Treatment of Substance Use Disorders in the Hospital

September 2022

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Disclosures

- I have nothing to disclose
- Thank you to Linda Peng, MD and Honora Englander, MD for recommending a case-based approach and for sharing some of the slides in this presentation

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Welcome

- Diagnose Substance Use Disorders using DSM V
- Avoid stigmatizing language
- Treat withdrawal (this talk will focus on opioids)
- Reduce harm
- Ask for help: **OHSU Addiction Consult Line**

  Call 503-494-4567 and ask for the addiction consult line (available M-F 8am-5pm)

Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

During your assessment, you notice he appears diaphoretic with piloerection, restlessness and agitation. He’s shifting around in bed and having trouble focusing on your conversation.

Suspecting Substance Use?

- Ask permission
- Explain why you are asking
- Use non-judgmental language (eg. "substance use" instead of "substance abuse")
- Stay rooted in role of care provider

"I want to make sure you're comfortable while you're admitted and treat any potential withdrawal symptoms. Can I ask you about substances many of my patients use, like opioids?"

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DSM V Diagnosis of Substance Use Disorder

	DSM V Diagnostic Criteria: Substance Use Disorder *SEVERITY: 2-3: mild 4-5: moderate 6 or more: severe*
Compulsion + Craving	1. Taking the substance in larger amounts or for longer than you meant to.
	2. Wanting to cut down or stop using the substance but not managing to do so.
	3. Spending a lot of time getting, using, or recovering from use of the substance
	4. Cravings and urges to use the substance
Consequences + Loss of control	5. Not managing to do what you should at home, work, or school because of substance use
	6. Continuing to use, even when it causes problems in relationships
	7. Giving up important social, occupational, or recreational activities because of substance use
	8. Using substances again and again, even when it puts you in danger
	9. Continuing to use, even if you have a physical or psychological problem that could have been caused or made worse by the substance
Tolerance + Withdrawal	*10. Needing more of the substance to get the effect you want (tolerance)
	*11. Development of withdrawal symptoms, which can be relieved by taking more of the substance
	*Criteria not met if taking prescribed drugs under supervision

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Taking a Substance Use History

“When did you start using heroin?”
“Are there things you like about heroin? Things you don’t like?”
“Have you ever wanted to stop using heroin?”
“Has heroin caused any problems in your relationships?”
“What happens when you run out of heroin?”
“Have you ever experienced an overdose?”
“Have you been tested for HIV, hepatitis?”

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Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

Mr. Grey shares his substance use history:

- Injecting heroin daily for several years and endorses withdrawal
- Several treatment attempts with brief periods of abstinence
- Feels heroin use has contributed to conflict with ex-wife and grown children
- Difficulty working the last 6 months given increasing tolerance and increase in use
- Experienced a near overdose about 2 months ago when trying fentanyl
- Has used fentanyl a few times since when he wasn't able to access heroin

What is your diagnosis?

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DO THIS

DON'T DO THIS

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Words Matter: Stigma as barrier to treatment

- Surveys involving identical case vignettes except for substance-related terminology randomly distributed to attendees of MH/Addictions Conference 2008 (516/728 ~71% completion)

- Does terminology evoke differential judgments about culpability, social threat, and whether more punitive vs. therapeutic measures should be taken?

- Exposure to the term “substance abuser” evoked judgments of greater personal culpability and were more likely to agree that punitive action should be taken

“Substance Abuser”

Mr. Williams is a substance abuser and is attending a treatment program through the court. As part of the program Mr. Williams is required to remain abstinent from alcohol and other drugs. He has been compliant with program requirements, until one month ago, when he was found to have two positive urine toxicology screens which revealed drug use and a breathalyzer reading which revealed alcohol consumption. Within the past month there was a further urine toxicology screen revealing drug use. Mr. Williams has been a substance abuser for the past few years. He now awaits his appointment with the judge to determine his status.

