigo

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Efavirenz-Tenofovir DF-Emtricitabine

Atripla

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Elvitegravir-Cobicistat-Tenofovir alafenamide-Emtricitabine

Genvoya

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Elvitegravir-Cobicistat-Tenofovir DF-Emtricitabine

Stribild

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Rilpivirine-Tenofovir alafenamide-Emtricitabine

Odefsey

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

Rilpivirine-Tenofovir DF-Emtricitabine

Complera

Prescribing Information »
Clinical Trials »
References »
Slide Deck »

HIV Medication Chart

Combination Antiretrovirals

Single-Tablet Regimens

Atripla† (EFV/TDF/FTC)

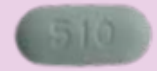
Biktarvy (BIC/TAF/FTC)

Complera (RPV/TDF/FTC)

Delstrigo (DOR/TDF/3TC)

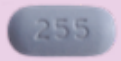
Dovato (DTG/3TC)

Genvoya (EVG/COBI/TAF/FTC)



Juluca (DTG/RPV)

Odefsey (RPV/TAF/FTC)



Stribild (EVG/COBI/TDF/FTC)

Symtuza (DRV/COBI/TAF/FTC)

Triumeq (DTG/ABC/3TC)

Long-Acting Injectable Regimens

Cabenuva (CAB/RPV)

Regimens Used in Combination with Other HIV Medications

Descovy (TAF/FTC)

Truvada† (TDF/FTC)

Nucleoside/Nucleotide Reverse Transcriptase Inhibitors (NRTI)

Emtriva*† (emtricitabine, FTC)

Epivir*† (lamivudine, 3TC)

Viread*† (tenofovir DF, TDF)

Vemlidy (tenofovir alafenamide, TAF)
FDA approved for HBV only

Protease Inhibitors (PI)

Evotaz (ATV/COBI)

Prezcobix (DRV/COBI)

Prezista*† (darunavir, DRV)

Reyataz*† (atazanavir, ATV)

Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTI)

Edurant (rilpivirine, RPV)

Intelence† (etravirine, ETR)

Pifeltro (doravirine, DOR)

Sustiva† (efavirenz, EFV)

Capsid Inhibitors

Sunlenca (lenacapavir, LEN)

Entry Inhibitors

Rukobia (fostemsavir, FTR)
gp120 Attachment Inhibitor

Selzentry* (maraviroc, MVC)
CCR5 Antagonist

Trogarzo (ibalizumab, IBA)
Post-Attachment Inhibitor

Boosting Agents

Norvir*† (ritonavir, RTV)

Tybost (cobicistat, COBI)

Integrase Inhibitors (INSTI)

Isentress*▲ (raltegravir, RAL)

Isentress HD (raltegravir, RAL)

Tivicay* (dolutegravir, DTG)

Vocabria (cabotegravir, CAB)

All pills shown in relative size/scale. *Medication brand names appear in bold. Generic names and commonly used abbreviations appear in parentheses.*

*Also available in liquid or powder form. †Generic formulation available. ▲Chewable form available.

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LONG-ACTING ART

Table 1. Recommended Dosing Schedule with Optional Oral Lead-in or Direct to Injection for Monthly Injection

Drug	Optional Oral Lead-in[a] (at Least 28 Days)	Intramuscular (Gluteal)Initiation Injections(One-Time Dosing)	Intramuscular (Gluteal)Continuation Injections(Once-Monthly Dosing)
	Month (at Least 28 Days) Prior to Starting Injections	Initiate Injections at Month 1[b]	One Month after Initiation Injection and Monthly Onwards
Cabotegravir	30 mg once daily with a meal	600 mg (3 mL)	400 mg (2 mL)
Rilpivirine	25 mg once daily with a meal	900 mg (3 mL)	600 mg (2 mL)

A DIFFERENT WAY TO TREAT HIV

Every other month, and you're good to go.

CABENUVA is given by a healthcare provider as 2 injections, initially 1 month apart for 2 months. Attend all appointments.

Unlike daily pills, **CABENUVA is a long-acting, complete HIV regimen** you can get monthly or every other month—that's as few as 6 times a year.

It's an injectable treatment that **works continuously to help you stay undetectable* for up to 2 months,** depending on the treatment plan.

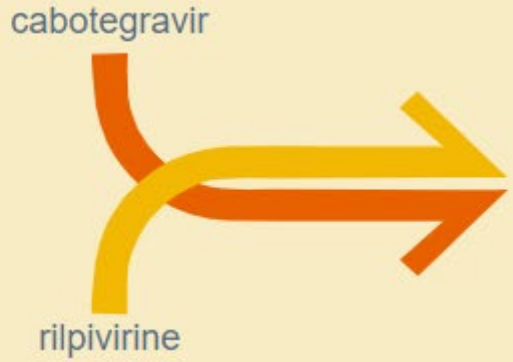
With regular injections, you **won't have to take any more daily HIV pills.**†

*Undetectable means the amount of HIV in the blood is below the level that can be measured by a lab test. Results may vary.

†Before your first injections, you may take daily starter pills for about a month to see how your body reacts.

HOW DOES LONG-ACTING CABENUVA WORK?

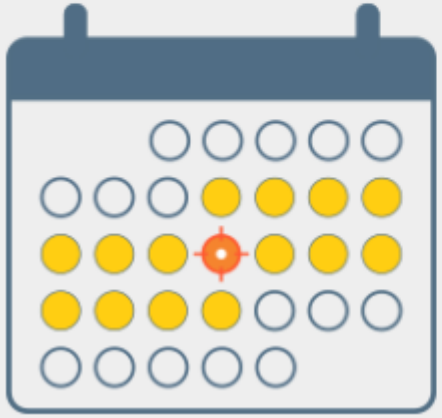
It contains 2 HIV medicines, cabotegravir and rilpivirine, to help keep you undetectable.* These 2 medicines slowly release over time to keep around the same level of medicine in your body between appointments.



CABENUVA | Prescribing Info | For US Healthcare Professionals

SCHEDULING CABENUVA TREATMENT

CABENUVA injections can be given by a healthcare professional once a month or every other month, depending on your treatment plan. To help stay undetectable, it's important to keep your planned appointments.



Target Treatment Date

You and your doctor will choose an ongoing date that works best for your injection appointments. This is called your **Target Treatment Date**. If you can't make your appointment, be sure to contact your doctor right away.

Flexible Treatment Window

You have a **Flexible Treatment Window** to schedule your appointment within—from 7 days before to 7 days after your Target Treatment Date.

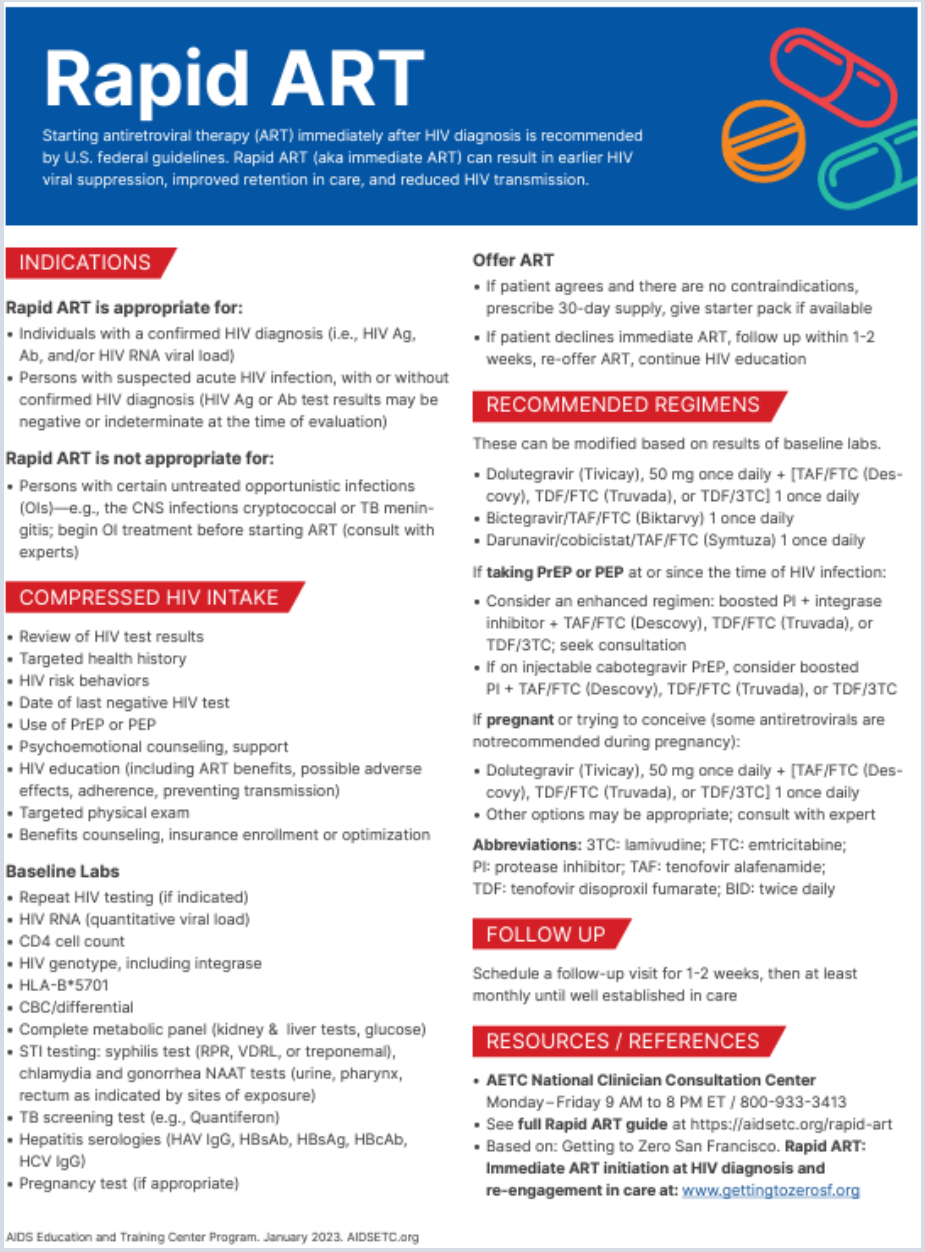
THAT'S ALL GREAT... BUT WHAT DO I START?

Start with a "backbone" of two NRTIs

- Tenofovir-emtricitabine
- Avoid abacavir whenever possible
- Avoid Tenofovir DF if kidney disease/osteoporosis

Then add a third "anchor" drug – can be NNRTI, PI, or INSTI

- Bictegravir or dolutegravir



Rapid ART

Starting antiretroviral therapy (ART) immediately after HIV diagnosis is recommended by U.S. federal guidelines. Rapid ART (aka immediate ART) can result in earlier HIV viral suppression, improved retention in care, and reduced HIV transmission.

INDICATIONS

Rapid ART is appropriate for:

- Individuals with a confirmed HIV diagnosis (i.e., HIV Ag, Ab, and/or HIV RNA viral load)
- Persons with suspected acute HIV infection, with or without confirmed HIV diagnosis (HIV Ag or Ab test results may be negative or indeterminate at the time of evaluation)

Rapid ART is not appropriate for:

- Persons with certain untreated opportunistic infections (OIs)—e.g., the CNS infections cryptococcal or TB meningitis; begin OI treatment before starting ART (consult with experts)

COMPRESSED HIV INTAKE

- Review of HIV test results
- Targeted health history
- HIV risk behaviors
- Date of last negative HIV test
- Use of PrEP or PEP
- Psychoemotional counseling, support
- HIV education (including ART benefits, possible adverse effects, adherence, preventing transmission)
- Targeted physical exam
- Benefits counseling, insurance enrollment or optimization

Baseline Labs

- Repeat HIV testing (if indicated)
- HIV RNA (quantitative viral load)
- CD4 cell count
- HIV genotype, including integrase
- HLA-B*5701
- CBC/differential
- Complete metabolic panel (kidney & liver tests, glucose)
- STI testing: syphilis test (RPR, VDRL, or treponemal), chlamydia and gonorrhea NAAT tests (urine, pharynx, rectum as indicated by sites of exposure)
- TB screening test (e.g., Quantiferon)
- Hepatitis serologies (HAV IgG, HBsAb, HBsAg, HBcAb, HCV IgG)
- Pregnancy test (if appropriate)

Offer ART

- If patient agrees and there are no contraindications, prescribe 30-day supply, give starter pack if available
- If patient declines immediate ART, follow up within 1-2 weeks, re-offer ART, continue HIV education

RECOMMENDED REGIMENS

These can be modified based on results of baseline labs.

