Cases From the Counter and the Clinic

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Disclosures

- No conflict of interest in relation to this presentation
- Most of the images, graphs, etc…come from the HIV National Curriculum https://www.hiv.uw.edu/

Objectives

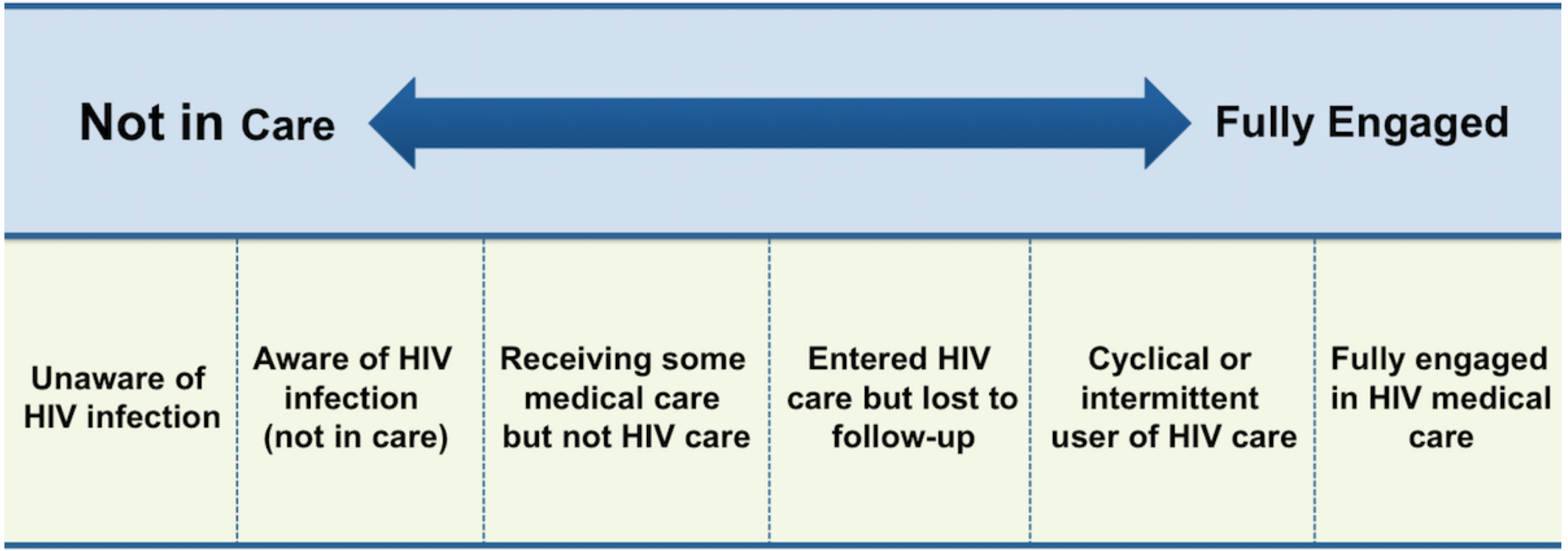
- Utilizing patient cases
  - Highlight challenges in screening and diagnosis
  - Develop a vaccine regimen appropriate for a person living with HIV (PLWH)
  - Recommend appropriate risk reduction strategies for various chronic comorbid conditions
  - Define several risk reduction strategies to mitigate spread of HIV
  - Highlight different roles community pharmacies play in helping keep patients retained in care
  - Identify a complete antiretroviral treatment regimen (ART)
  - Select methods to best manage side effects of ART
  - Review common insurance barriers and resolutions

Screening and Diagnosis

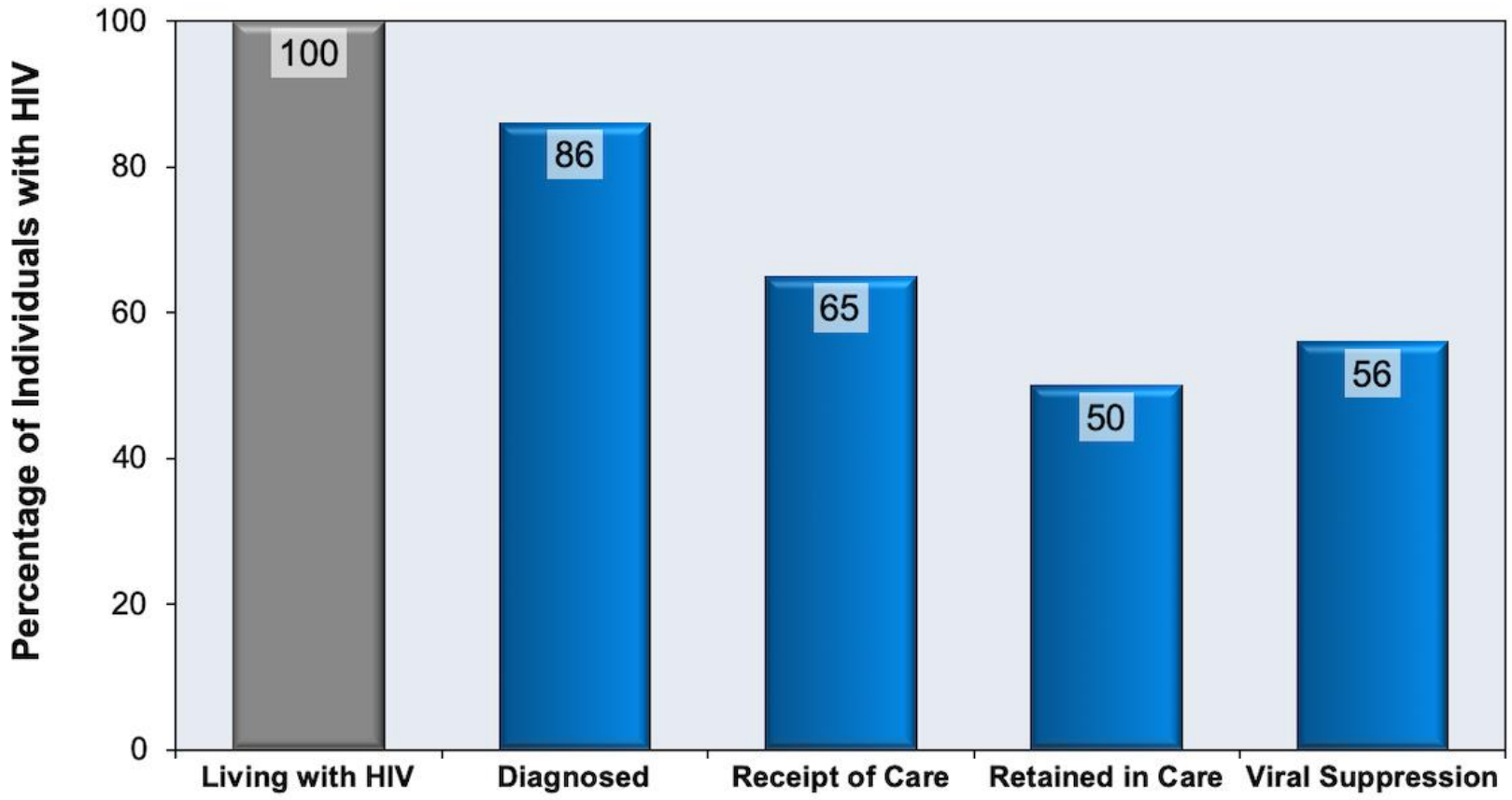
‘James’ is a 24-year-old male who is picking up a prescription for Azithromycin (*Zithromax®*) 1,000 mg to be taken one time today and inquires about the accuracy over the counter/at home HIV test. What is the best response:

A. HIV screening should only be done at a medical office
B. The ‘At Home’ tests are about 50% sensitive and specific
C. The test should not be done if you think you might have recent infection (<2 weeks)
D. The ‘At Home’ tests are about 95% sensitive and specific

