HIV Screening Guidelines

Rebecca Widener, MD, FAAP

Pediatric Infectious Diseases

QTIP: Adolescent Health

SCAAP July 29, 2020

PRISMA HEALTH Children's Hospital

Objectives

- Why screen?
- When to screen?
- What to send to screen?
- What to do after you screen?

PRISMA HEALTH Children's Hospital

Case #1

- 19 yo male went to PCP for a routine check up and sought out HIV testing because he knew he was at high risk, having had 3 lifetime male partners with no condom use. ROS also with rectal pain.
  - PMH- previously healthy
  - Social- in college, MSM, has receptive anal sex
  - HIV tested +
- 4 months prior during the winter, he had SOB. He developed cold sores, sore throat, subjective fevers, chills all x 2 weeks. He also had rectal pain and bright blood on the toilet paper and went to UC, dx'd with hemorrhoids. Symptomatic care has not improved this.

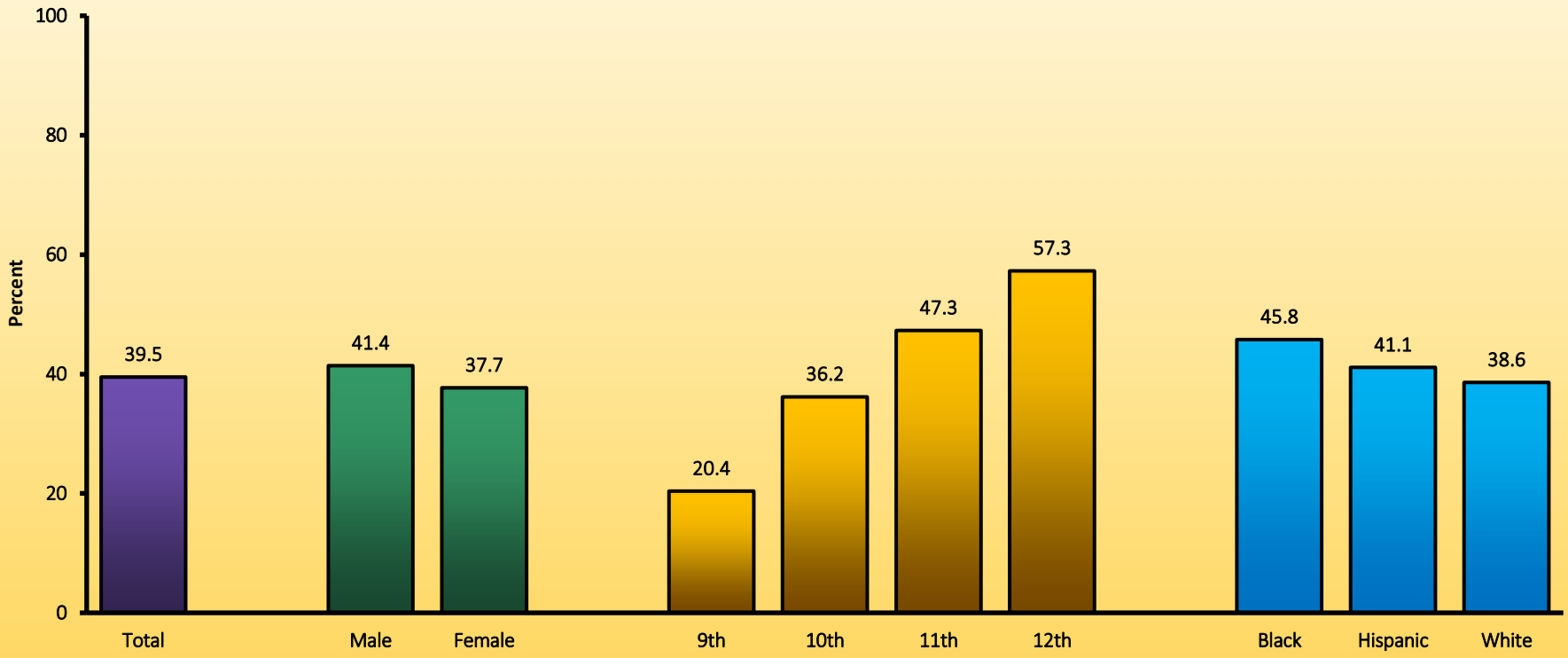
PRISMA HEALTH Children's Hospital

Why screen for HIV?