- Dolutegravir (Tivicay), 50 mg once daily + [TAF/FTC (Descovy), TDF/FTC (Truvada), or TDF/3TC] 1 once daily
- Bictegravir/TAF/FTC (Biktarvy) 1 once daily
- Darunavir/cobicistat/TAF/FTC (Symtuza) 1 once daily

If **taking PrEP or PEP** at or since the time of HIV infection:

- Consider an enhanced regimen: boosted PI + integrase inhibitor + TAF/FTC (Descovy), TDF/FTC (Truvada), or TDF/3TC; seek consultation
- If on injectable cabotegravir PrEP, consider boosted PI + TAF/FTC (Descovy), TDF/FTC (Truvada), or TDF/3TC

If **pregnant** or trying to conceive (some antiretrovirals are notrecommended during pregnancy):

- Dolutegravir (Tivicay), 50 mg once daily + [TAF/FTC (Descovy), TDF/FTC (Truvada), or TDF/3TC] 1 once daily
- Other options may be appropriate; consult with expert

Abbreviations: 3TC: lamivudine; FTC: emtricitabine; PI: protease inhibitor; TAF: tenofovir alafenamide; TDF: tenofovir disoproxil fumarate; BID: twice daily

FOLLOW UP

Schedule a follow-up visit for 1-2 weeks, then at least monthly until well established in care

RESOURCES / REFERENCES

- **AETC National Clinician Consultation Center** Monday–Friday 9 AM to 8 PM ET / 800-933-3413
- See **full Rapid ART guide** at https://aidsetc.org/rapid-art
- Based on: Getting to Zero San Francisco. **Rapid ART: Immediate ART initiation at HIV diagnosis and re-engagement in care at:** www.gettingtozerosf.org

AIDS Education and Training Center Program. January 2023. AIDSETC.org

[Rapid ART Quick Guide]

RAPID START ART

- Ideally, ART would be started the ***same day*** as diagnosis
- Benefits
  - Prevention of low CD4 is shown to prevent decreased overall morbidity/mortality
- Why aren't we doing this a primary care providers?
  - Fear
  - Lack of education
  - Poor collaboration

WHEN TO DELAY START OF ART IN PRIMARY CARE

- Rather than delay – make urgent referral to infectious disease
- RARE to delay
- Patient preference
- Multiple severe, poorly managed co-morbidities
- Prior history of multiple ART regimens

WHAT NOT TO DO!

- Monotherapy with ANY ARV Regimen
- Dual Therapy with two NRTIs
- Triple therapy with three NRTIs
- TAF plus TDF

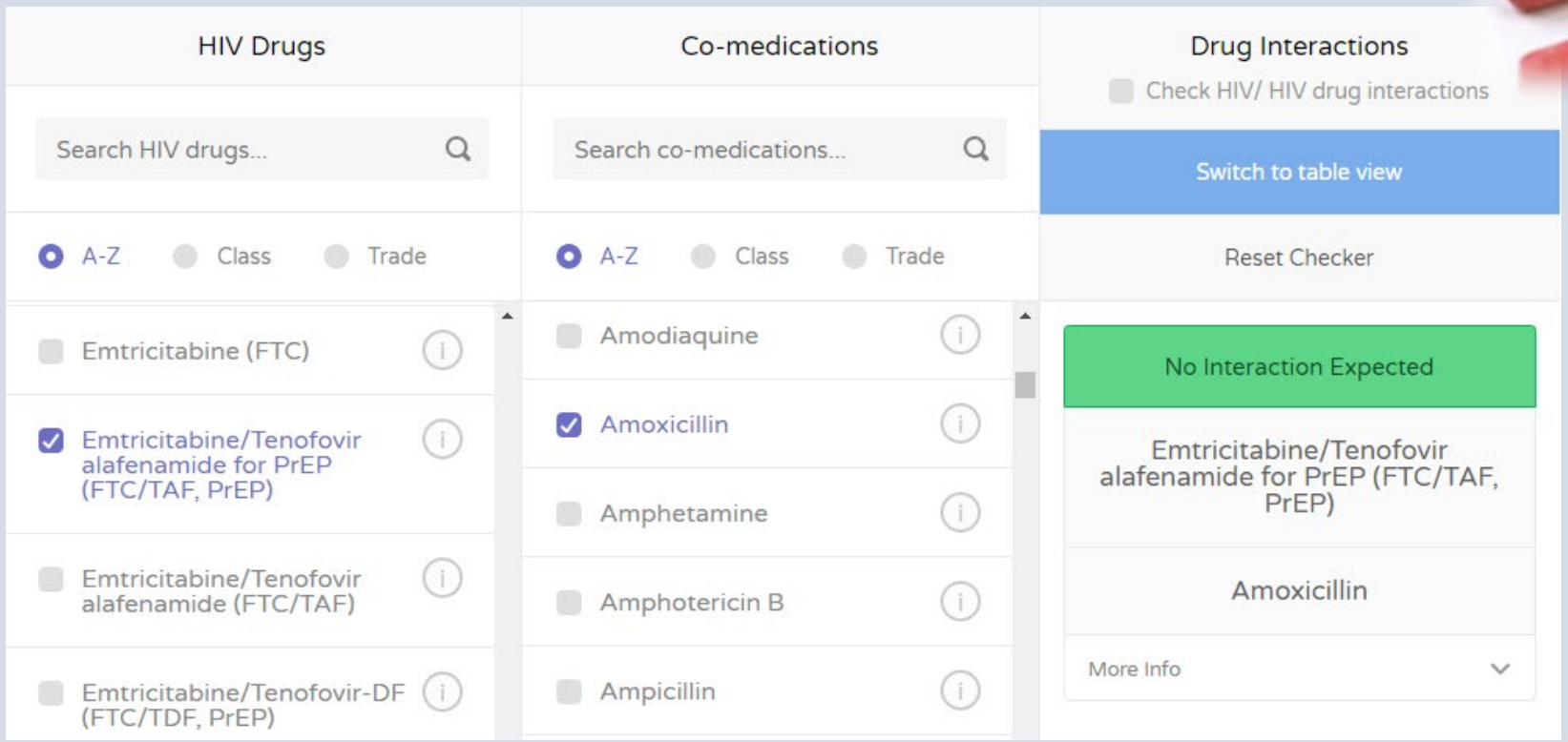
MONITORING RESPONSE TO MEDS

- Baseline HIV viral load and CD4
- **ANY time there is a change in clinical status – recheck labs**
- Recheck a CD4 every 3-6 months for the first 2 years of therapy
  - THEN:
    - If less than 300 – every 3-6 months
    - 300-500 – every 12 months
    - If consistently greater than 500 – optional (CHCBH still checks every 12mo)
- Repeat viral load in 2-8 weeks, no later than 8 weeks
  - Recheck VL every 4-8 weeks until virally suppressed
  - After fully suppressed – extend VL to every 3-4 months for 1-2 years
  - Long-term suppression – VL every 6 months

BUT MY PATIENT IS ON OTHER MEDS, NOW WHAT DO I DO?

[HIV and HCV Drug Interactions: Quick Guides for Clinicians]

[HIVinfo.NIH.gov: HIV treatment – side effects]



[University of Liverpool: HIV Drug Interactions Checker]

MEDICATIONS – KEY CONCEPTS

Steroids

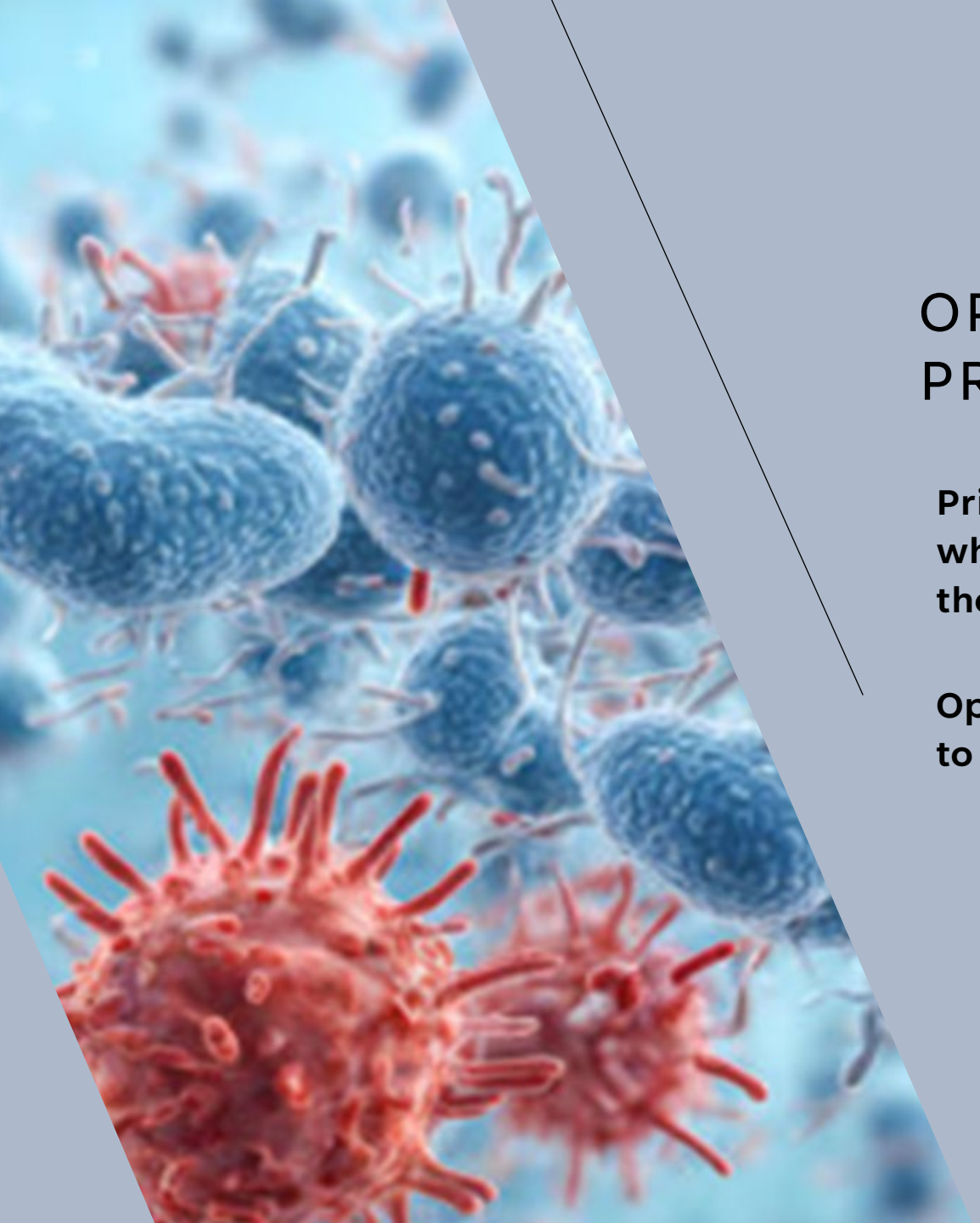
- HIV medications can increase concentrations
  - Cushing's syndrome adrenal suppression
- More common with "boosters"
- Adjust dosing for:
  - Most inhaled steroids
  - Prednisone
- AVOID Flonase

