LET'S TALK ABOUT HIV: INTEGRATING HIV TESTING, TREATMENT, AND PREVENTION IN PRIMARY CARE

NPSD Conference
Rapid City, SD
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OBJECTIVES

- **After this training, participants will be able to:**
  - Identify Primary Care's role in the HIV Care Continuum
  - Explain HIV Basics, including HIV status neutral care, testing guidelines, treatment and prevention methods
  - Describe the importance of primary care in preventing, identifying, and treating HIV

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DISCLOSURES

None

3

WHAT'S THE FIRST WORD THAT COMES TO MIND WHEN YOU HEAR "HIV"?

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HIV CARE CONTINUUM:

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

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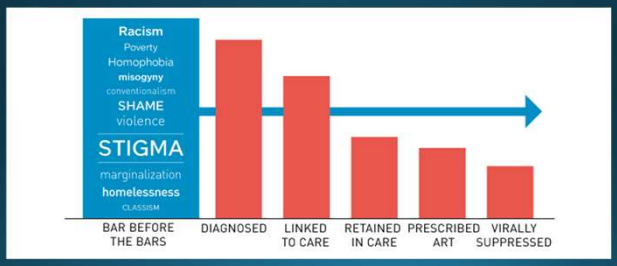
Primary Care – the Key to Prevention



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THERE IS NO SUCH THING AS A SINGLE-ISSUE STRUGGLE BECAUSE WE DO NOT LEAD SINGLE-ISSUE LIVES.

Audre Lorde

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SOCIAL DETERMINANTS OF HEALTH

https://www.cdc.gov/publichealthgateway/sdoh/index.html

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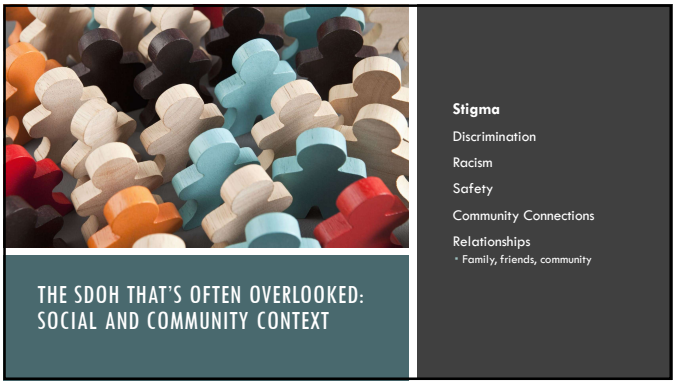

THE SDOH THAT'S OFTEN OVERLOOKED: SOCIAL AND COMMUNITY CONTEXT

Stigma

Discrimination

Racism

Safety

Community Connections

Relationships
- Family, friends, community

10

"Why don't they just….?"

Internal Stigma: Internal beliefs about public attitudes that result in negative consequences

External Stigma: Public beliefs about people with have devalued characteristics

Structural Stigma: Policies, decreased social supports, impacts on criminal justice system, hiring practices

STIGMA – A SET OF NEGATIVE BELIEFS CONNECTED TO A PARTICULAR PERSON, CIRCUMSTANCE, OR QUALITY DUE TO PERCEIVED CONTROL

Earnshaw VA, Am Psychol (2020)

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Always remember…

HIV is a *medical diagnosis*, NOT a character flaw.

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HIV BASICS

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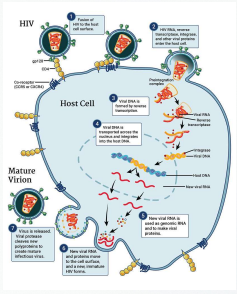
HUMAN IMMUNODEFICIENCYVIRUS (HIV)



- HIV is a virus that impacts 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 generally curable, but it is treatable
- If not treated, it can lead to Acquired Immunodeficiency Syndrome (AIDS) – now called late-stage HIV

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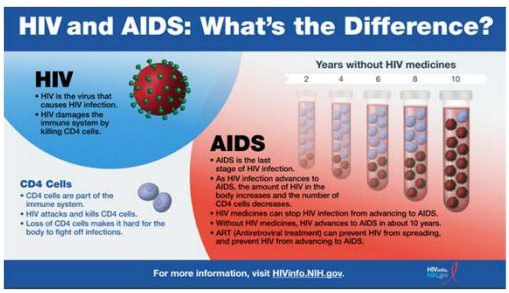

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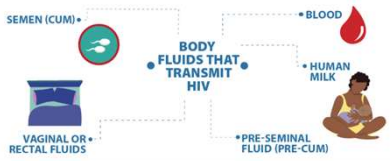
How is HIV Acquired?