- Teenagers are having sex
- We’re trying to end the epidemic
- We have a lot of HIV in South Carolina

PRISMA HEALTH Children’s Hospital

Percentage of High School Students Who Ever Had Sexual Intercourse, by Sex,* Grade,* and Race/Ethnicity,* 2017



*M > F; 10th > 9th, 11th > 9th, 11th > 10th, 12th > 9th, 12th > 10th, 12th > 11th; B > W (Based on t-test analysis, $p < 0.05$.)
All Hispanic students are included in the Hispanic category. All other races are non-Hispanic.
Note: This graph contains weighted results.

PRISMA HEALTH Children's Hospital

Center for Disease Control and Prevention, South Carolina, High School Youth Risk Behavior Survey, 2017

South Carolina Teens

South Carolina 2017 Results	Total %		Women %		Men %	
	Freshman	Senior	Freshman	Senior	Freshman	Senior
Ever had sex	26	54	22	53	30	-
Had sex before age 13	4	2	7	2	9	-
4+ lifetime partners	5	14	4	12	7	14
Currently having sex	15	35	13	40	17	36
Did *not* use a condom the last time	10	27	10	32	11	26
Alcohol or drugs with sex the last time	5	10	5	9	6	13
Never tested, or not sure of testing, for HIV (outside of blood donation)	90	82	90	76	91	88
	n=337-340	n=183-208	n= 182-194	n=104-115	n= 157-197	n=78-90

PRISMA HEALTH Children's Hospital

Center for Disease Control and Prevention, South Carolina, High School Youth Risk Behavior Survey, 2017