“Substance Use Disorder”

Mr. Williams has a substance use disorder and is attending a treatment program through the court. As part of the program Mr. Williams is required to remain abstinent from alcohol and other drugs. He has been compliant with program requirements, until one month ago, when he was found to have two positive urine toxicology screens which revealed drug use and a breathalyzer reading which revealed alcohol consumption. Within the past month there was a further urine toxicology screen revealing drug use. Mr. Williams has had a substance use disorder for the past few years. He now awaits his appointment with the judge to determine his status.

Kelly et al. International Journal of Drug Policy 2010

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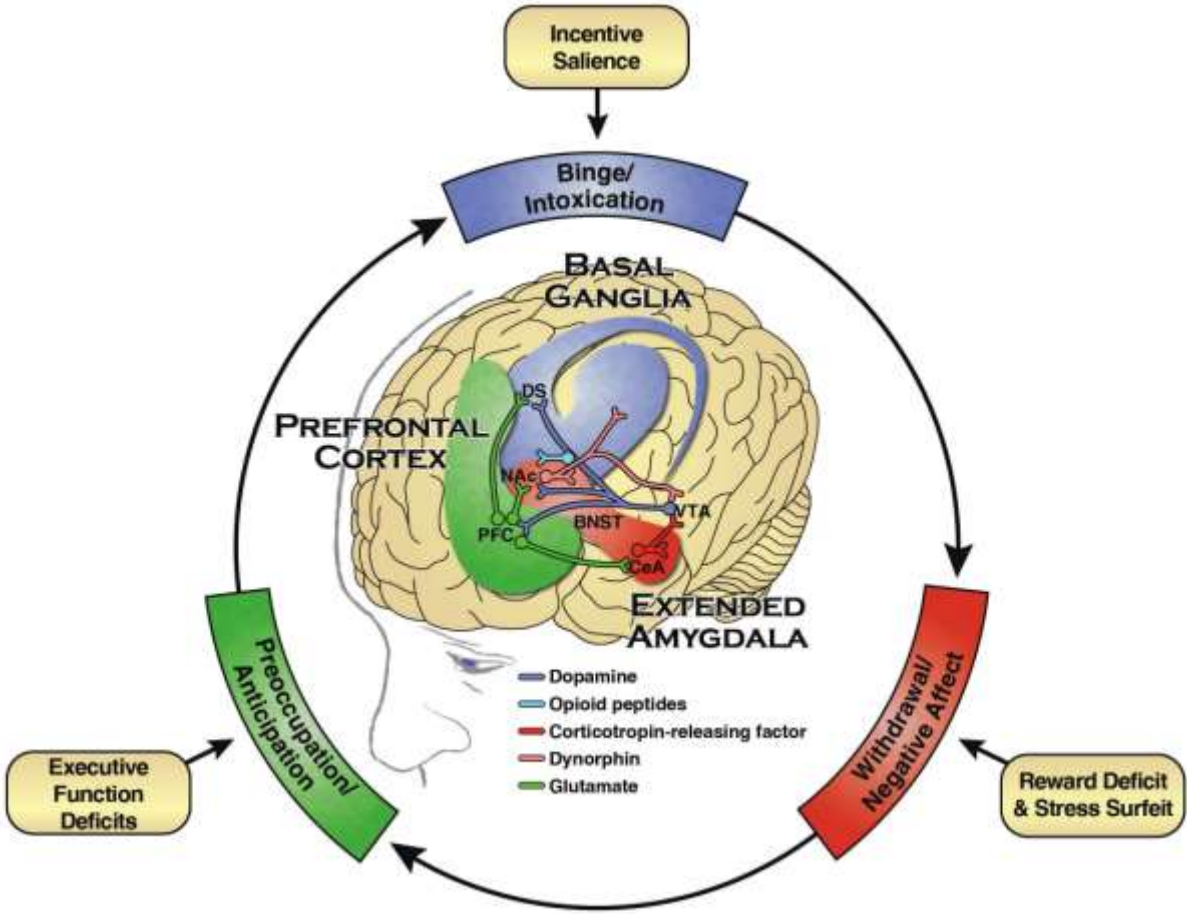
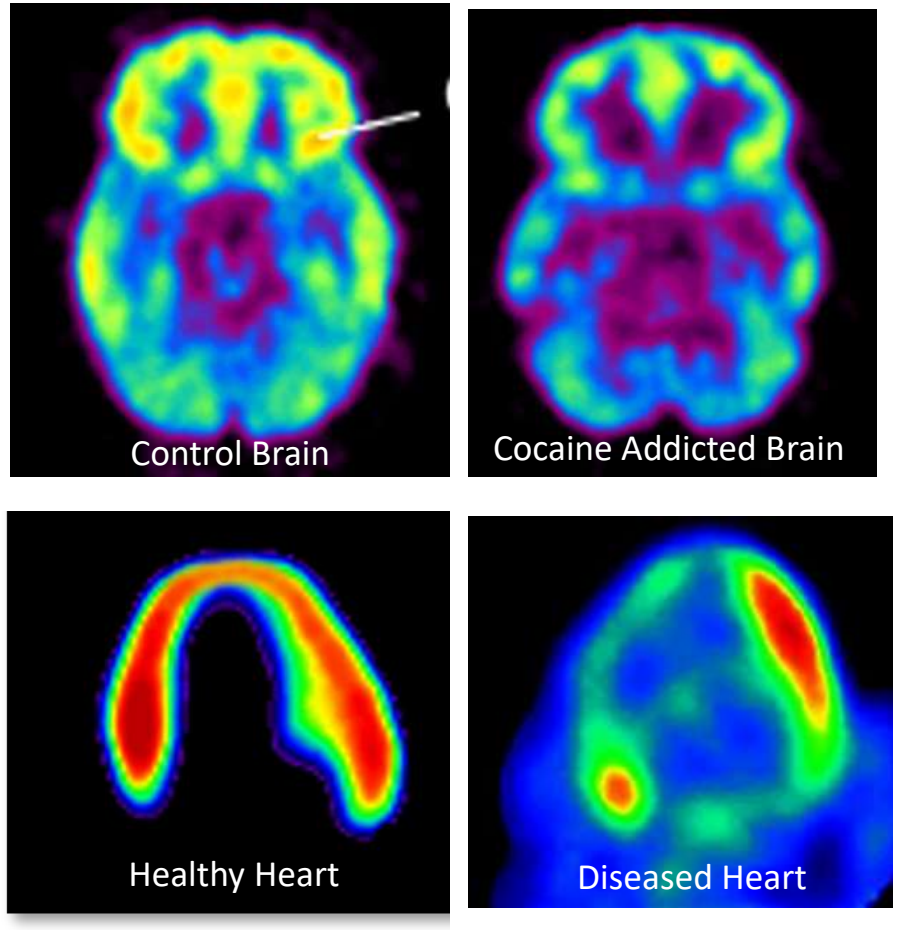
The Biological Basis of Addiction