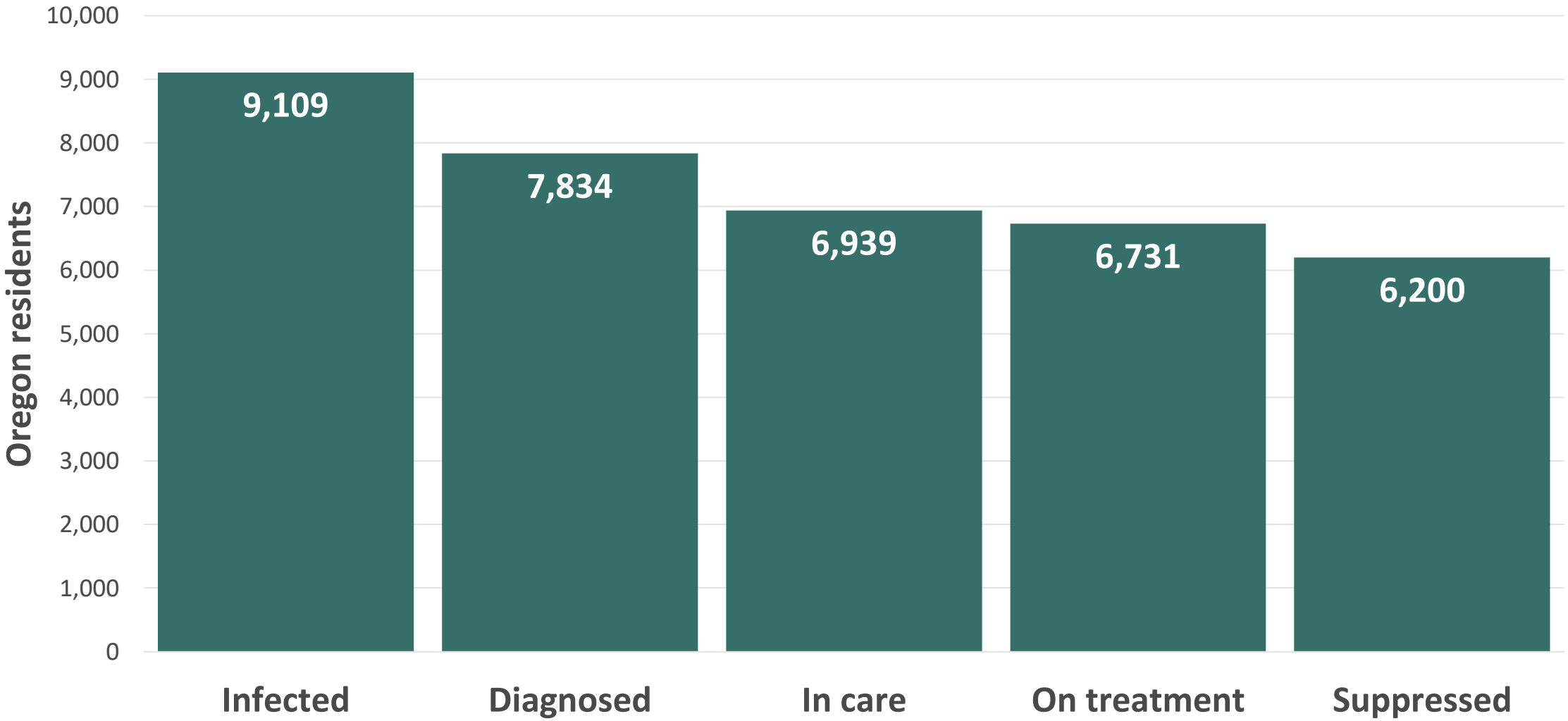
Continuum of HIV Care Engagement



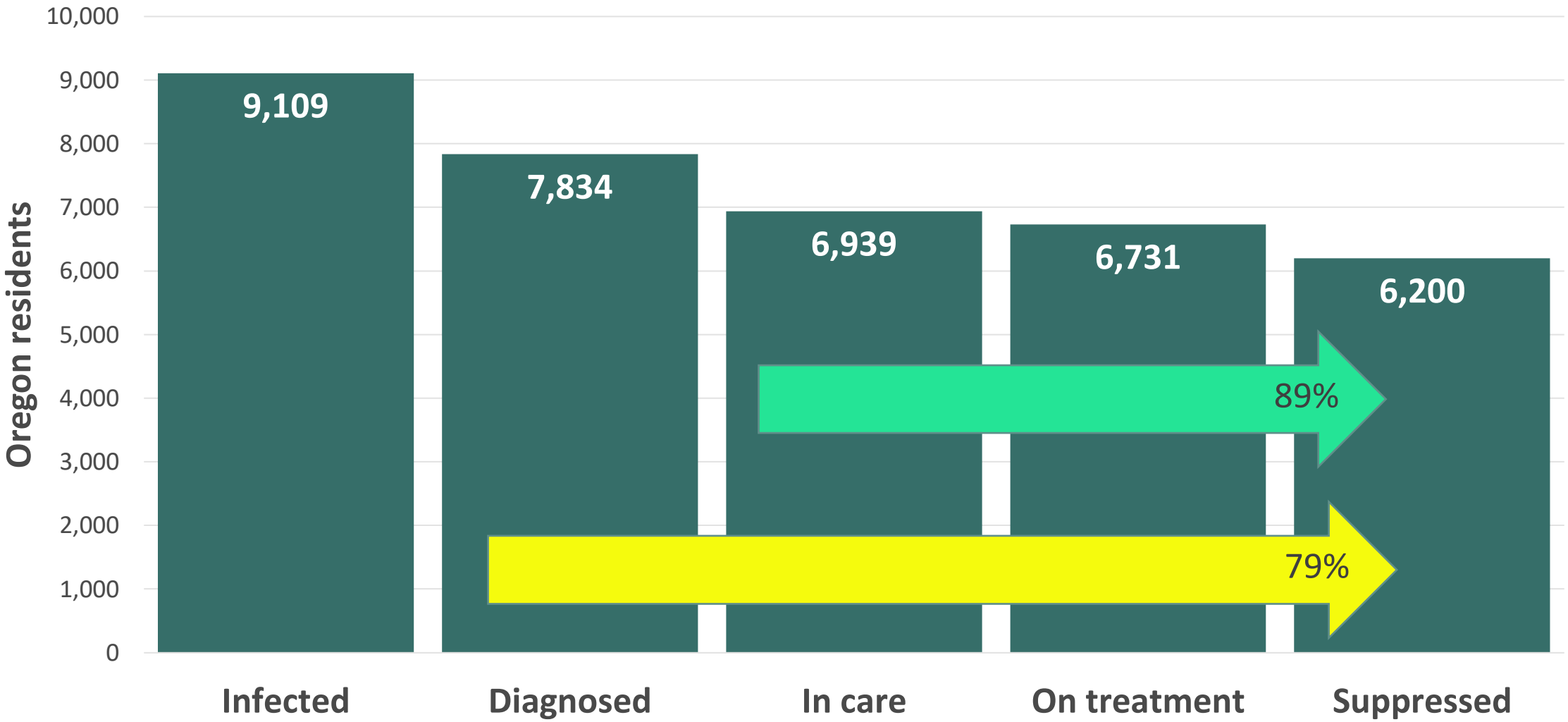
2018 Care Cascade



Oregon HIV care continuum, 2019



Oregon HIV care continuum, 2019



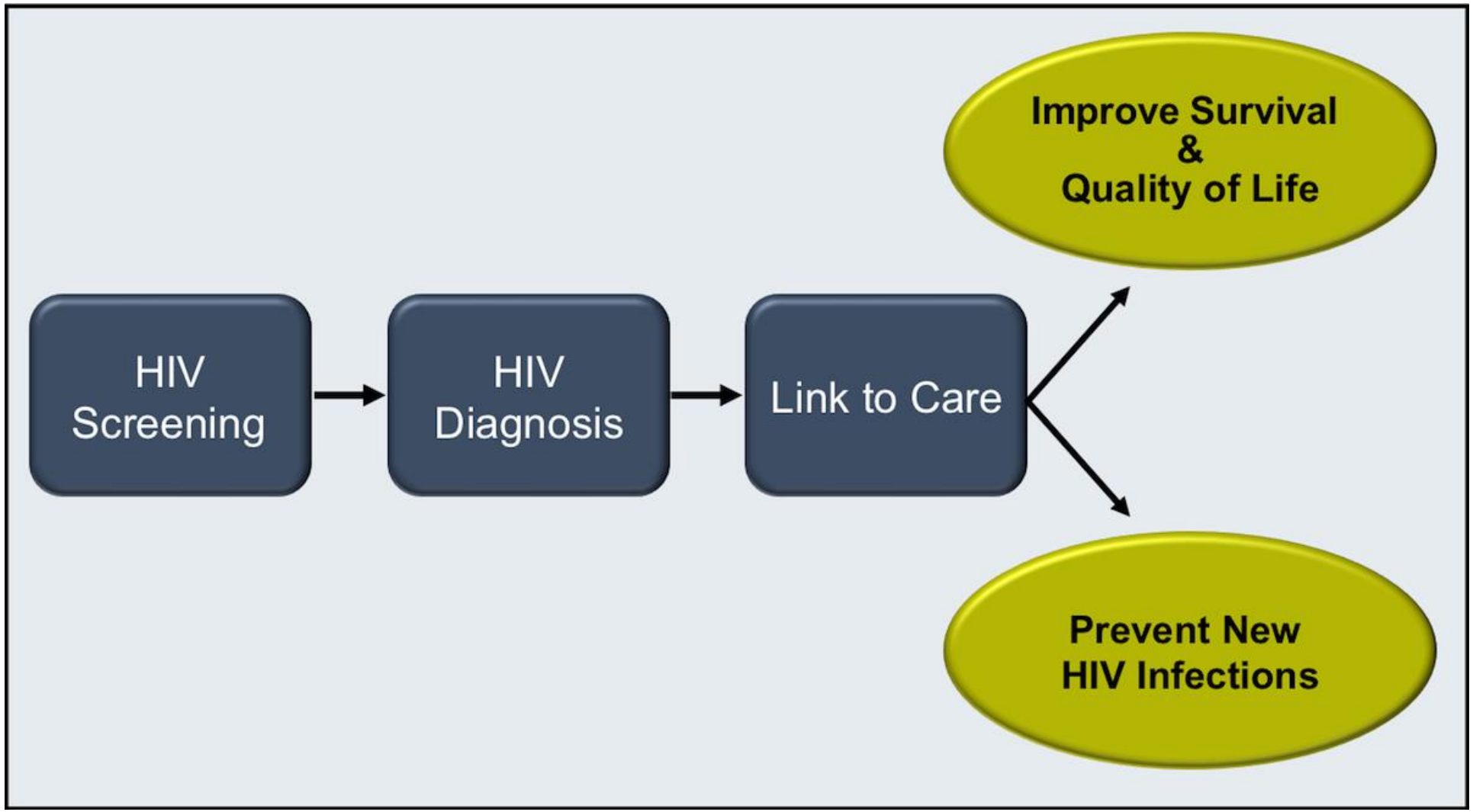
Screening Recommendations

CDC (2006) – Opt out

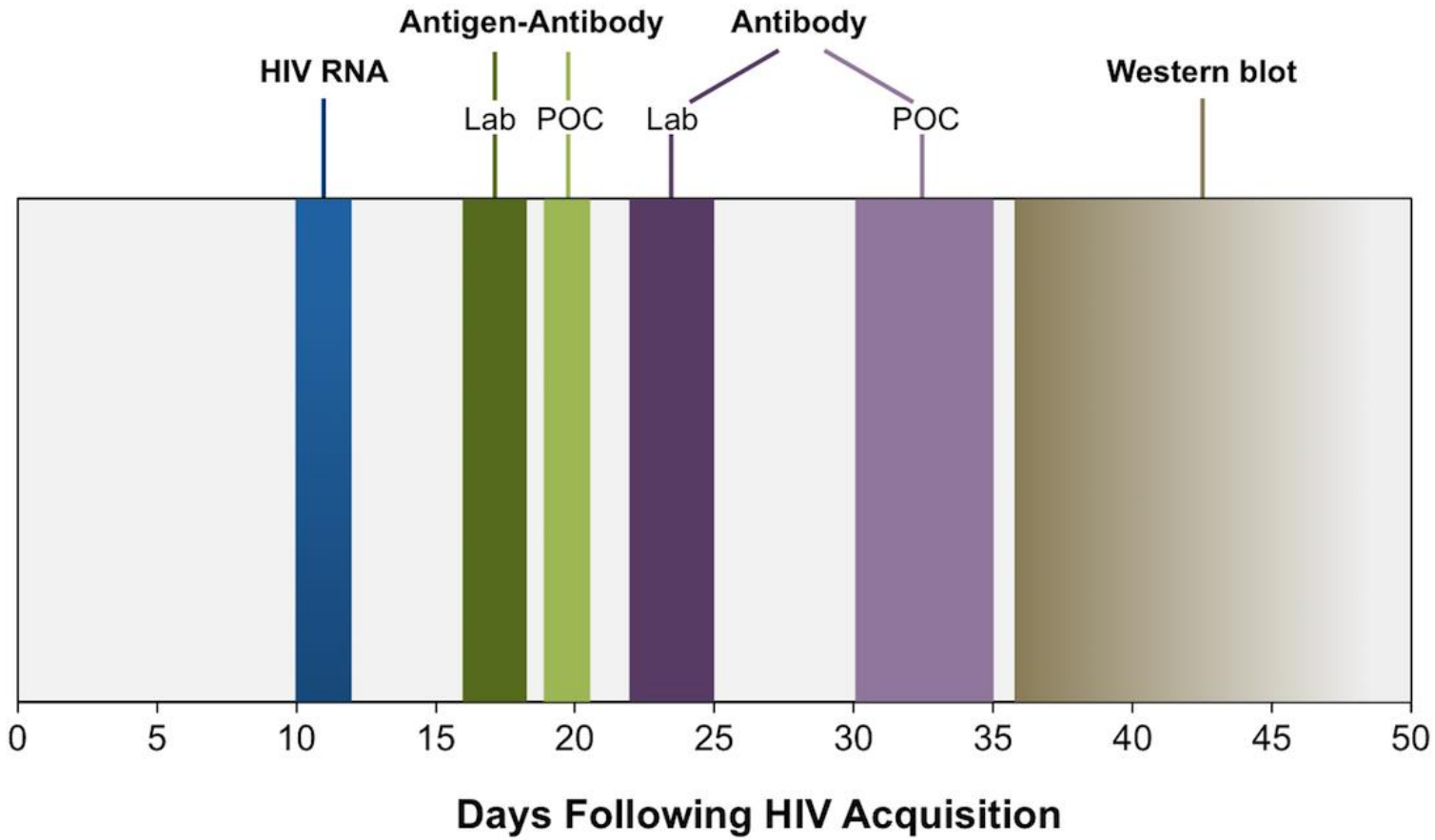
- "…perform routine HIV screening for all persons aged 13 to 64 in all health care settings in the United States"
- Repeat HIV testing should be performed at least once a year for persons considered at high risk for acquiring HIV
- Test in every pregnancy

USPSTF

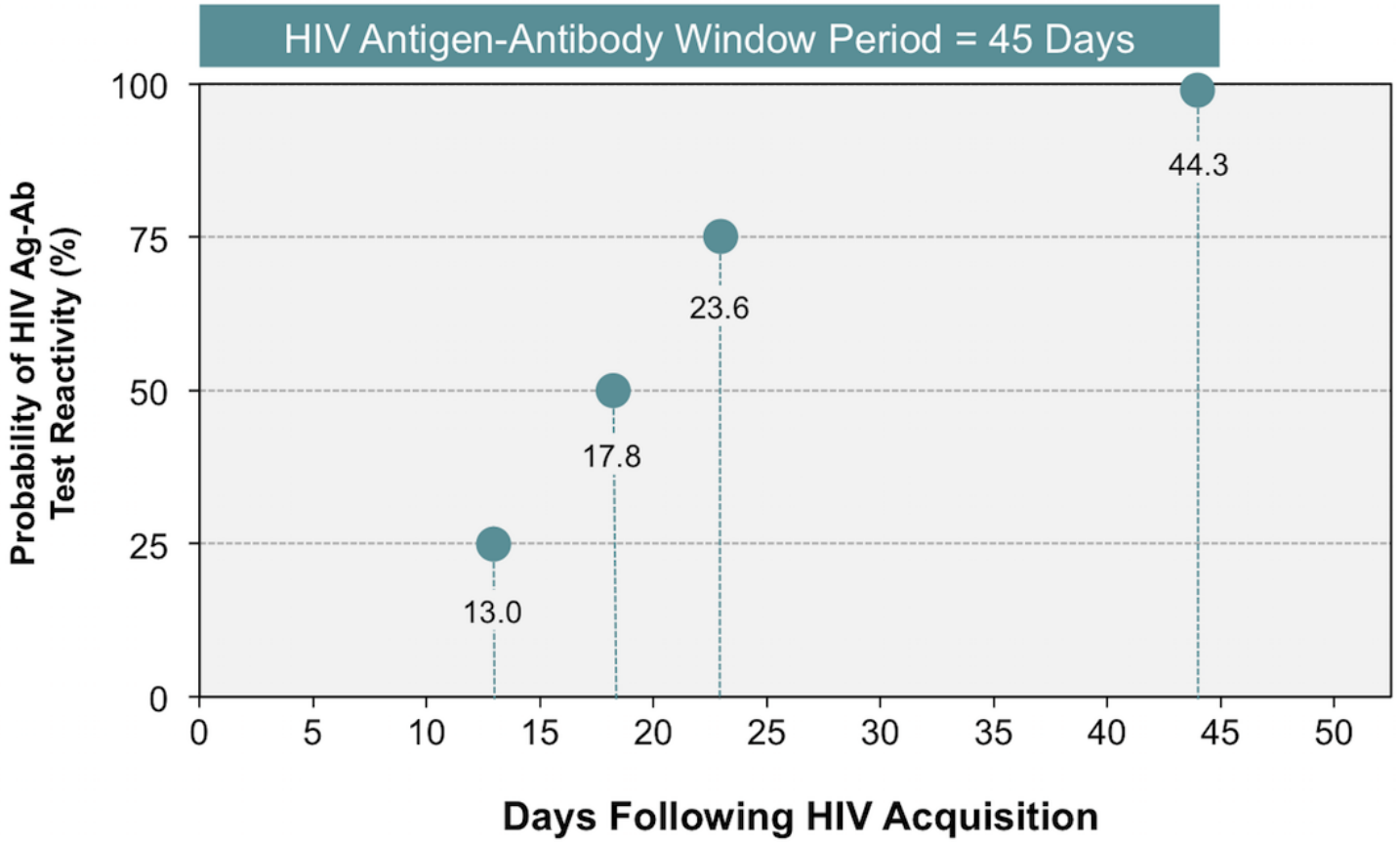
- "…routine HIV screening, specifically stating that clinicians should screen all adults aged 15 to 65 years for HIV infection (Grade A)
