

Pan-Viral Screening for HBV, HCV, and HIV in Diverse Practice Settings

This program has been supported by an independent educational grant from Gilead Sciences, Inc.

CME
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INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, CME Outfitters LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Activity Credit Types



Physicians (ACCME)

This activity was planned by and for the healthcare team, and learners will receive 0.75 Interprofessional Continuing Education Credit for learning and change.

CME Outfitters LLC designates this enduring material for a maximum of 0.75 *AMA PRA Category 1 Credit(s)*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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This application-based activity is approved for 0.75 contact hours (0.075 CEUs) of continuing pharmacy credit (JA0007185-0000-25-034-L01-P).

Nurses (ANCC)

This activity is designated for 0.75 contact hours.

Note to Nurse Practitioners: The content of this CNE activity pertains to Pharmacology.

California residents: provider approved by the California Board of Registered Nursing, Provider # CEP15510, for 0.75 Contact Hours.

CME Outfitters LLC has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 0.75 AAPA Category 1 CME credits. Approval is valid until expiration date. PAs should only claim credit commensurate with the extent of their participation.



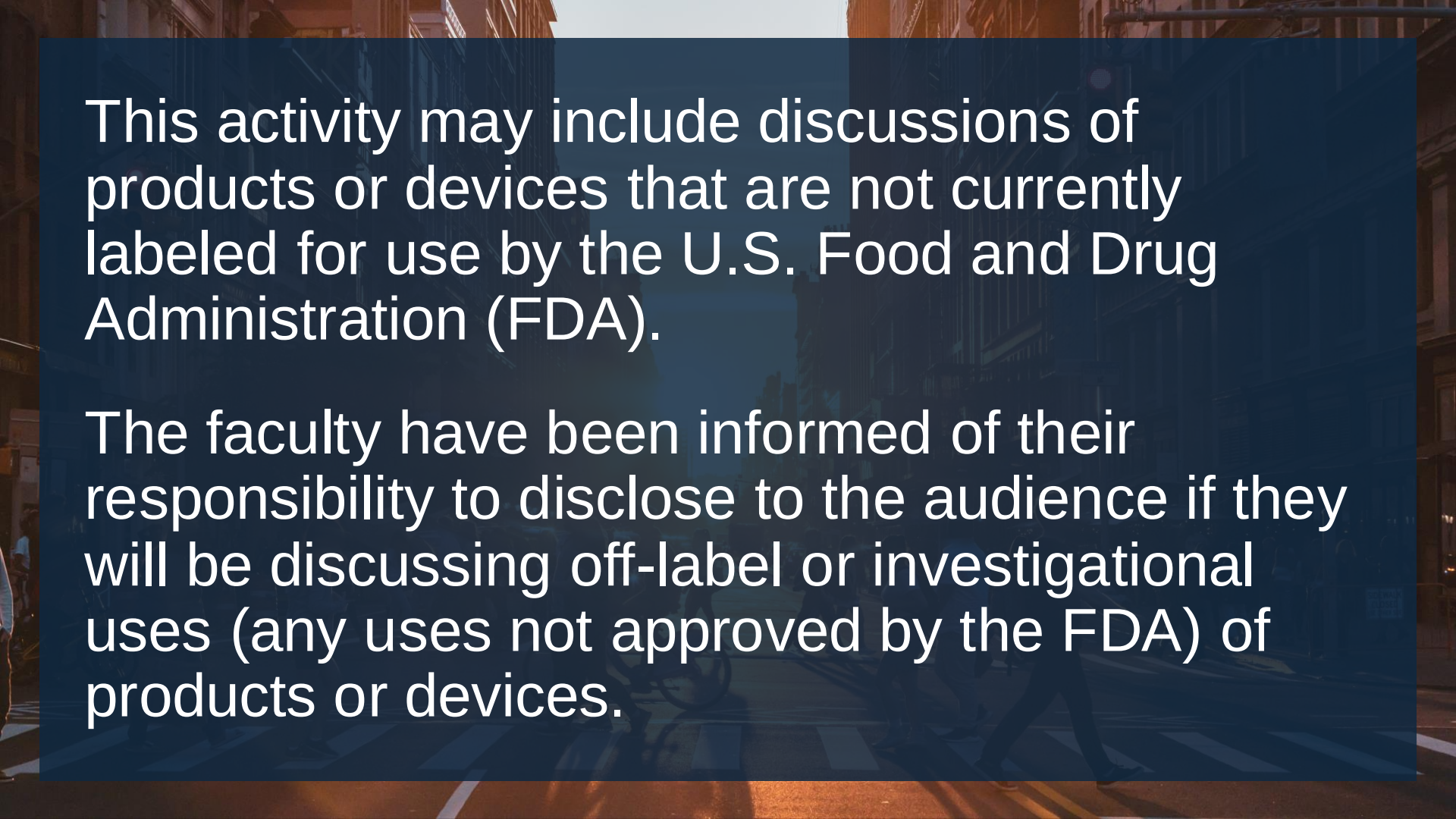
Through an agreement between the Accreditation Council for Continuing Medical Education and the Royal College of Physicians and Surgeons of Canada, medical practitioners participating in the Royal College MOC Program may record completion of accredited activities registered under the ACCME's "CME in Support of MOC" program in Section 3 of the Royal College's MOC Program.



Completion of this accredited CME activity meets the expectations of an Accredited Safety or Quality Improvement Program (IA_PSPA_28) for the Merit-based Incentive Payment Program (MIPS). Clinicians should submit their improvement activities by attestation via the CMS Quality Payment Program website.



Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 0.75 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

The background of the slide is a photograph of a city street at night, featuring tall buildings and streetlights. A semi-transparent blue rectangle is overlaid on the image, serving as a background for the text.

This activity may include discussions of products or devices that are not currently labeled for use by the U.S. Food and Drug Administration (FDA).

The faculty have been informed of their responsibility to disclose to the audience if they will be discussing off-label or investigational uses (any uses not approved by the FDA) of products or devices.



Juhi Moon, MD

Assistant Professor
Division of Infectious Diseases
Johns Hopkins University
Baltimore, Maryland



Christina M. Madison **PharmD, FCCP, AAHIVP**

Founder and CEO
The Public Health Pharmacist, PLLC

Disclosures

Faculty

Juhi Moon, MD, reports no financial relationships to disclose

Christina M. Madison, PharmD, FCCP, AAHIVP, reports the following financial relationships:

Advisory board—ViiV Healthcare, Sanofi, and GSK

Consultant—ViiV Healthcare, Sanofi, and GSK

Ownership interest (stock)—Pills2Me and Wellness Equity Alliance

Interviewed Faculty

Martina L. Badell, MD, reports no financial relationships to disclose

Lee Gilman, MSN, CRNP, reports no financial relationships to disclose

Joseph McCray, BSN, RN, reports no financial relationships to disclose

Interviewed Faculty/Planner

Asia Sullivan, PA-C, MPH, reports the following financial relationships:

Advisory board—Gilead Sciences Inc., and GSK

Other financial or material support (social media content)—Carbon Health, Cystex, FOLX, GSK, GoodRx, Johnson & Johnson, LabCorp, Pair Eyewear, and Wisp

The following individuals have no financial relationships to disclose:

Jeffrey Helfand, DO (peer reviewer)

Albert Eubanks, Jr., RN (peer reviewer)

Warren Beckman (planning committee)

Nichole Lainhart (planning committee)

Scott J. Hershman, MD, FACEHP, CHCP (planning committee)

Sandra Caballero, PharmD (planning committee)

Sharon Tordoff (planning committee)

All identified conflicts of interest have been mitigated.



Integrate a universal testing approach in clinical practice for hepatitis B virus (HBV), hepatitis C virus (HCV), and human immuno-deficiency virus (HIV) based on evidence-based CDC guidelines to address screening gaps

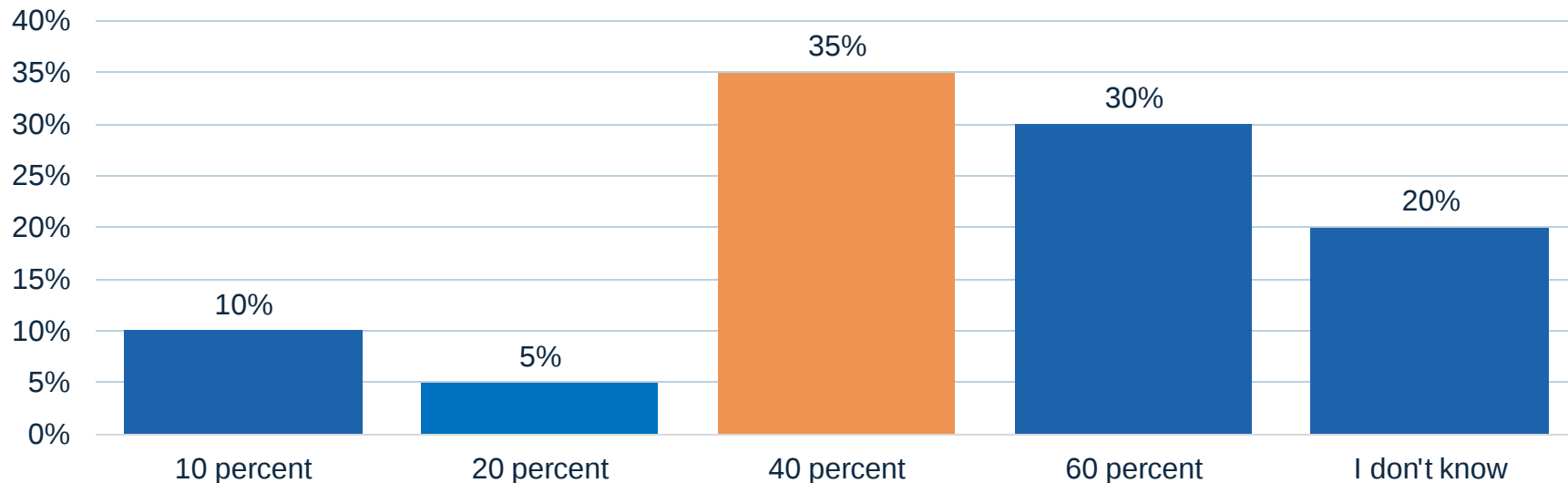


What percentage of new HIV cases result from individuals who are unaware of their status due to lack of screening?

- A. 10%
- B. 20%
- C. 40%
- D. 60%
- E. I don't know



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Results recorded on March 18, 2025.

