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Substance Use Disorder		
	Associate Professor of Associate Professor of	
	Medicine Medicine University of Alabama at Yale School of Medicine	
	Birmingham New Haven, Connecticut	
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	Financial Relationships With Ineligible Companies	
	(Formerly Described as Commercial Interests by the ACCME) Within the Last 2 Years:	
	Dr Eaton has received grants paid to her institution from Bristol Myers	
	Squibb, and has received consulting fees from Gilead Sciences, Inc. (Updated 12/14/22)	
	Dr Springer has received consulting fees from Alkermes Inc, and has	
	received in-kind drug donations from Alkermes Inc (Vivitrol) and Indivior (Sublocade) for NIH-sponsored research. (Updated 12/14/22)	
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	Learning Objectives	
	After attending this presentation, learners will be able to:	
	 Screen for substance use disorders in HIV prevention and treatment settings 	
	Initiate treatment for opioid use disorder with HIV treatment	
	Consider alternative plans to help patients with substance	
	use disorders and HIV stay retained in care	

CASE 1.

- 46 yo M admitted to hospital for acute left sided weakness and slurred speech and found to have acute right corona radiata ischemic stroke. HIV + on admission screening test with a CD4 127 and VL 18,000 copies/mL.
- During H&P, reports 7-year history of HIV
- He never sought care as his wife was sick and now is deceased Seen by ID consults and agreeable to start BIC/TAF/FTC Discharged to Inpatient Rehab for PT/OT

- Day 7, returns from smoking & developed somnolence, decreased RR, AMS MET Team called: delivered naloxone, returned to USOH
- Patient reports insufflating fentanyl he received from a friend at bus stop on

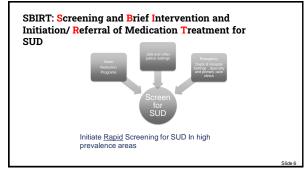
ARS Question 1: CASE 1 (cont)

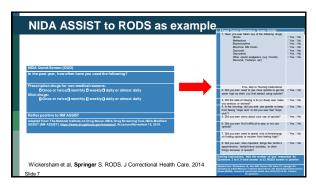
Which of the following is a substance use related outcome that could be prevented by integrating substance use screening and treatment into routine care?

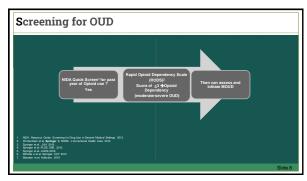
- A. Ischemic CVA
- B. Delay in ART initiation
- C. Failure to engage in HIV treatment
- D. Advanced HIV
- E. All of the above

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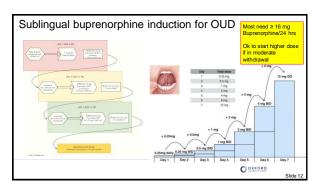
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ARS Question 2: CASE 2 46 yo M admitted to hospital for acute left sided weakness and slurred speech and found to have acute right corona radiata ischemic stroke, HIV and OUD. He was successfully resuscitated with naloxone after an in-hospital overdose on insufflated fentanyl. What is the next best step? A. Refer him to a methadone clinic on discharge B. Offer him buprenorphine/naloxone now C. Prescribe long-acting naltrexone D. None of the above, he is still on morphine for pain control

FDA-Ap	FDA-Approved Medications for OUD (MOUD)					
		Methadone	Buprenorphine	Extended-release Naltrexone		
	Mechanism of Action	Full µ agonist	Partial μ agonist, Partial κ antagonist	Full µ antagonist		
	Delivery	Oral	Sublingual, film, implant, injection*	Injection		
	Frequency	Daily	Daily oral; monthly injection; implant 6 months	monthly		
	Setting	Licensed drug treatment program	PCC/HIV care setting	PCC/HIV care setting (no special licensing)		
. Springer et al. Plos one 2012.; 2. Springer S. AIDS 2018; Springer JAIDS	Other	Highly structured due to safety concerns. OD potential Interacts with some ARVs Reduces HIV Risk Behaviors Reduces Overdose (OD)	Safer than methadone, without major OD potential Less interactions with ARVs Reduces HIV Risk Behaviors Reduces OD Improves HIV Viral Suppression (VS)	Also treats Alcohol Use disorders Adherence advantage NO overdose or diversion concerns Reduces HIV Risk Behawiors Reduces Overdose Improves VS*23		

Resting Pulse Rate (Beats per minute) \bigcirc 0 = pulse rate <80 \bigcirc 1 = pulse rate 81-100 \bigcirc 2 = pulse rate 101-120 \bigcirc 4 = pulse sate greater than 120	GI Upset (in past 1s hour) () 0 = no GI symptoms () 1 = stamach cramping () 2 = nautea/loose stools () 3 = vomiting/diarrhea () 5 = multiple episodes of diarrhea or vomiting
Sweating (in past 1s hour) \bigcirc 0 = No report of chills or flushing \bigcirc 1 = Subjective report of chills or flush \bigcirc 2 = flushed or observable moistness on face \bigcirc 3 = Beads of sweat on brow or face \bigcirc 4 = Sweat streaming off face	ing Trentor () 0 = no tremor () 1 = tremor can be felt, but not observed () 2 = slight tremor observable () 4 = gross tremor/inuscle twitching
Restlessness \bigcirc 0 = able to sit still \bigcirc 1 = subjective difficulty sitting still but able to do so \bigcirc 3 = frequestiffing/enovement of hands/arms \bigcirc 5 = unable to sit still for more than a few seconds.	that sharing () 0 = no yawning () 1 = yawning once or twice during assessment () 2 = yawning 3 or more times during assessment () 4 = yawning several times a minute
Pupil Size ○ 0 = pupils pinned or normal size for room light ○ 1 = pupils possibly larger than normal normal light ○ 2 = pupils moderately dilated ○ 3 = pupils dilated, only rim of its visible	or Initability/Ansiety
Muscle/Bone/Joint Aches \bigcirc 0 – not present \bigcirc 1 – mild diffuse discomfort \bigcirc 2 – patient reports seve diffuse aching of joints/muscles \bigcirc 4 – patient rubbing joints/muscles and unable to sit still due to discomfort.	re Piloerection ○ 0 ~ skin is smooth ○ 3 ~ piloerection of skin can be felt, arm hair standing up ○ 5 ~ prominent piloerection
Rhistorrhea/Lacrimation () 0 = not present () 1 = nasal stuffiness/lunusually moist eyes () 2 = nose running or teering () 4 = nose constantly running or teers streaming down cheeks	Tetal: Score: 5-12 = mild; 13-24 = moderate; 25-36 = moderately severe; greater than 1 = severe