- Repeated screening for those known to be at risk for HIV, persons engaged in risky behaviors
- All women should be screened for HIV during pregnancy


Improve Survival
&
Quality of Life
HIV
Screening
HIV
Diagnosis
Link to Care
Prevent New
HIV Infections

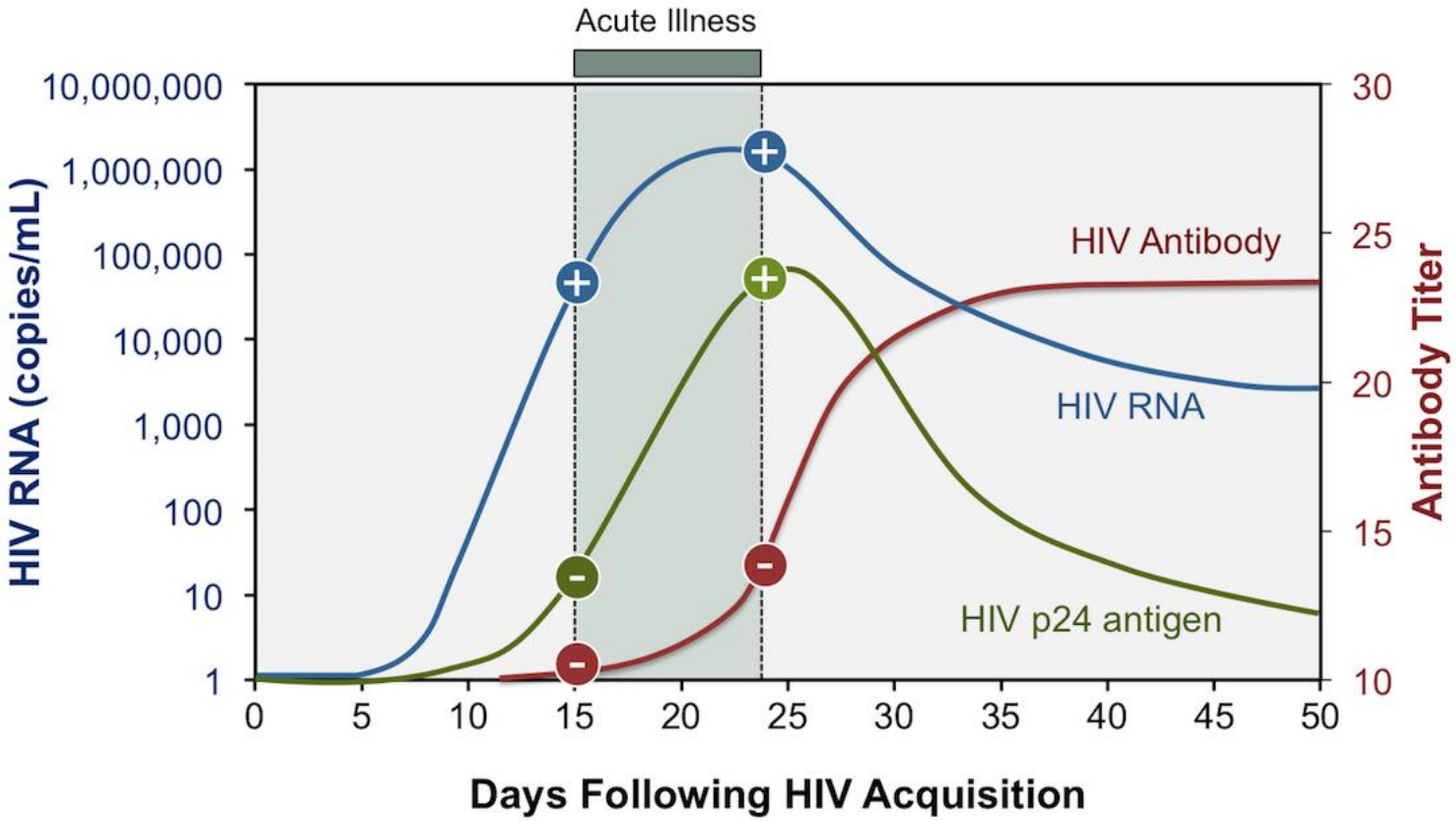
Comparison of Different Tests



Timing of HIV Test Becoming Positive



Timing of HIV Test Becoming Positive



Vaccines for PLWH

‘Steve’ is a 22-year-old newly diagnosed with HIV and presents to your pharmacy with a prescription for bictegravir/tenofovir/emtricitabine (*Biktarvy*®). His provider said he should start his pneumonia and hepatitis B series. Which would be most appropriate for ‘Steve’