Summary of Global HIV, HBV, HCV Epidemics

Characteristic	HIV	HBV	HCV
Epidemic size	39 million	296 million	58 million
New infections per year	1.3 million	1.5 million	1.5 million
Deaths per year	650,000	820,000	290,000
Percentage diagnosed	85.0%	10.5%	21.0%
Percentage treated	75.0%	2.2%	13.0%
Treatment	Tenofovir/emtricitabine + dolutegravir	Tenofovir	Sofosbuvir/daclatasvir
Cost of treatment (per person), U.S. \$	<\$50/year	\$28.80/year	\$60.00
Diagnostic test	Anti-HIV 1/2 antibodies	Hepatitis B surface antigen	Anti-HCV antibodies
Cost of diagnostic test, U.S. \$	\$1.00	\$0.70	\$0.78

HBV, hepatitis B virus; HCV, hepatitis C virus; HIV, human immunodeficiency virus.

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General population	11	0.09 (4.28)	0.22 (3.46)	0.60 (3.88)	0.87 (8.96)	0.05 (2.45)	2.44	6.55
Blood donors	43	0.33 (1.70)	1.13 (3.51)	0.53 (1.42)	1.95 (1.42)	0.54 (1.59)	3.45	1.61
Pregnant women	16	0.39 (3.17)	1.50 (4.02)	0.31 (1.71)	2.19 (6.14)	0.07 (1.30)	3.81	0.79
Healthcare attendees	34	0.18 (5.04)	7.21 (6.39)	1.14 (8.12)	8.52 (10.31)	0.21 (4.99)	40.37	6.38
Refugees/immigrants/ asylum seekers	35	0.17 (1.76)	1.19 (4.04)	0.47 (2.27)	1.80 (5.61)	0.48 (0.88)	7.03	2.75
Prisoners	15	1.03 (2.03)	1.27 (3.37)	5.69 (6.82)	7.78 (6.76)	0.62 (0.48)	1.23	5.53
Homeless individuals	4	3.38 (2.31)	1.80 (0.70)	21.75 (8.68)	26.93 (10.86)	NA	0.53	6.44
MSM	4	18.28 (30.45)	1.26 (2.56)	1.42 (2.15)	20.08 (32.03)	3.47	0.07	0.08
PWUD	13	20.47 (13.27)	9.87 (13.21)	52.79 (20.62)	60.56 (23.03)	24.83 (16.05)	0.48	2.58
Total	175	0.22 (7.71)	1.09 (5.80)	0.65 (14.64)	1.90 (16.82)	0.12 (10.44)	4.93	2.96

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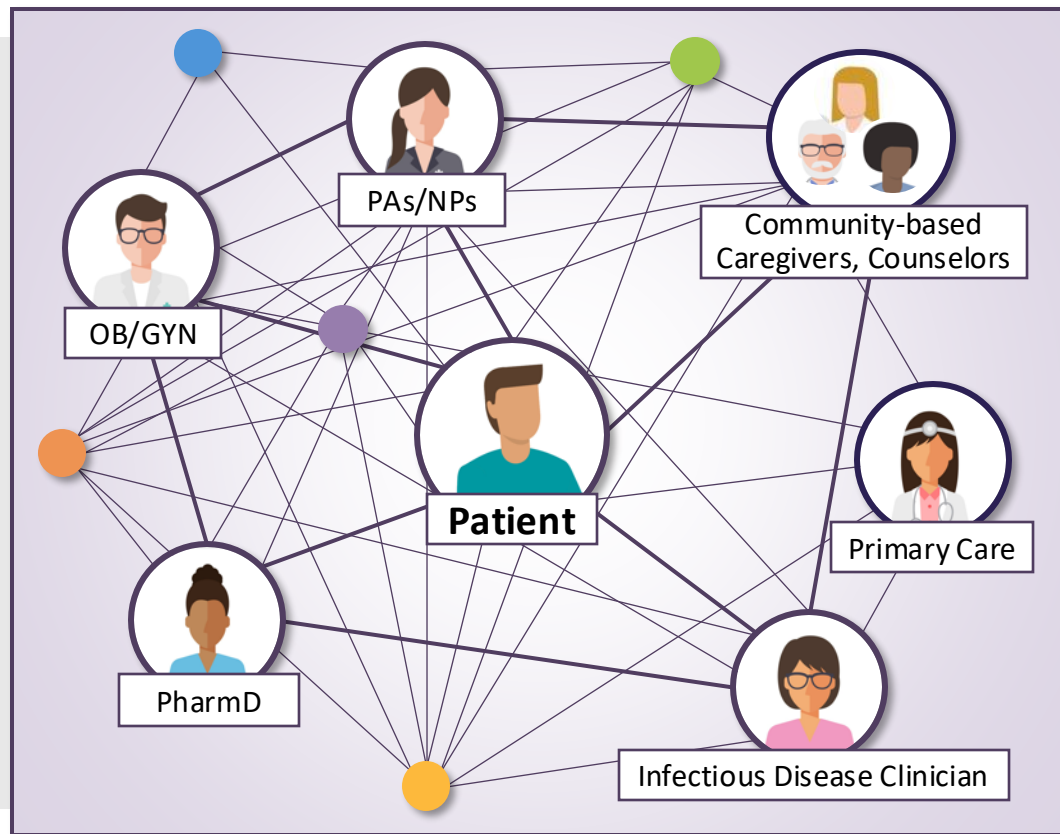
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A Team Approach to Pan-Viral Screening/Care



Asia Sullivan
PA-C, MPH

CDC Screening Recommendations for HIV, HBV, HCV

A Universal Approach That Is Not Just for Persons “at Risk”

- **HIV: all patients ages 13–64** → screen at least 1× in a lifetime¹ (patients with ongoing risk factors for HIV at least annually)

CDC, Centers for Disease Control and Prevention.

¹Centers for Disease Control and Prevention (CDC). CDC website. 2025. <https://www.cdc.gov/hivnexus/hcp/diagnosis-testing/index.html>.

²Conners EE, et al. *MMWR Recomm Rep*. 2023;72(RR-1):1–25. ³Schillie S, et al. *MMWR Recomm Rep*. 2020;69(RR-2):1–17.

⁴CDC website. 2025. <https://www.cdc.gov/pregnancy-hiv-std-tb-hepatitis/php/screening/index.html>.

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- **HBV: all adults age ≥18 years** → screen at least 1× in a lifetime² (periodic testing for susceptible persons, regardless of age, with ongoing exposure risk)
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 - ~15% of individuals with HIV are unaware of their status due to lack of appropriate screening, leading to nearly 40% of new cases of HIV
 - “Opt out” approach removes stigma, ↑ diagnosis/treatment, ↓ transmission

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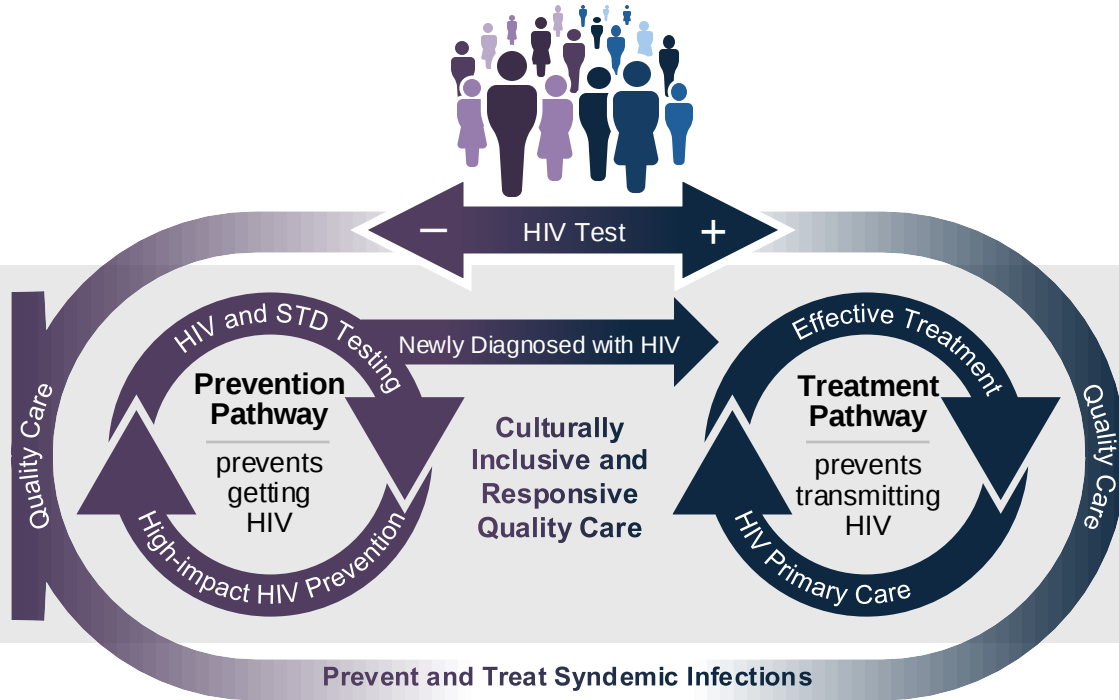
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Status Neutral HIV Prevention and Care

Prevent and Treat Syndemic Infections



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.