Koob et al. Adapted for The Surgeon General's Report on Alcohol, Drugs, and Health 2016
Fowler et al. Addiction Science & Clinical Practice 2007

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Addiction: A Lived Experience

- Substance use is a common human behavior
- **Addiction is not a moral failing or bad choice**
- Genetic and environmental factors predispose to chronic drug use
- Chronic substance use can lead to structural and functional disruption of motivation, reward, inhibitory control centers in the brain
- Drug use becomes an automatic, compulsive behavior
- **Addiction is a treatable chronic condition with biological, social, emotional, cultural, and political underpinnings**

Koob. Psychiatry Online. 2011
Lie. American Journal of Public Health 2022

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Words Matter: Language and Addiction

Instead of...	Use...	Because...
• Addict	• Person with substance use disorder[1]	• Person-first language. • The change shows that a person "has" a problem, rather than "is" the problem.[7] • The terms avoid eliciting negative associations, punitive attitudes, and individual blame.[7]
• User	• Person with OUD or person with opioid addiction (when substance in use is opioids)	
• Substance or drug abuser	• Patient	
• Junkie	• Person in active use; use the person's name, and then say "is in active use."	
• Alcoholic	• Person with alcohol use disorder	
• Drunk	• Person who misuses alcohol/engages in unhealthy/hazardous alcohol use	
• Former addict	• Person in recovery or long-term recovery	
• Reformed addict	• Person who previously used drugs	