SIMPLY PUT: Blood, semen and pre-seminal fluid, rectal fluids, vaginal fluids, breast milk

- 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

Source: https://www.cdc.gov/hiv/causes/index.html

Only **certain body fluids** from a person who has HIV **can transmit HIV.**



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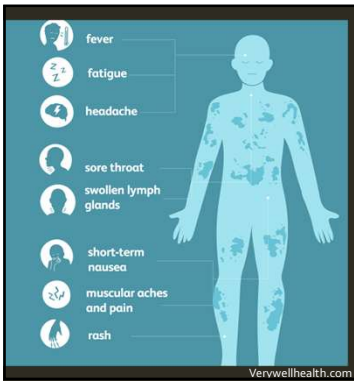

ACUTE HIV INFECTION

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SYMPTOMS OF HIV

Many people are asymptomatic

- May stay this way for years

Early Infection: Fever, body aches, chills, night sweats, cough, swollen lymph nodes, rash. (Think Mono)

Late Infection: Weight loss, fatigue, frequent infections, certain cancers, all symptoms listed above, and

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EXPLAIN "THE NUMBERS"

- CD4 – How well your 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

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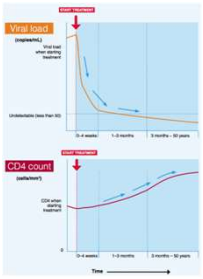

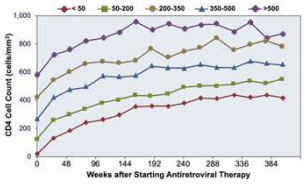

CD4 IMPROVEMENT OVER TIME

https://www.hiv.uw.edu

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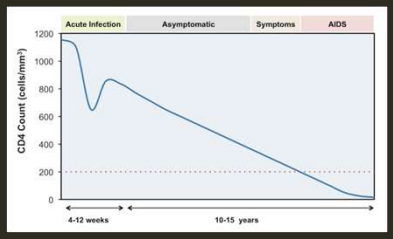
NATURAL HISTORY OF HIV INFECTION WITHOUT ART



https://www.hiv.uw.edu/go/antiretroviral-therapy

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U=U
UNDETECTABLE EQUALS UNTRANSMITTABLE

INITIATE ART AS SOON AS POSSIBLE AFTER DIAGNOSIS

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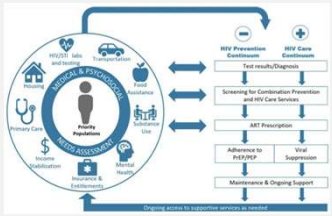
AIMS FOR STATUS NEUTRAL CARE

Follow CDC guidelines to test people for HIV

- Person-centered, "whole-person", respecting autonomy and person's health goals
- Improves accessibility for services
- Reduces stigma and biases
- Creates efficiencies
- Decreases new HIV infections



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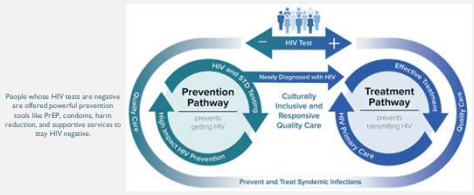

People whose HIV tests are negative are offered powerful prevention tools like PrEP, condoms, harm reduction, and supportive services to stay HIV negative.

People whose HIV tests are positive enter primary care and are offered effective treatment and supportive services to achieve and maintain viral suppression.

STATUS NEUTRAL

Follow CDC guidelines to test people for HIV. Regardless of HIV status, quality care is the foundation of HIV prevention and effective treatment. Both pathways provide people with the tools they need to stay healthy and stop HIV.

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HIV TESTING

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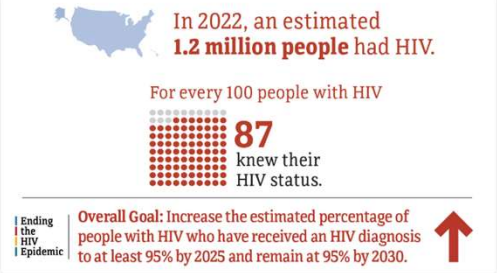

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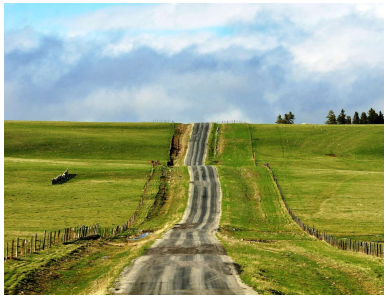
South Dakota's HIV Disparities

-Only about 30% of SD residents have been tested

-Nearly 30% have AIDS-defining condition at time of diagnosis

-The average person living with HIV spends more than $550,000 on medical care in their lifetime



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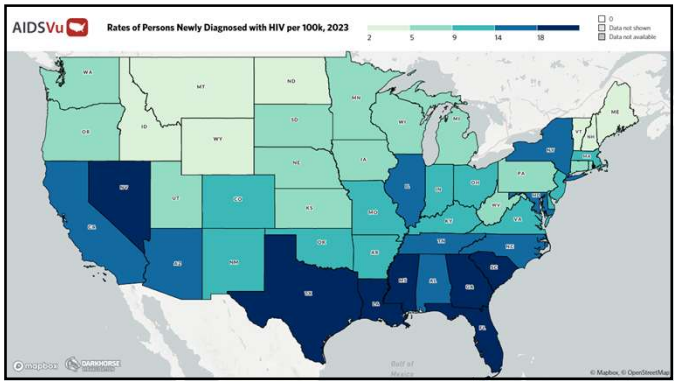
AIDSVu
Rates of Persons Newly Diagnosed with HIV per 100k, 2023
2
5
9
14
18
0
Data not shown
Data not available

