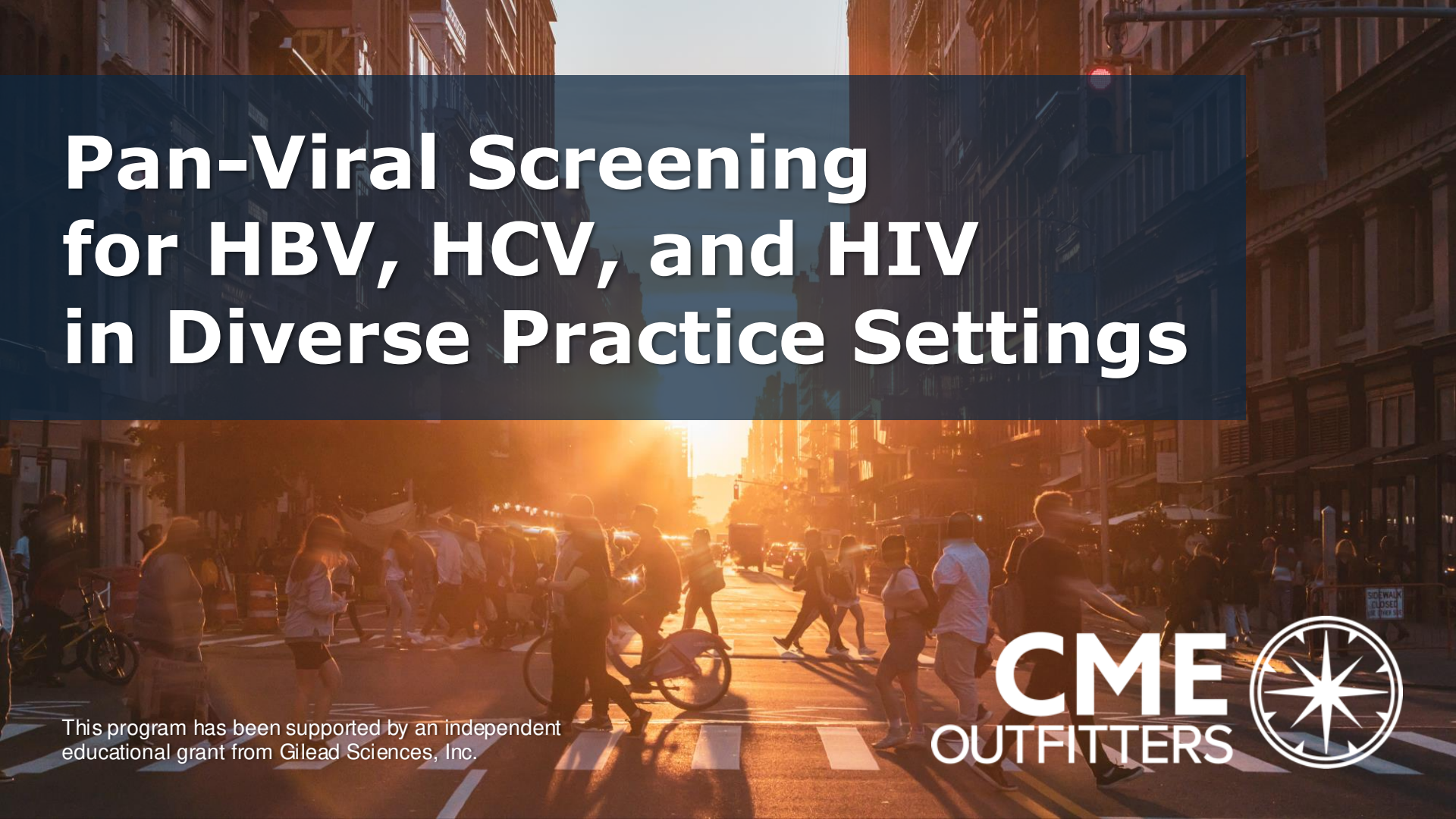
Pan-Viral Screening for HBV, HCV, and HIV in Diverse Practice Settings



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

CME OUTFITTERS



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

IPCE CREDIT™

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

Physicians (ACCME)

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.

Pharmacists (ACPE)

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.

PA AAPA CATEGORY 1 CME

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.

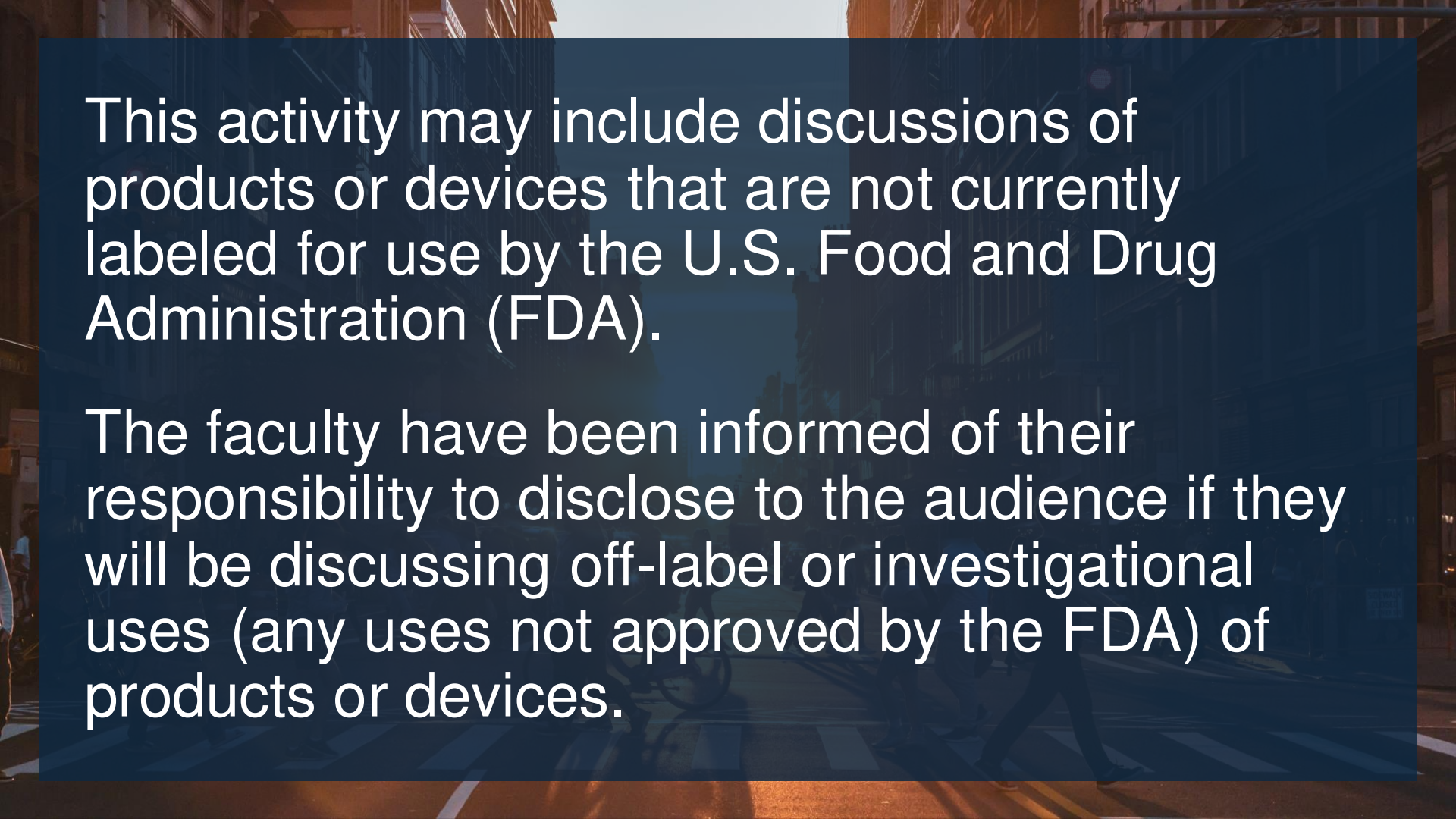
CME for MIPS IMPROVEMENT ACTIVITY

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.