Over the Counter (OTC)

- St. John's Wort – CP450 3A4
  - May reduce concentration of PIs and NNRTIs by as much as 82%
- Garlic – topic of debate
- PPIs and H2 receptor antagonists
- Antacids – magnesium and/or aluminum
  - neutralize stomach acids and may interfere with absorption of ART

Other common opportunistic infections in PLWH

Coccidiodomycosis | Cryptococcal meningitis | Cytomegalovirus
Histoplasmosis | Kaposi Sarcoma | Toxoplasmosis



OPPORTUNISTIC INFECTIONS (OI): PREVENTION

Primary care providers need a basic understanding of what opportunistic infections are and how to prevent them from occurring

Opportunistic infections are more frequent or severe due to immunosuppression

- Most common in undiagnosed HIV, those with late diagnosis, or those with poor retention in care
- Typically occur with a CD4 count less than 200
- AIDS-defining infections

OPPORTUNISTIC INFECTIONS:

Prevention of *Pneumocystis* Pneumonia

Pneumocystis pneumonia

- Prior to ART, this infected up to 80% of patients with AIDS
- 90% of those who get PCP have a CD4 less than 200

Indications for primary prophylaxis

- CD4 less than 200
- CD4 percentage less than 14%
- CD4 200-250 and ART needs to be delayed and unable to monitor CD4 every 3 months

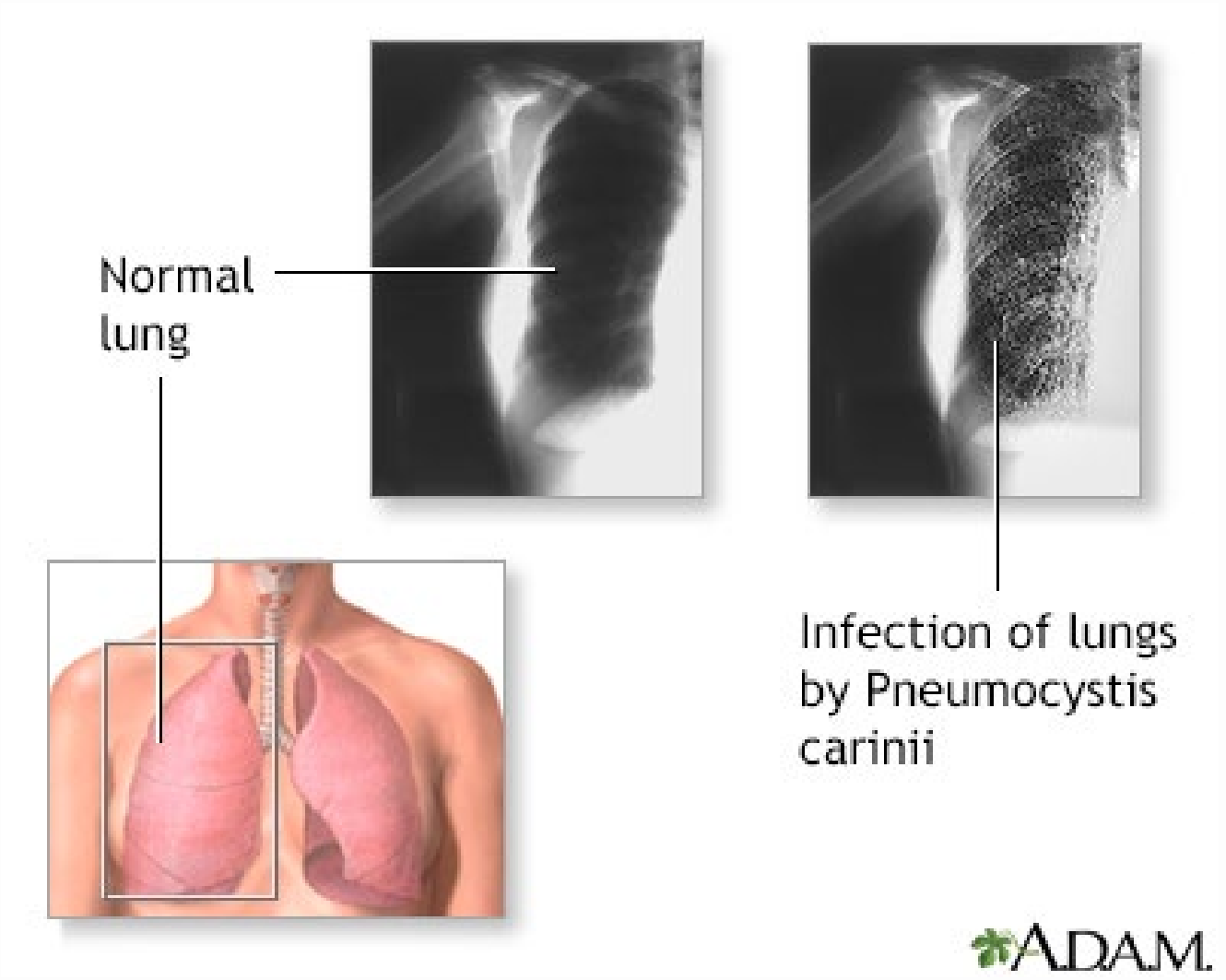
Regimen: Trimethoprim-sulfamethoxazole tablet daily

When to discontinue primary prophylaxis

- CD4 greater than 200 for at least 3 months or CD4 100-200 for 3-6 months with an undetectable viral load

PNEUMOCYSTIS CARINII PNEUMONIA (PCP)

- Fever
- Cough
- Shortness of breath
- Chest pain
- Chills
- Fatigue
- Weight Loss



OPPORTUNISTIC INFECTIONS:

Prevention of Disseminated *Mycobacterium avium* Complex (MAC)

MAC: Non-tubercular mycobacterium found in environment – infection causes fever, night sweats, weight loss, fatigue, diarrhea, anemia

- Usually in those not on ART or with resistance
- If disseminated – may take several weeks for culture to be positive

Indications for primary prophylaxis

- CD4 less than 50
  - ➢ *If suspect active MAC – get cultures before starting treatment*

Regimen:

- Azithromycin 1200mg/week or 600mg 2x/week

When to discontinue primary prophylaxis

- Effective ART has been started – regardless of CD4 count

HEALTH MAINTENANCE

- STI testing and Trichomoniasis at diagnosis - then every 3 months, *and at least annually*
- Syphilis at diagnosis - every 3 months, *and at least annually*
- Pap at diagnosis - then routine if normal, if abnormal follow ASCCP guidelines
- Anal Pap smear at diagnosis - *research pending*
- Mental health/substance use disorder screening - bi-annually
- Cholesterol panel at diagnosis - then 1-3 months after starting meds
- DEXA scan at age 50 - then based on sex assigned at birth
- People with HIV should receive evidence-based, patient-centered counseling to support shared decision-making about infant feeding

IDSA Clinical Practice Guidance for PLWH

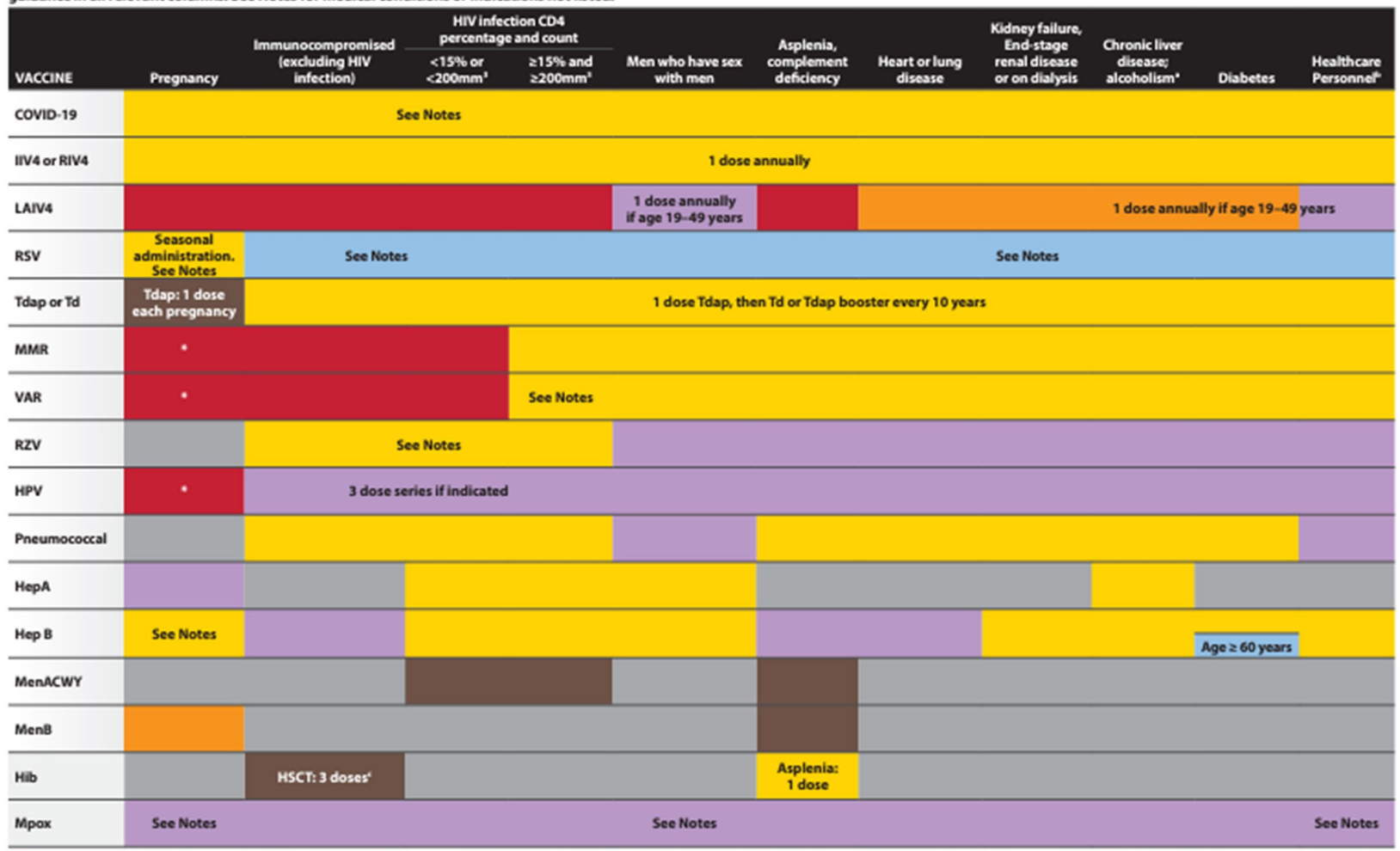
HEALTH MAINTENANCE

- TB screening at diagnosis - and annually
- Hep A/B/C testing at diagnosis - and annually
- HPV vaccine - all PLWH up to age 45
- STOP SMOKING
- Dentist every 6 months
- Yearly eye exam

IDSA Clinical Practice Guidance for PLWH

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2024

Always use this table in conjunction with Table 1 and the Notes that follow. Medical conditions or indications are often not mutually exclusive. If multiple medical conditions or indications are present, refer to guidance in all relevant columns. See Notes for medical conditions or indications not listed.



a. Precaution for LAIV4 does not apply to alcoholism.

b. See notes for influenza; hepatitis B; measles, mumps, and rubella; and varicella vaccinations.

c. Hematopoietic stem cell transplant.

IMMUNIZATIONS

- **NO LIVE VACCINES – avoid FluMist**
- **Know your CD4 before giving vaccinations**
  - No varicella, MMR, or Zoster if CD4 less than 200
- **Yes, they need a Covid vaccine.**
- **Vaccinations for Adults with HIV Infection**

It takes a team to stay healthy with HIV. Who's on your team?

Case Managers can help a person with HIV by connecting them with services.

Pharmacists can fill prescriptions and answer questions about ART and other medications.