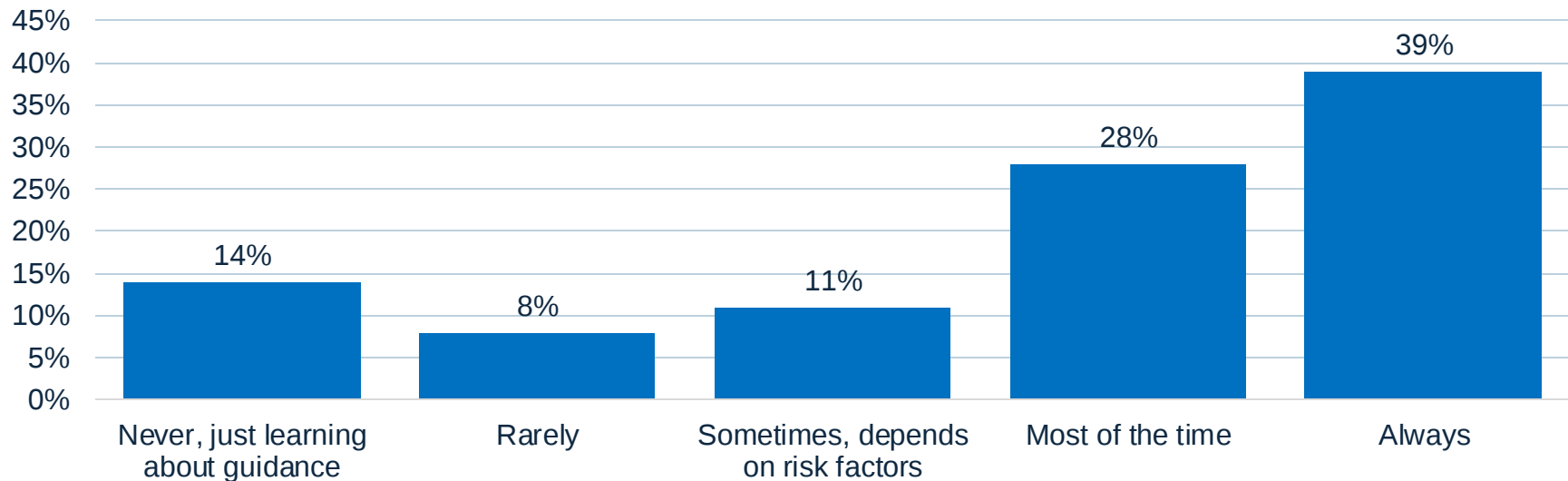
Evaluate pan-viral testing strategies in diverse practice settings that improve engagement with patients from special populations at risk for HIV and/or viral hepatitis



? How often do you currently recommend pan-viral screening for your patients per CDC guidance?

- A. Never, just learning about the CDC recommendations
- B. Rarely
- C. Sometimes, depending upon risk factors
- D. Most of the time
- E. Always

? How often do you currently recommend pan-viral screening for your patients per CDC guidance?



Results recorded on March 18, 2025.

Patient Case: Daniel



Daniel, who is 57 years old, had not received routine medical care for several years due to lack of insurance.



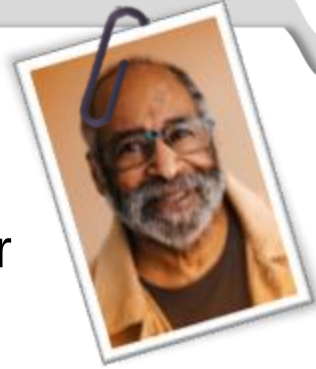
Patient Case: Daniel



Daniel, who is 57 years old, had not received routine medical care for several years due to lack of insurance.



He engaged in occasional IV drug use in his 30s but never disclosed this to healthcare providers. During a routine physical at age 50, his doctor did not recommend HCV testing, despite CDC guidelines.



Patient Case: Daniel

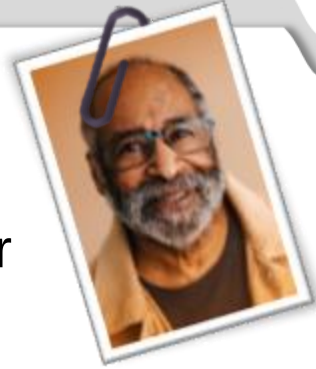


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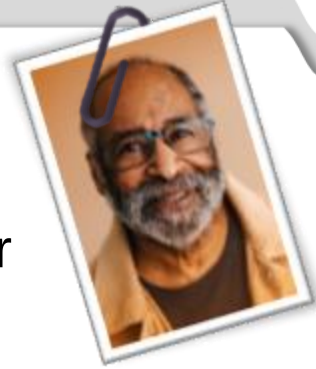
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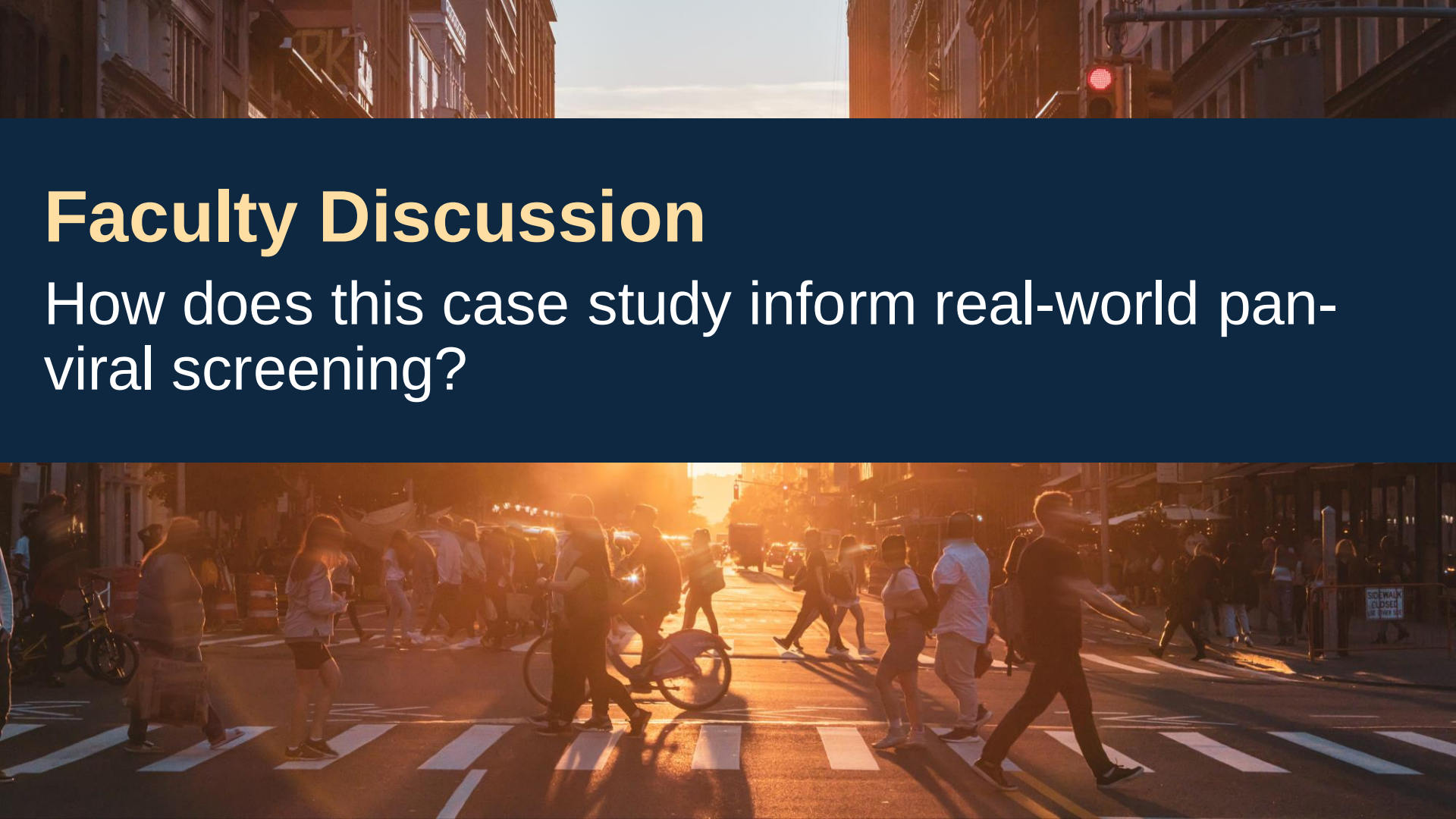


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At age 53, Daniel experienced fatigue and abdominal pain but attributed it to stress and did not seek medical attention.

By age 55, Daniel developed severe symptoms, including jaundice, and was diagnosed with advanced liver disease due to HCV. Further testing revealed he was also HIV+, which he had unknowingly contracted and likely transmitted to others.