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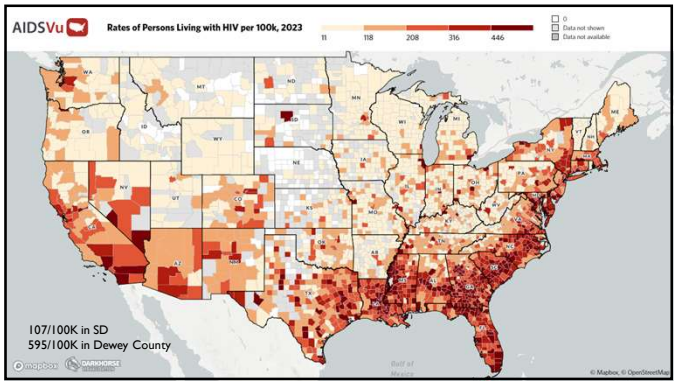
AIDSVu
Rates of Persons Living with HIV per 100k, 2023
11
118
208
316
446
0
Data not shown
Data not available
107/100K in SD
595/100K in Dewey County

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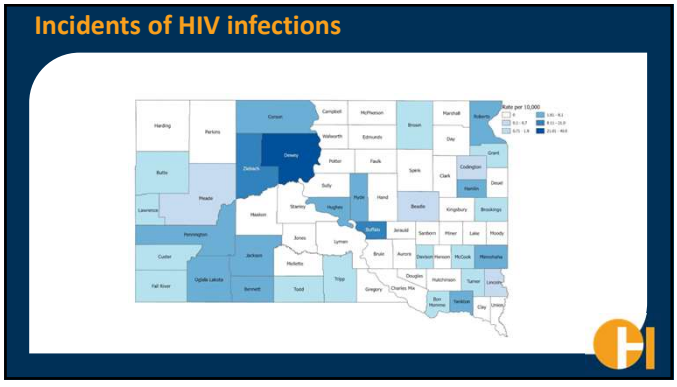
Incidents of HIV infections

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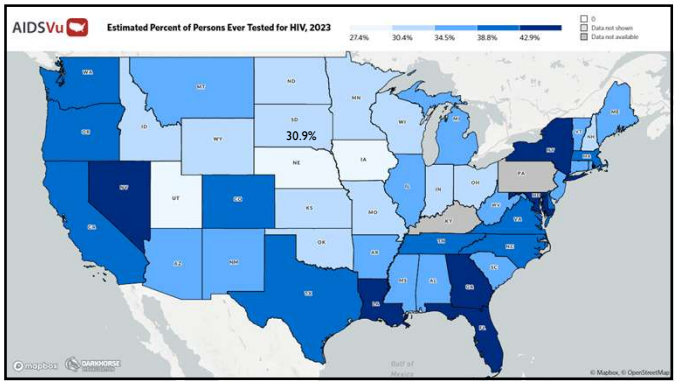

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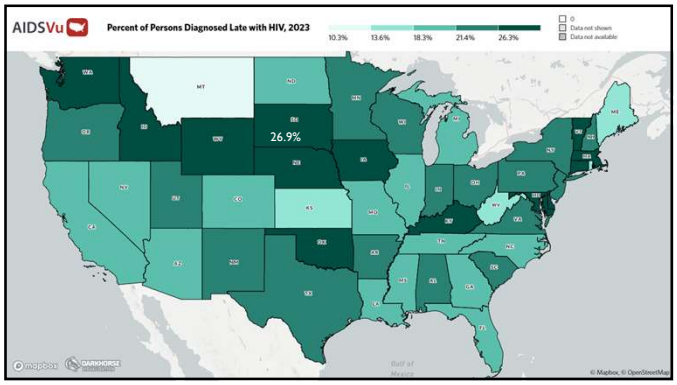

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Recommendations for HIV Testing

"Opt-out testing" ALWAYS

- HIV testing is the *STANDARD OF CARE* with any STI check
- One-time testing for low-risk patients – Everyone age 13-64 as part of routine care
  - Consider ending upper age limit
- Annual or more frequent testing for high-risk patients
  - People with history of IVDU
  - MSM (3-6 months)
  - Persons engaged in sex work or commercial sexual exploitation
  - Sex partners of HIV-positive individuals, IVDU
  - Pregnant Women
  - Recent treatment for an STI – Increases risk of HIV acquisition by 3-5x

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TYPES OF HIV 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; incressed 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 (usually back in 24 hours)

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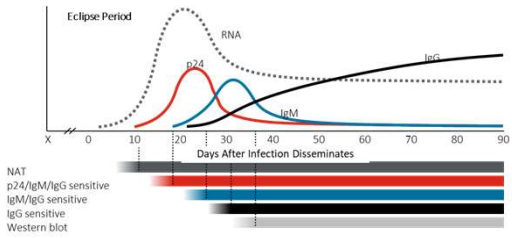
Improved Diagnostic Tests Reduce Test-Negative Window from HIV Infection to Detection



Hurt CB, Nelson JAE, Hightow-Weidman LB, Miller WC. Selecting an HIV test: a narrative review for clinicians and researchers. Sex Transm Dis 2017; 44:739–46. PubMed abstract

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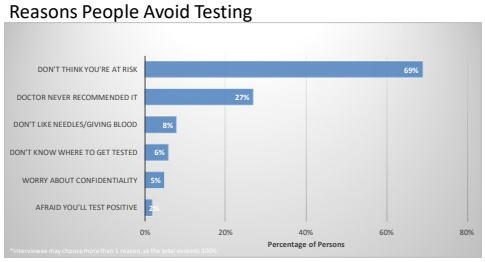
Reasons People Avoid Testing