Health Care Providers run tests, prescribe medicines, and work with a person to select an HIV regimen.

Partners, Friends and Family offer support and help a person with HIV live a healthy lifestyle.

For more information, visit HIVinfo.NIH.gov.

HIVinfo.NIH.gov

BREAK

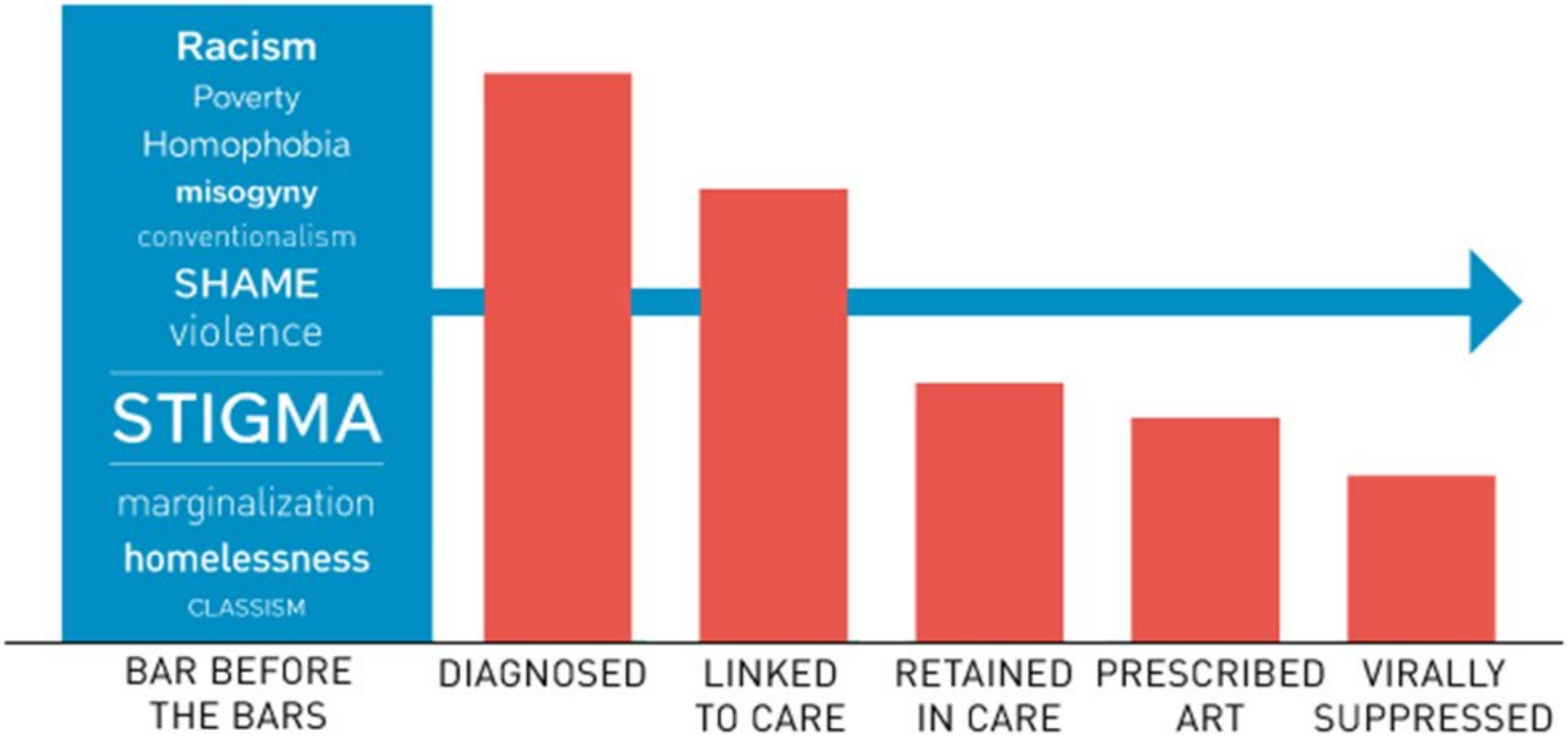
HIV PREVENTION – MEDICATIONS AND HARM REDUCTION STRATEGIES

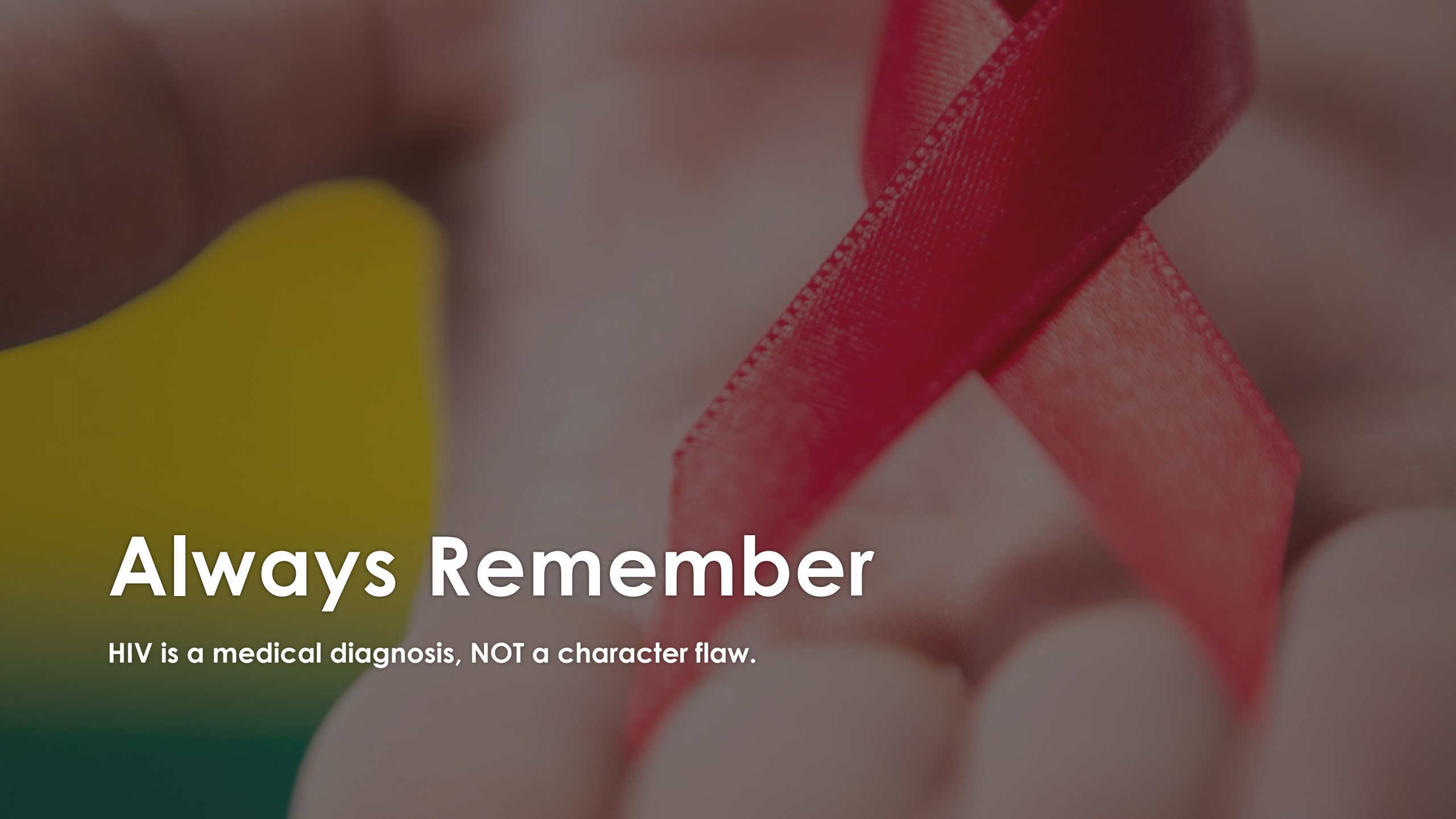
- CDC guideline recommendations for assessing HIV PrEP eligibility and initiation
- Assessing HIV PrEP indications
- Obtaining a sexual history
- Medications for PrEP, PEP, and DoxyPEP
- Prescribing PrEP in primary care

HIV CARE CONTINUUM:

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

Primary Care – the Key to Prevention




Always Remember
HIV is a medical diagnosis, NOT a character flaw.


YOU ARE
WELCOME
HERE

The BEST News – HIV is PREVENTABLE!

- Safer Sex
- Condoms
- Syringe Exchange Programs
- Frequent STI testing – and recheck if positive
- Keep positive patients undetectable (U=U)
- Pre-exposure Prophylaxis (PrEP)
- Post-exposure Prophylaxis (PEP and nPEP)

IDENTIFY THOSE AT RISK

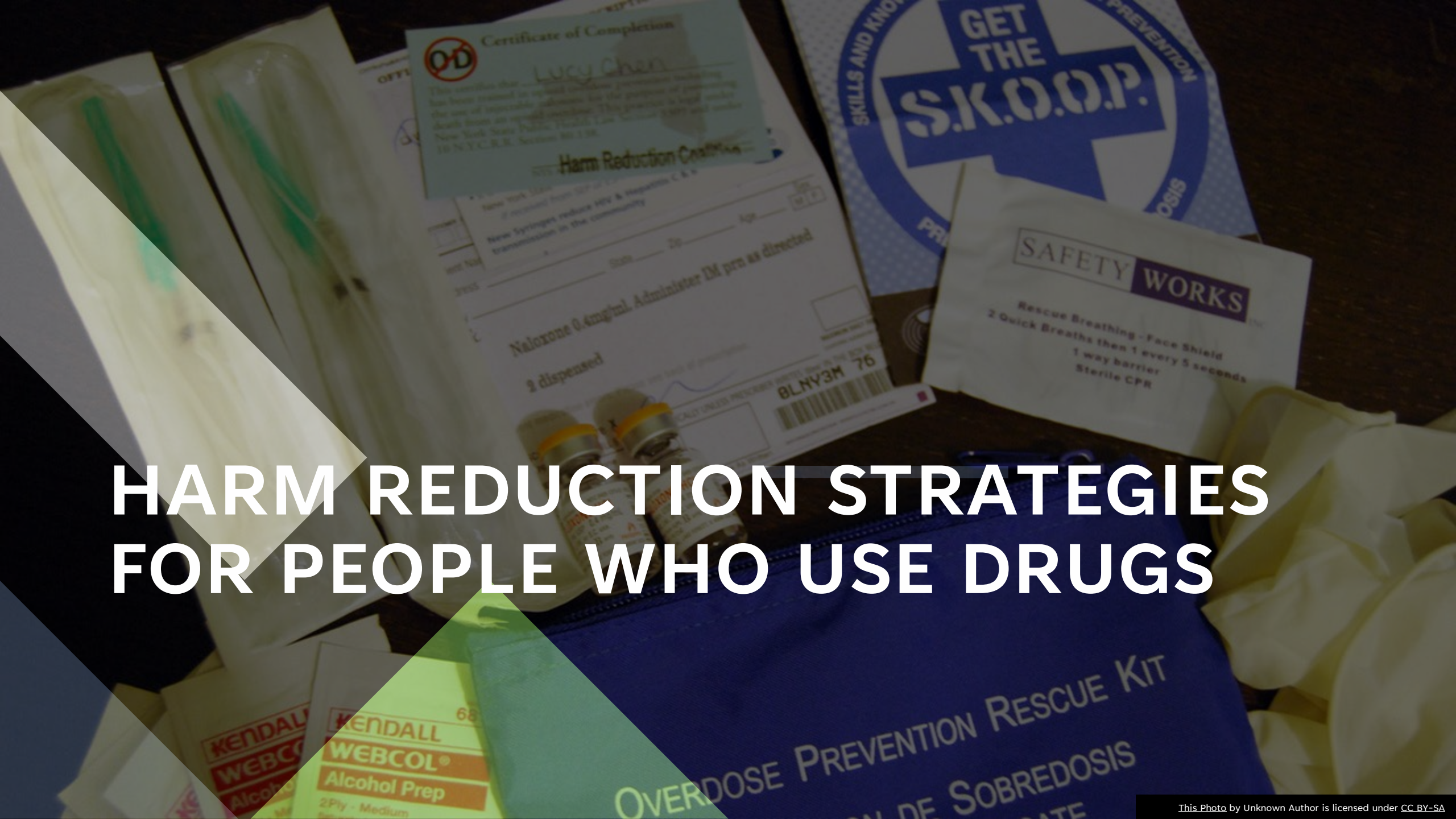
- Take a detailed sexual health history
- Provider discomfort about sex is not an acceptable reason to omit this from history
- Ask about behaviors – substance use, others
- Patients may disclose more over time as they become comfortable