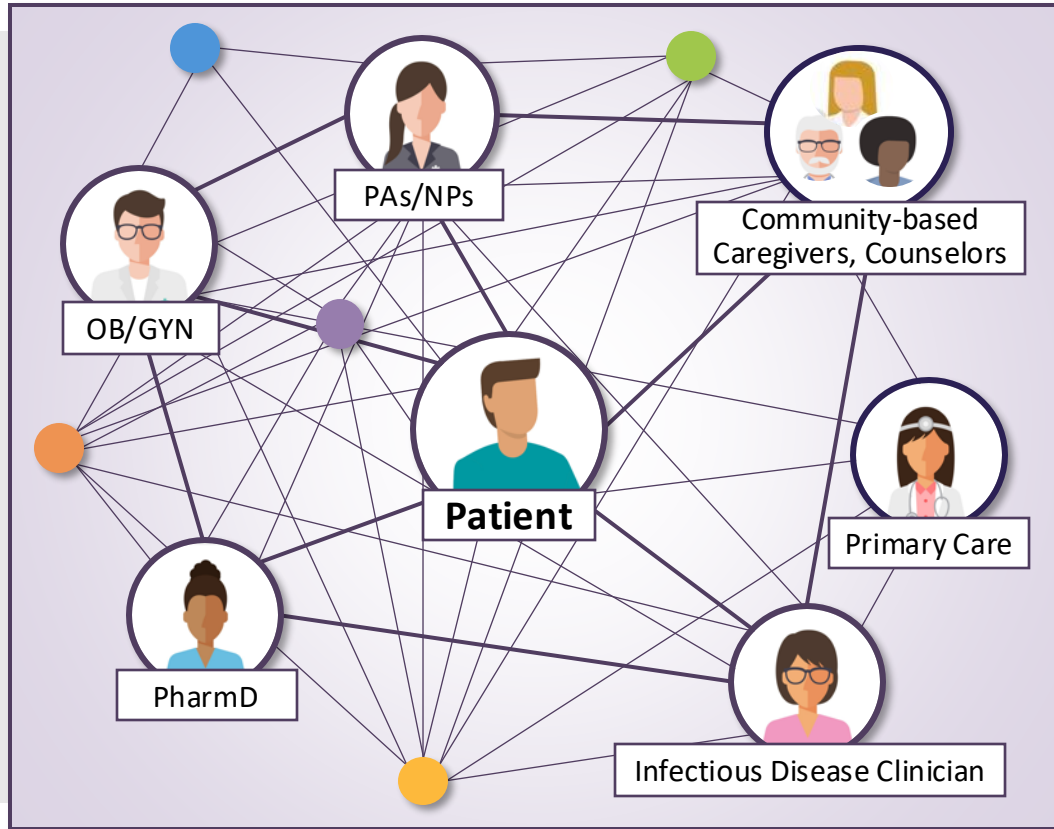




Faculty Discussion

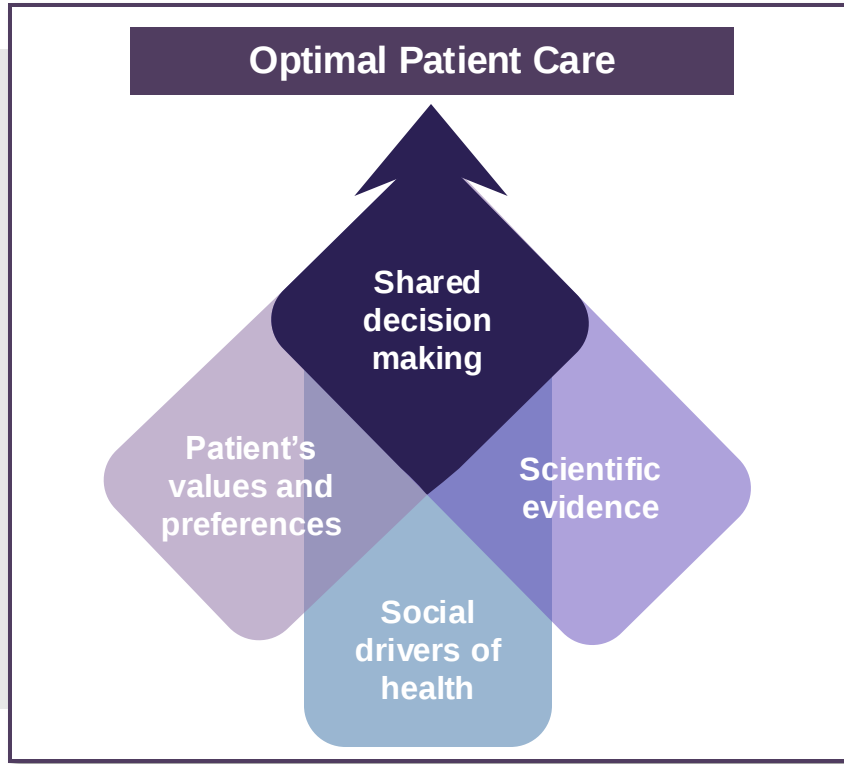
How does this case study inform real-world pan-viral screening?

A Team Approach: Community Outreach

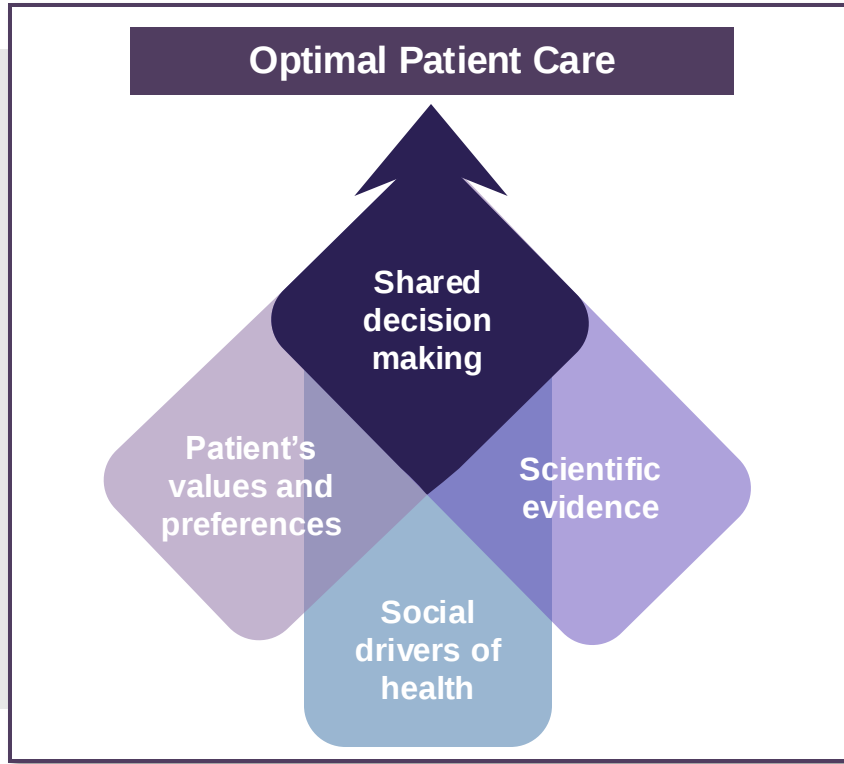


Lee Gilman
CRNP

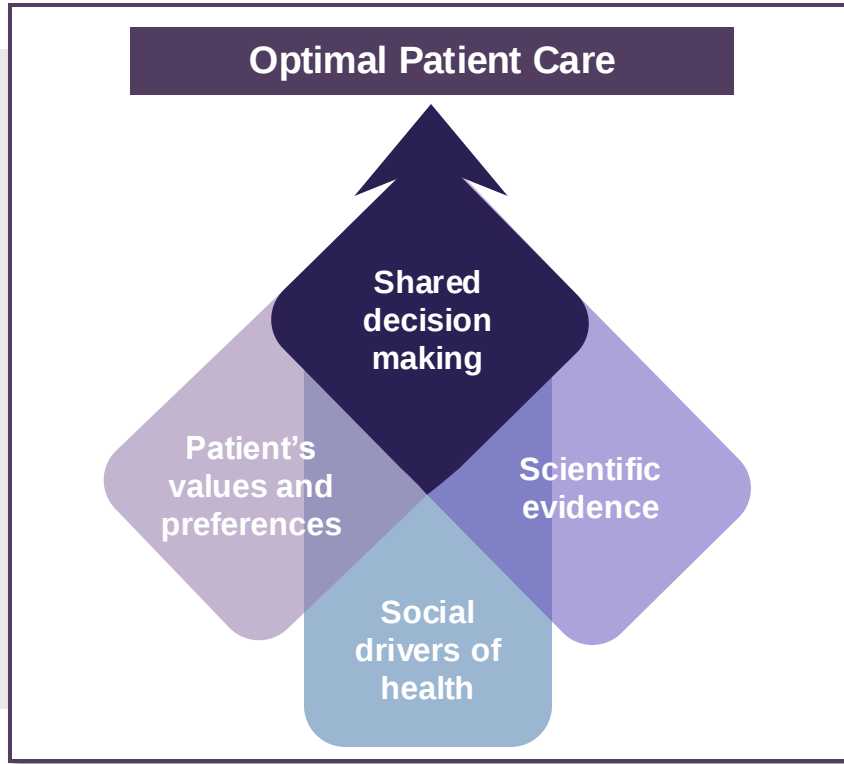
Shared Decision Making and the SHARE Approach