Instead of...	Use...	Because...
• Habit	• Substance use disorder • Drug addiction	• Inaccurately implies that a person is choosing to use substances or can choose to stop.[6] • "Habit" may undermine the seriousness of the disease.
• Abuse	**For illicit drugs:** • Use **For prescription medications:** • Misuse • Used other than prescribed	• The term "abuse" was found to have a high association with negative judgments and punishment.[9] • Legitimate use of prescription medications is limited to their use as prescribed by the person to whom they are prescribed. Consumption outside these parameters is misuse.
• Opioid substitution replacement therapy • Medication-assisted treatment (MAT)	• Opioid agonist therapy • Pharmacotherapy • Addiction medication • Medication for a substance use disorder • Medication for opioid use disorder (MOUD)	• It is a misconception that medications merely "substitute" one drug or "one addiction" for another.[8] • The term MAT implies that medication should have a supplemental or temporary role in treatment. Using "MOUD" aligns with the way other psychiatric medications are understood (e.g., antidepressants, antipsychotics), as critical tools that are central to a patient's treatment plan.
• Clean	**For toxicology screen results:** • Testing negative **For non-toxicology purposes:** • Being in remission or recovery • Abstinent from drugs • Not drinking or taking drugs • Not currently or actively using drugs	• Use clinically accurate, non-stigmatizing terminology the same way it would be used for other medical conditions.[10] • Set an example with your own language when treating patients who might use stigmatizing slang. • Use of such terms may evoke negative and punitive implicit cognitions.[7]

NIDA website. Words Matter – Terms to Use and Avoid When Talking About Addiction. Accessed 2022

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Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

You thank Mr. Grey for sharing his substance use history and inform him that in order to treat the infection, he needs to be admitted for IV antibiotics and evaluation of bacteremia.

He tells you he's anxious about withdrawal and pain. Wonders if you can just give him some pills so he can leave.

How should you treat withdrawal?

DO THIS

Provide standard of care to people with substance use disorders by treating withdrawal

DON'T DO THIS

Discharge someone Against Medical Advice for treatable withdrawal

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Patient Initiated Discharges & SUDs

- "Against Medical Advice" (AMA) Discharges associated with increased 30-day mortality and hospital readmission
- People with SUDs are up to 3x more likely to be discharged AMA as compared to those without SUDs
- In-hospital methadone and social support have been shown to independently reduce the odds of an AMA discharge

Simon et al. Substance Abuse. 2020

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Identifying and Assessing Opioid Withdrawal

Syndrome	Clinical findings	Onset after last use
Early	**Craving**, **anxiety**, agitation, diaphoresis	4 to 12 hours
Mid-Late	Insomnia, restlessness, **lacrimation**, rhinorrhea, diaphoresis, **mydriasis, yawning**	8 to 24 hours
Late	Vomiting, diarrhea, chills, **muscle spasms**, tremor, tachycardia, **piloerection**	Up to 3 days

Wesson & Ling, J Psychoactive Drugs. 2003 Apr-Jun;35(2):253-9.