CDC HIV TESTING RECOMMENDATIONS

- **HIV testing is the *STANDARD OF CARE* with any STI check**
- **All patients 13-64+ should get tested for HIV at least once as part of routine care**
- **Annual or more frequent testing for patients with certain risk factors for HIV**
  - People who inject drugs and their sex partners
  - People who exchange sex for money or drugs
  - Sex partners of people with HIV
  - Sexually active gay, bisexual, and other men who have sex with men (more frequent testing may be beneficial [e.g., every 3-6 months])
  - Pregnant women
  - Recent treatment for STI – Increases risk of acquisition by 3-5 times

HIV TESTING IS THE PERFECT OPPORTUNITY TO DISCUSS HIV PREVENTION

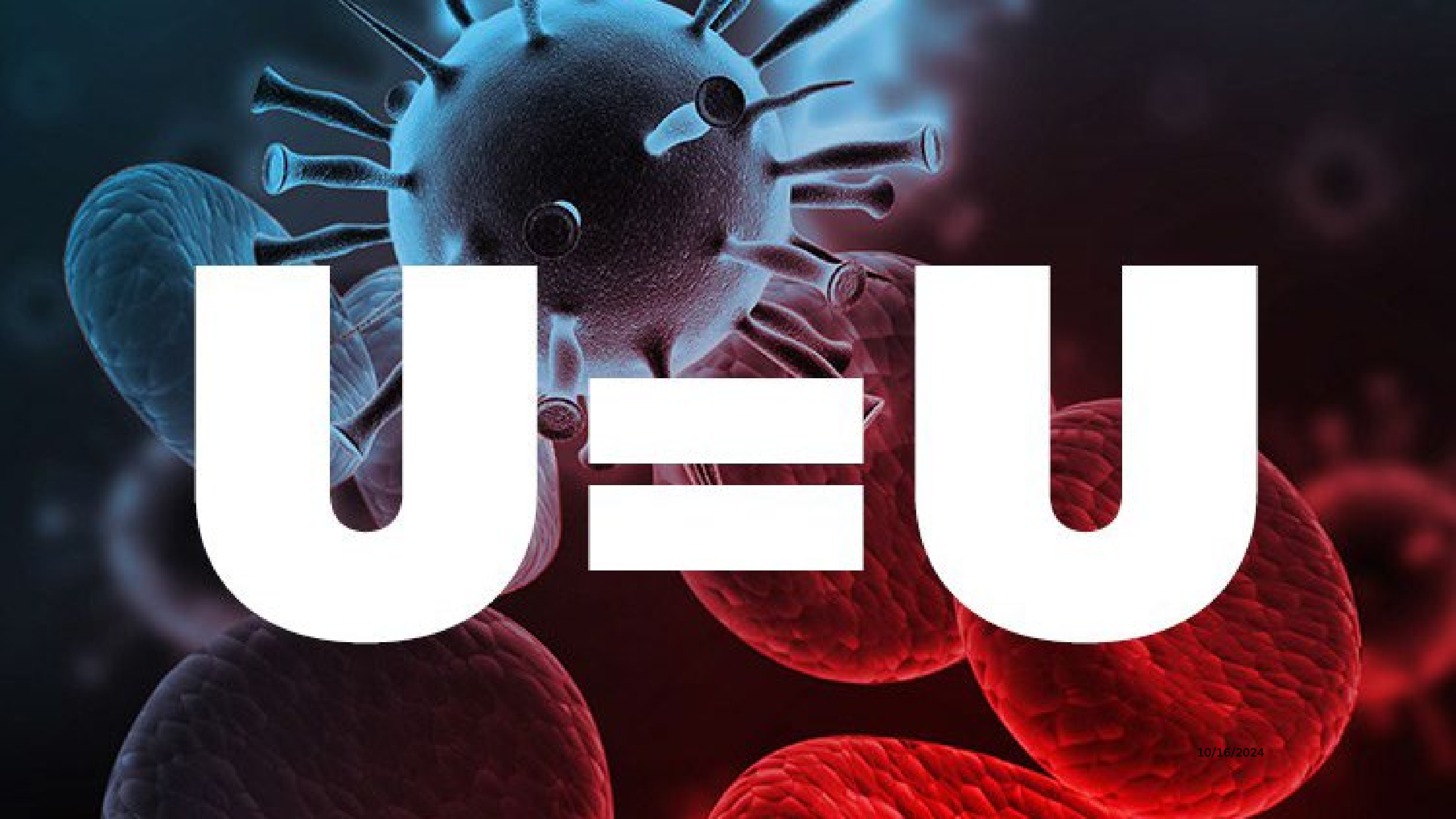
Safer Sex Education // Condom Use



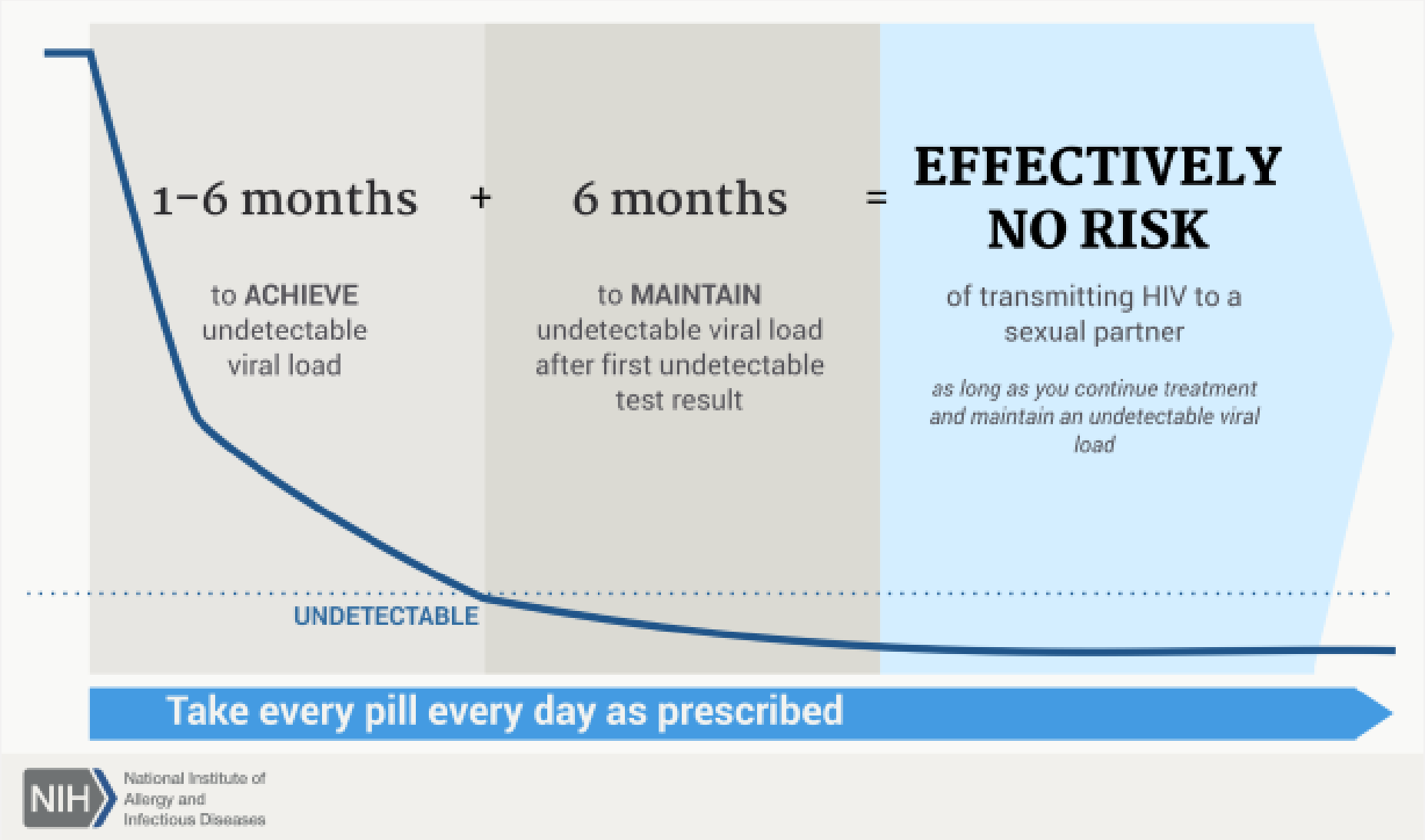
HARM REDUCTION STRATEGIES FOR PEOPLE WHO USE DRUGS

HARM REDUCTION LAWS

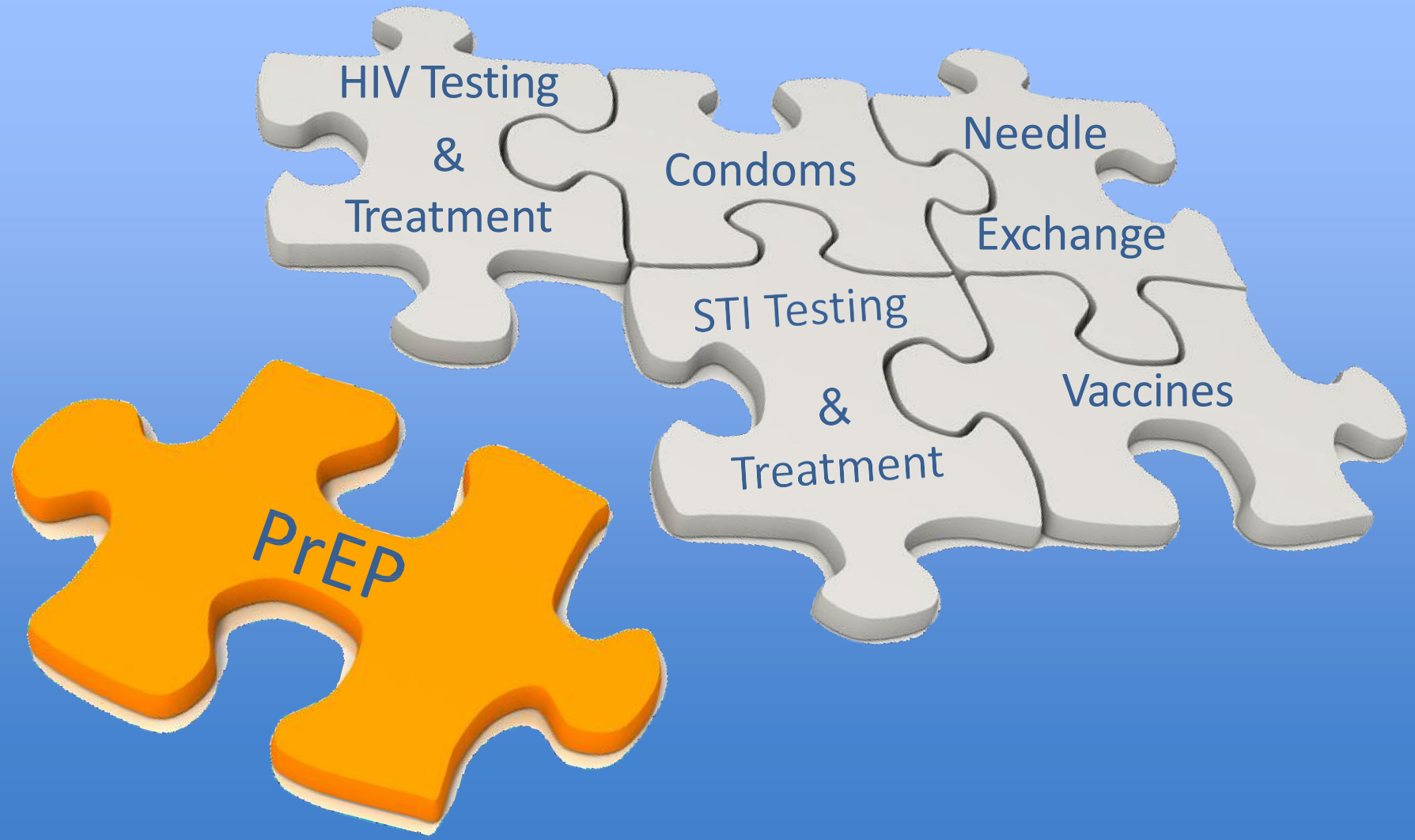
	North Dakota	South Dakota
Syringe Possession & Distribution	Needle exchange is authorized	Needle exchange is not authorized
Naloxone Access Law	May prescribe naloxone directly or by standing order	May prescribe naloxone directly or by standing order
Naloxone Standing Order	No statewide standing order	Allows pharmacists to give out prepackaged
Good Samaritan Law	Nothing specific for medical personnel	Giving first aid (but not necessarily just calling for help) may be used as a mitigating factor in other prosecutions