ABIM CME MOC ACCREDITED

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.

CME OUTFITTERS



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.

To Ask a Question

To submit a question, please go to the *Ask Question* tab at the bottom of the screen.



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.

CME OUTFITTERS

LEARNING OBJECTIVE



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

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.

Beard N, Hill A. *Open Forum Infect Dis*. 2024;11(2):ofad666.

CME OUTFITTERS

Global Prevalence of HIV, HBV, HCV
By Population

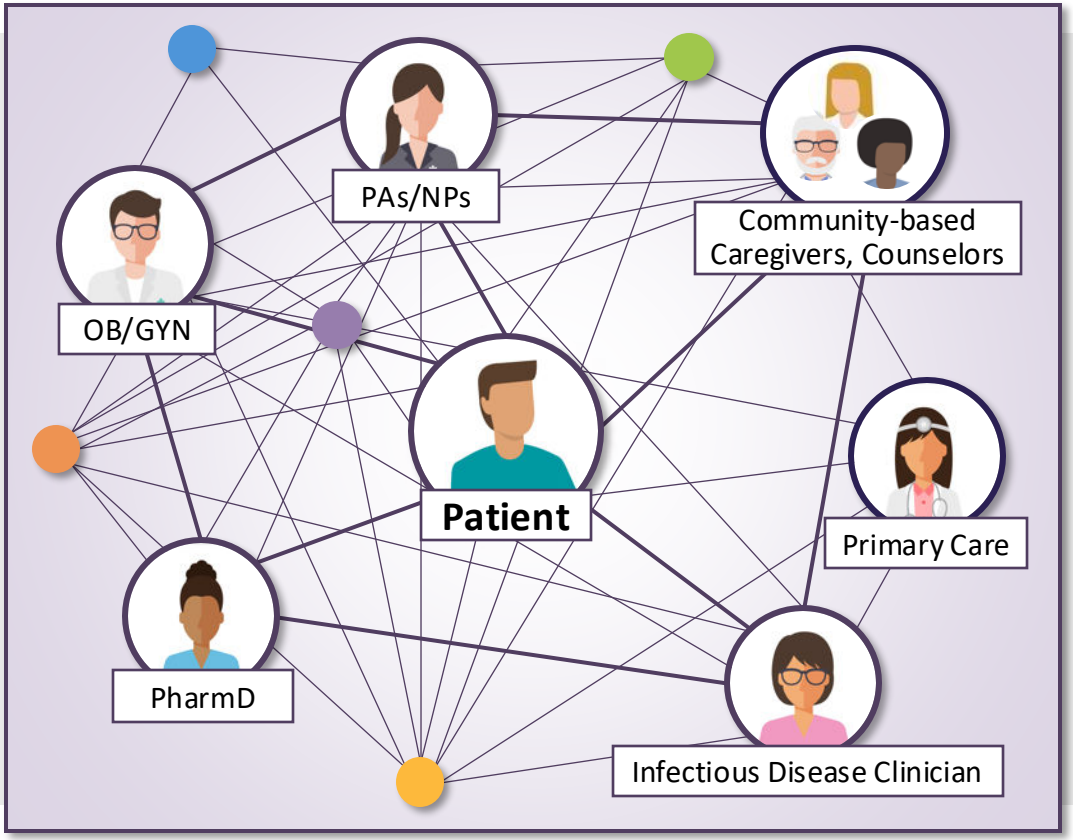
Category	No. of Studies	HIV positive, % (SD)	HBV Positive, % (SD)	HCV Positive, % (SD)	1 BBV Positive, % (SD)	Confection, % (SD)	HBV:HIV	HCV:HIV
General population	11	0.09 (4.28)	0.22 (3.46)	0.60 (3.88)	0.87 (8.96)	0.05 (2.45)	2.44	6.55
Blood donors	43	0.33 (1.70)	1.13 (3.51)	0.53 (1.42)	1.95 (1 42)	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

BBV, blood-borne virus; MSM, men who have sex with men; NA, not applicable; PWUD, people who use drugs; SD, standard deviation.

Beard N, Hill A. *Open Forum Infect Dis*. 2024;11(2):ofad666.

CME OUTFITTERS

A Team Approach to Pan-Viral Screening/Care





Asia Sullivan
PA-C, MPH

CME OUTFITTERS

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 lifetime[1] (patients with ongoing risk factors for HIV at least annually)
- **HBV: all adults age ≥18 years** → screen at least 1× in a lifetime[2] (periodic testing for susceptible persons, regardless of age, with ongoing exposure risk)
- **HCV: all adults age ≥18 years** → screen at least 1× in a lifetime[3] (periodic testing while risk factors persist)
- **All pregnant women** → screen for HIV, HBV, HCV, syphilis in each pregnancy[4]
- Universal screening reduces stigma or difficulty in assessing risk factors, *reduces transmission*, improves outcomes—but is underused
  - ~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

CDC, Centers for Disease Control and Prevention.