SOURCE: Kaiser Family Foundation Survey

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HIV PREVENTION

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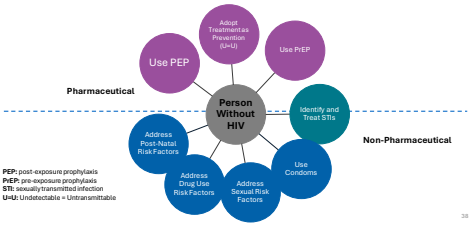
Current HIV Prevention Options (Slide credit: CDC)



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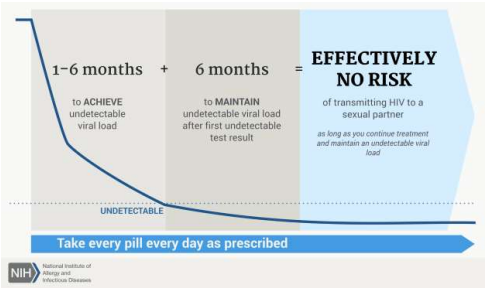
Added benefit of HIV treatment – it works for prevention!



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

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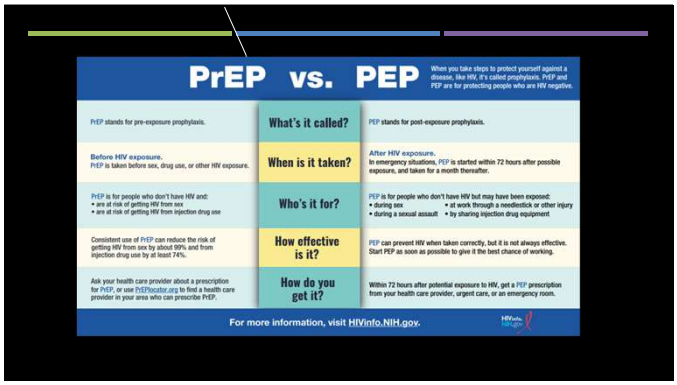
PrEP vs. PEP
When you take steps to protect yourself against a disease, like HIV, it's called prophylaxis. PrEP and PEP are for protecting people who are HIV negative.
PrEP stands for pre-exposure prophylaxis.
What's it called?
PEP stands for post-exposure prophylaxis.
Before HIV exposure.
PrEP is taken 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.

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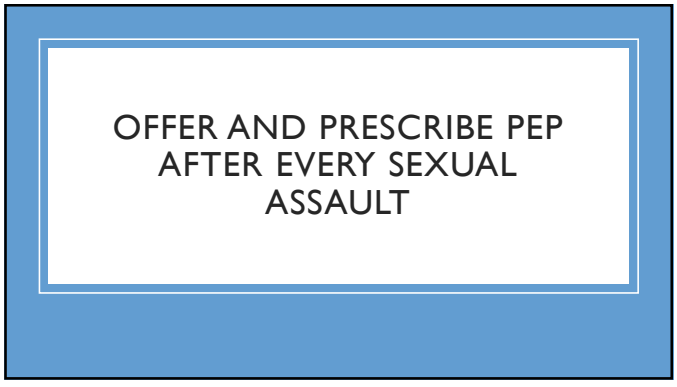
OFFER AND PRESCRIBE PEP AFTER EVERY SEXUAL ASSAULT

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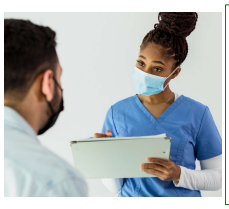
Who Is PrEP For?

(Slide credit: CDC)

PrEP is for adults and adolescents without HIV who are at risk of getting HIV from sex or injection drug use.



CDC's PrEP guideline includes telling all sexually active adults and adolescents that PrEP can protect them from getting HIV

Giving patients information about PrEP:

- Increases the number of people who know about PrEP and equips them to share the information with their social networks and family members
- Helps patients overcome embarrassment and stigma so they can respond accurately to risk assessment questions

PrEP **can be prescribed to any adult or adolescent patient who asks for it,** even if they do not report HIV risk factors, as part of their comprehensive prevention plan

Centers for Disease Control and Prevention, US Public Health Service. *Preexposure prophylaxis for the prevention of HIV infection in the United States—2021 update: a clinical practice guideline.* Published December 2021. Accessed January 20, 2023. https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf

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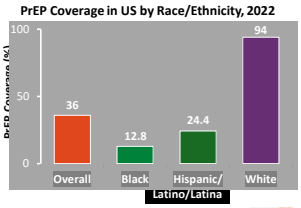
The PrEP Gap in the United States

- **1.2 million people** are likely to benefit from PrEP
- But in 2022, among those who could benefit, **few were prescribed** PrEP
  - Only 41.0% of men
  - Only 14.5% of women
  - Only 23.5% of those aged 16-24 yr
- Significant inequities in PrEP coverage exist based on **race/ethnicity**

American Indians/Alaska Natives: Compared with White counterparts, **HIV infection rates ≥2x higher; 42% have heard of PrEP and only 3.5% were currently taking PrEP or had used PrEP in the past 12 mo**



cdc.gov/hiv/library/reports/surveillance-data-tables/vol-4-no-3/index.html.
minorityhealth.hhs.gov/hivaids-and-american-indiansalaska-natives.
cdc.gov/hiv/pdf/funding/announcements/ps18-1802/cdc-hiv-ps18-1802-monitoring-evaluation-report-2021.pdf.