Ending the HIV Epidemic

A PLAN FOR AMERICA

Learn More @

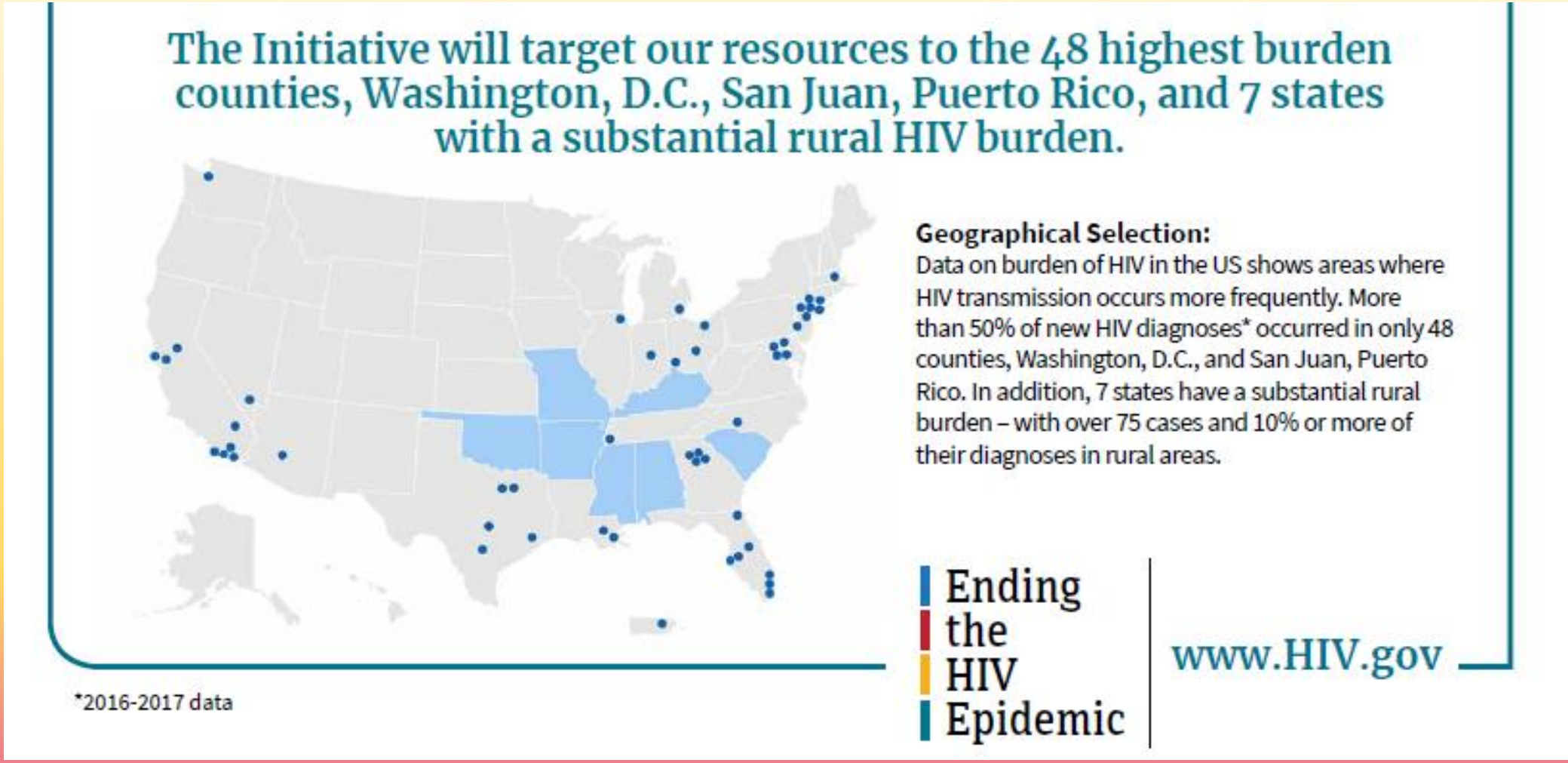
HIV.gov

Ending the HIV Epidemic

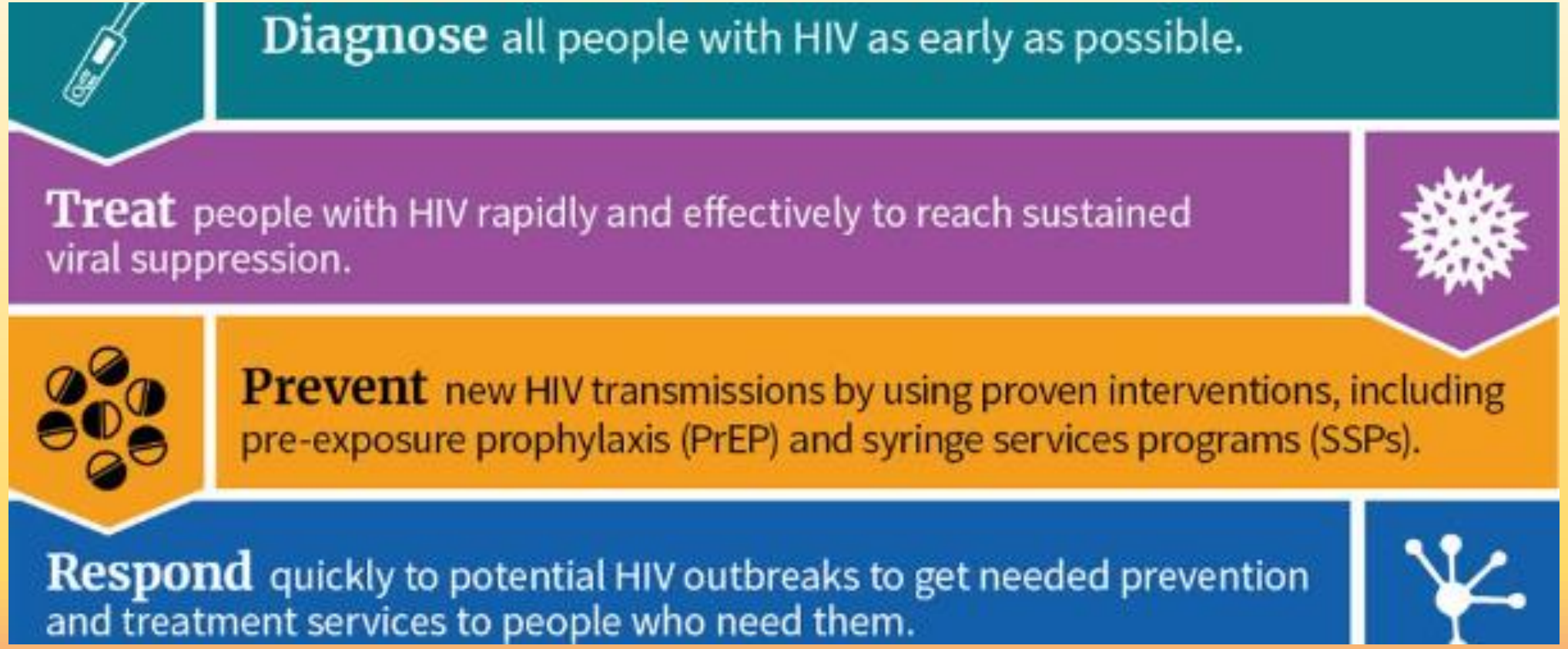
- President Trump announced in his state of the union address in Feb 2019 a campaign to End the HIV Epidemic
- *What does this mean, and why is it important?*
- An initiative to reduce the number of new HIV infections in the US by 75% within five years, and 90% by 2030
  - for an estimated 250,000 total HIV infections averted
- Why is it important?
  - > 700,000 Americans have died from HIV since 1981
  - > 1.1 million Americans are currently living with HIV, and more are at risk of HIV infection
  - New HIV diagnoses have plateaued, with ~ 40,00 new diagnoses each year
  - US government spends $20 billion in annual direct health expenditures for HIV prevention and care
  - Opioid epidemics and HIV complacency among healthcare providers threatens an HIV resurgence

PRISMA HEALTH Children's Hospital

End the Epidemic: Data Driven Target Areas



End the Epidemic Plan: Four Key Strategies



Location	HIV Diagnoses
1. District of Columbia	34.6
2. Georgia	29.2
3. Florida	25.6
4. Louisiana	25.5
5. Nevada	20.0
6. Maryland	19.3
6. Mississippi	19.3
8. Texas	19.2
9. South Carolina	16.8
10. Puerto Rico	15.7
11. New York	14.9
12. Alabama	13.9
12. New Jersey	13.9
14. North Carolina	13.7
United States [1]	**13.6**
15. Arizona	13.4
16. California	13.3
16. Tennessee	13.3
18. Illinois	12.6
19. Virginia	12.1
20. Arkansas	11.2
21. Delaware	11.1
22. Massachusetts	11.0
23. U.S. Virgin Islands	10.2
24. Ohio	10.0
25. Kentucky	9.6

HIV diagnosis rate in SC in ages 13-24 years is 20.6 in 2018

Notes
Rates are per 100,000 population.

Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) AtlasPlus 2018 Data

PRISMA HEALTH Children's Hospital

Barriers to screening for HIV

- Many teenagers feel they are not at risk for HIV
- Concerned about confidentiality
- Access to testing
- Blood draw
- Missed opportunities by doctors
  - In a study of 253 teens seen by 49 doctors, 1/3 of teen patients do not receive any talk about sexual health during annual visits
  - When it is discussed, it lasts an average of 36 seconds
  - Patient engagement varied, only 4% had prolonged conversation
  - Adolescent girls, older teens, and explicitly confidential visits were more than 4x as likely to discuss sexual health[1]

PRISMA HEALTH Children's Hospital

1 Alexander, Stewart et al. JAMA Pediatr. 2014;168(2):163-169

When to screen for HIV: Routine

- CDC recommends universal, routine screening for all people at least once as part of routine health care, starting at age 13
  - Screen at least yearly
    - PWID and their sex partners
    - People who exchange sex for drugs or money
    - Sex partners of people with HIV
    - Sexually active MSM (consider testing every 3-6 months)
    - Heterosexuals who have had ≥1 sex partner since most recent HIV test
    - People receiving treatment for hepatitis, TB, or an STD
- AAP recommends screening on all sexually active teens regardless of age, for all teens at least once by age 16-18 if community prevalence is >0.1%, and annually for high-risk youth
  - Teens tested for other STDs should be tested for HIV at the same visit
  - ED and UC facilities in high-prevalence areas should start routine testing

PRISMA HEALTH Children's Hospital

https://www.cdc.gov/hiv/clinicians/screening/benefits.html

Case #2

- 16 yo presents to PCP in the summer with fever, vomiting, diarrhea
  - *PCP diagnosis: viral illness, symptomatic care*
- Symptoms worsen, develops muscle aches, arthralgia, HA, presents to ED
  - *ED diagnosis: viral illness, admit for IVF*
- Hospital admission shows leukopenia, thrombocytopenia, elevated CPK, mild transaminitis. RMSF, flu, EBV normal. Improves after 24 hours of IVF
  - *Hospital diagnosis: viral illness, symptomatic care*
- Presents 2 months later to PCP with anal warts…HIV tested +

PRISMA HEALTH Children's Hospital

When to screen for HIV: Acute HIV

- 50% of people acutely infected with HIV will present to providers with symptoms, few are tested[1]
- Symptoms of acute retroviral syndrome
  - Flu-like illness
  - GI-like illness
  - Fever, LAD, rash, HA, oral ulcers
  - Leucopenia, thrombocytopenia, transaminitis, aseptic meningitis, pancreatitis
- Diagnosis and treatment during acute phase can have short-term and long-term benefits and decrease transmission (26 times higher in acute phase[2])

PRISMA HEALTH Children's Hospital

1 Weintrob AC, et al. Arch Inter Med. 2003; 163 (17): 2097-2100
2 Hollingsworth TD, et al. *J Infect Dis.* 2008;198(5):687-93