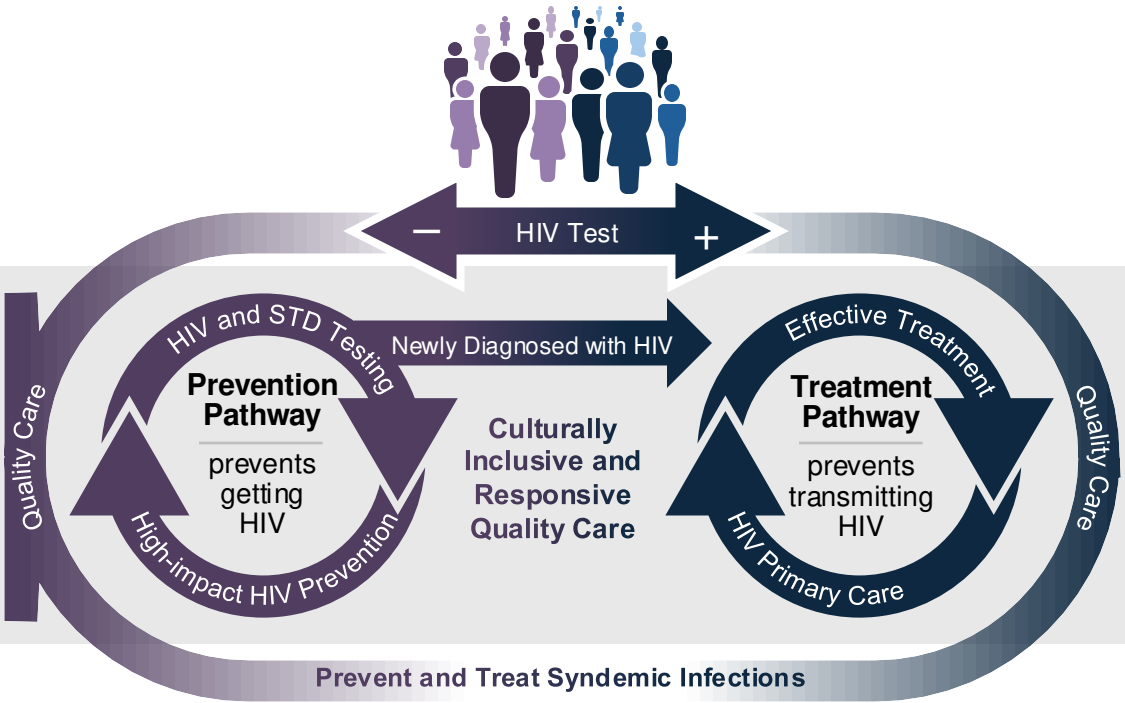
[1]Centers for Disease Control and Prevention (CDC). CDC website. 2025. https://www.cdc.gov/hivnexus/hcp/diagnosis-testing/index.html.
[2]Conners EE, et al. *MMWR Recomm Rep*. 2023;72(RR-1):1–25. [3]Schillie S, et al. *MMWR Recomm Rep*. 2020;69(RR-2):1–17.
[4]CDC website. 2025. https://www.cdc.gov/pregnancy-hiv-std-tb-hepatitis/php/screening/index.html.

CME OUTFITTERS

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.

PrEP, pre-exposure prophylaxis.

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

CME OUTFITTERS

LEARNING OBJECTIVE



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

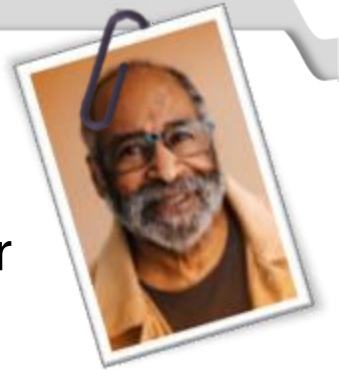


How often do you currently recommend pan-viral screening for your patients per CDC guidance?

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

CME OUTFITTERS

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.

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

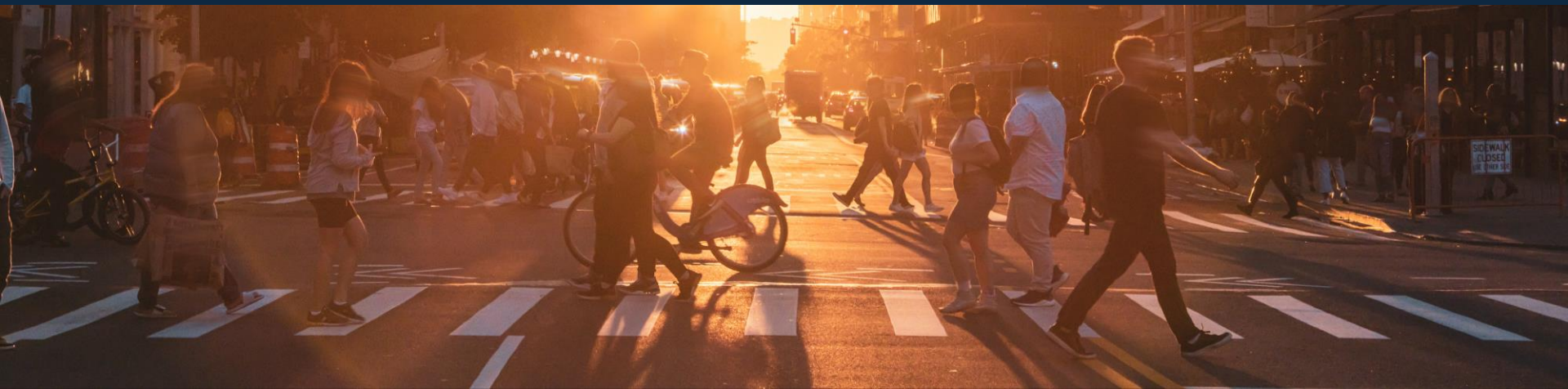
By age 55, Daniel developed severe symptoms, including jaundice, and was diagnosed with advanced liver disease due to HCV. Further testing revealed he was also HIV+, which he had unknowingly contracted and likely transmitted to others.