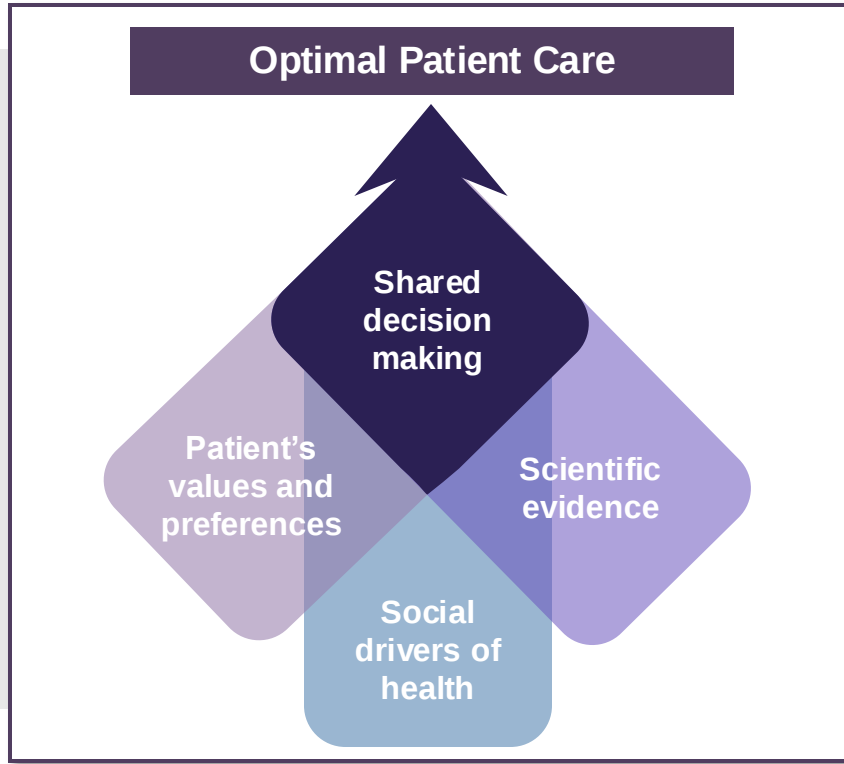
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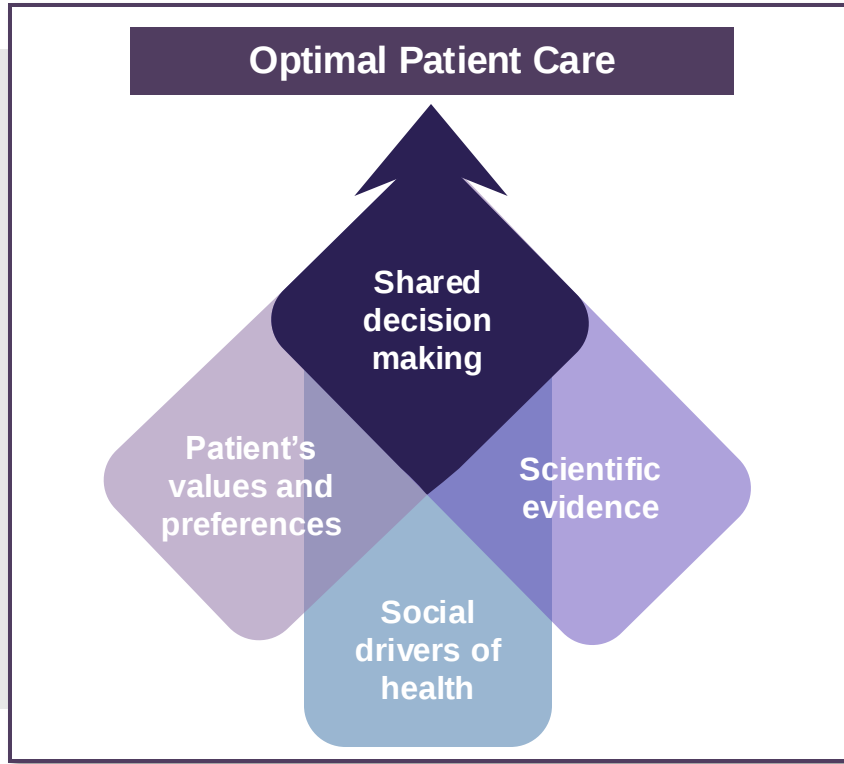
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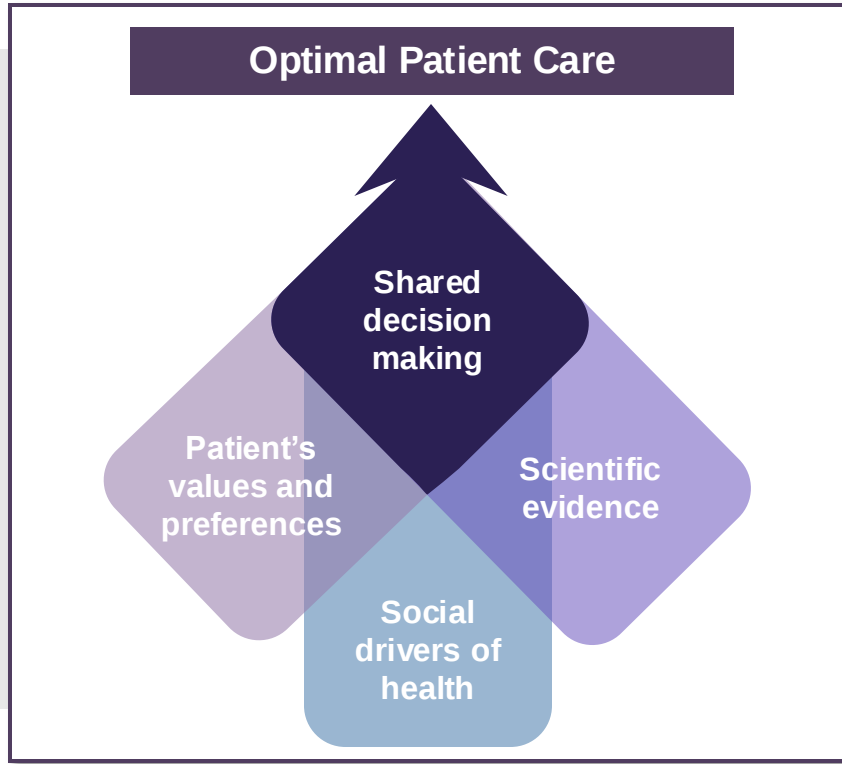
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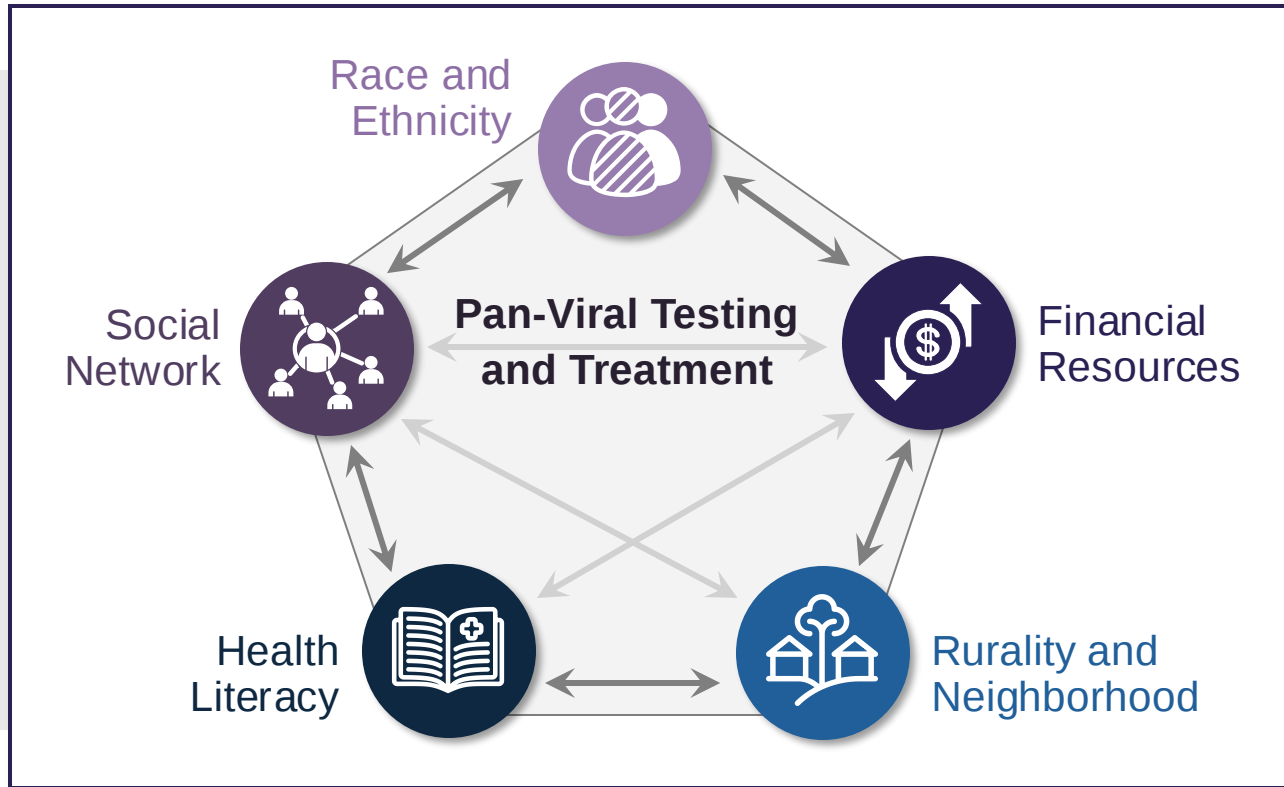
Shared Decision Making and the SHARE Approach



Shared Decision Making and the SHARE Approach



Social Drivers of Health (SDoH)



How Do I Ask Patients about SDoH?



How Do I Ask Patients about SDoH?



Sample Questions

What challenges do you have getting to appointments?



Possible Actions

Discuss best hours; telehealth

How Do I Ask Patients about SDoH?



Sample Questions

What challenges do you have getting to appointments?

Do you have access to a pharmacy?



Possible Actions

» *Discuss best hours; telehealth*

» *Recommend mail-order/prescription delivery*

How Do I Ask Patients about SDoH?



Sample Questions

What challenges do you have getting to appointments?

Do you have access to a pharmacy?

Do you have access to care in your preferred language?



Possible Actions

Discuss best hours; telehealth

Recommend mail-order/prescription delivery

Introduce to other providers

How Do I Ask Patients about SDoH?



Sample Questions

What challenges do you have getting to appointments?

Do you have access to a pharmacy?

Do you have access to care in your preferred language?

Do you have insurance for visits and prescriptions?



Possible Actions

Discuss best hours; telehealth

Recommend mail-order/prescription delivery

Introduce to other providers

Refer to counselor, social worker; determine if drug company has patient assistance programs; refer to coupon/discount

How Do I Ask Patients about SDoH?



Sample Questions

What challenges do you have getting to appointments?

Do you have access to a pharmacy?

Do you have access to care in your preferred language?

Do you have insurance for visits and prescriptions?

Do you have safe housing?



Possible Actions

Discuss best hours; telehealth

Recommend mail-order/prescription delivery

Introduce to other providers

Refer to counselor, social worker; determine if drug company has patient assistance programs; refer to coupon/discount

Home health care visit to assess safety; report abuse

How Do I Ask Patients about SDoH?



Sample Questions

What challenges do you have getting to appointments?

Do you have access to a pharmacy?

Do you have access to care in your preferred language?

Do you have insurance for visits and prescriptions?

Do you have safe housing?

Do you have a safe place to store/refrigerate medications?



Possible Actions

Discuss best hours; telehealth

Recommend mail-order/prescription delivery

Introduce to other providers

Refer to counselor, social worker; determine if drug company has patient assistance programs; refer to coupon/discount

Home health care visit to assess safety; report abuse

Provide pillbox, blister packs

How Do I Ask Patients about SDoH?



Sample Questions

What challenges do you have getting to appointments?

Do you have access to a pharmacy?

Do you have access to care in your preferred language?

Do you have insurance for visits and prescriptions?

Do you have safe housing?

Do you have a safe place to store/refrigerate medications?

Are you experiencing discrimination that is negatively impacting your health?



Possible Actions

Discuss best hours; telehealth

Recommend mail-order/prescription delivery

Introduce to other providers

Refer to counselor, social worker; determine if drug company has patient assistance programs; refer to coupon/discount

Home health care visit to assess safety; report abuse

Provide pillbox, blister packs

Report

How Do I Ask Patients about SDoH?



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Do you have access to a pharmacy?

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Are you experiencing discrimination that is negatively impacting your health?

How do you prefer to learn about things?



Possible Actions

Discuss best hours; telehealth

Recommend mail-order/prescription delivery

Introduce to other providers

Refer to counselor, social worker; determine if drug company has patient assistance programs; refer to coupon/discount

Home health care visit to assess safety; report abuse

Provide pillbox, blister packs

Report

Use preferred learning method if possible

How Do I Ask Patients about SDoH?



Sample Questions

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Do you have insurance for visits and prescriptions?

Do you have safe housing?

Do you have a safe place to store/refrigerate medications?

Are you experiencing discrimination that is negatively impacting your health?

How do you prefer to learn about things?

Can you afford and access healthy food?