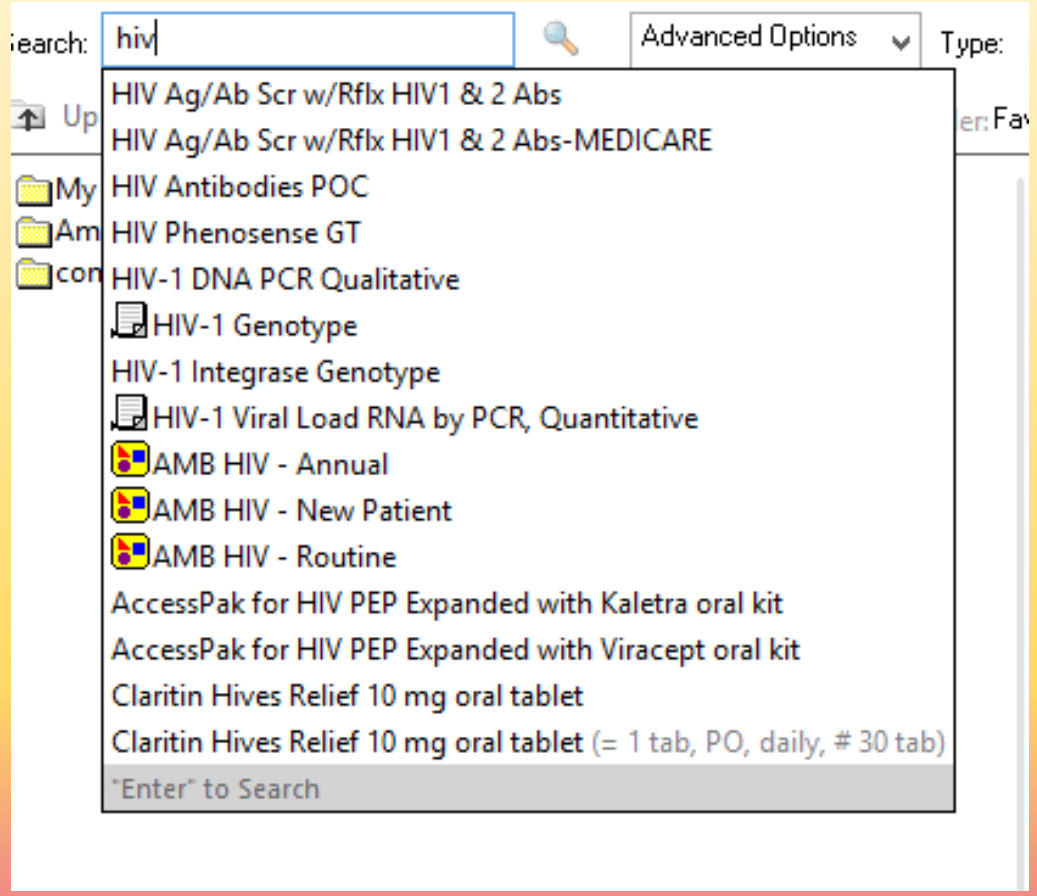
Case #3

- 17 yo male presents to ED in winter with complaint of flu symptoms. Patient states that he has had back pain, headache, myalgias and throat pain for the past week. He developed fevers of 102-103 at home over the past several days. He has also had 3 episodes of nonbilious, nonbloody vomiting once daily for the past 3 days.
  - PCP strep and flu negative
  - UC repeat strep and flu negative
  - ED diagnosis: viral illness
- Presents back to PCP eight months later with weight loss ongoing since this winter… HIV tested +