Slide credit: clinicaloptions.com

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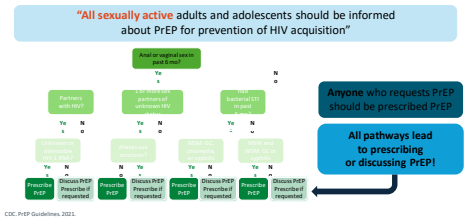
PrEP Guidance: CDC



CDC. PrEP Guidelines 2021.

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Expanding PrEP Uptake by Expanding HCPs Who Prescribe It

- **Does not require HIV expertise**
  - PrEP uptake will remain stagnant if few prescribe
- **Lesson from contraception care in the United States**
  - Expansion of contraception care services (beyond OB/GYN and midwives) increased access to and prescription of contraception
  - **Other prescribing HCPs:** family medicine physicians, internal medicine physicians, pediatricians, and APPs
  - **May be especially important in more rural areas**

Chen. Am J Obstet Gynecol. 2022;226:232.e1.

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Mechanisms to Improve Conversations About PrEP

Normalize PrEP as a prevention option for *any* person who is (or plans to be) sexually active

- Initiate the conversation
- Build rapport and trust with your patients
- Provide person-centered care
- **Shared decision-making**
  - Promotes cultural competence and humility
  - Builds trust within patient–provider relationship
- **Avoid stigmatizing language**
- **Set up safe clinic spaces**
  - Promote representation of racial and ethnic minority and transgender people
  - Display signals of acceptance (eg, wear pride pin on clothing)
  - Pronouns on ID tag
- Integrate sexual health and harm reduction in your practice

McNulty. Cult Health Sex. 2022;24:1033. Golub. Curr HIV/AIDS Rep. 2018;15:190. cdc.gov/endhiv/action/stories/dekalb-county-talk.html.

Slide credit: clinicaloptions.com

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PrEP Formulations

- 2012: Oral FTC/TDF (Truvada)
- 2019: Oral FTC/TAF (Descovy)
- 2020: Generic PrEP
- 2021: Long Acting (LA) Cabotegravir Injectable (Apretude)
- 2025: Lenacapavir (Yeztugo)

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ORAL PREP

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TENOFOVIR DF-EMTRICITABINE (TRUVADA)

Approved Indication for HIV PrEP: Tenofovir DF-emtricitabine is indicated for HIV PrEP to reduce the risk of sexually acquired HIV in adults and adolescents (weighing at least 35 kg).

Formulation/Dosing: Tenofovir DF-emtricitabine is a fixed-dose combination that contains 300 mg of tenofovir DF and 200 mg of emtricitabine. The recommended dosing of tenofovir DF-emtricitabine when used for HIV PrEP is one tablet once daily, with or without food. Alternative dosing, such as on-demand (2-1-1) dosing, is not included in the FDA indication but can be considered "off-label" for select men who have sex with men.

Use in Persons with Renal Impairment: Tenofovir DF-emtricitabine is not recommended for HIV PrEP in persons with an estimated creatinine clearance of less than 60 mL/min.

https://www.hiv.uw.edu/

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TENOFOVIR ALAFENAMIDE-EMTRICITABINE (DESCOVY)

Approved Indication for HIV PrEP: Tenofovir alafenamide-emtricitabine is indicated for HIV PrEP in adults and adolescents (weighing at least 35 kg) at risk of acquiring HIV sexually, excluding women at risk from receptive vaginal sex.[1] Tenofovir alafenamide-emtricitabine is not indicated for receptive vaginal sex because its effectiveness in this population has not been established, although it is currently under investigation.

Formulation/Dosing: Tenofovir alafenamide-emtricitabine is a two-drug, fixed-dose combination that contains 25 mg of tenofovir alafenamide and 200 mg of emtricitabine. Oral tenofovir alafenamide-emtricitabine should be taken as one tablet once daily, with or without food. Alternative dosing, such as on-demand (2-1-1) dosing, is not recommended.

Use in Persons with Renal Impairment: For HIV PrEP, tenofovir alafenamide-emtricitabine is not recommended for persons who have an estimated creatinine clearance of less than 30 mL/min, unless they are on dialysis

https://www.hiv.uw.edu/

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INJECTABLE PREP

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CABOTEGRAVIR-IM (LONG-ACTING INJECTABLE) BRAND NAME: APRETUDE

FDA-Approved Indication for HIV PrEP: Long-acting injectable cabotegravir, administered as an intramuscular dose (cabotegravir-IM), is indicated for HIV PrEP in adults and adolescents (weighing at least 35 kg) who are at risk of sexual acquisition of HIV. Cabotegravir-IM has not been studied as a prevention measure for people who are at risk of acquiring HIV from injecting drugs.

Formulations/Dosing: Cabotegravir-IM is available as a 200 mg/mL solution and is administered as a 3 mL intramuscular injection in the gluteal region. Oral cabotegravir is a 30 mg tablet that is taken once daily, with or without food. Cabotegravir-IM is administered as a 600 mg (3 mL) injection, repeated 1 month after the first injection, and then administered every 2 months thereafter. An optional lead-in with oral cabotegravir 30 mg once daily may be used for approximately 1 month to assess the tolerability of cabotegravir. If the oral cabotegravir lead-in is used, the first injection of cabotegravir-IM should be given on the last day of the oral lead-in (or within 3 days of completing the oral lead-in).