CME OUTFITTERS

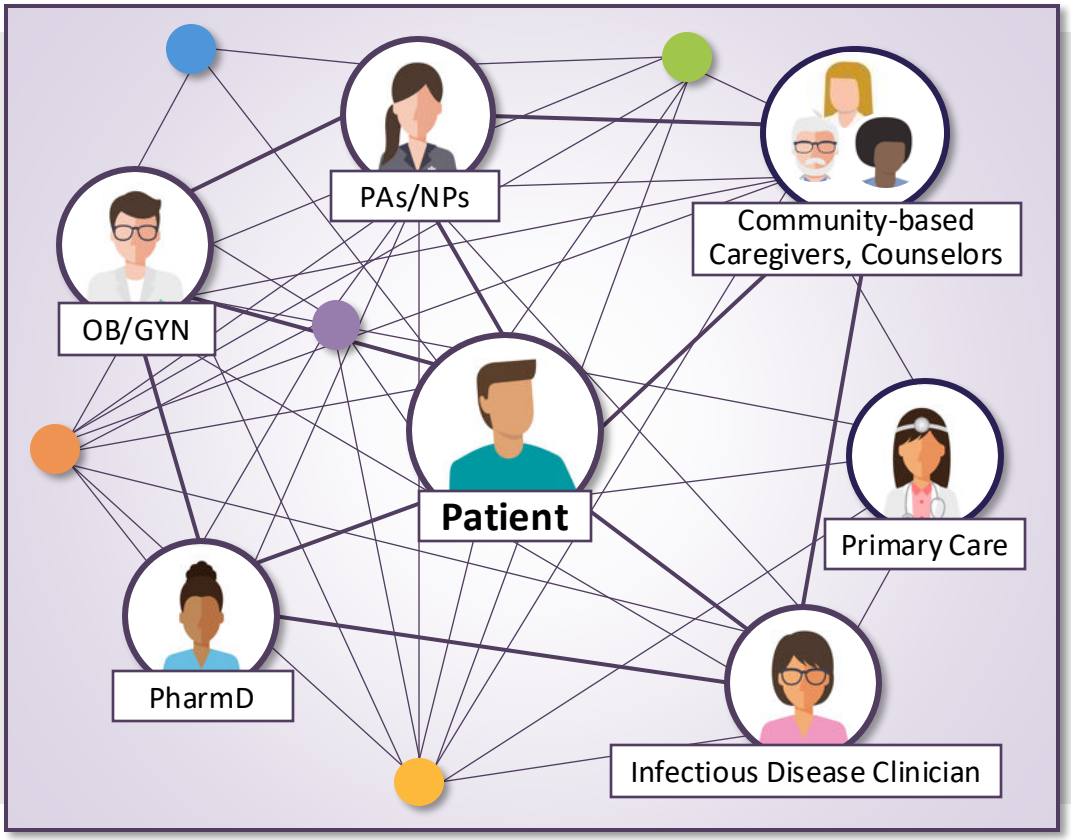


Faculty Discussion

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



A Team Approach: Community Outreach



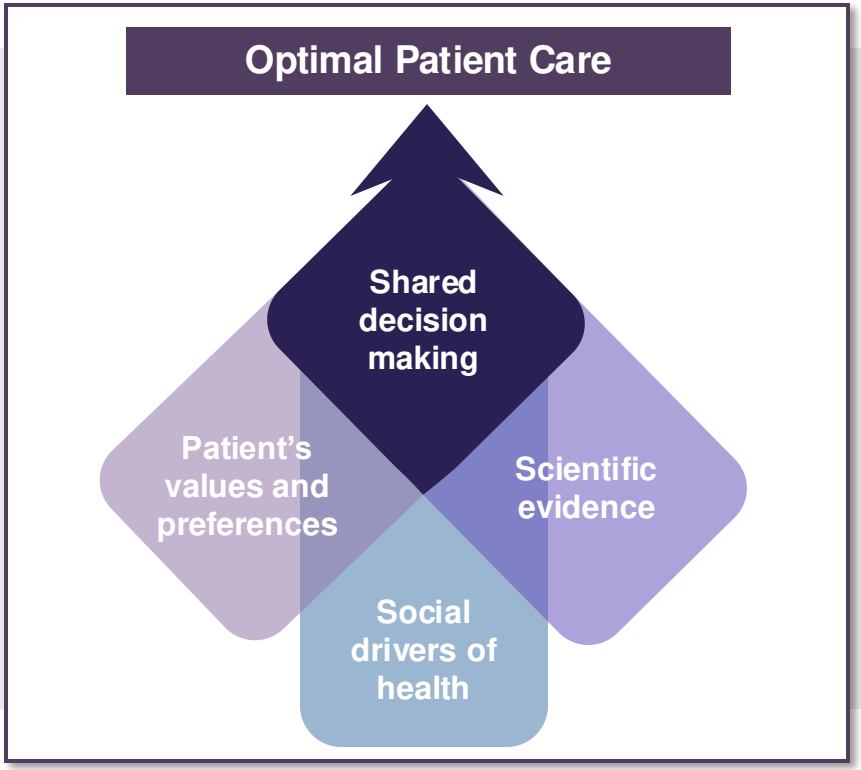




Lee Gilman
CRNP

CME OUTFITTERS

Shared Decision Making and the SHARE Approach

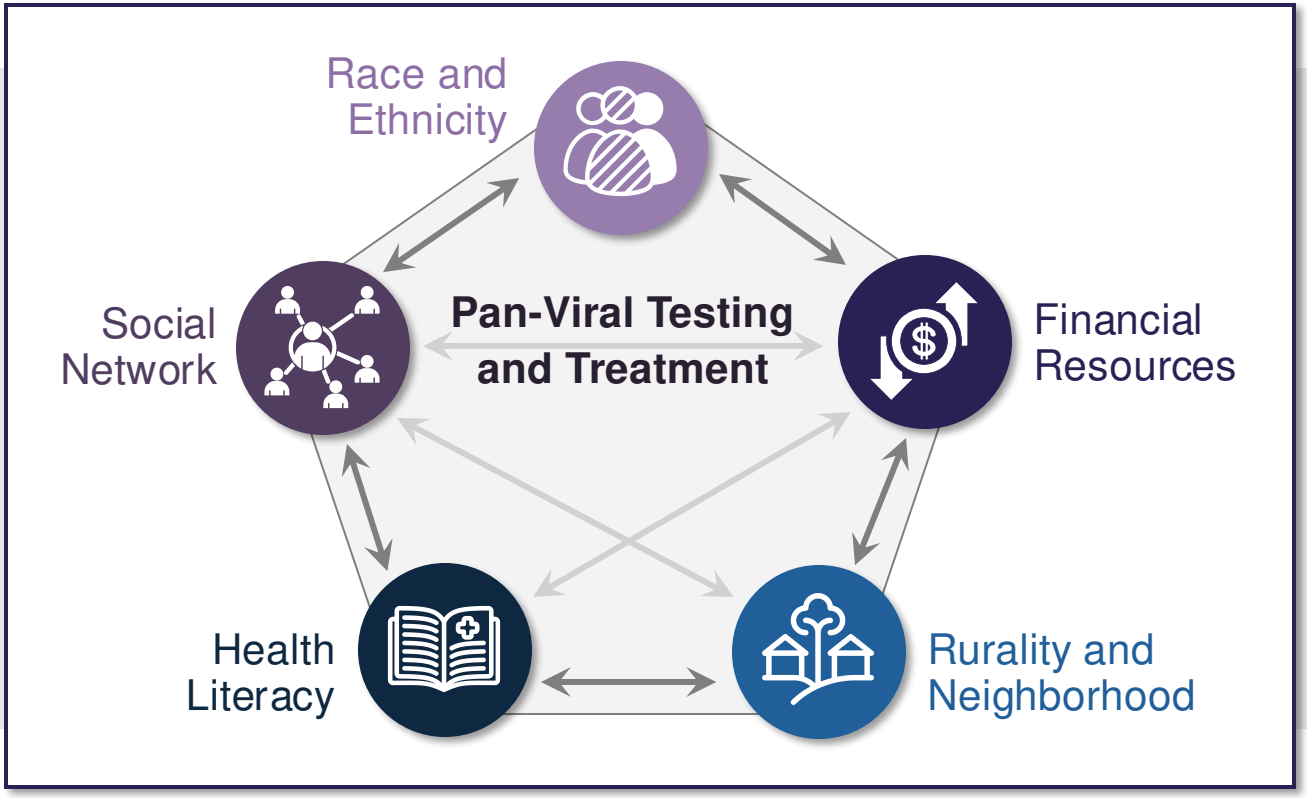




CME OUTFITTERS

Turkson-Ocran R-A, et al. *J Am Heart Assoc.* 2021;10:e018183.
AHRQ Publication 14-0034-1-EF. AHRQ website. 2016. https://www.ahrq.gov/sites/default/files/publications/files/share-approach_factsheet.pdf.

Social Drivers of Health (SDoH)



Adapted from Essien UR, et al. *Nat Rev Cardiol.* 2021;18(11):763–773.