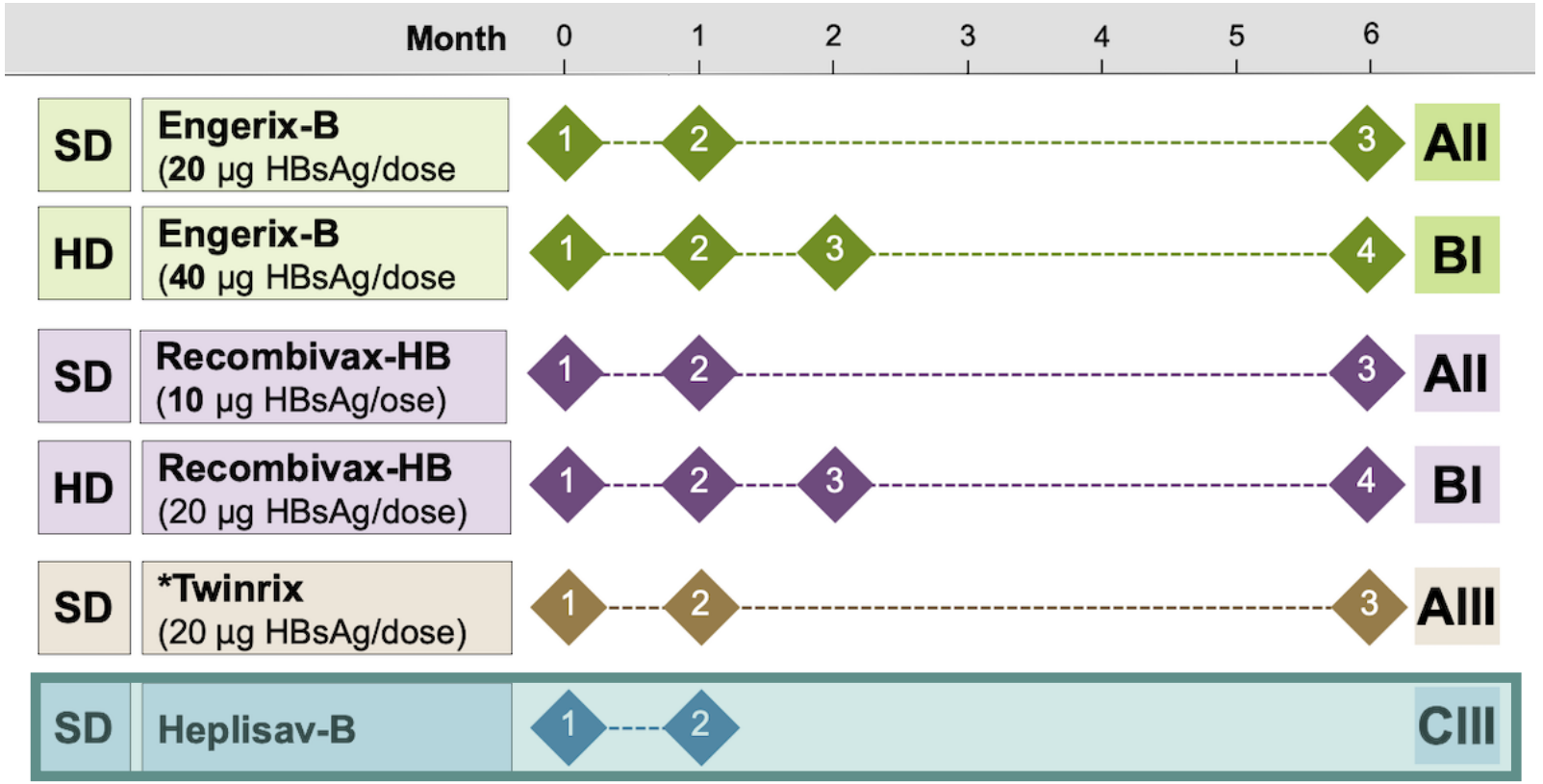
A. Pneumovax 23 + Engerix B
B. Pneumovax 23 + Heplisav B
C. Prevnar 13 + Heplisav B
D. Prevnar 13 + Engerix B

Table 2.
2021 ACIP Recommended Immunizations for Adults with HIV[†]

Vaccines	Abbreviations	CD4 count <200 cells/mm^3	CD4 count ≥200 cells/mm^3
Haemophilus influenza type b	Hib	Recommended with an additional risk factor or other indication 1 dose	
Hepatitis A	HepA	**Recommended** 2 or 3 doses depending on vaccine	
Hepatitis B	HepB	**Recommended** 2 or 3 doses depending on vaccine	
Human papillomavirus, female Human papillomavirus, male	9vHPV	**Recommended** 3 doses through age 26 years (0, 1-2, and 6 months)	
Influenza inactivated, or Influenza recombinant	IIV RIV4	**Recommended** 1 dose annually	
Influenza live, attenuated	LAIV4	**NOT RECOMMENDED**	
Measles-mumps-rubella	MMR	**NOT RECOMMENDED**	[&]**Recommended** 2 doses (at least 4 weeks apart)
Meningococcal serogroups A, C, W, Y	MenACWY-D MenACWY-CRM MenACWY-TT	**Recommended** 2 doses (at least 8 weeks apart), then revaccinate every 5 years	
Meningococcal serogroup B	MenB-4C MenB-FHbp	Recommended with an additional risk factor or other indication 2 or 3 doses	
Pneumococcal 13-valent conjugate	PCV13	**Recommended*** 1 dose	
Pneumococcal 23-valent polysaccharide	PPSV23	**Recommended*** 2 doses before age 65 years and 1 dose after age 65 years	
Tetanus-diphtheria-acellular pertussis Tetanus-diphtheria	Tdap Td	**Recommended** 1 dose Tdap then Td or Tdap booster every 10 years	
Varicella	VAR	**NOT RECOMMENDED**	**Recommended** 2 doses (3 months apart)
Zoster, recombinant (preferred)	RZV	**No recommendation/Not applicable** 2 doses at age 50 and older (2-6 months apart)	

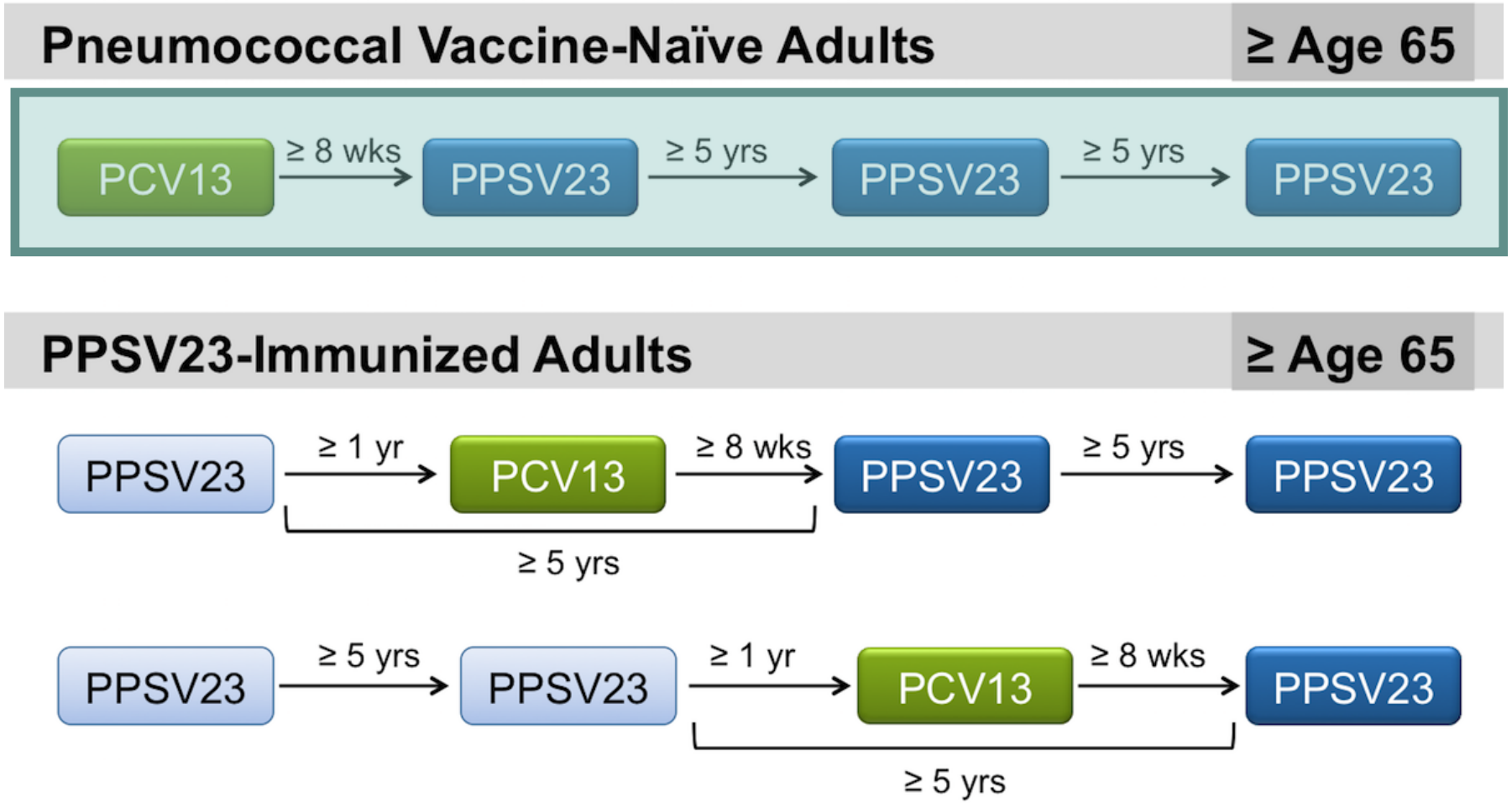
[†] This table is based on the 2021 ACIP Recommended Adult Immunization Schedule by Medical Condition and Other Indications, United States.
[&] Recommended if CD4 count greater than 200 cells/mm^3 for at least 6 months with no evidence of immunity to measles, mumps, or rubella
* The dosing of PCV13 and PPSV23 depend on whether the person has previously received any doses of PPSV23 and whether the individual is younger than age 65 years.