Possible Actions

Discuss best hours; telehealth

Recommend mail-order/prescription delivery

Introduce to other providers

Refer to counselor, social worker; determine if drug company has patient assistance programs; refer to coupon/discount

Home health care visit to assess safety; report abuse

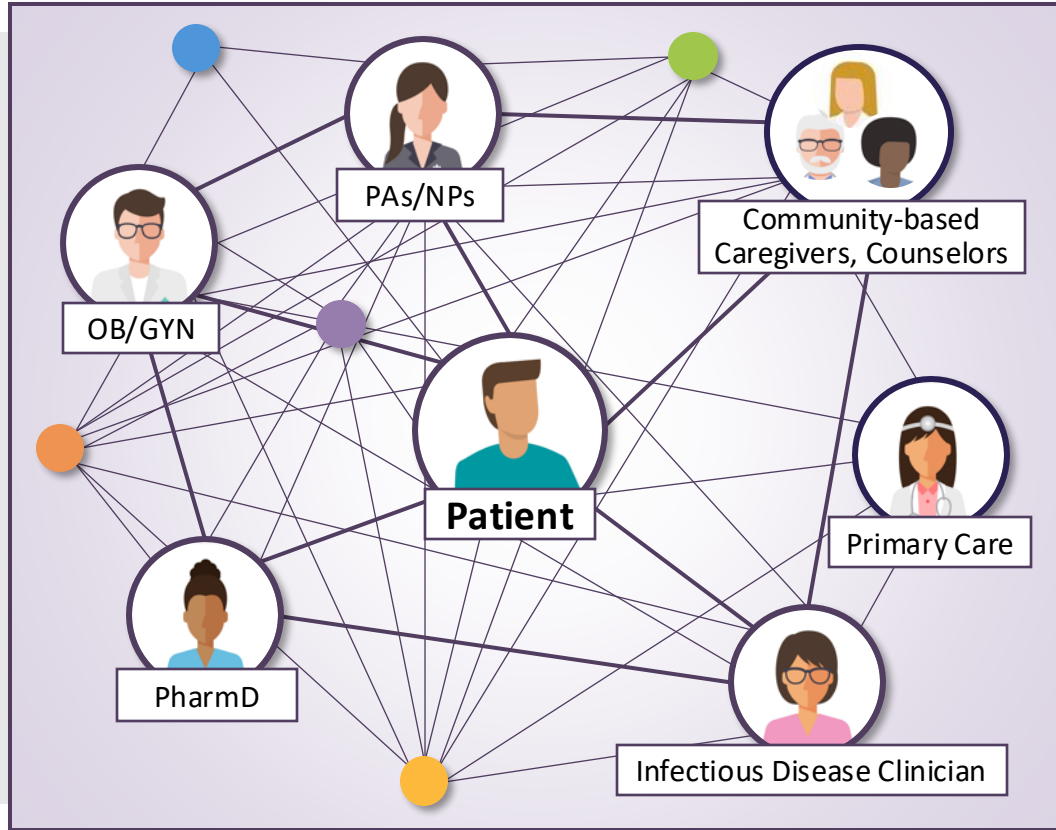
Provide pillbox, blister packs

Report

Use preferred learning method if possible

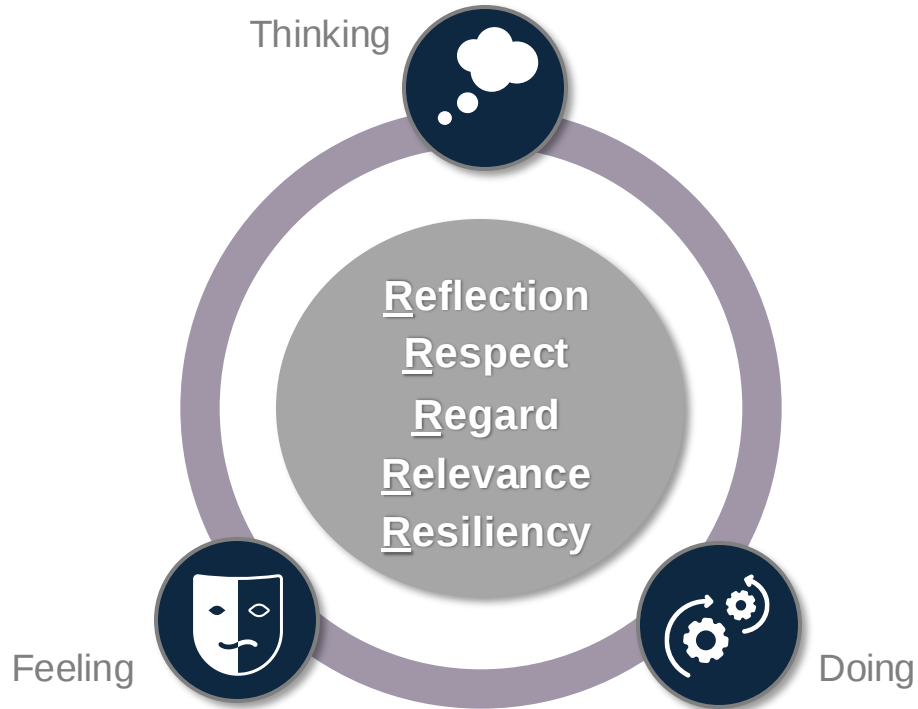
Determine eligibility for meal assistance