Use in Persons with Renal Impairment: For HIV PrEP, cabotegravir has no renal restrictions. For persons who have a creatinine clearance less than 30 mL/min, increased monitoring for cabotegravir toxicity is recommended. Hemodialysis is not expected to impact cabotegravir levels

https://www.hiv.uw.edu/

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LENACAPAVIR-SQ (LONG-ACTING INJECTABLE) BRAND NAME: YEZTUGO

FDA-Approved Indication for HIV PrEP: Long-acting injectable lenacapavir, administered as a subcutaneous injection (lenacapavir-SQ), is indicated for HIV PrEP to reduce the risk of sexually acquired HIV-1 for adults and adolescents weighing at least 35 kg (77 lbs). Two lenacapavir-SQ medications are available for commercial use: lenacapavir-SQ (*Yeztugo*) for HIV PrEP and lenacapavir-SQ (*Sunlenca*) for HIV treatment. Although these two lenacapavir-SQ medications contain the same recommended dose and dosing frequency, it is important to designate the correct brand, based on whether the indication for use is HIV PrEP or HIV treatment. In addition, there are also two different oral brand preparations: oral lenacapavir (*Yeztugo*) for HIV PrEP and oral lenacapavir (*Sunlenca*) for HIV treatment.

Formulations/Dosing: Lenacapavir-SQ is available in 1.5 mL vials that contain 463.5 mg of lenacapavir. Lenacapavir is also available as a 300 mg tablet that can be taken with or without food. Use of lenacapavir-SQ for HIV PrEP requires a 2-day initiation phase that uses both oral and injection doses. Day 1 of the initiation phase requires a 600 mg (2 x 300 mg tablets) dose of oral lenacapavir and a 927 mg (2 injections, each with 463.5 mg) of lenacapavir-SQ. Day 2 of the initiation phase requires a 600 mg (2 x 300 mg tablets) dose of oral lenacapavir. After the 2-day initiation phase, lenacapavir-SQ 927 mg (2 injections, each with 463.5 mg injections) is administered every 26 weeks.

Use in Persons with Renal Impairment: There are no dosage adjustments of lenacapavir-SQ or oral lenacapavir in persons with mild, moderate, or severe renal insufficiency. There are insufficient data on the use of lenacapavir-SQ or oral lenacapavir in persons who have a creatinine clearance less than 15 mL/min. In addition, there are insufficient data on the use of lenacapavir-SQ or oral lenacapavir in persons receiving hemodialysis. Since lenacapavir is highly protein bound, hemodialysis is not likely to significantly impact lenacapavir levels

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PREP MONITORING

- **Baseline**
  - HIV test – within 7 days
  - Renal Function
  - STI Testing
  - Lipid Panel
  - Hep B
  - Hep C
  - Pregnancy

- **Monitoring**
  - HIV test
    - Q3months orals
    - Q 4 months Apretude
    - Q 6 months Yeztugo
  - Renal Function – every 6 months if over 50, yearly if under 50
  - STI Testing – MSM every 3-6 months
  - Lipid Panel – every 12 months
  - Hep C every 12 months in MSM, IVDU
  - Pregnancy – every 3-6 months

https://www.hiv.uw.edu/

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National HIV PrEP Curriculum

www.hivprep.uw.edu

APP: HIV PREP TOOLS FOR CLINICIANS

This app supports health care professionals to:

- Evaluate persons for HIV PrEP
- Identify appropriate HIV PrEP medications
- View recommended laboratory tests
- Assess, initiate, and monitor HIV PrEP

Access the app on a web browser (hiv.prep.uw.edu/page/tools/app), via the CDC STI Tx Guide app, or download the free app

APPLE APP STORE | GOOGLE PLAY

University of Washington (UW) Professor of Medicine Dr. David Spach is Editor-in-Chief of this site and four other curricula about HIV, STDs, HCV, and HBV. All sites offer FREE CE. Created and managed by the UW Infectious Diseases Education & Assessment (IDEA) Program (idea.medicine.uw.edu).

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HIV TREATMENT

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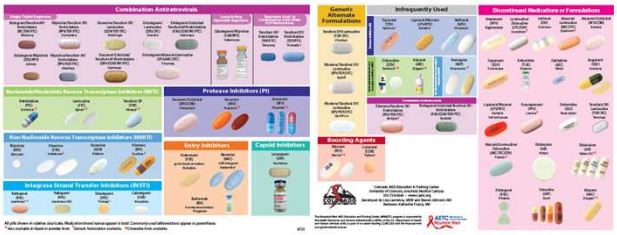
HIV MEDICATION CHART



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RAPID ART INITIATION

Candidate Criteria:

- New reactive HIV test, confirmed HIV, or suspected acute HIV
- ART-naive or limited prior ART
- No conditions requiring ART deferral (e.g., cryptococcal, TB meningitis, DMV retinitis)
- Perform baseline labs; ART can start while awaiting results (A3)

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RECOMMENDATIONS:

Rationale for Rapid ART Initiation:

- Recommend ART for all patients diagnosed with HIV (A1)
- Offer rapid ART – same day preferred, within 72 hours if eligible (A1)
  - Confirmed HIV diagnosis (A1)
  - Reactive screening, confirmatory pending (A2)
  - Acute HIV infection: Ab-negative, RNA-positive (A2)
- Counsel patients with HIV-negative partners on reduced transmission risk once virally suppressed; strongly recommend ART (A1)
- Involve patients in ART decisions; patient decides timing/initiation (A3)
- If patient declines rapid ART, revisit as soon as possible
- Initiate ART in advanced HIV/AIDS even with adherence barriers; refer to specialized support (A2)
- Monitor response or consult HIV specialist after initiation (A2)

Rapid ART initiation, the standard of care, is safe, effective, and widely accepted; even patients facing substance use, mental health, or housing should be offered immediate ART, with counseling and support services addressing potential adherence barriers.