PRISMA HEALTH Children's Hospital

What to send to screen

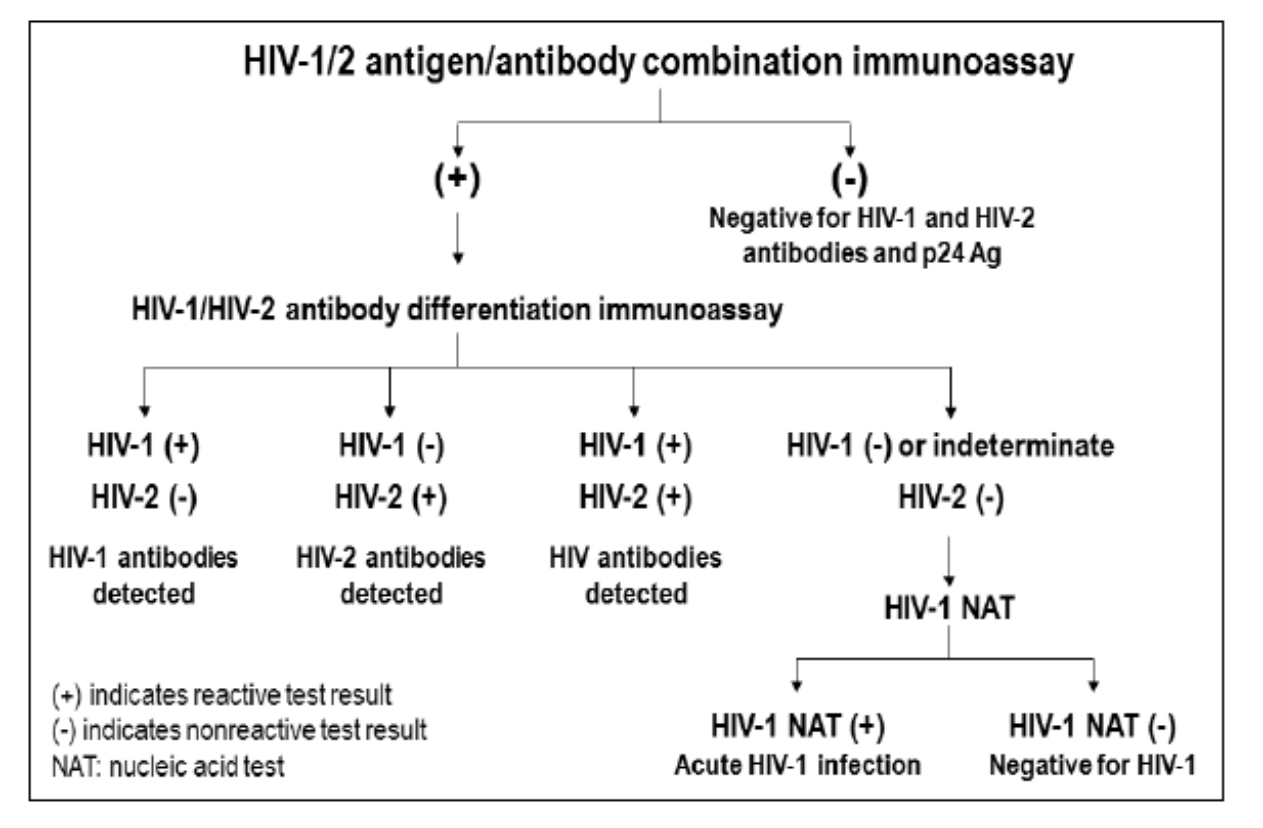
- Rapid HIV test, or POC
- HIV 4th generation, *aka* HIV-1/2 antigen/antibody immunoassay, *aka* HIV Ag/Ab screen with reflex
  - Detects HIV-1 Ab (most common), HIV-2 Ab (West Africa), and HIV-1 p24 Ag
  - Does not discern Ag reactivity from Ab reactivity
- For acute retroviral syndrome, also send HIV RNA PCR ("viral load")



https://stacks.cdc.gov/view/cdc/23447

Indeterminate test result

- Is your patient high risk? → this could be acute HIV, send HIV NAT (RNA PCR)
- Is your patient low risk? → most likely false positive, but send HIV NAT (RNA PCR)