Hepatitis B Vaccines



SD = standard dose
HD = high dose

Pneumococcal Vaccines



Comorbid Disease Reduction

'Jane' is a 45-year-old female living with HIVand taking bictegravir/tenofovir/emtricitabine (*Biktarvy*®). She smokes, has hypertension (on lisinopril BP 135/85), high cholesterol, and a 10-year cardiovascular risk score of about 6%. Which of the following do you feel would have the greatest impact on reducing her risk of a heart attack or stroke?

A. Stop smoking
B. Better control of hypertension
C. Start a statin
D. Start aspirin

Primary Care

- PLWH have near normal life expectancies
- As people are living longer, higher rates of other conditions are occurring
- HIV can be managed, for the most part, like other chronic conditions
- PLWH are dying from
  - Heart disease
  - Lung disease
  - Cancers
- Certain challenges for PLWH and comorbid conditions:
  - Drug interactions
  - Polypharmacy

Clinical Infectious Diseases

MAJOR ARTICLE

Primary Care Guidance for Persons With Human Immunodeficiency Virus: 2020 Update by the HIV Medicine Association of the Infectious Diseases Society of America

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Advances in antiretroviral therapy (ART) have made it possible for persons with human immunodeficiency virus (HIV) to live a near expected life span, without progressing to AIDS or transmitting HIV to sexual partners or infants. There is, therefore, increasing emphasis on maintaining health throughout the life span. To receive optimal medical care and achieve desired outcomes, persons with HIV must be consistently engaged in care and able to access uninterrupted treatment, including ART. Comprehensive evidence-based HIV primary care guidance is, therefore, more important than ever. Creating a patient-centered, stigma-free care environment is essential for care engagement. Barriers to care must be decreased at the societal, health system, clinic, and individual levels. As the population ages and noncommunicable diseases arise, providing comprehensive healthcare for persons with HIV becomes increasingly complex, including management of multiple comorbidities and the associated challenges of polypharmacy, while not neglecting HIV-related health concerns. Clinicians must address issues specific to persons of childbearing potential, including care during preconception and pregnancy, and to children, adolescents, and transgender and gender-diverse individuals. This guidance from an expert panel of the HIV Medicine Association of the Infectious Diseases Society of America updates previous 2013 primary care guidelines.

Keywords. HIV primary care; HIV care engagement; HIV monitoring; HIV comorbidities; sexually transmitted infections.

Although substantial inequities exist by region and population, with continuous engagement in high-quality human immunodeficiency virus (HIV) care and uninterrupted access to antiretroviral therapy (ART), people with HIV now have the possibility of an expected life span that approaches that of persons not living with HIV, free of opportunistic diseases and without horizontal transmission to partners or vertical transmission to infants [1–4]. Ending the HIV epidemic, however, has proven challenging in the United States, with only 59.8% of those aware of their HIV diagnosis achieving viral suppression, and even lower rates among African-Americans, Hispanic/Latinos, transgender women, persons aged 13–24 years, persons who inject drugs (PWID), and those who live in the South [5]. Identifying and overcoming barriers to care engagement and continuous ART, therefore, must be an overarching priority of HIV primary care. Ensuring stigma-free, culturally appropriate, and patient-centered care experiences is essential to maximize care engagement, treatment adherence, and viral suppression. While ART has become more potent, less toxic, and simpler, other aspects of HIV care have become increasingly complex as people with HIV live longer and experience increased comorbidities across the life span, requiring additional attention to issues associated with aging with HIV [6–10]. Recommendations that are affected by age are noted throughout this guidance. Noncommunicable diseases, including metabolic complications, require guidance for prevention and management, particularly as the population ages. Persons of childbearing potential, children, adolescents, and transgender and gender-diverse individuals experience unique clinical challenges. As ever-increasing numbers of people are living with HIV and require both HIV-specific and primary medical care, the need for updated recommendations necessitated this update to the 2013 HIV Primary Care Guidelines from the HIV Medicine Association (HIVMA) of the Infectious Diseases Society of America (IDSA) [11]. "People First" language that places the person before the disease is used in this document to acknowledge the dignity of people with HIV, and gender-neutral language is used, where appropriate [12].

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[a]Co-chaired the HIV Primary Care Guidance Panel.

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Food for thought

- Cardiovascular disease
  - Blood pressure and cholesterol
  - When to use an aspirin
- Diabetes
  - Metformin interactions
- CKD
- Osteoporosis
- Tobacco use and lung disease

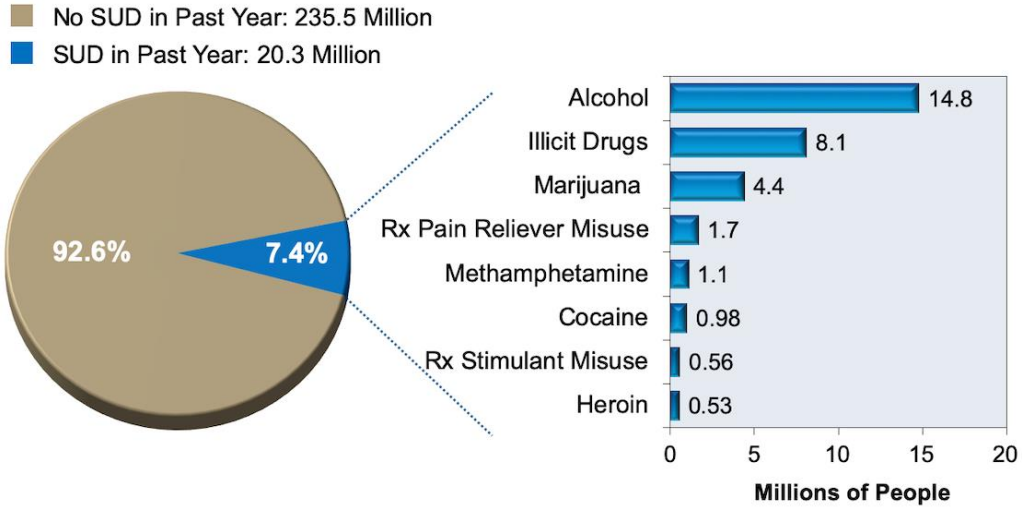
Mitigating Transmission

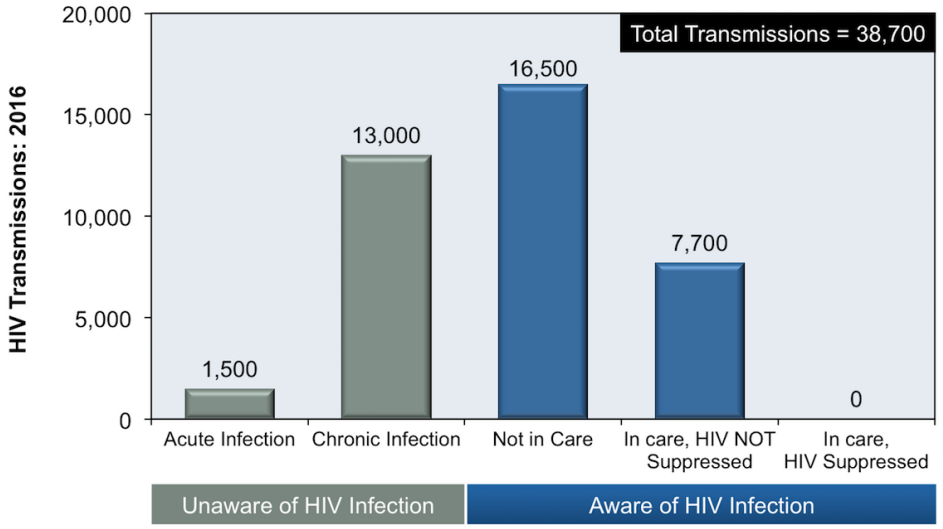
'Trevor' is a 42-year-old male with HIV who is known to inject methamphetamine 4-5 times per month and have several new sexual partners. He takes Dolutegravir (*Tivicay®*) + tenofovir/emtricitabine (*Descovy®*) and his refill history is off about 7 days every month (his viral load is regularly undetectable). What do you feel would be the best approach to reducing transmission of HIV?