CME OUTFITTERS

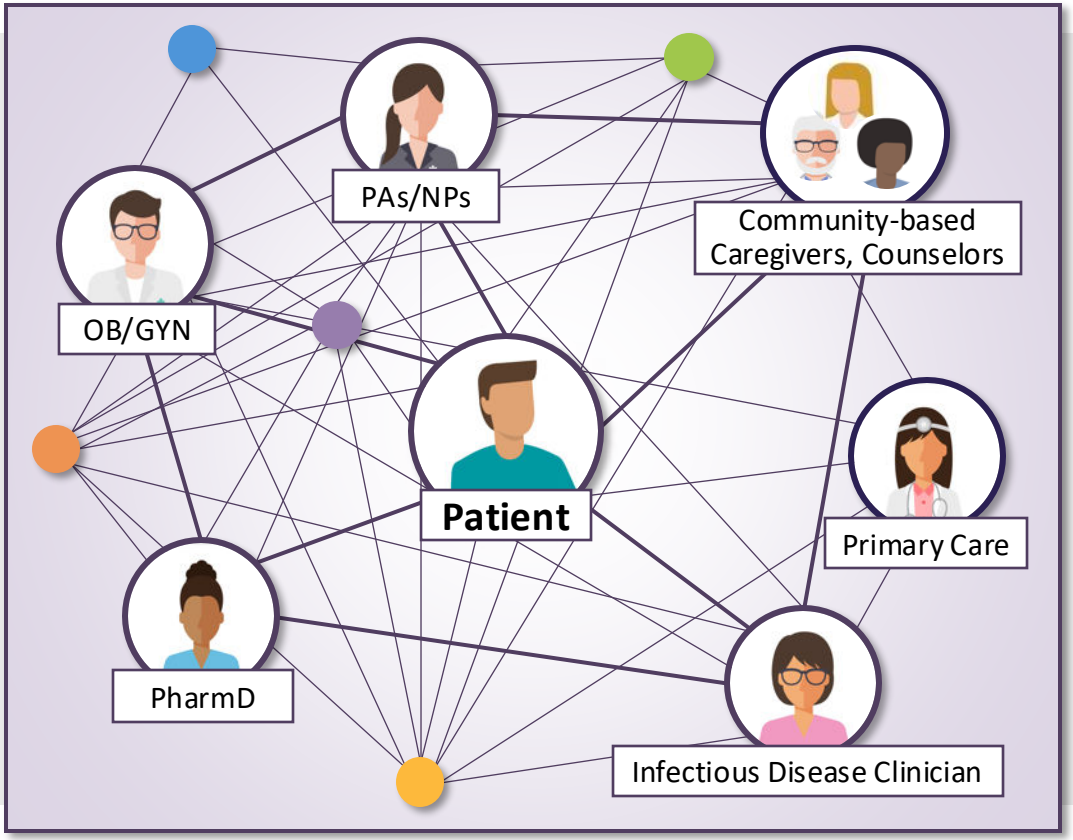
How Do I Ask Patients about SDoH?

Sample Questions	Possible Actions
What challenges do you have getting to appointments?	*Discuss best hours; telehealth*
Do you have access to a pharmacy?	*Recommend mail-order/prescription delivery*
Do you have access to care in your preferred language?	*Introduce to other providers*
Do you have insurance for visits and prescriptions?	*Refer to counselor, social worker; determine if drug company has patient assistance programs; refer to coupon/discount*
Do you have safe housing?	*Home health care visit to assess safety; report abuse*
Do you have a safe place to store/refrigerate medications?	*Provide pillbox, blister packs*
Are you experiencing discrimination that is negatively impacting your health?	*Report*
How do you prefer to learn about things?	*Use preferred learning method if possible*
Can you afford and access healthy food?	*Determine eligibility for meal assistance*

Anticoagulation Forum. Anticoagulation Centers of Excellence website. Updated December 2021. https://acforum-excellence.org/Resource-Center/resource_files/1885-2021-12-13-063409.pdf.

CME OUTFITTERS

A Team Approach: Patient Advocacy

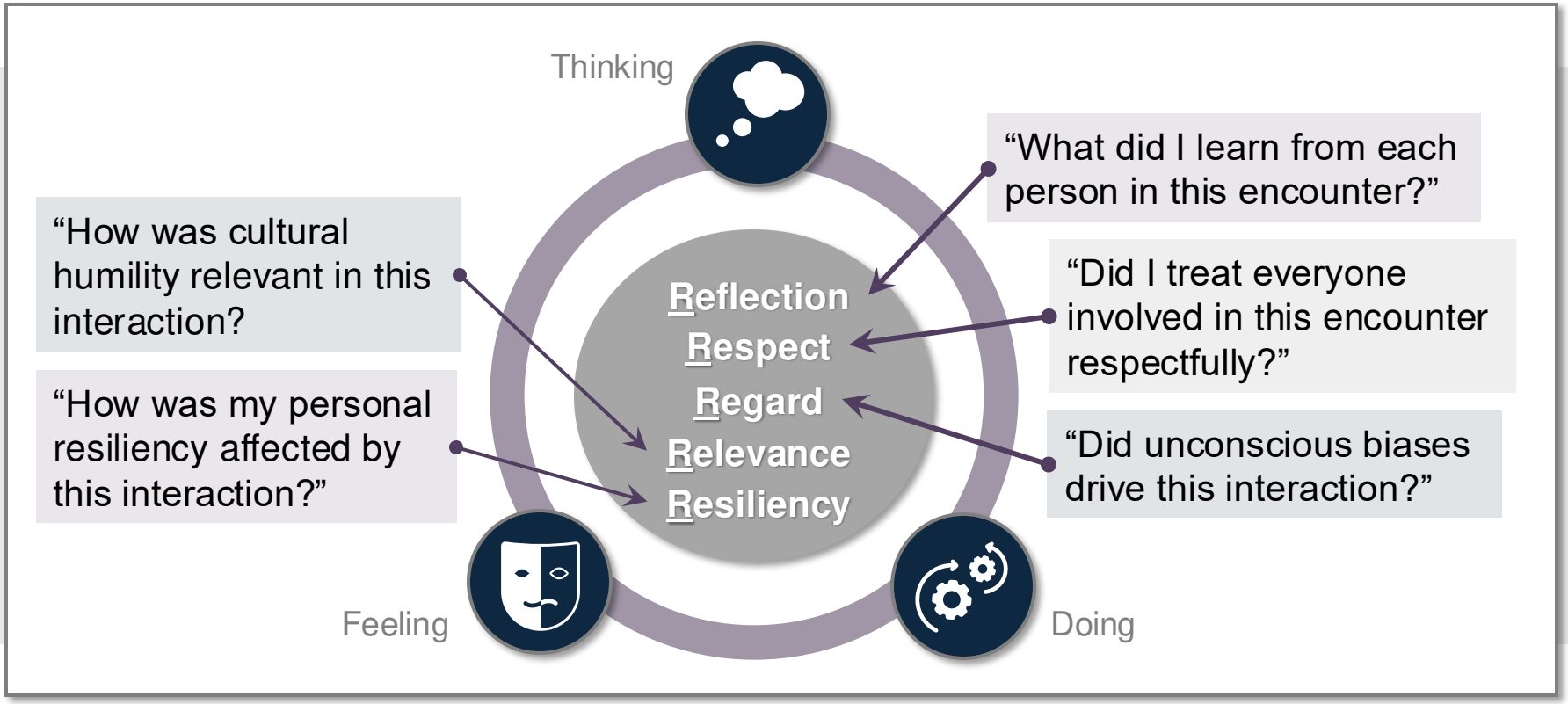




Asia Sullivan
PA-C, MPH

CME OUTFITTERS

5 Rs of Cultural Humility



Robinson D, et al. *Am J Med*. 2021;134(2):161–163.