A Team Approach: Patient Advocacy



Asia Sullivan
PA-C, MPH

5 Rs of Cultural Humility



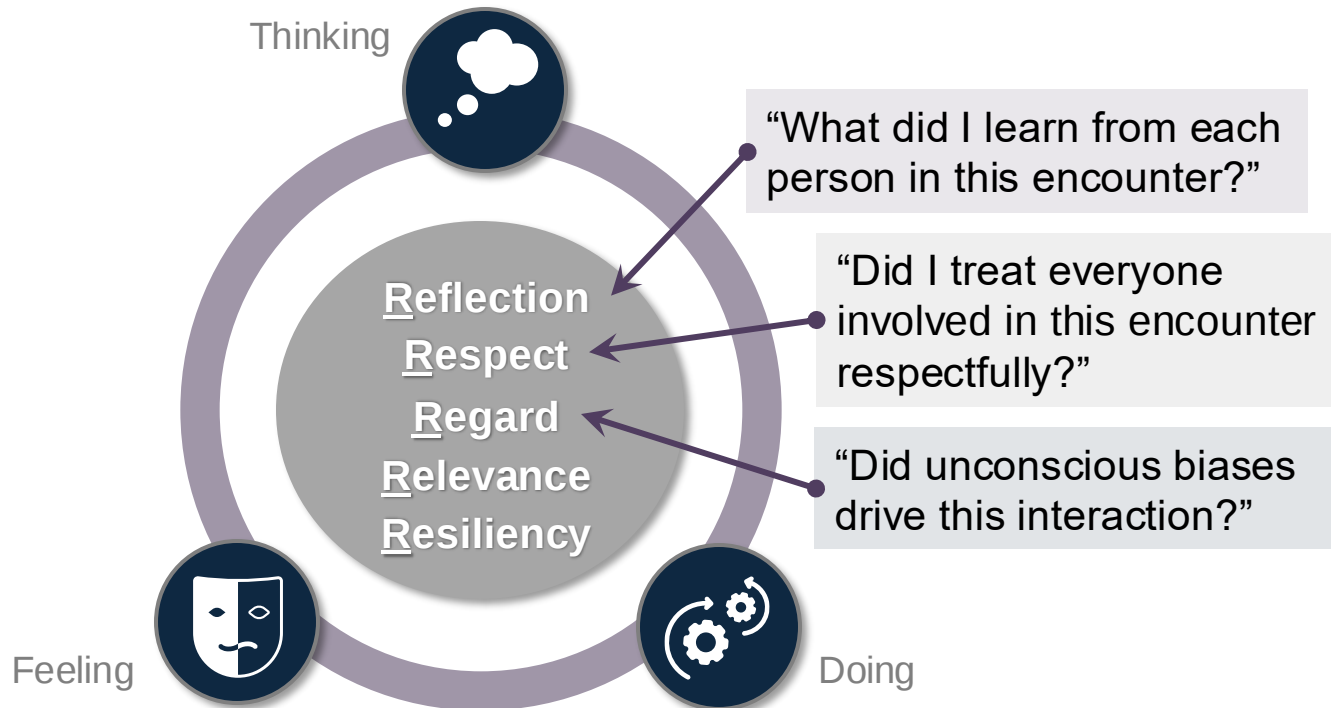
5 Rs of Cultural Humility



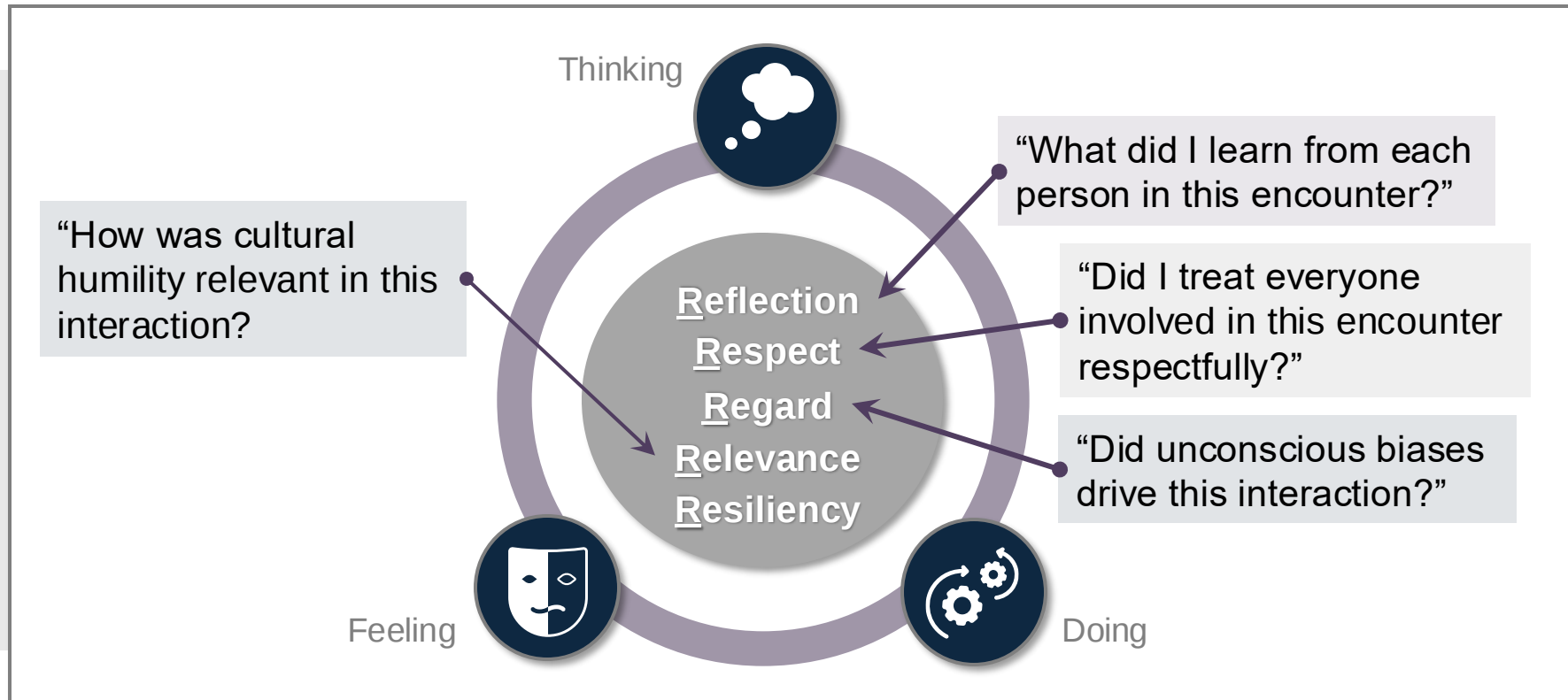
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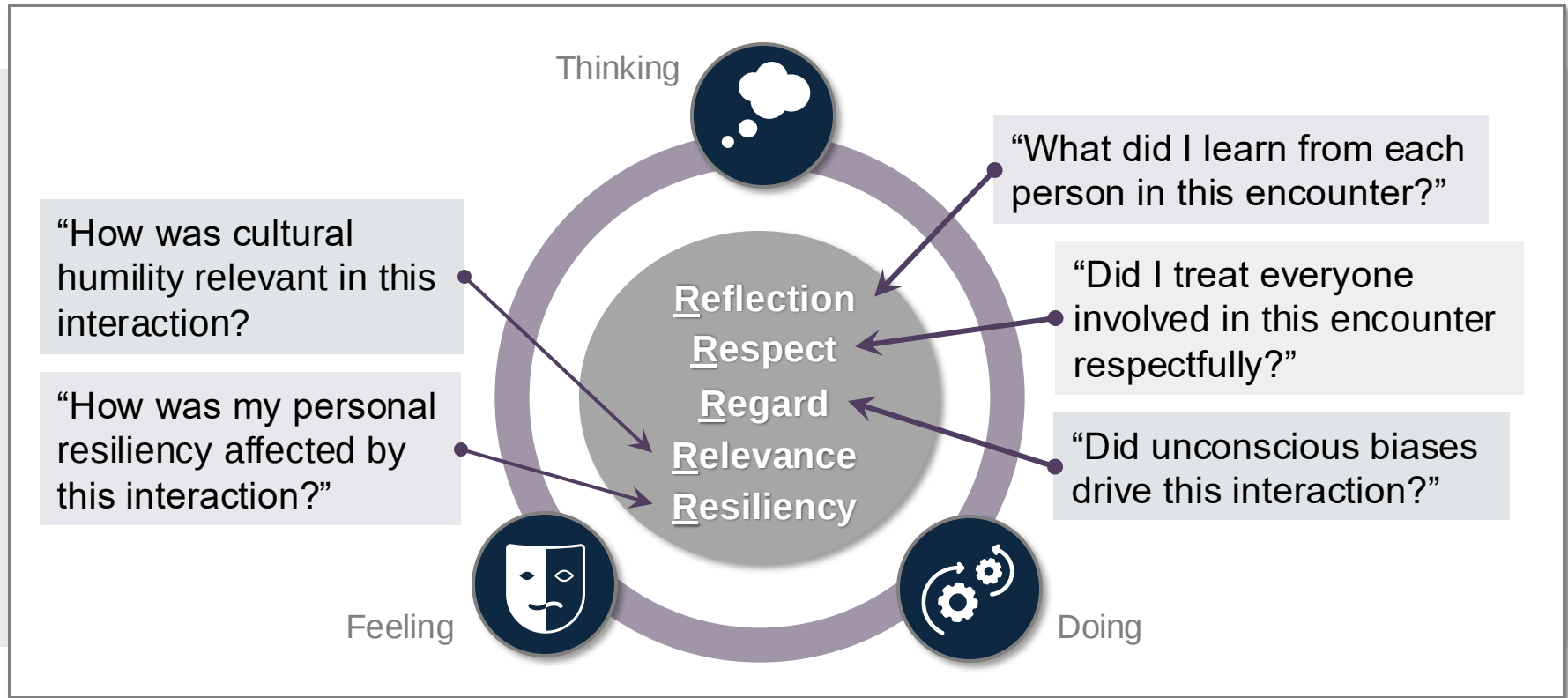
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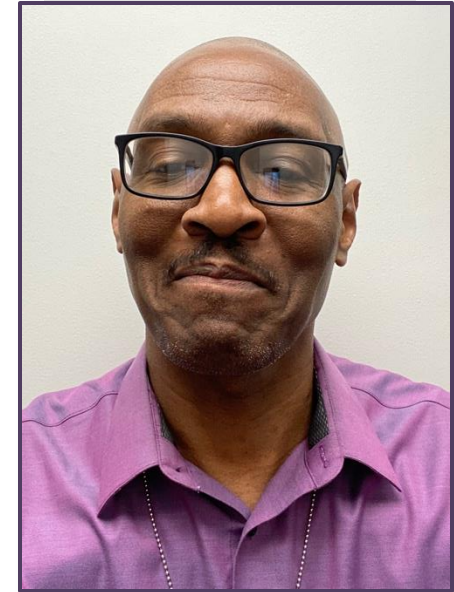
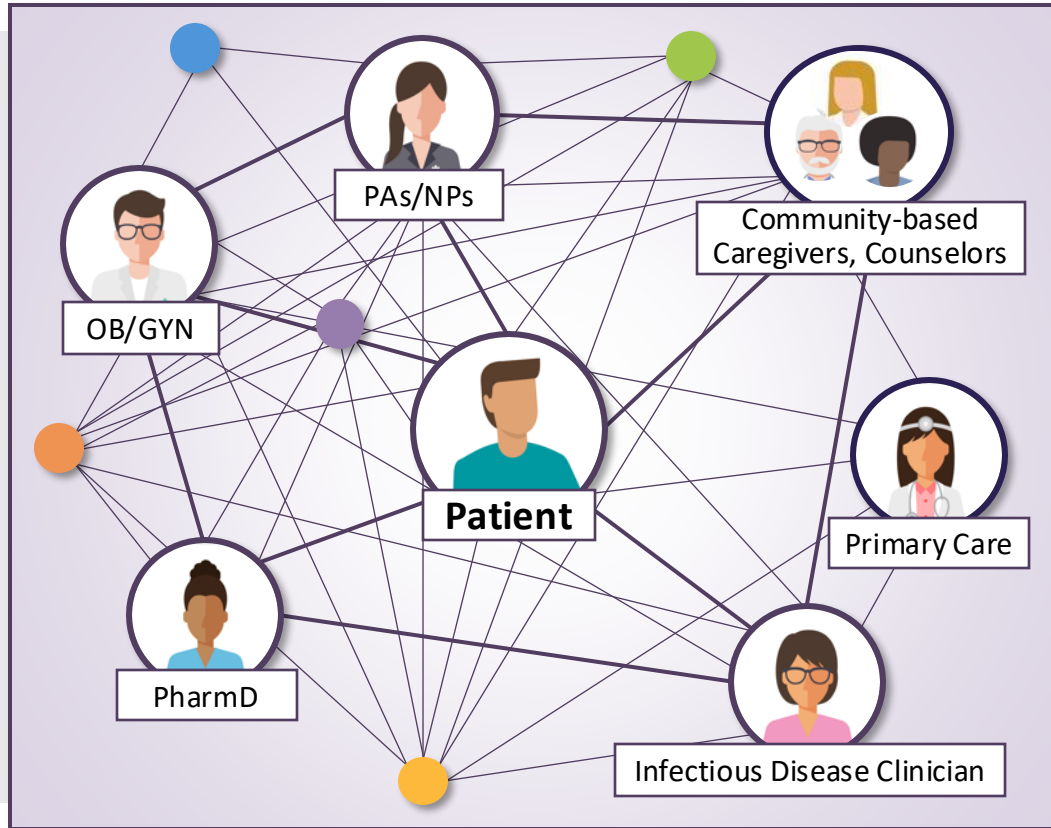
5 Rs of Cultural Humility



5 Rs of Cultural Humility



A Team Approach: Education and Trust



Joseph McCray
RN



Incorporate guideline-recommended pan-viral screening approaches for patients who are pregnant to improve outcomes and limit perinatal transmission

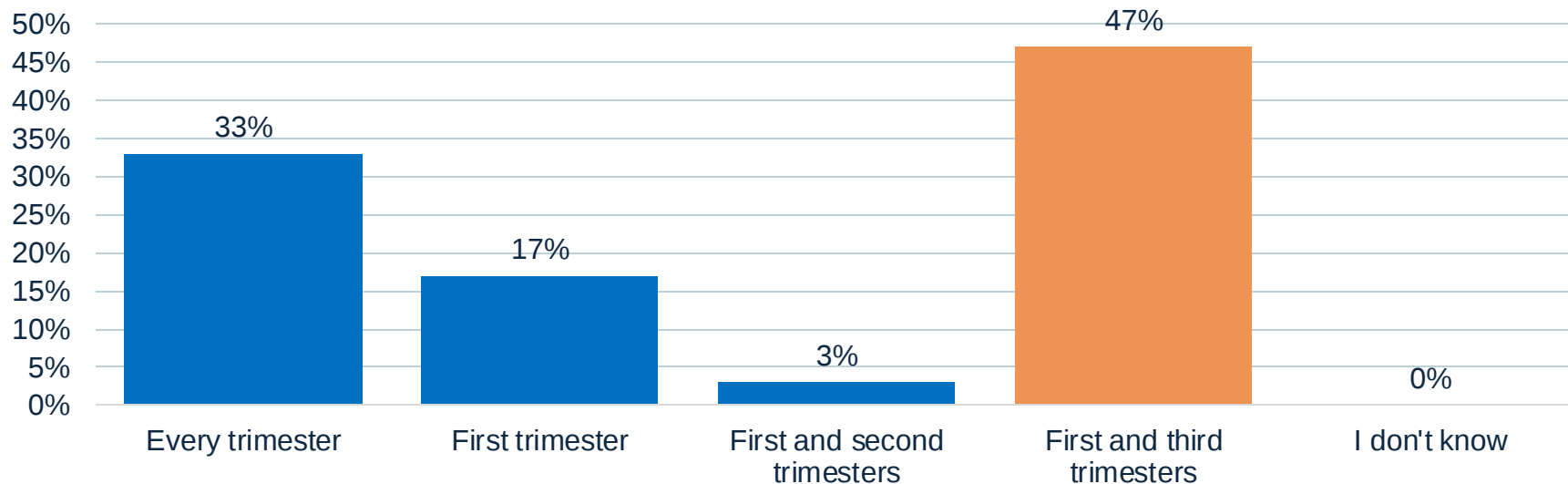


? Per CDC and ACOG, when should pregnant patients at elevated risk ideally be screened for HIV?