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PROTOCOL FOR RAPID ART INITIATION

ART can be started while awaiting laboratory test results

Identify Rapid ART Candidates	Assessment, Counseling, and Referrals	Baseline Lab Testing	Payment Assistance	Initiate ART	Follow-up
Candidates have: • A new reactive POC HIV test result, new HIV diagnosis, known or suspected acute HIV, or known HIV, *and* • No or limited prior ARV use (except PEP/PrEP), *and* • No known medical conditions or OIs that require deferral of ART initiation	• Assess health literacy • Discuss HIV diagnosis and disclosure • Discuss ART benefits, adherence, adverse effects, and management • Identify and address medical and psychosocial barriers to treatment and adherence • Refer for substance use treatment, behavioral health services, and housing assistance, as needed	• HIV Ag/Ab test • Viral load • Resistance testing • CD4 count • HAV, HBV, and HCV testing • Metabolic panel • STI testing (including syphilis) • Urinalysis • Pregnancy test for individuals of childbearing potential	• Assess need for payment assistance • Refer patients with no insurance a Certified Application Counselor or Navigator • Provide resources for sliding fee and/or payment assistance	• Choose among preferred regimens based on patient characteristics and preference • Initiate ART immediately – preferably on the same day – or within 72 hours • Administer the first dose on-site if possible	• Contact the patient within 24 to 48 hours by phone (or other preferred method) • Assess medication tolerance and adherence • If feasible, schedule in-person visit with medical care provider within 7 days • Reinforce adherence • Change or adjust the initial ART regimen as needed based on results of initial lab and/or resistance testing

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MEDICAL HISTORY CHECKLIST

Before Rapid ART Initiation, Ask About:

- Date and result of last HIV test
- Serostatus of sex partners and their ART regimens *(if known)*
- Prior use of antiretrovirals, including PrEP or PEP *(with dates)*
- Comorbidities, especially renal or liver disease and hepatitis B
- Current prescribed and OTC medications
- Drug allergies
- Substance use
- Symptoms concerning for – cryptococcal meningitis, TB meningitis, and CMV retinitis
  - Guidelines for the Prevention and Treatment of Opportunistic Infections in Adults and Adolescents with HIV
- Psychiatric history, including depression, psychosis, or suicidality
- Possible pregnancy and reproductive plans *(if applicable)*

A Guide for Health Care Providers

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INITIAL WORK-UP

Baseline

- CBC
- CMP
- Hgb A1c
- TSH
- Hepatitis Panel | Hep B serology
- Vaccine titers – Varicella, MMR, Hep A, Hep B
- TB Gold
- EBV, CMV, Toxoplasmosis
- Lipid Panel
- Vitamin D
- Chlamydia, Gonorrhea, Syphilis
- Pregnancy Test

HIV Labs

- CD4
- Viral Load
- Genotype
- HLAB5701
- Tropism Testing

Health Maintenance

- Pap smear, Pelvic Exam
- Mammogram, CBE
- Colonoscopy
- Low Dose CT Scan
- Vaccine Updates
- Bone Density
- STI testing
- Mental Health Screening
- Substance Use Screening

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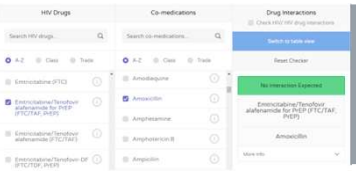
MY PATIENT IS ON OTHER MEDS – NOW WHAT DO I DO?

HIV and HCV Drug Interactions: Quick Guides for Clinicians



HIVinfo.NIH.gov: HIV treatment – side effects

University of Liverpool: HIV Drug Interactions Checker

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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) MEDS

- St. John's Wort – CYP450 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
  - Neutralizes stomach acids and may interfere with absorption of ART (*space out the dosing if necessary*)

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HOW DO I MONITOR MY PATIENTS' VIRAL LOAD

The frequency of viral load testing depends on several factors. Current guidelines recommend viral load monitoring as follows[1]:

- **With initiation of ART** (before initiation and within 2 to 4 weeks after treatment initiation, followed by 4- to 8-week intervals until the levels become undetectable)
- **After ART modification because of suboptimal response** (within 2 to 4 weeks after treatment modification, followed by 4- to 8-week intervals until the levels become undetectable) / **After ART modification because of toxicity or need for regimen simplification** (within 4 to 8 weeks after changing therapy)
- **In patients on a stable, suppressive ART regimen** (every 3 to 4 months, or every 6 months if virally suppressed for more than 2 years, to confirm durable viral suppression)
- **In patients with suboptimal response** (frequency depends on clinical circumstances)

A patient's plasma HIV RNA viral load should be measured regularly to confirm initial and sustained response to ART. Most patients taking ART as prescribed achieve viral suppression within 6 months.