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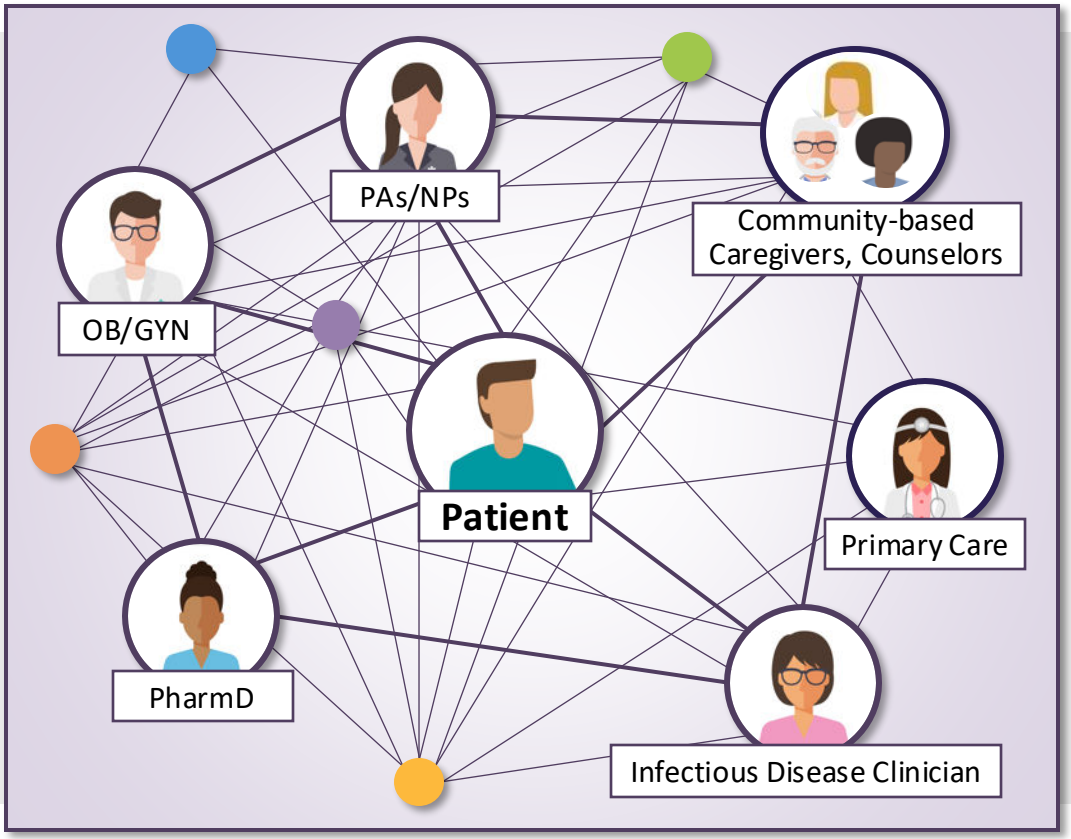
A Team Approach: Education and Trust





Joseph McCray
RN

LEARNING OBJECTIVE



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

CME OUTFITTERS

Pan-Viral Testing in Pregnancy

- According to the CDC and the American College of Obstetricians and Gynecologists (ACOG)
  - All pregnant individuals should be screened for viral infections, including HIV, HBV, and HCV—preferably in the first trimester
  - For patients with an increased risk of HIV, repeat testing is recommended in the third trimester
- 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

ACOG. ACOG website. Updated September 2018. https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/09/prenatal-and-perinatal-human-immunodeficiency-virus-testing. ACOG. ACOG website. Updated September 2023. https://www.acog.org/clinical/clinical-guidance/clinical-practice-guideline/articles/2023/09/viral-hepatitis-in-pregnancy.

CME OUTFITTERS

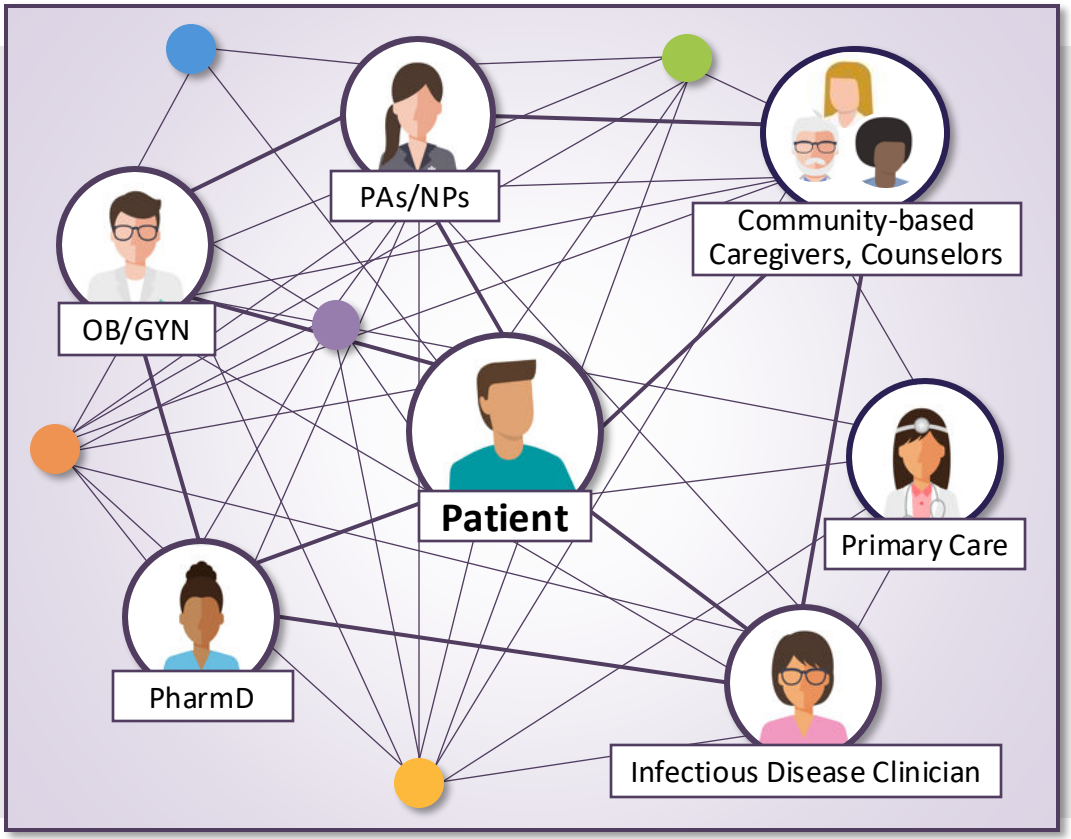
Syphilis Screening in Pregnancy

- 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

ACOG. ACOG website. 2024. https://www.acog.org/news/news-releases/2024/04/acog-recommends-obstetrician-gynecologists-increase-syphilis-screening-for-pregnant-individuals.