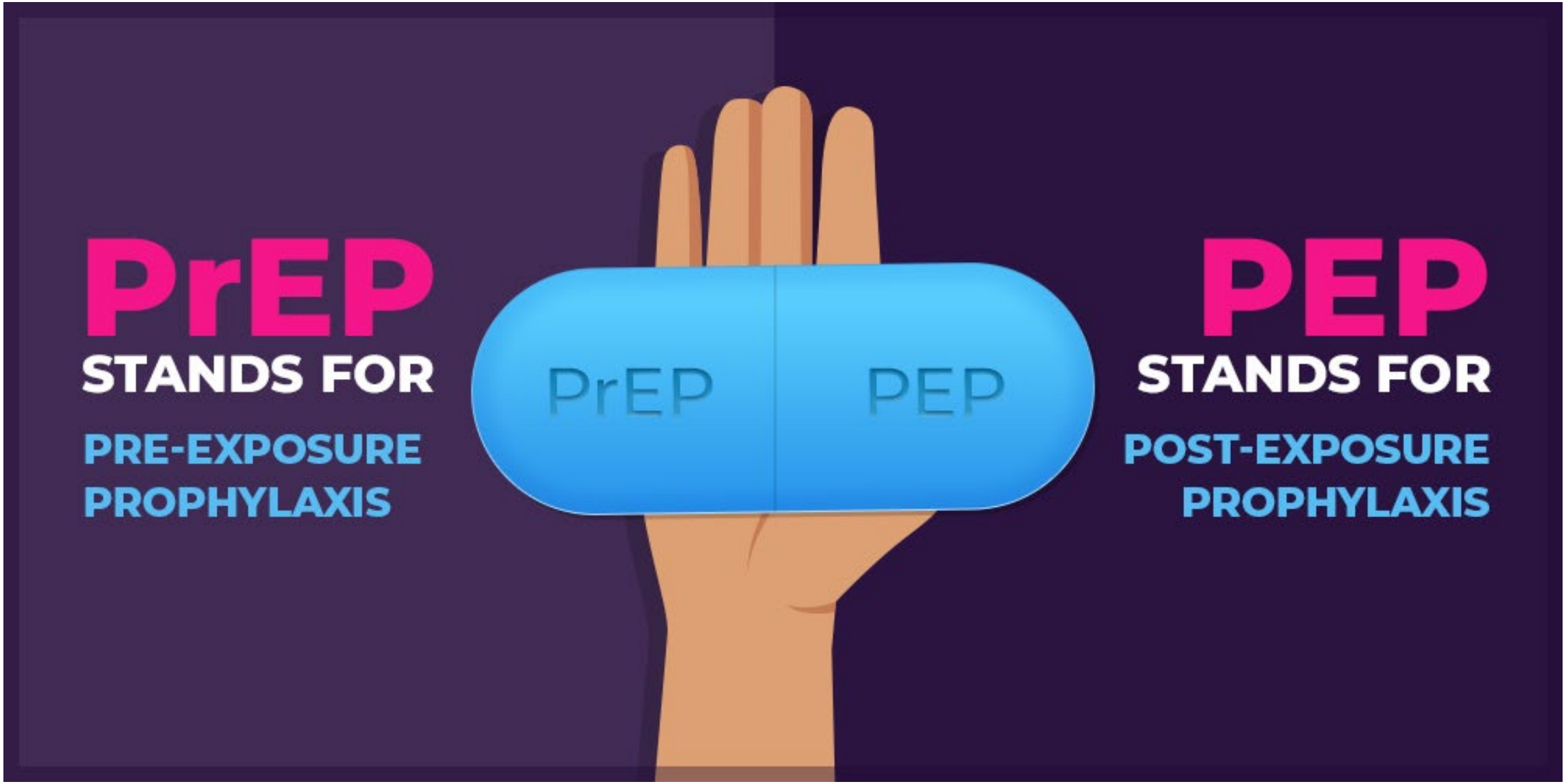

U=U

ADDED BENEFIT OF HIV TREATMENT – IT WORKS FOR PREVENTION!



PREP IS ONE PIECE OF THE HIV PREVENTION PUZZLE




PrEP
STANDS FOR
PRE-EXPOSURE
PROPHYLAXIS
PrEP
PEP
PEP
STANDS FOR
POST-EXPOSURE
PROPHYLAXIS

PrEP vs. PEP

When you take steps to protect yourself against a disease, like HIV, it's called prophylaxis. PrEP and PEP are for protecting people who are HIV negative.

PrEP		PEP
PrEP stands for pre-exposure prophylaxis.	**What's it called?**	PEP stands for post-exposure prophylaxis.
Before HIV exposure. PrEP is taken before sex, drug use, or other HIV exposure.	**When is it taken?**	**After HIV exposure.** In emergency situations, PEP is started within 72 hours after possible exposure, and taken for a month thereafter.
PrEP is for people who don't have HIV and: • are at risk of getting HIV from sex • are at risk of getting HIV from injection drug use	**Who's it for?**	PEP is for people who don't have HIV but may have been exposed: • during sex • during a sexual assault • at work through a needlestick or other injury • by sharing injection drug equipment
Consistent use of PrEP can reduce the risk of getting HIV from sex by about 99% and from injection drug use by at least 74%.	**How effective is it?**	PEP can prevent HIV when taken correctly, but it is not always effective. Start PEP as soon as possible to give it the best chance of working.
Ask your health care provider about a prescription for PrEP, or use PrEPlocator.org to find a health care provider in your area who can prescribe PrEP.	**How do you get it?**	Within 72 hours after potential exposure to HIV, get a PEP prescription from your health care provider, urgent care, or an emergency room.

For more information, visit HIVinfo.NIH.gov.

HIVinfo.NIH.gov

WHAT MEDS WORK FOR PREP?

Two oral medications available

- Truvada – TDF/FTC – (Tenofovir disoproxil fumarate, Emtricitabine)
- Descovy – TAF/FTC (Tenofovir alafenamide, Emtricitabine)

  ** ONLY approved for those assigned male at birth*

TDF VS TAF // FTC

TDF – Tenofovir disoproxil fumarate

- Nucleoside/Nucleotide Reverse Transcriptase Inhibitor

TAF – Tenofovir alafenamide

- Nucleoside/Nucleotide Reverse Transcriptase Inhibitor

FTC - Emtricitabine

- Nucleoside/Nucleotide Reverse Transcriptase Inhibitor

APRETUDE is the first and only long-acting, injectable PrEP proven to reduce the risk of getting HIV

Here's what you need to know about APRETUDE

- **Helps give 2 months of continuous protection from HIV with each dose***

- **Long-acting APRETUDE was proven superior at reducing the risk of getting HIV vs once-daily TRUVADA in two randomized, double-blind, controlled studies†**

- **Diverse studies**
  Among the most diverse PrEP studies ever conducted—including cisgender men and women, as well as transgender women, and a range of ages and ethnicities

*APRETUDE is given every other month by a healthcare provider after initiation injections have been given 1 month apart for 2 consecutive months. Stay under a provider's care while receiving APRETUDE. You must receive it as scheduled. If you will miss a scheduled injection by more than 7 days, call your provider right away.
†Based on two separate clinical studies in which HIV transmissions occurred 3x less often in cisgender men and transgender women, and 12x less often in cisgender women receiving APRETUDE compared to once-daily TRUVADA.

PrEP=pre-exposure prophylaxis | Step-by-Step Checklist

General Workflow

	Sexually-Active Adults and Adolescents[1]	Persons Who Inject Drug[2]
Identifying substantial risk of acquiring HIV infection	Anal or vaginal sex in past 6 months AND any of the following: • HIV-positive sexual partner (especially if partner has an unknown or detectable viral load) • Bacterial STI in past 6 months[3] • History of inconsistent or no condom use with sexual partner(s)	HIV-positive injecting partner OR Sharing injection equipment
Clinically eligible	**ALL OF THE FOLLOWING CONDITIONS ARE MET:** • Documented negative HIV Ag/Ab test result within 1 week before initially prescribing PrEP • No signs/symptoms of acute HIV infection • Estimated creatinine clearance ≥30 ml/min[4] • No contraindicated medications	
Dosage	• Daily, continuing, oral doses of F/TDF (Truvada®), ≤90-day supply OR • For men and transgender women at risk for sexual acquisition of HIV; daily, continuing, oral doses of F/TAF (Descovy®), ≤90-day supply	
Follow-up care	**Follow-up visits at least every 3 months to provide the following:** • HIV Ag/Ab test and HIV-1 RNA assay, medication adherence and behavioral risk reduction support • Bacterial STI screening for MSM and transgender women who have sex with men[3] – oral, rectal, urine, blood • Access to clean needles/syringes and drug treatment services for PWID **Follow-up visits every 6 months to provide the following:** • Assess renal function for patients aged ≥50 years or who have an eCrCl <90 ml/min at PrEP initiation • Bacterial STI screening for all sexually-active patients[3] – [vaginal, oral, rectal, urine- as indicated], blood **Follow-up visits every 12 months to provide the following:** • Assess renal function for all patients • Chlamydia screening for heterosexually active women and men – vaginal, urine • For patients on F/TAF, assess weight, triglyceride and cholesterol levels	

[1] adolescents weighing at least 35 kg (77 lb)

[2] Because most PWID are also sexually active, they should be assessed for sexual risk and provided the option of CAB for PrEP when indicated

[3] Sexually transmitted infection (STI): Gonorrhea, chlamydia, and syphilis for MSM and transgender women who have sex with men including those who inject drugs; Gonorrhea and syphilis for heterosexual women and men including persons who inject drugs

[4] estimated creatine clearance (eCrCl) by Cockcroft Gault formula ≥60 ml/min for F/TDF use, ≥30 ml/min for F/TAF use

AFTER YOU PRESCRIBE PREP:

- 1 month follow-up after initial Rx
- Rx for 90 days every 3 months
- HIV test every 3 months
- Check CMP and STIs at each visit
- Counsel regarding risk factors
- Link into primary care if not already done

Test	Baseline (Week 0)	About day 30 after initiating PrEP (optional)	90 days after initiating PrEP	Every subsequent 90 days on PrEP	Other frequency
HIV testing and assessment for signs or symptoms of acute infection	Y	Y	Y	Y	N
Assess side effects	N	Y	Y	Y	N
Hepatitis B serology Vaccinate if non-immune	Y	N	N	N	Y If patient required hepatitis B vaccine at baseline, confirm immune response to vaccination 1 month after last vaccine dose
Hepatitis C serology	Y	N	N	N	12 monthly but, more frequently if ongoing risk e.g. non-sterile injection drug use and MSM with sexual practices that predispose to anal trauma
STI (i.e. syphilis, gonorrhoea, chlamydia) as per Australian STI Management Guidelines^	Y	N	Y	Y	N
eGFR at 3 months and then every 6 months	Y	N	Y	N	At least every 6 months or according to risk of CKD
Urine protein creatinine ratio (PCR) baseline	Y	N	Y	N	Every 6 months
Pregnancy test (for women of child-bearing age, not on effective contraception)	Y	Y	Y	Y	N

PrEP vs. PEP

When you take steps to protect yourself against a disease, like HIV, it's called prophylaxis. PrEP and PEP are for protecting people who are HIV negative.