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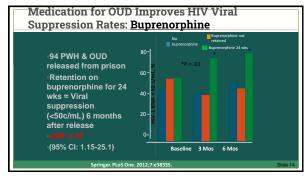
ARS Question 3: Case 3

46 yo M with HIV, OUD and recent CVA arrives at your HIV clinic for hospital follow up. You note that he was started on buprenorphine/naloxone (8mg/2mg) during his admission and is now taking 3 tabs daily. He is doing well and has not taken any non-medical opioids; reports occasional crack cocaine usage. Which of the following is associated with continued buprenorphine/naloxone or other MOUD?

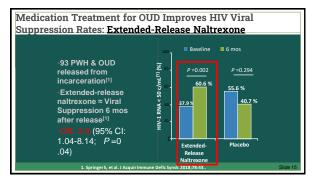
- A. Improved Viral Load Suppression
- B. Improved Quality of Life
- C. Reduction in Overdose Risk
- D. All of the above

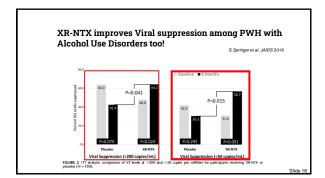
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HIV and OUD *Methadone and buprenorphine primarily metabolized by CYP3A4^[1] *Few DDIs between OUD medications and recommended ART regimens^[2,3] *Potential DDIs between buprenorphine and ATV, DRV, EFV^[3] *No interaction expected *Potential weak interaction ##W Regimen^[2,3] *Buprenorphine Methadone Nattrexone Lamivoidne (ETC) *Abzeavir (ABIC) *Bucketgravir (DTG) *Emtrictabine/tenofovir alafenamide (FTC/TAF) *Emtrictabine/tenofovir dalafenamide (FTC/TAF) *Baltegravir (RAL)

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ARS Question 4: Case 4 A 46 yo M with HIV and OUD is doing well on his ART and MOUD but reports that he has gone from occasional stimulant use (smoked cocaine) to methamphetamines and is now injecting multiple times weekly. What is the appropriate next step? A. Stop his MOUD as he no longer has an indication B. Stop his MOUD and offer him contingency management C. Switch his MOUD to extended-release naltrexone D. Continue MOUD and provide harm reduction, naloxone E. Continue MOUD and offer contingency management

Stimulant Use Disorder Treatment Unfortunately, there are no FDA approved effective medications for treatment of cocaine and methamphetamine use disorder Behavioral treatments are the recommended treatment	
 Most effective has been <u>Contingency Management programs</u> that can reduce stimulant use Offer other harm reduction tools for persons who use stimulants SSPs, safe injection kits, drug testing (contamination of stimulant supply with fentanyl and xylazine) Offer naloxone to reduce risk of death from fentanyl / opioids contaminating stimulant supply Educate about xylazine contamination and risk of overdose from 	
stimulants alone	
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What else do PWUD need? Low-barrier access to HIV & SUD prevention and treatment services Bringing services to people in need, rather than expecting them to come to us in traditional clinics Low-cost/ Rapid scale-up approaches Community health workers	
Patient/ Peer navigators Pharmacists Telehealth with specialists Visiting Nurses- home care model Mobile health units, non-traditional clinic settings Long-acting injectable PrEP, ART, & MOUD & combinations of these treatments	
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Key Recommendations for Substance Use and HIV	
Provide screening and treatment for substance use disorders to all persons at risk for and living with HIV (evidence rating: Ala) Substance use treatment should be integrated into HIV prevention and treatment services (evidence rating: Ala)	

Persons with substance use disorders and HIV infection or risk for HIV should receive integrated addiction treatment with:
o Pharmacotherapy for opioid and alcohol use disorders (evidence rating: Ala)
o Contingency management for stimulant use disorders (evidence rating: AIII)

Key Recommendations for Substance Use and HIV

- Persons with opioid use and alcohol use disorders should be offered timely initiation of medications for substance use disorder regardless of HIV and HCV treatment plans (evidence rating: Ala)
- Peer/patient support staff, telehealth, extended hours, mobile clinics, and walk-in clinic options should be available to persons with substance use disorders who are receiving HIV treatment or prevention (evidence rating: Allb)
- Peer/patient support staff, mobile health units, and pharmacy delivery services should be available to persons with substance use disorders who are receiving HIV treatment or prevention (evidence rating: Allb)

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