CME OUTFITTERS

A Team Approach: Perinatal Screening/Care





Martina Badell MD

CME OUTFITTERS

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

ACOG. ACOG website. Updated September 2018. https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/09/prenatal-and-perinatal-human-immunodeficiency-virus-testing. ACOG. ACOG website. Updated September 2023. https://www.acog.org/clinical/clinical-guidance/clinical-practice-guideline/articles/2023/09/viral-hepatitis-in-pregnancy. Connor EM, et al. *N Engl J Med*. 1994;331:1173–1180.

CME OUTFITTERS

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.

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

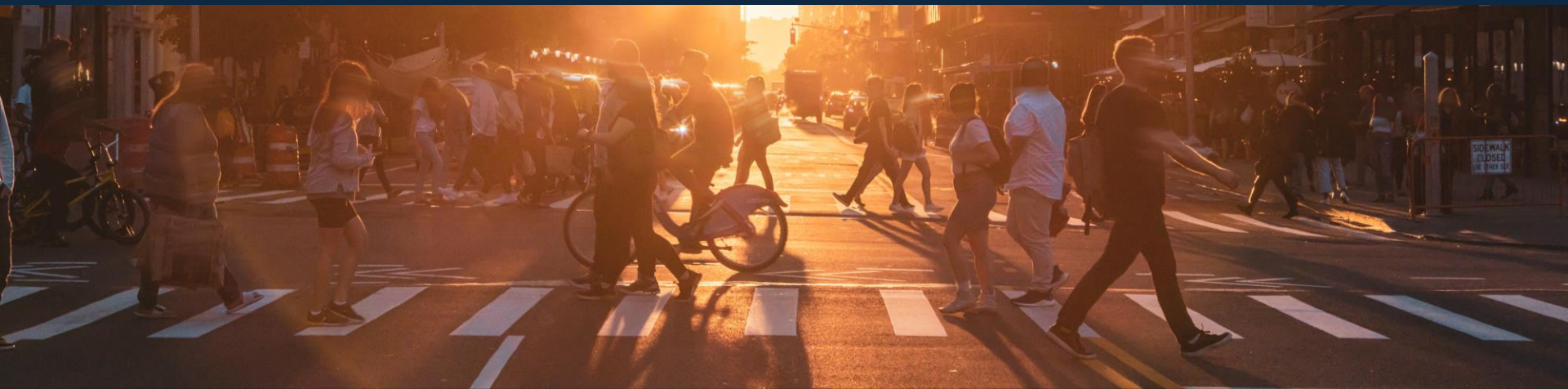
Improve adherence to CDC and ACOG recommendations for pan-viral and syphilis testing in pregnant individuals to reduce vertical transmission