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For more information, visit HIVinfo.NIH.gov.

HIVinfo.NIH.gov

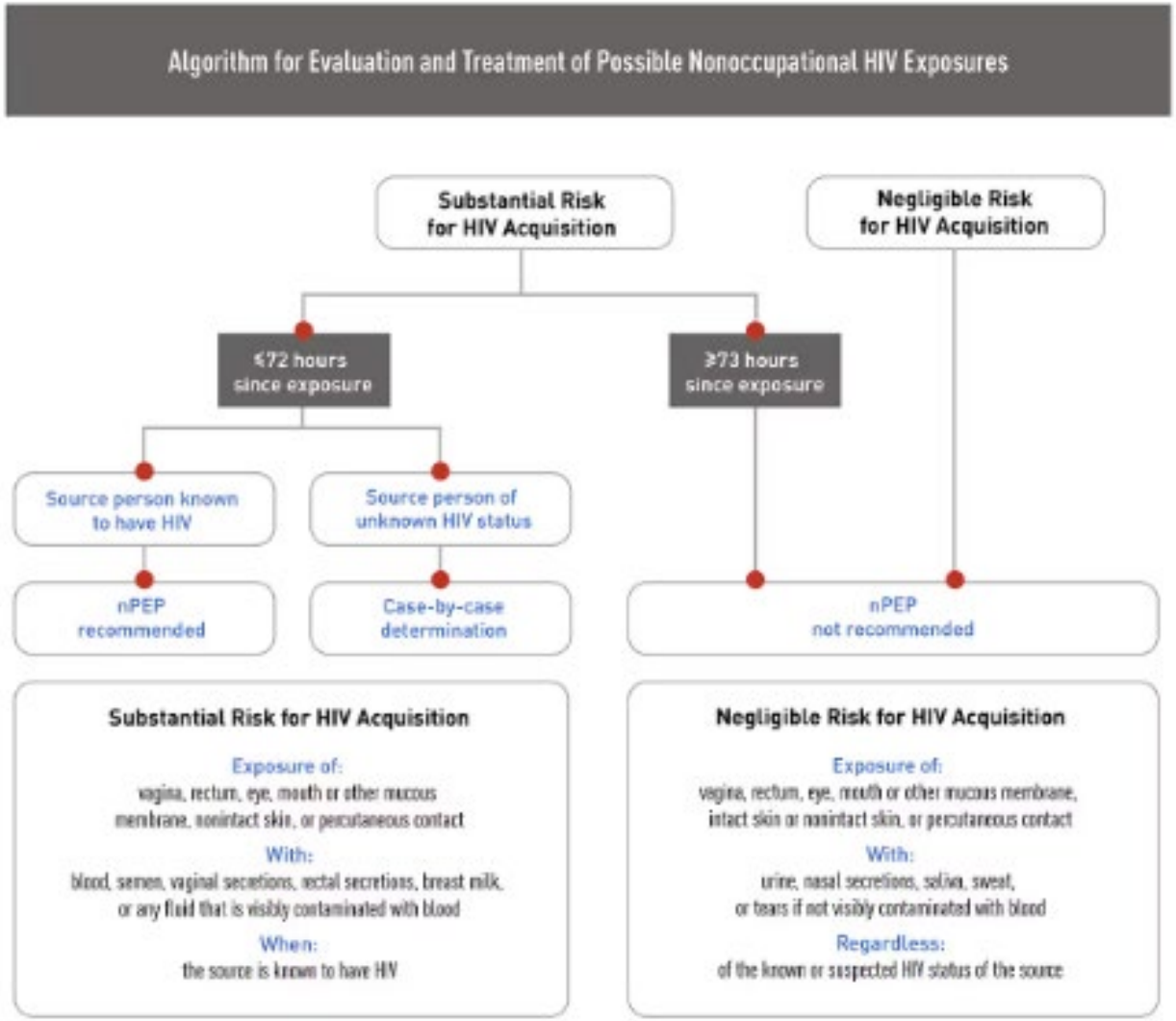
PEP CLINICAL GUIDANCE

tenofovir disoproxil fumarate (TDF)(300 mg) + emtricitabine (F)(200 mg) once daily	PLUS	raltegravir (RAL)(400 mg) twice daily or dolutegravir (DTG)(50 mg) once daily

An alternative regimen for otherwise healthy adults and adolescents is

TDF (300 mg) + F (200 mg) once daily	PLUS	darunavir (DRV)(800 mg) + ritonavir* (RTV)(100 mg) once daily

- PEP is used to prevent HIV after a potential exposure
- Any licensed prescriber can prescribe PEP
- Baseline assessment is required for people beginning PEP
- Use CDC's comprehensive guidelines for prescribing PEP



- Healthcare providers can use CDC guidelines to prescribe doxycycline post-exposure prophylaxis (doxy PEP) to prevent bacterial STIs
- Discuss the pros and cons of doxy PEP with gay, bisexual, and other men who have sex with men and transgender women who had a bacterial STI in the last year
- If offering doxy PEP, write a prescription for patients to self-administer 200 mg of doxycycline as soon as possible within 72 hours after sex
- Offer doxy PEP in the context of comprehensive sexual health approach

DoxyPEP for STI Prevention

What is DoxyPEP?

Doxycycline Post-Exposure Prophylaxis (DoxyPEP) means taking the antibiotic doxycycline after sex, to prevent getting a sexually transmitted infection (STI). It is a morning-after pill for STIs. Studies have shown that taking DoxyPEP reduces your chance of getting syphilis and chlamydia by about two-thirds, especially if you are a transgender woman (TGW) or a man who has sex with men (MSM).

When should I take DoxyPEP?

Two 100 mg of doxycycline should ideally be taken within 24 hours, but no later than 72 hours after condomless sex. Condomless sex means oral, anal, or vaginal/front-hole sex where a condom is not used for the entire time.

What about when I have sex again?

If you have sex again within 24 hours of taking doxycycline, take another dose 24 hours after your last dose. You can take doxycycline as often as every day when you are having condomless sex but do not take more than 200 mg (two 100 mg pills) every 24 hours.

How should I take DoxyPEP?

Take doxycycline with plenty of water or something else to drink so that it does not get stuck when you swallow. If your stomach is upset by doxycycline, taking it with food may help.

- ✓ Some people are more sensitive to the sun when they take doxycycline, so wear sunscreen.
- ✓ Please do not share doxycycline with others.
- ✓ Avoid dairy products, calcium, antacids, or multivitamins 2 hours before after taking doxycycline.

What are we still learning about DoxyPEP?

1. Does it affect normal ("good") bacteria in our intestines?
2. Could it increase or decrease the bacteria that live on our skin, or cause bacterial resistance to doxycycline (for example staph)?
3. Will DoxyPEP increase doxycycline resistance in bacteria that cause STIs?
   - Although doxycycline has been used for decades, there is no known resistance to doxycycline in chlamydia or syphilis.
   - About 25% of gonorrhea in the US is already resistant to doxycycline; DoxyPEP may not work against these strains. The DoxyPEP study and other studies will help understand whether using DoxyPEP changes resistance in gonorrhea.

[Clinical Guidelines on the Use of Doxycycline Post-exposure Prophylaxis for Bacterial STI Prevention]

Centers for Disease Control (CDC) | CDC Resources for Clinicians

National Clinician Consultation Center

American Academy of HIV Medicine

Association of Nurses in AIDS Care

The Well Project

National HIV Curriculum

National HIV PrEP Curriculum

This free resource was developed at the University of Washington for health care professionals who want to learn about HIV PrEP.

ABOUT CONTRIBUTORS

Funded by:
Centers for Disease Control and Prevention (CDC)
Health Resources and Service Administration (HRSA)

Course Modules

HIV PrEP Fundamentals

In this 6-hour module, novice-to-expert health care professionals can develop proficiency in the fundamental skills needed to assess, initiate, and monitor HIV PrEP. Learners who complete all 5 lessons in this module may take the optional knowledge assessment test and earn an HIV PrEP Training Certificate.

SELF STUDY » QUICK REFERENCE »

HIV PrEP In-Depth Topics

These 6 topics explore content addressed in the HIV PrEP Fundamentals module in more detail. The selected topics focus on populations where less HIV PrEP data exits, as well as considerations for same-day HIV PrEP and how to provide HIV PrEP in sexual health clinic settings.

SELF STUDY » QUICK REFERENCE »

INTRODUCING THE AETC National HIV Curriculum

FREE Online CME/CNE Training for Physicians, PAs, and Nurses

Visit www.hiv.uw.edu

- Six modules on HIV diagnosis, care, and treatment
- For novice to expert clinicians, faculty and students
- Clinical screening tools and calculators
- 400+ interactive board-review questions
- Modular learning in any order with progress tracker
- Easy to use antiretroviral medications guide and references
- Challenges and Controversies - national experts' opinions

HRSA Ryan White & Global HIV/AIDS Programs

AETC AIDS Education & Training Center Program National Coordinating Resource Center

- FROM UNIVERSITY OF WASHINGTON AND AETC NATIONAL COORDINATING RESOURCE CENTER
- EDITOR-IN-CHIEF: DAVID H. SPACH, MD
- FUNDED BY A GRANT FROM THE HEALTH RESOURCES AND SERVICES ADMINISTRATION

National HIV Curriculum

National STD Curriculum

www.std.uw.edu features self-study modules and Question Bank (board-review style) on a variety of STDs.

Hepatitis C Online

www.hepatitisc.uw.edu features self-study modules for diagnosis, monitoring, and management of HCV infection; tools and calculators; HCV medications; and a resource library.

MWAETC

AETC AIDS Education & Training Center Pacific

Clinical Essentials: HIV testing, Rapid ART, PEP, PrEP

Updated November 2018

▸HIV testing

■ How should I test for HIV?

Test everyone ages 13+!

Use ICD-10 code Z11.4.

- Order this lab for most people:
  HIV 4th generation antibody + antigen test
  For recent risk of exposure in the last month:
  HIV RNA PCR test (HIV viral load)
- Offer as a normal part of labs:
  "We test everyone's cholesterol, sugars, liver, kidneys and for HIV." Or: *"It looks like we need to check your cholesterol and sugars again, but we haven't checked HIV yet. The HIV test is a normal part of health screening for everyone. I'm going to add it to your labs. OK?"*
  (*Be sure to mention you are ordering an HIV test so the patient is informed and has the chance to opt out.)

■ How do I interpret 4th gen HIV test results?

HIV Ab/Ag non-reactive: **negative for HIV**	HIV Ab/Ag reactive & HIV1/2 diff reactive: **chronic infection**	HIV Ag only reactive & HIV1/2 neg + RNA detected: **acute infection**	HIV Ab/Ag reactive & HIV1/2 neg & RNA neg: **negative**
(2-3 week window period from exposure)	call linkage coordinator, offer rapid ART	call linkage coordinator, offer rapid ART!	likely false pos Ab result but if high risk, check HIV2 DNA

■ How do I disclose a positive result?