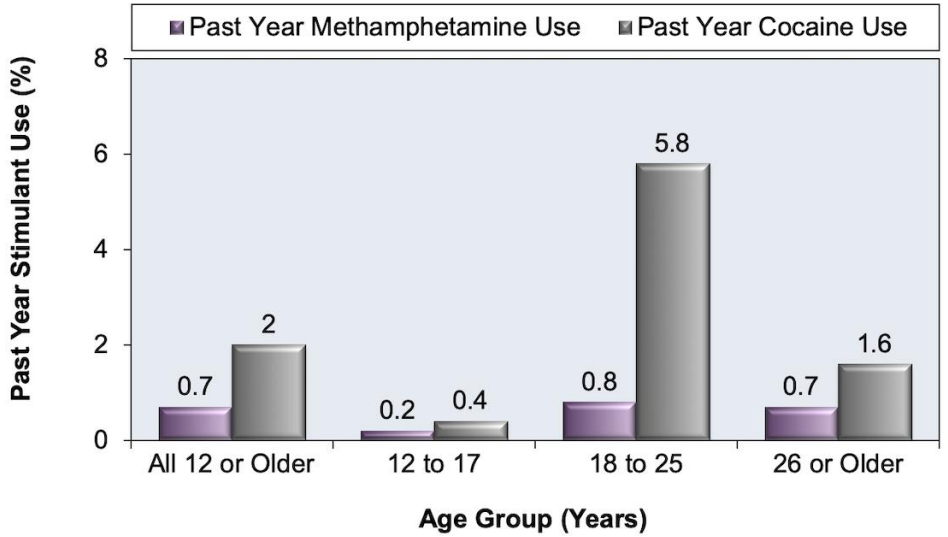
A. 100% condom use for him and his partners
B. Getting his partners on PrEP
C. Ensuring he has access to clean needles
D. Getting better adherence to maintain suppression

Contributing Factors

- Social determinants of health
- Substance use disorder
- Adherence
  - Levels of adherence that correlate with suppression
- Sexual prevention
  - PrEP and condom use

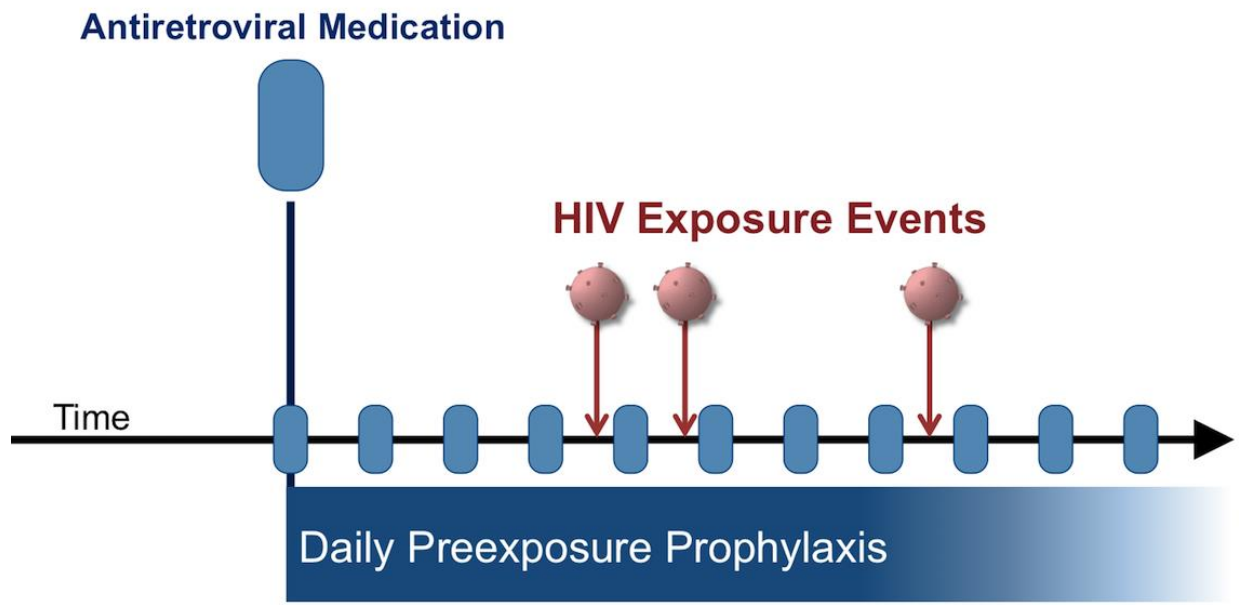






U = U

Undetectable means Untransmittable

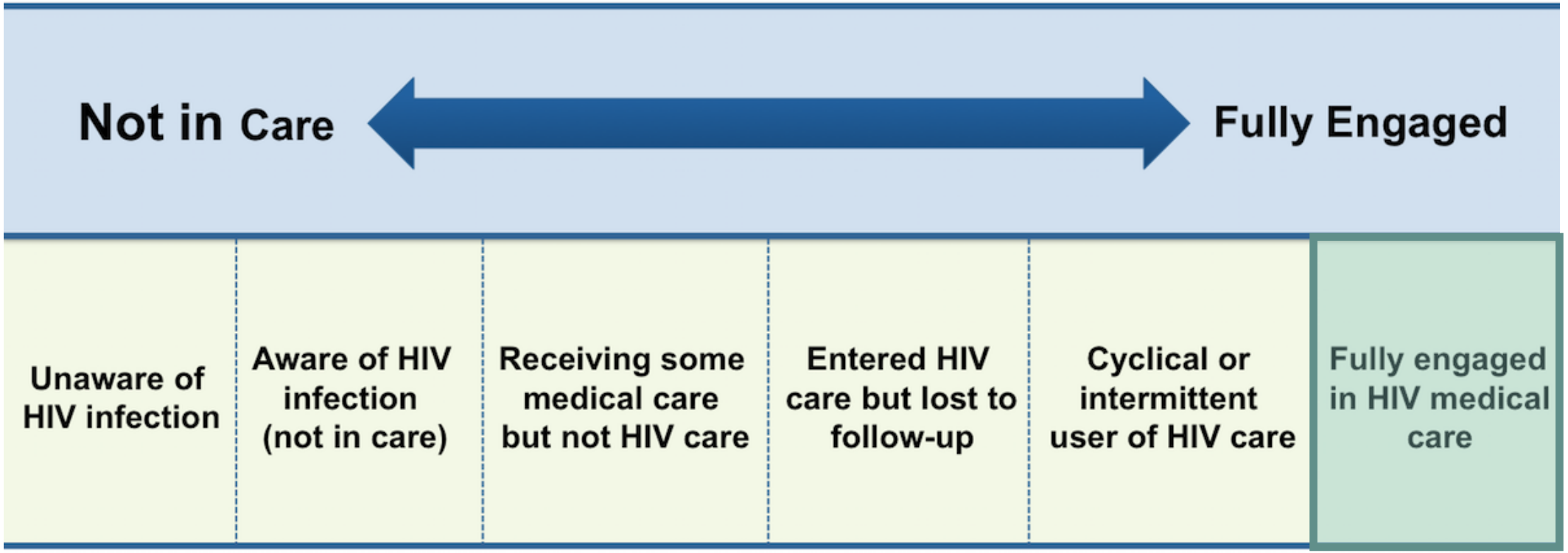


Engagement and Retention

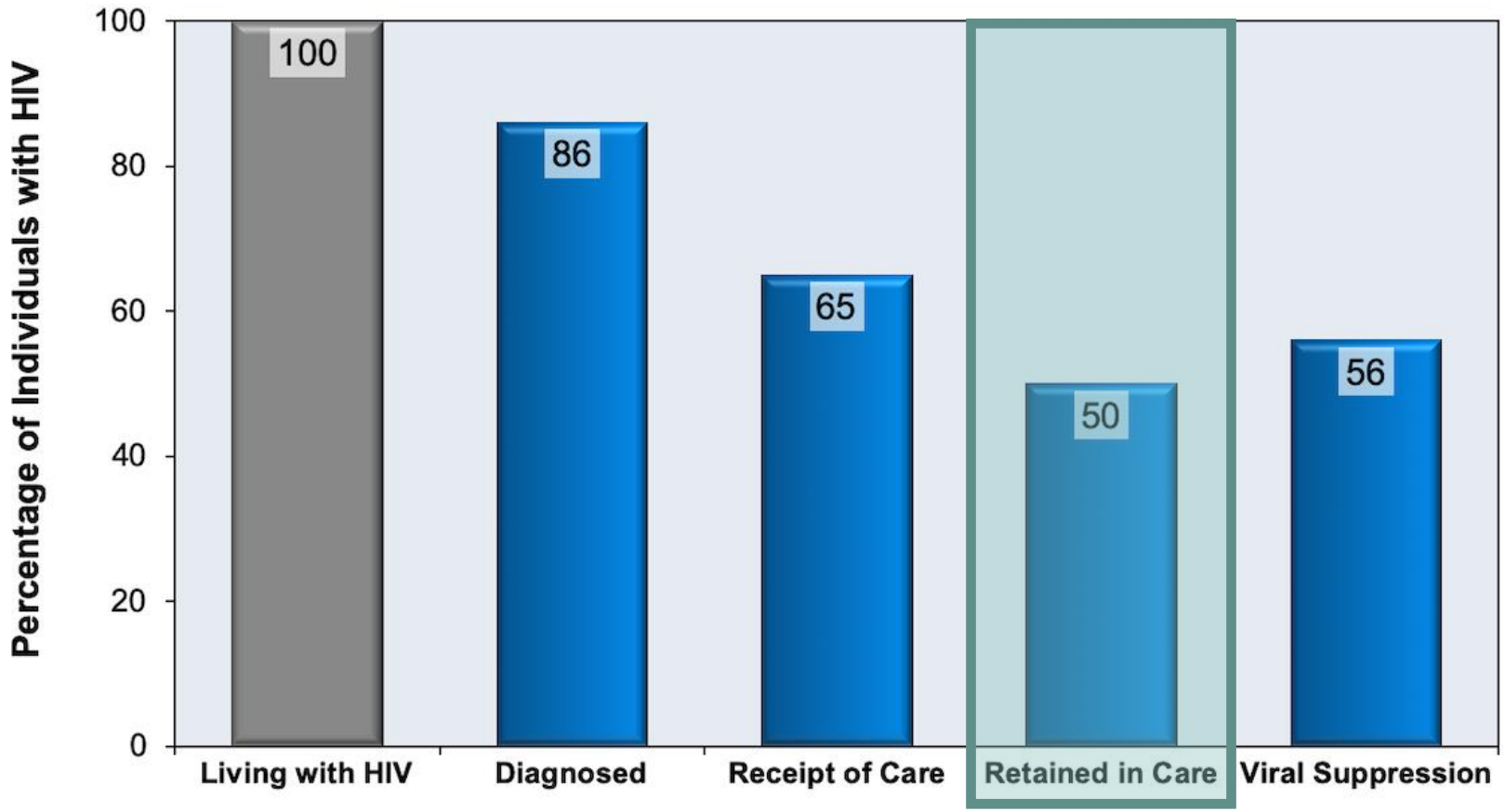
'Trevor' is a 42-year-old male with HIV who is known to inject methamphetamine 4-5 times per month and have several new sexual partners. He takes Dolutegravir (*Tivicay®*) + tenofovir/emtricitabine (*Descovy®*) and his refill history is off about 7 days every month (his viral load is regularly undetectable). This has worsened to where you are needing to reverse the claims after 10-14 days and put the drug back on the shelf. What is the best approach to his non-adherence?