PRISMA HEALTH Children's Hospital

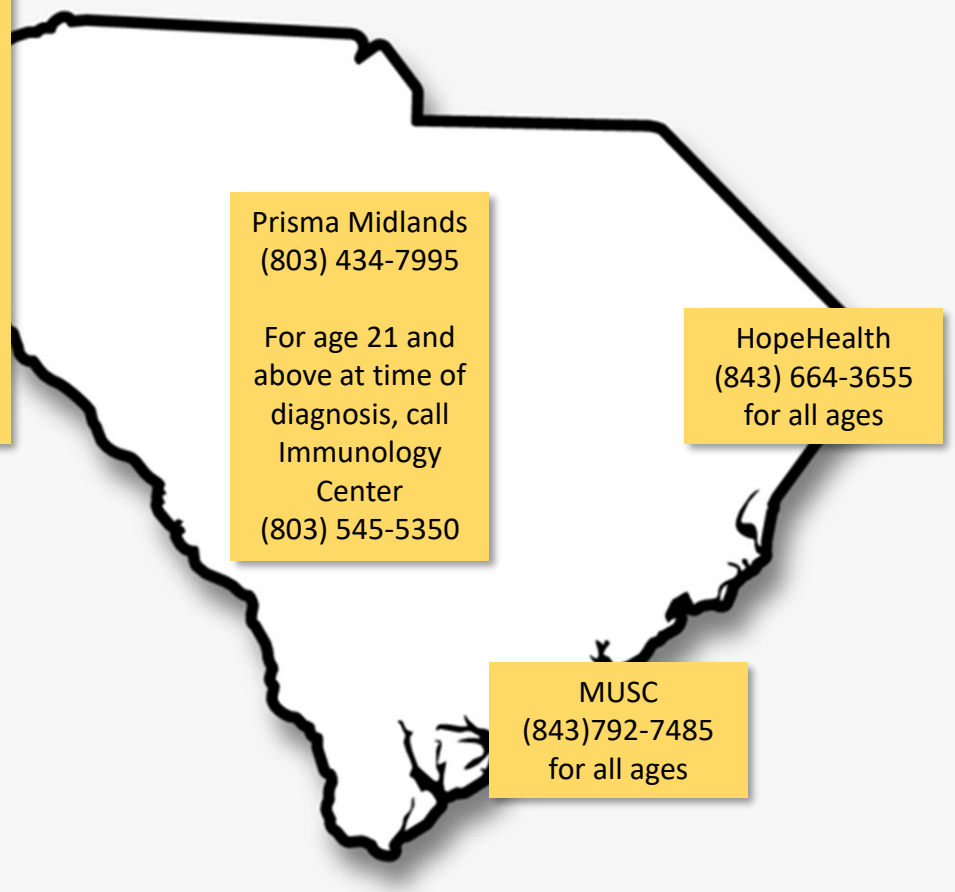
What to do after your screen?

- If your rapid or POC is positive, send a 4th generation test
  - Trep/RPR, GC/Chlamydia NAAT (urine and/or rectal), consider hepatitis panel
- If your 4th generation test is positive
  - You can hold on other labs and refer to Peds or Adult ID
  - Or…send HIV viral load, CD4
- Counsel your patient
  - HIV is now a chronic illness that can be controlled with easy, effective treatment and with good control, you can stay healthy
  - Nothing needs to change in the house (no new silverware or dishes, soap, towels, etc)
  - Transmission is through sex, blood, and mom to baby: it is ok to interact as normal with family, babies, people on chemo
  - Thus far, HIV with normal CD4 count is not a risk factor in and of itself for COVID-19
  - RW Clinics help with all barriers to care (cost, transportation, mental health, etc.)
  - SC law states you must disclose your status to your sex or needle-sharing partner
  - DHEC will be in touch with them for anonymous public health reporting
  - Primary care provider is still needed
- Refer to your local Peds or Adult ID for rapid ART (appointment within 48 hours)
  - The goal = offer ART on the same day of appointment if ready

PRISMA HEALTH Children's Hospital

Prisma
Greenville
(864) 454-5130

Age 18 and above at time of diagnosis, call the adult clinic at (864) 455-9033, or for uninsured, call New Horizons (864) 729-8330



Prisma Midlands
(803) 434-7995

For age 21 and above at time of diagnosis, call Immunology Center (803) 545-5350

HopeHealth
(843) 664-3655
for all ages

MUSC
(843)792-7485
for all ages

Alternative sites for screening

- Free, confidential site list for screening
  - https://gettested.cdc.gov/
- Drug store OTC test kits ~$40
- Blood donation

PRISMA HEALTH Children's Hospital

Summary

- Screen because HIV is prevalent in our teens and young adults
  - HIV is high in SC, and is targeted for End the HIV Epidemic campaign goals for our rural populations
- Screen on all sexually active teens and once by age 16
- Screen with HIV 4th generation
  - Add HIV viral load if acute symptoms or indeterminate result
- Screen positive → Counsel and refer to ID specialist for rapid start
- Questions?

PRISMA HEALTH Children's Hospital