1. Call your HIV linkage coordinator as soon as you see the result to coordinate a warm-handoff to HIV care.
2. Call the patient for an in-person visit to discuss lab results. Disclose in-person ideally the same day as the confirmed result, and when not possible, aim to disclose and provide ART within 5 working days.
3. When the patient is sitting, calmly and neutrally let them know.
   "Your lab results show that you have HIV." Give them a few moments and listen.
   "Would you be willing to share your thoughts, feelings or questions about this?"
   Listen, address concerns: *"We have really good treatment to help you live as long and healthy as possible. May I introduce you to (your HIV linkage coordinator)? They will help answer questions and connect you with HIV care."*

▸Rapid ART: immediate HIV treatment

Rapid ART increases retention in care and viral load suppression. Disclosure and an ART Rx the same day as confirmed diagnosis is ideal, but when not possible, aim for within 5 working days.

1. **New diagnosis with confirmed labs: contact HIV linkage coordinator ASAP** to schedule disclosure, with same-day warm hand-off to HIV intake, education and medical visit.
2. **Obtain baseline labs as soon as possible:** If not done before first HIV visit, can be done the same day the ART Rx is written.
   Baseline labs *(priority)*: HIV 4th gen if only rapid test result; HIV RNA PCR viral load, HIV genotype, CD4 (Quest lymphocyte panel 4), CBC, CMP, hep B sAg/sAb/cAb, hep C Ab w/ reflex, UA, GC/CT (exposed sites), RPR.
   Lower priority: HLA B5701, hep A tAb, QFT TB, non-fasting lipids, HgA1C, VZV IgG, toxo IgG.
3. **Perform a brief, targeted medical history and exam:** check for previous ART, PrEP, PEP use, sexual/IDU exposures, co-morbidities, meds, allergies, opportunistic illness symptoms.
4. **Offer an ART prescription:** choose one of preferred regimens:
   Tivicay® + Truvada® (or **Descovy®**): **dolutegravir 50 mg + tenofovir/emtricitabine**, *1 pill each PO daily*
   Or **Biktarvy®** ***(bictegravir/tenofovir/emtricitabine)*** *1 pill PO daily*
   Or **Symtuza™** ***(darunavir/cobicistat/emtricitabine/tenofovir AF)*** *1 pill PO daily*
   Or for those who could become pregnant, use:
   Isentress® + Truvada®: Raltegravir 2x600 mg + tenofovir/emtricitabine, *3 pills total PO daily*
5. **Follow-up labs and meds in 5-7 days.**

▸PEP: HIV Post-Exposure Prophylaxis

PEP should be started within 72 hours of exposure; the sooner, the better.

1. **Assess risk for HIV.** High risk—offer PEP: condomless receptive anal or vaginal sex, sharing needles. Consider PEP for: condomless insertive anal or vaginal sex.
2. **Screen for acute HIV infection:** if they have fevers, flu-like or mono-like sxs, rash, sore throat, order HIV viral load.
3. **Get a rapid HIV test, serum 4th gen HIV test, +/-HIV viral load, CMP, STI tests based on exposures.**
4. **If appropriate, prescribe 28-days of PEP.**
   Preferred regimens include:
   Truvada® ***(tenofovir DF/emtricitabine)*** **+ Tivicay®** ***(dolutegravir)***, *1 pill each PO daily*
   Or **Biktarvy®** ***(bictegravir/tenofovir/emtricitabine)*** *1 pill PO daily*
   Or for those who could become pregnant, use Isentress+Truvada regimen listed above
   (click on med name for drug assistance programs)
5. **Repeat HIV 4th gen test in 6 and 12 weeks.**
6. **Offer PrEP if on-going risks.**

Author: Sophy S. Wong, MD, Clinical Director of Practice Transformation, Pacific AETC; Medical Director, HIV ACCESS and Bay Area AETC; Associate Clinical Professor of Medicine, UCSF. **PrEP Consultant:** Kenly Kiu, MD, MPH. **Contributors:** [illegible]

▸PrEP: HIV Pre-Exposure Prophylaxis

For help: PrEPline 855-448-7737
For resources: PleasePrEPMe.org

■Candidates for PrEP: anyone requesting PrEP, has condomless anal sex, injects drugs, has recent STIs, or HIV+ partners

■Recommended PrEP regimen:

Truvada®:
Tenofovir[1,2] (300 mg) PO Daily + Emtricitabine[1,2](200 mg) PO once daily

Do not use Descovy®

1. Truvada side effects: headache, insomnia, nausea, vomiting, diarrhea, rash. Usually resolve in a month. Also active against Hep B, so beware of Hep B flare when stopping. Precautions also in chronic kidney disease and with nephrotoxic meds. (Renal dysfunction seen in 1-2% of patients).
2. Further information about drug interactions: **hiv-druginteractions.org**

■Contraindications:

- **Absolute:** acute or chronic HIV infection (Rx ART), estimated GFR<60 by serum creatinine, unwilling to take daily meds or have lab follow-up.
- **Relative:** HBV with cirrhosis/transaminitis (refer to specialist), osteoporosis or history of fragility fracture.

■Time to achieve protection:

- **7 days in rectal tissue** (anal receptive intercourse).
- **20 days in penile and cervico-vaginal tissue** (anal insertive and vaginal intercourse).
- **20 days in blood** (IDU).

■First visit:

- ❑ **Evaluate for exposures in the last 72 or so hours and need for PEP** (post-exposure prophylaxis)
- ❑ **Evaluate for appropriateness for PrEP:** discuss efficacy, side effects, support for and importance of adherence, insurance coverage and support for continuity, plan for refills and follow-up.
- ❑ **Labs:** BMP, 4th gen HIV test, GC/CT (throat, rectal, urine), RPR, UPreg, HepBsAg, sAb, cAb, HCV Ab.
- ❑ **If symptoms of acute HIV infection in past month** (fever, flu- or mono-like symptoms, rash, sore throat), get HIV viral load (positive at 10 days). **Do not start PrEP unless viral load neg.**
- ❑ **If HIV test neg and no symptoms of acute HIV infection,** write rx for 1-month supply, no refill.

■1-month follow-up visit:

- ❑ **Evaluate adherence and side effects.** Rx for 2-month supply, no refill.

■Follow-up visit every 3 months:

- ❑ **4th gen HIV test, GC/CT** (throat, rectal, urine), UPreg, RPR, BMP (BMP can be Q6 months).
- ❑ **Refill** for 3-month supply only if HIV test negative; refer to immediate linkage to care if HIV test positive.
- ❑ **At every visit assess** for adherence, side effects, exposures (number of partners, anal/vaginal insertive/receptive exposures, condom use, drug use), desires around sexual wellness and continued PrEP use.
- ❑ **Counsel to return for HIV test if off of PrEP for > 1 week and had possible exposure.**

■Every 12 months:

- ❑ **Hepatitis C screen, U/A (check for +protein), evaluate continued desire/need for PrEP.**

Reference: Preexposure Prophylaxis for the Prevention of HIV Infection in the United States – 2017 Update: a Clinical Practice Guideline. Available at **cdc.gov/hiv/guidelines/preventing.html**

QUESTIONS? NEED HELP?

In the Pacific Region (Arizona, California, Hawaii, and Nevada) request free training and technical assistance from **Pacific AETC: paetc.org**, call **415-476-6153**, or email **paetc@ucsf.edu.**

Outside the Pacific Region contact the AETC National Coordinating Resource Center.

National HIV Consultation Line for HIV testing and care/treatment questions: 800-933-3413
You can reach a live consultant 6 am-5 pm PST, M-F (voicemail available after hours) or **submit consultation**

http://paetc.org/wp-content/uploads/2018/12/PAETC_HIVEssentialsAndQuickClinicalGuides.pdf

THANK YOU

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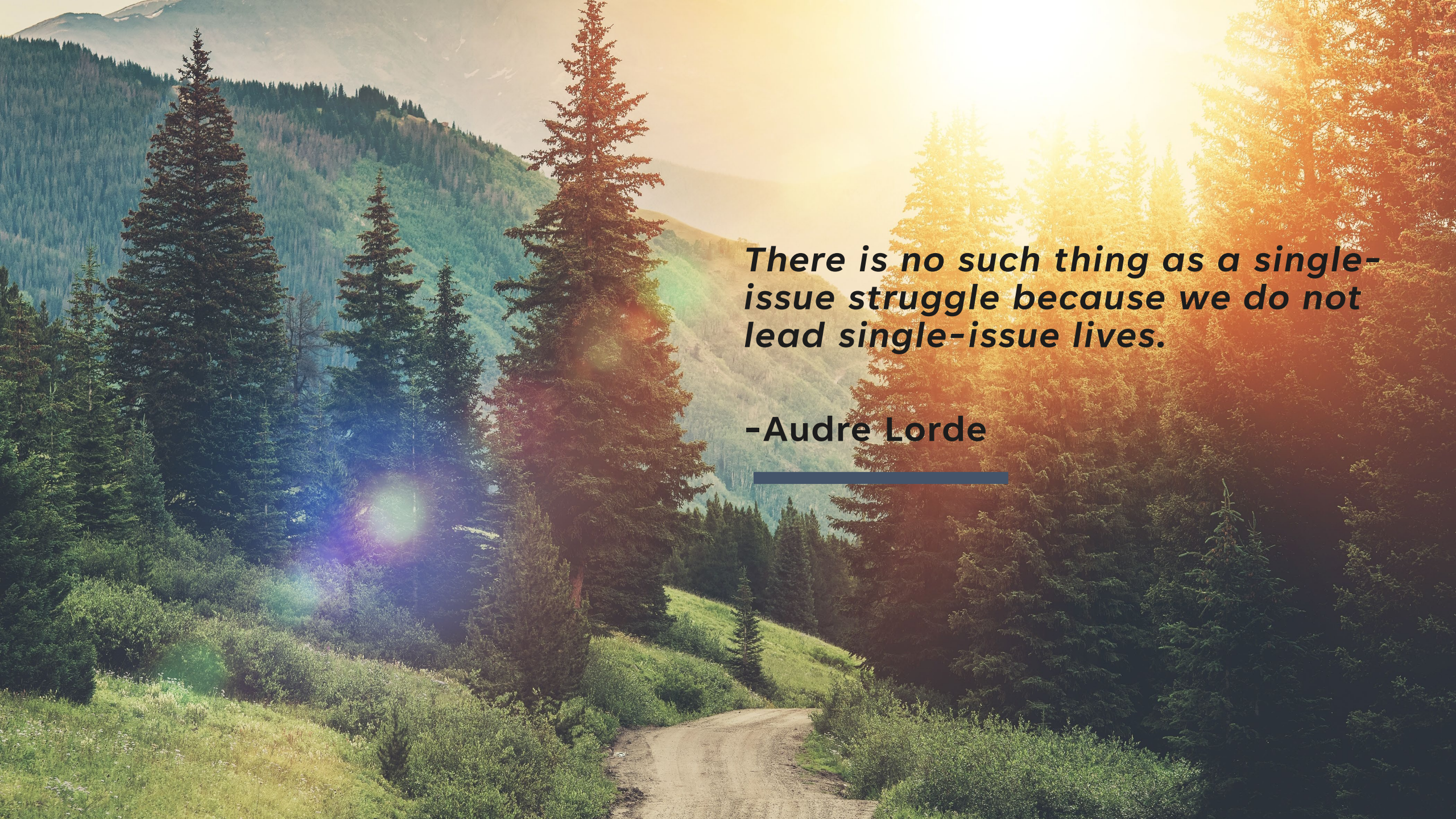
EVALUATION

Scan to complete the evaluation. The evaluation is required to receive the AAFP CME Credits.


There is no such thing as a single-issue struggle because we do not lead single-issue lives.
-Audre Lorde