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RECOMMENDED FREQUENCY OF CD4 MONITORING

September 2025 HHS Guidelines Update:

Clinical Scenario	CD4 Monitoring
After initiating ART	3 months after initiation
During first 1-2 years of ART with viral suppression and CD4 count ≥300 cells/mm³	Every 6 months
After 1-2 years of ART with viral suppression and CD4 count ≥300 cells/mm³	Optional
If CD4 count <300 cells/mm³	Every 3-4 months
After modifying ART due to virologic failure	Every 3 to 6 months

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RESOURCES

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https://www.hiv.uw.edu/page/symptom-evaluation/guides

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National HIV Curriculum

www.hiv.uw.edu

Six modules with 35 lessons and corresponding Question Bank topics address:

- SCREENING AND DIAGNOSIS
- BASIC HIV PRIMARY CARE
- ANTIRETROVIRAL THERAPY
- CO-OCCURRING CONDITIONS
- PREVENTION OF HIV
- KEY POPULATIONS

CREATE FREE ONLINE LEARNING GROUPS TO:

- Invite, train, and onboard staff and residents by assigning select content
- Review group progress reports to track CE and shape future training
- Augment medical, nursing, pharmacy, dental and other healthcare professionals training programs

The Health Resources and Services Administration (HRSA), Department of Health and Human Services (HHS) provided financial support for the National HIV Curriculum. The award provided 100% of total costs and totaled $1,172,594. The contents are those of the author. They may not reflect the policies of HRSA, HHS, or the U.S. Government.

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REFERENCES

- Aber. AIDS Rerev. 2010;63:1945.
- Byrne survive. 2011;997:151. [more] AIDS Rerev. 2011;20:2007.
- [illegible]
- Chen. Int J Neurol Cancers. 2021;13:e12141.
- Crooks Prev Med Rep. 2016;3:1–5.
- Deng. AIDS Patient Care STDS. 2013;26:26.
- Dombrowski JC, Rentschler KM, Golden MR. Implementation of Law, Barrier Human Immunodeficiency Virus Care Lessons Learned From the Pre-Chlor in Seattle. Clin Infect Dis. 2019;Jul 73(1):162.207. doi: 10.1093/cid/ciw360. PMID: 27614578; PMCID: PMC5507384.
- Fernshaw, V. A., (2020). Stigma and conservative members in clinical, research, and advocacy agenda. American Psychologist, 75(9), 1166–1181. [illegible]
- Gallardo, Congress. NCJ 2015. Alert DA0001008.
- Highness Medicine JMM Rev Preess 2018;7:e10565.
- Meyer Ann Thor. 2010;57:1736. Preess. NCJ 232. Alert TUP0008.
- National HIV Curriculum. [illegible]
- Obesity Acquir Immune Defic Syndr. 2010;8:9–15.
- Purposeship. BMC Womens Health. 2012;12:150.

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REFERENCES

- *AHEAD | South Dakota*. (n.d.). Retrieved August 25, 2025, from https://ahead.hivgov/south_dakota/
- Ahrens, K., Burgess, A., Munk, L., Zöller, E. (2021) Rural HIV prevalence and service availability in the United States: a chart book. University of Southern Main, Muskie School, Main Rural Health Research Center. Retrieved 5/27/25 from: http://ruralhealthresearch.org/publications/1414
- AIDSVu. (2024). HIV Prevalence by county map. https://map.aidsvu.org/prev/county/rate/none/none/usa?geoContext=national.
- Centers for Disease Control (2024, May 21). *HIV Surveillance Supplemental Report: Estimated HIV Incidence and Prevalence in the United States, 2018-2022*. https://stacks.cdc.gov/view/cdc/156513/cdc_156513_DS1.pdf
- Complete Health Practice Transformation Project Data – 2017-2025
- *HIV care and treatment in rural communities*. (2020). HRSA. https://ryanwhite.hrsa.gov/sites/default/files/ryanwhite/resources/hiv-rural-communities-fact-sheet.pdf
- South Dakota Department of Health (2025). 2025 HIV/AIDS Surveillance Report. https://doh.sd.gov/media/2xdoxma/hiv-aids_surveillance-report_2025.pdf
- South Dakota Department of Health (2024). Strategic-analysis-sd-rural-healthcare-programs_date-analysis-summary.pdf [Data Analysis Summary] Strategic Analysis ofSouth Dakota's Rural Healthcare Programs https://doh.sd.gov/media/gn4fkgpz/strategic-analysis-sd-rural-healthcare-programs_data-analysis-summary.pdf
- The Center for HIV Law and Policy. (2024). *HIV Criminalization in the United States: A Sourcebook on State and Federal HIV Criminal Law and Practice*. The Center for HIV Law and Policy. https://www.hivlawandpolicy.org/sites/default/files/2024-01/HIV%20Criminalization%20in%20the%20U.S.%20A%20Sourcebook%20on%20State%20and%20Federal%20HIV%20Criminal%20Law%20and%20Practice%20Jan24.pdf
- United Health Foundation. (2025). *Rural Population in the United States*. America's Health Rankings. https://www.americashealthrankings.org/explore/measures/pct_rural_b

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