CME OUTFITTERS



Question-and-Answer Session

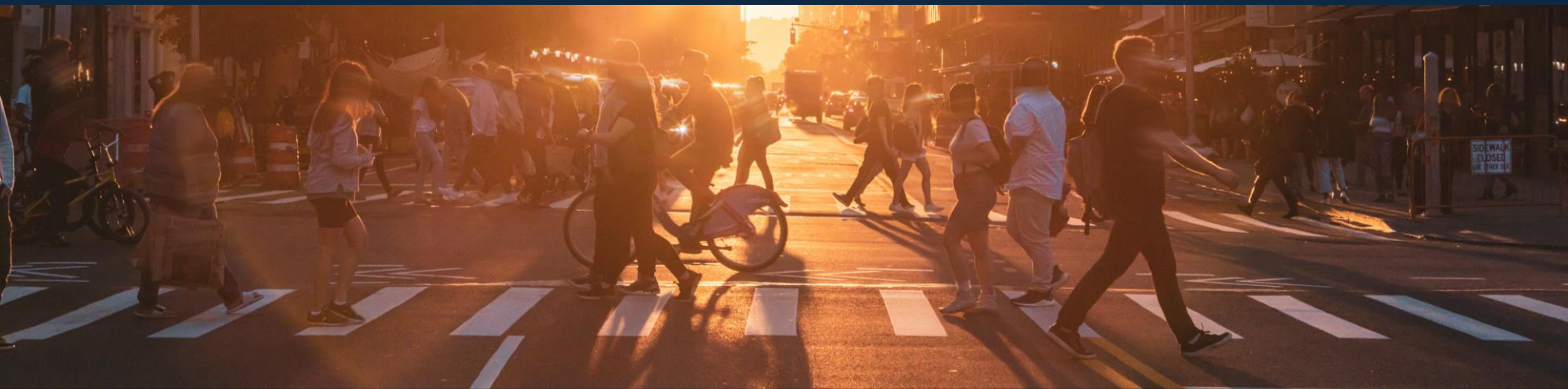
Juhi Moon, MD
Christina Madison, PharmD

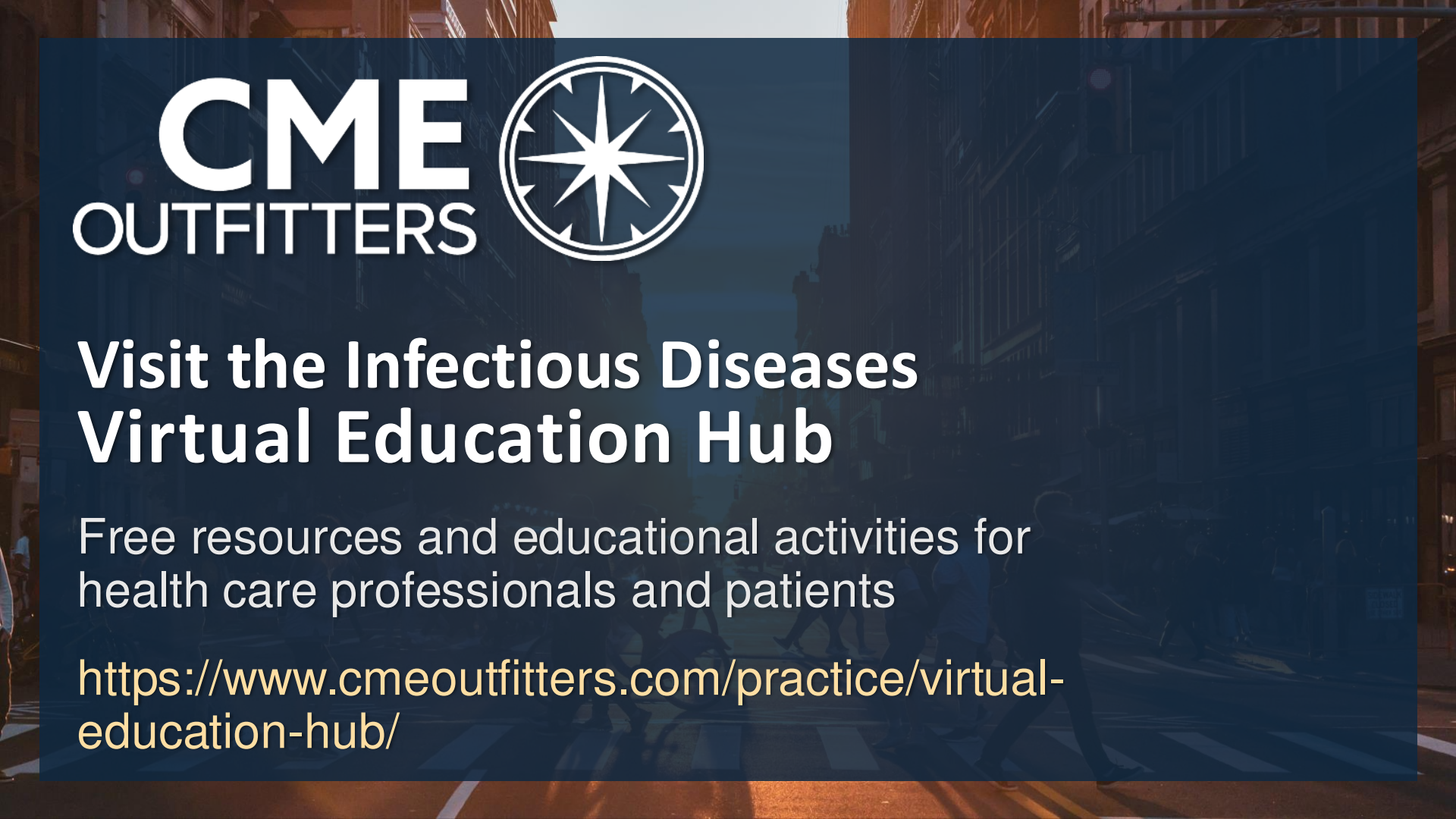




Closing Remarks

Juhi Moon, MD

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Virtual Education Hub
Free resources and educational activities for
health care professionals and patients
https://www.cmeoutfitters.com/practice/virtual-
education-hub/

Claim Credit

Scan the appropriate QR code for your mode of participation in this activity and create or log in to a CME Outfitters learner account. Complete the necessary requirements (e.g., pre-test, post-test, evaluation) and then claim your credit.*

Thank you for your participation!

*To receive credit, participants must register an account and apply for credit within 10 days of the live activity. For questions or technical difficulties, please contact info@cmeoutfitters.com.

In-Person

Livestream

Claim ABIM MOC Credit

3 Steps to Complete

1. Actively participate in the discussion today by **responding to questions** and/or **asking the faculty questions**
   (MOC credit can be claimed even if a question goes unanswered or an incorrect response is entered)
2. Complete the post-test and evaluation at the conclusion of the webcast
3. Enter your **ABIM ID number** and **DOB** (MM/DD) on the evaluation, so credit can be submitted to ABIM

ABIM CME MOC ACCREDITED

CME for MIPS Improvement Activity

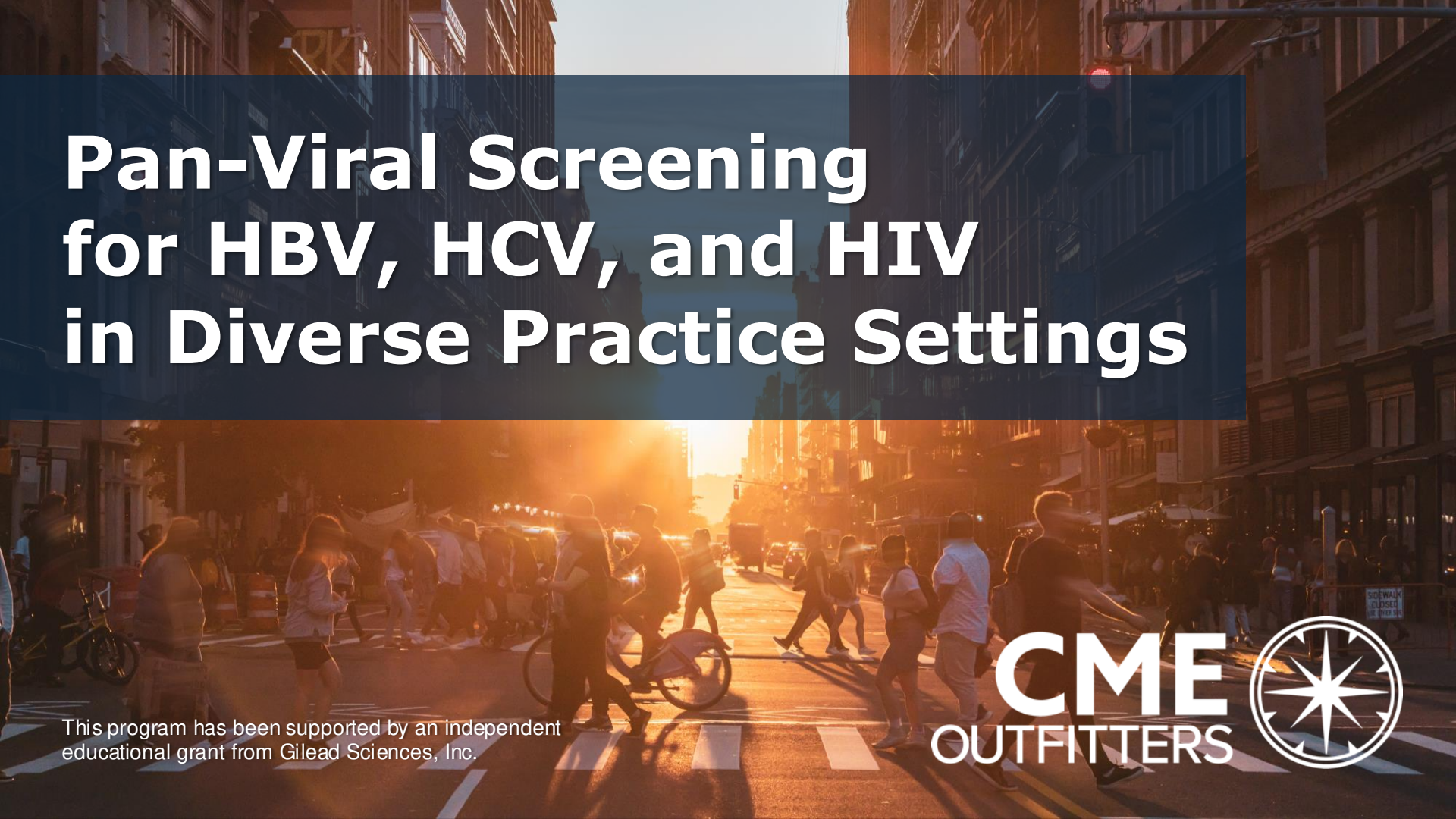
How to Claim This Activity as a CME for MIPS Improvement Activity

- Actively participate today by responding to ARS questions and/or asking the faculty questions
- Complete the post-test and activity evaluation at the link provided
- Over the next 3 months, actively work to incorporate improvements from this presentation into your clinical practice
- In approximately 3 months, complete the follow-up survey from CME Outfitters

CME for MIPS IMPROVEMENT ACTIVITY

CMEO will send you confirmation of your participation to submit to CMS attesting to your completion of a CME for MIPS Improvement Activity.

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



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