A. Have intense counseling sessions when he picks it up
B. Call his medical provider to have them help
C. Suggest he engage in substance abuse treatment
D. Suggest he use a long-acting injectable OR simply stop his therapy all together

Continuum of HIV Care Engagement

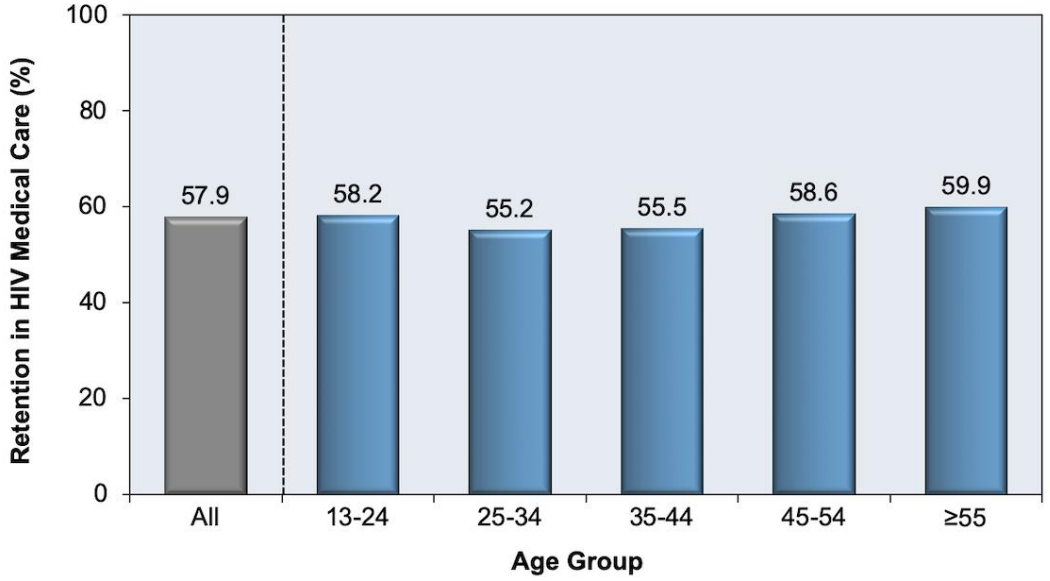


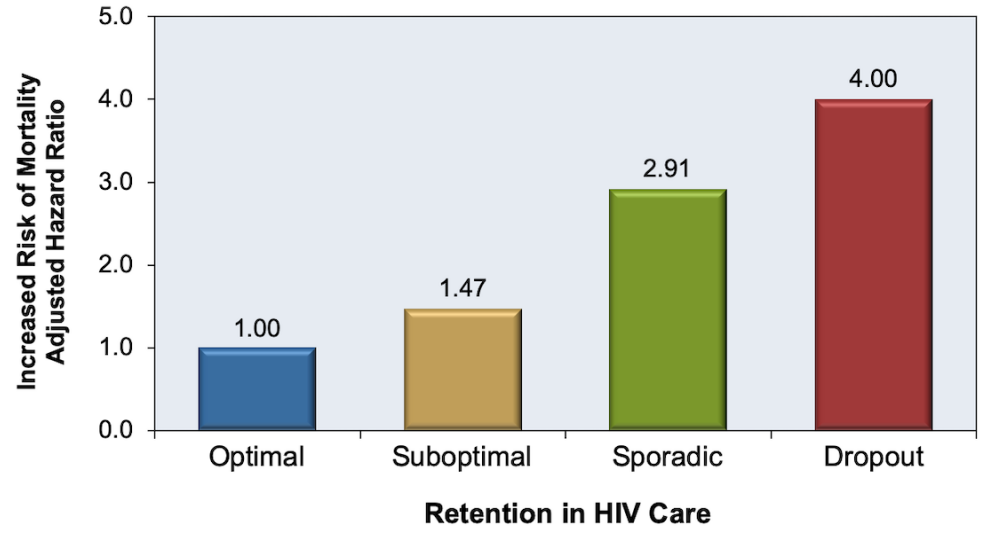
2018 Care Cascade



Strategies to Increase Retention

- Case management
- Clinic level monitoring
- Partnerships
  - Public Health Departments
  - Pharmacies
- Regular labs / office visits
- Peer navigation
- Mental health treatment
- Substance abuse treatment





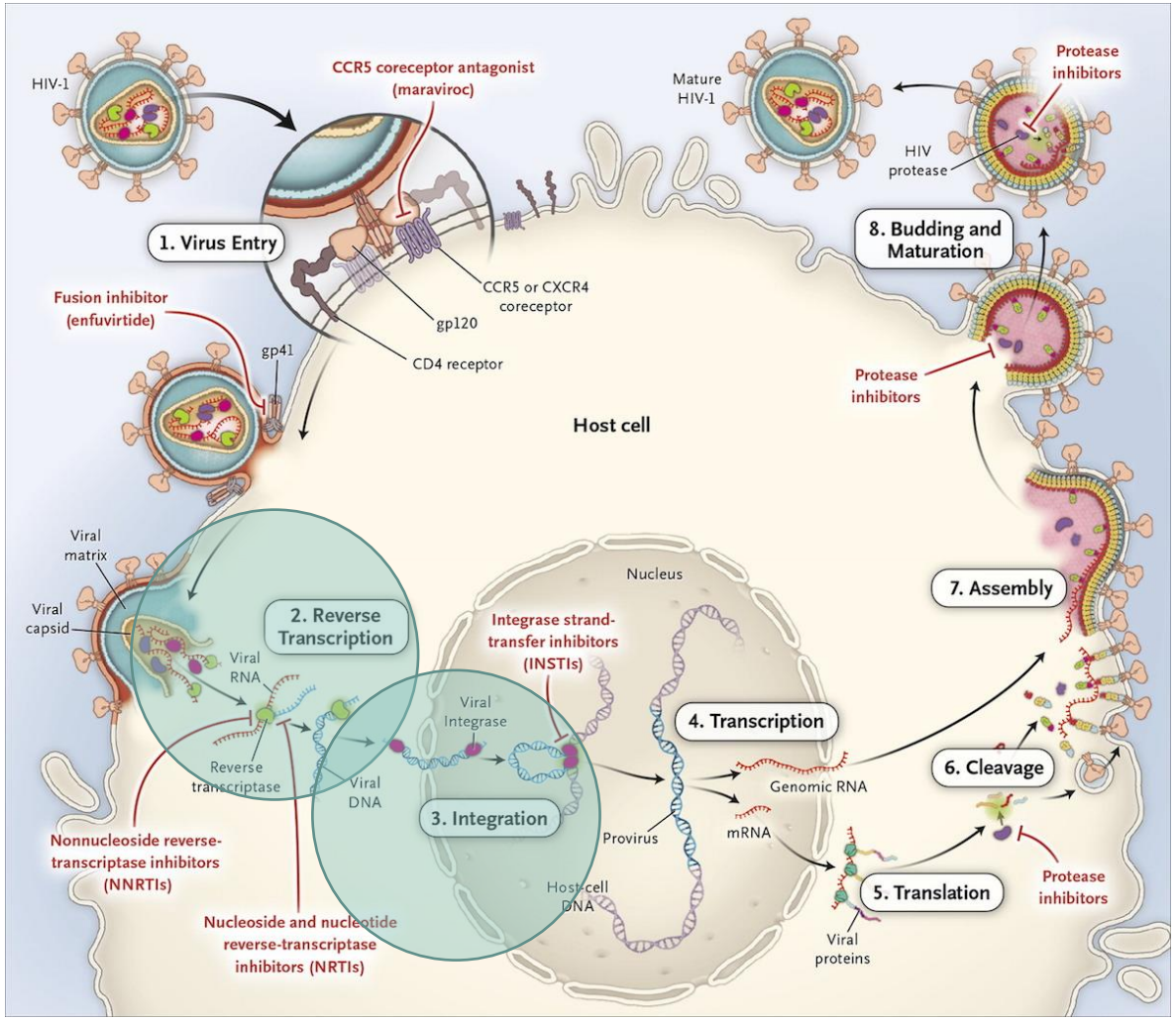
ART Regimens

'Debbie' is a 56-year-old female who presents with a prescription for Dolutegravir (*Tivicay®*) 50 mg once daily from a provider in your area that doesn't generally prescribe ART. Which of the following would you do with the prescription?