- A. Every trimester
- B. First trimester
- C. First and second trimesters
- D. First and third trimesters
- E. I don't know



Per CDC and ACOG, when should pregnant patients at elevated risk ideally be screened for HIV?



Results recorded on March 18, 2025.

Pan-Viral Testing in Pregnancy

- According to the CDC and the American College of Obstetricians and Gynecologists (ACOG)
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- Early identification of viral infection and rapid introduction of antiviral therapy can significantly reduce vertical transmission
 - In the absence of treatment, 25%–30% vertical transmission in HIV
 - With early viral suppression, the rate drops to 1%–2% or less

Syphilis Screening in Pregnancy

- Congenital syphilis cases have increased 10-fold between 2012 and 2022

Syphilis Screening in Pregnancy

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- 88% of these cases could have been prevented with timely screening and treatment

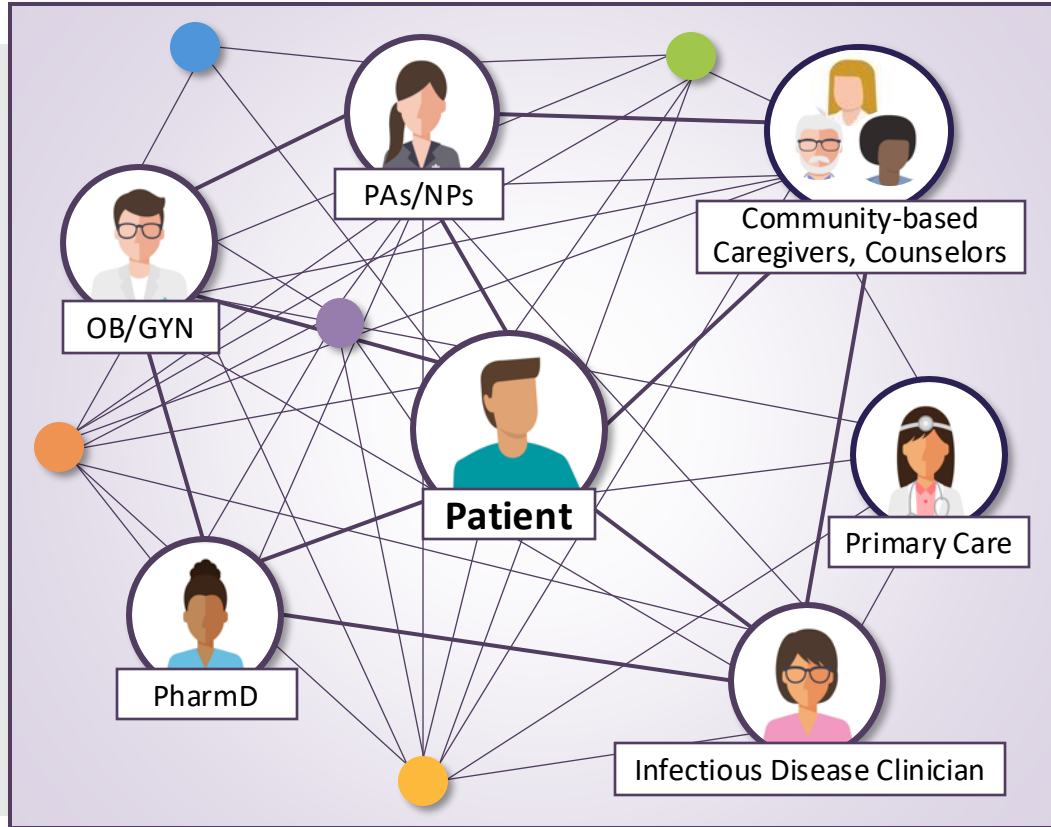
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Syphilis Screening in Pregnancy

- Congenital syphilis cases have increased 10-fold between 2012 and 2022
- 88% of these cases could have been prevented with timely screening and treatment
- ACOG practice advisory (2024) recommends individuals who are pregnant be screened serologically for syphilis at 3 time points
 - At first prenatal care visit
 - During the third trimester
 - At birth

A Team Approach: Perinatal Screening/Care



**Martina Badell
MD**

Early Screening Is Critical in Pregnancy

- Benefits of early screening in pregnancy for viral infections (HIV, hepatitis) as well as for syphilis, include
 - Early identification of active infections
 - Prompt initiation of treatment that reduces the risk of perinatal transmission

SMART Goals

Specific, Measurable, Attainable, Relevant, Timely

Put information into action! Consider the following goals; then *set a time frame* that fits with your work environment and *a reasonable improvement target* that aligns with your patient population.

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Increase the percentage of eligible patients who receive pan-viral screening for HBV, HCV, and HIV

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Increase the percentage of patients who participate in shared decision making regarding pan-viral testing and subsequent treatment, when indicated

SMART Goals

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Increase the percentage of eligible patients who receive pan-viral screening for HBV, HCV, and HIV

Increase the percentage of patients who participate in shared decision making regarding pan-viral testing and subsequent treatment, when indicated

Improve adherence to CDC and ACOG recommendations for pan-viral and syphilis testing in pregnant individuals to reduce vertical transmission



Question-and-Answer Session

Juhi Moon, MD

Christina Madison, PharmD

As recorded March 18, 2025.



Closing Remarks

Juhi Moon, MD

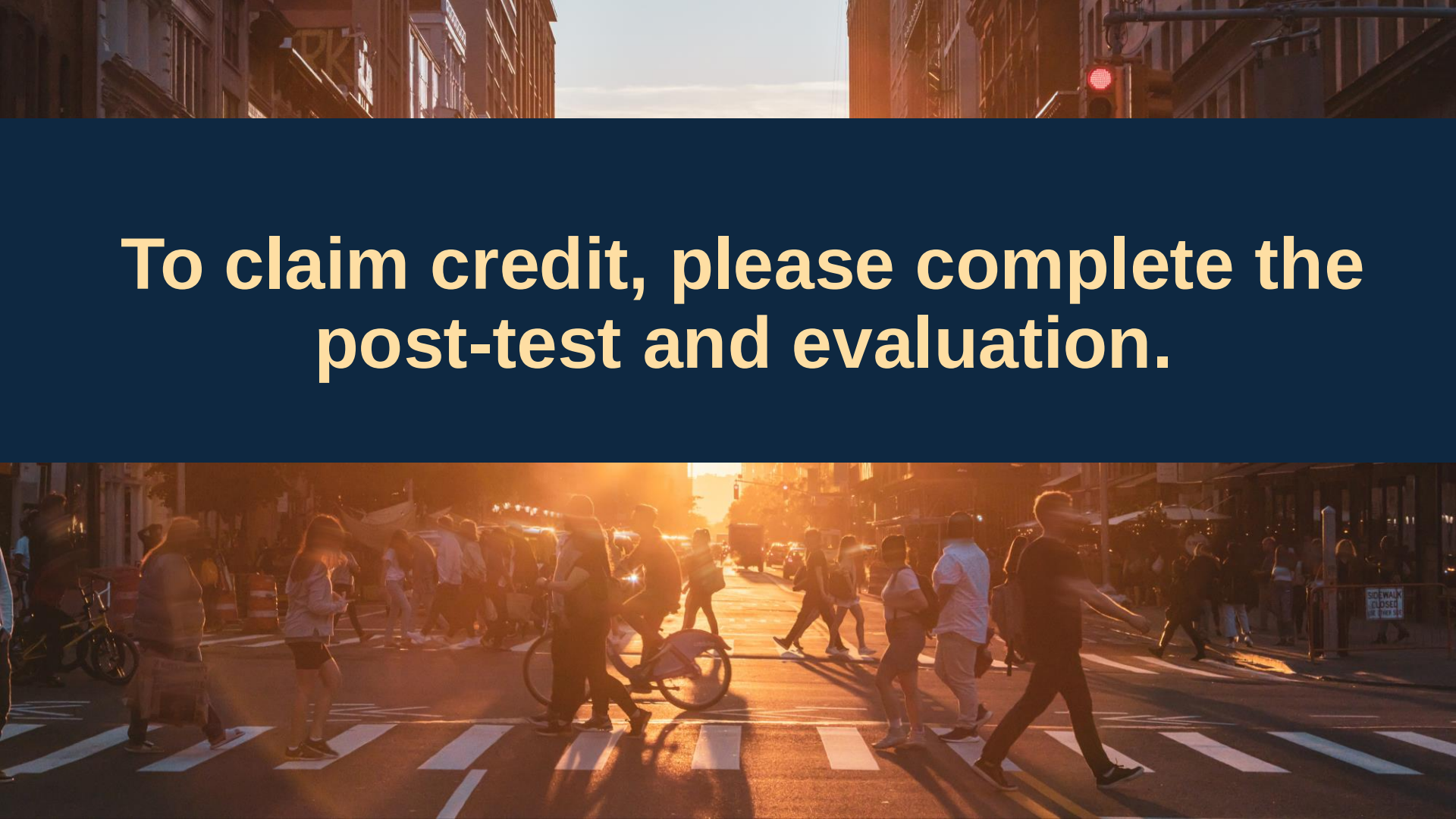




Visit the Infectious Diseases Virtual Education Hub

Free resources and educational activities for
health care professionals and patients

<https://www.cmeoutfitters.com/practice/virtual-education-hub/>

The image is a composite of two photographs. The top photograph shows a city street at sunset, with tall buildings on either side and a red traffic light visible on the right. The bottom photograph shows a large group of pedestrians crossing a street at a crosswalk during the same sunset. The sun is low on the horizon, creating a strong orange glow and long shadows. A person is riding a bicycle across the crosswalk in the center. A sign on the right side of the street reads "SIDEWALK CLOSED BE CAREFUL".

**To claim credit, please complete the
post-test and evaluation.**

Pan-Viral Screening for HBV, HCV, and HIV in Diverse Practice Settings

This program has been supported by an independent educational grant from Gilead Sciences, Inc.

CME
OUTFITTERS