A. Fill it and dispense it
B. Call the provider to clarify if she should be on additional meds
C. Call the patient to clarify if she has other meds to take along with it
D. Something else

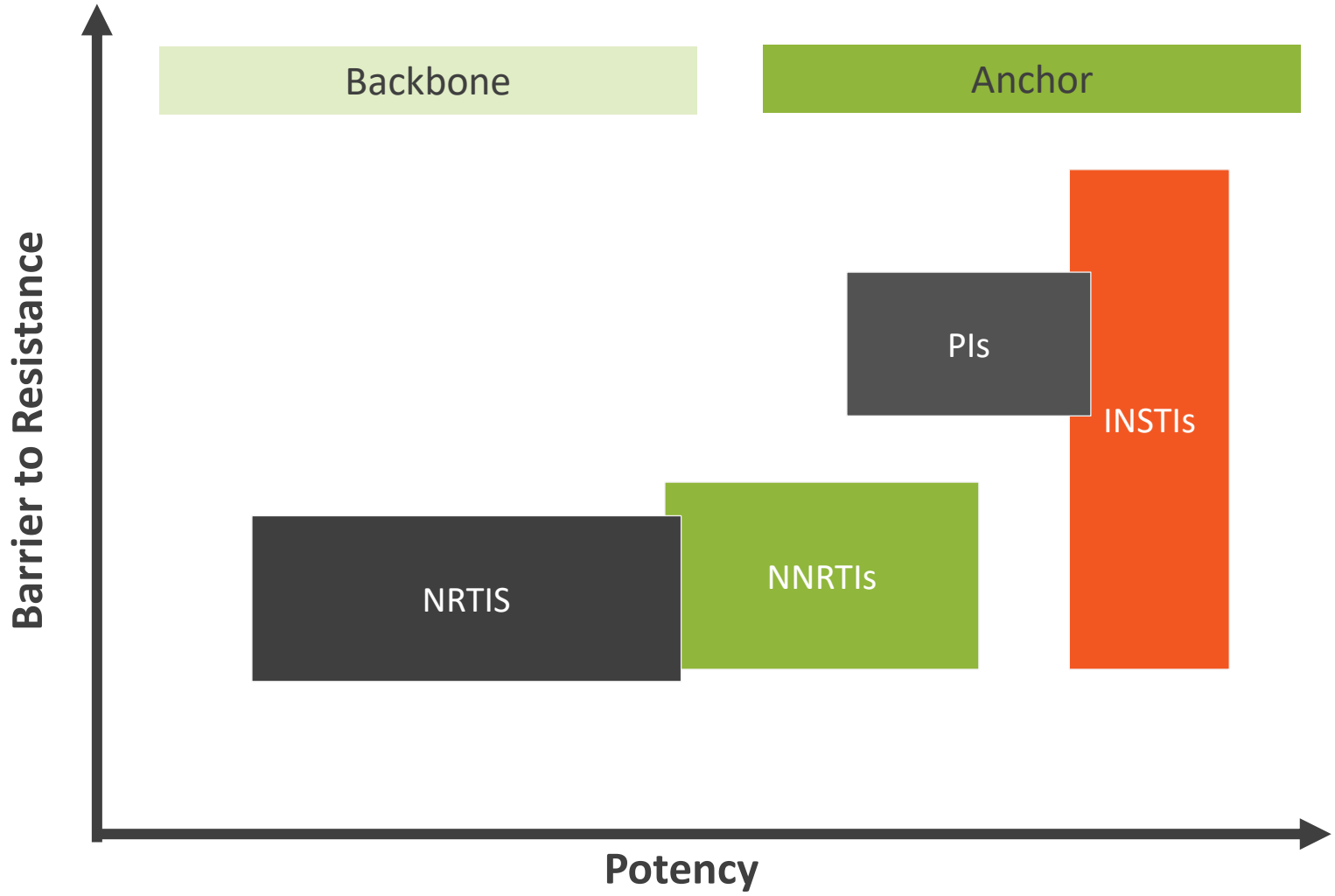
Sites of Drug Action

- Choosing a Backbone
  - Dual NRTI
- Choosing an Anchor drug
  - Integrase
  - Protease inhibitor
  - Non-nucleoside reverse transcriptase inhibitor



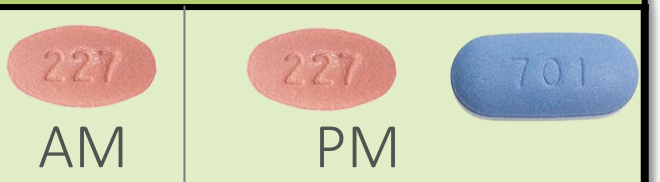
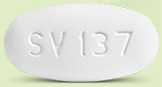
Source: Gandhi M, Gandhi RT. Single-pill combination regimens for treatment of HIV-1 infection. N Engl J Med. 2014;371:248-59.

Potency and Genetic Barrier to Resistance



Modified from: Tang MW, Shafer RW. Drugs. 2012:72:e1-e25.

Recommended Initial Regimens for Most PLWH

Therapy	Pill Burden
Raltegravir + **Tenofovir**-Emtricitabine	
Dolutegravir-Abacavir-Lamivudine	
Dolutegravir-Lamivudine	
Dolutegravir + **Tenofovir**-Emtricitabine	
Bictegravir-**Tenofovir** AF-Emtricitabine	

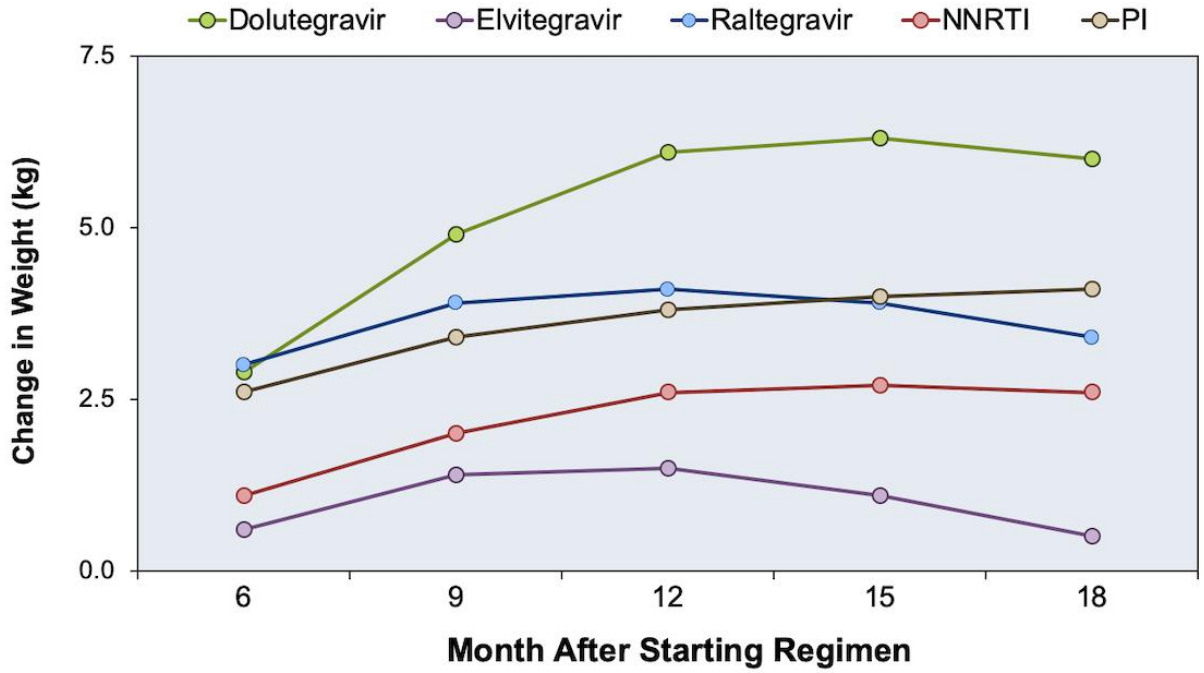
Side Effect Management

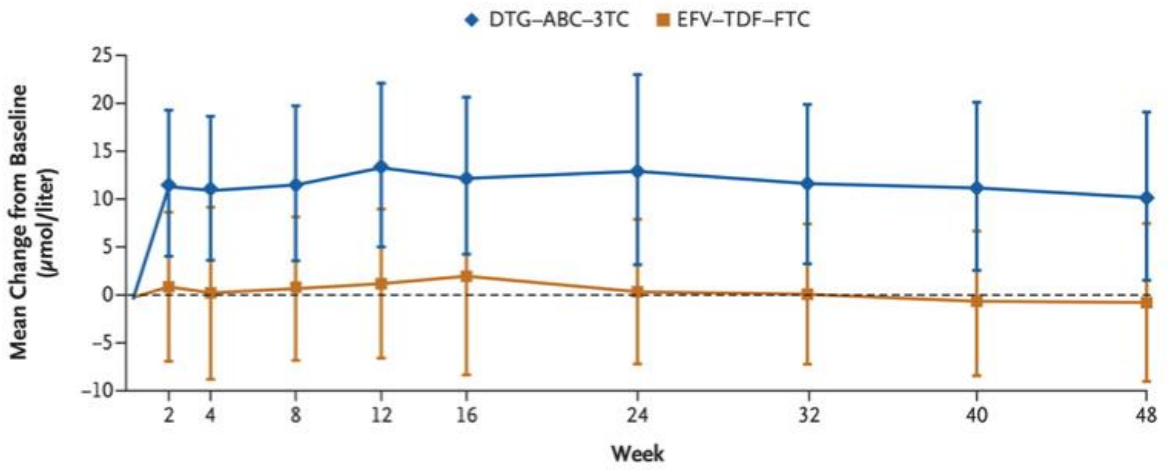
‘Debbie’ is a 56-year-old female who had tenofovir/emtricitabine (*Descovy®*) added to her dolutegravir (*Tivicay®*). When she return in a month to pick the medication up, she states she is having a hard time sleeping. What would you suggest she do?

A. Split the tablets and take only half
B. Take them at bedtime
C. Take them in the morning
D. Ask her provider for a medication for the side effect

Side Effects

- **Dosing**
  - All regimens can be taken with or without food, irrespective of time of day
  - Consider taking with food if patients are on MVI, or dosing in the morning if insomnia
- **Side effects**
  - Weight gain
  - Insomnia / depression
  - Renal effects
  - Rash
  - Gastrointestinal





Affordability

‘Debbie’ recently switched jobs and you process her prescriptions. Her copy comes back at $500 / prescription for a total of $1,000, which she can’t afford. What suggestion would you give ‘Debbie’?

A. Switch to Biktarvy® which might only have 1 copay instead of 2

B. Only fill the Tivicay® (dolutegravir)

C. Apply for a copay assistance card to reduce the costs

D. Contact someone from the state’s AIDS Drug Assistance Program (ADAP)

Cost

- All combinations are approximately $3,000 / month
- Copay cards
- State AIDS drug assistance programs can help
- Understanding deductibles and plan options
- DO NOT:
  - Have patients take medication every other day or split tablets

Summary

- Highlight challenges in screening and diagnosis
- Develop a vaccine regimen appropriate for a person living with HIV (PLWH)
- Recommend appropriate risk reduction strategies for various chronic comorbid conditions
- Define several risk reduction strategies to mitigate spread of HIV
- Highlight different roles community pharmacies play in helping keep patients retained in care
- Identify a complete antiretroviral treatment regimen (ART)
- Select methods to best manage side effects of ART
- Review common insurance barriers and resolutions

Let’s end HIV in Oregon.

We can make it happen.

The time is now.