COWS Clinical Opiate Withdrawal Scale

Resting Pulse Rate: _____ beats/minute *Measured after patient is sitting or lying for one minute* 0 Pulse rate 80 or below 1 Pulse rate 81-100 2 Pulse rate 101-120 4 Pulse rate greater than 120	GI Upset: *over last 1/2 hour* 0 No GI symptoms 1 Stomach cramps 2 Nausea or loose stool 3 Vomiting or diarrhea 5 Multiple episodes of diarrhea or vomiting
Sweating: *over past 1/2 hour not accounted for by room temperature or patient activity.* 0 No report of chills or flushing 1 Subjective report of chills or flushing 2 Flushed or observable moistness on face 3 Beads of sweat on brow or face 4 Sweat streaming off face	Tremor observation of outstretched hands 0 No tremor 1 Tremor can be felt, but not observed 2 Slight tremor observable 4 Gross tremor or muscle twitching
Restlessness *Observation during assessment* 0 Able to sit still 1 Reports difficulty sitting still, but is able to do so 3 Frequent shifting or extraneous movements of legs/arms 5 Unable to sit still for more than a few seconds	Yawning *Observation during assessment* 0 No yawning 1 Yawning once or twice during assessment 2 Yawning three or more times during assessment 4 Yawning several times/minute
Pupil size 0 Pupils pinned or normal size for room light 1 Pupils possibly larger than normal for room light 2 Pupils moderately dilated 5 Pupils so dilated that only the rim of the iris is visible	Anxiety or irritability 0 None 1 Patient reports increasing irritability or anxiousness 2 Patient obviously irritable anxious 4 Patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiate withdrawal is scored* 0 Not present 1 Mild diffuse discomfort 2 Patient reports severe diffuse aching of joints/ muscles 4 Patient is rubbing joints or muscles and is unable to sit still because of discomfort	Gooseflesh skin 0 Skin is smooth 3 Piloerection of skin can be felt or hairs standing up on arms 5 Prominent piloerection
Runny nose or tearing *Not accounted for by cold symptoms or allergies* 0 Not present 1 Nasal stuffiness or unusually moist eyes 2 Nose running or tearing 4 Nose constantly running or tears streaming down cheeks	Total Score _____ The total score is the sum of all 11 items Initials of person completing Assessment: _____
Score:	5-12 mild; 13-24 moderate; 25-36 moderately severe; more than 36 = severe withdrawal

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Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

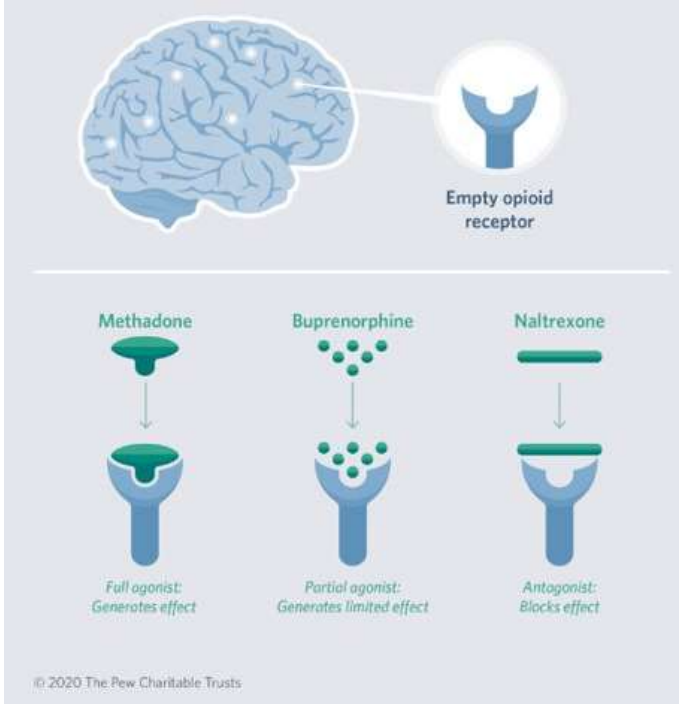
He has tried non-prescribed buprenorphine in the past to help with withdrawal.

He has never taken methadone.

You explain the options for medications for opioid use disorder (MOUD).

Medications for Opioid Use Disorder

	Methadone	Buprenorphine	Naltrexone
Mechanism of action	Long-acting mu receptor agonist	Long-acting, competitive partial mu receptor agonist	Mu receptor antagonist
Acute pain treatment with full agonists	No problem	May complicate traditional induction	Contraindication
Withdrawal necessary prior to initiation	No	Yes for traditional induction; but No for micro-induction	Yes
Induction duration	Weeks	Days	7 days after last opioid use
Rural geography	Often challenging	Often accessible (including telehealth)	PO accessible, IM more challenging
Outpatient treatment options	OTP (daily), need immediate discharge plans	OTP (daily) OR Office based (weekly+)/Telehealth	Office based (weekly+ for PO, monthly for IM)
Dispensing at SNF	Challenging	Straightforward	Depends



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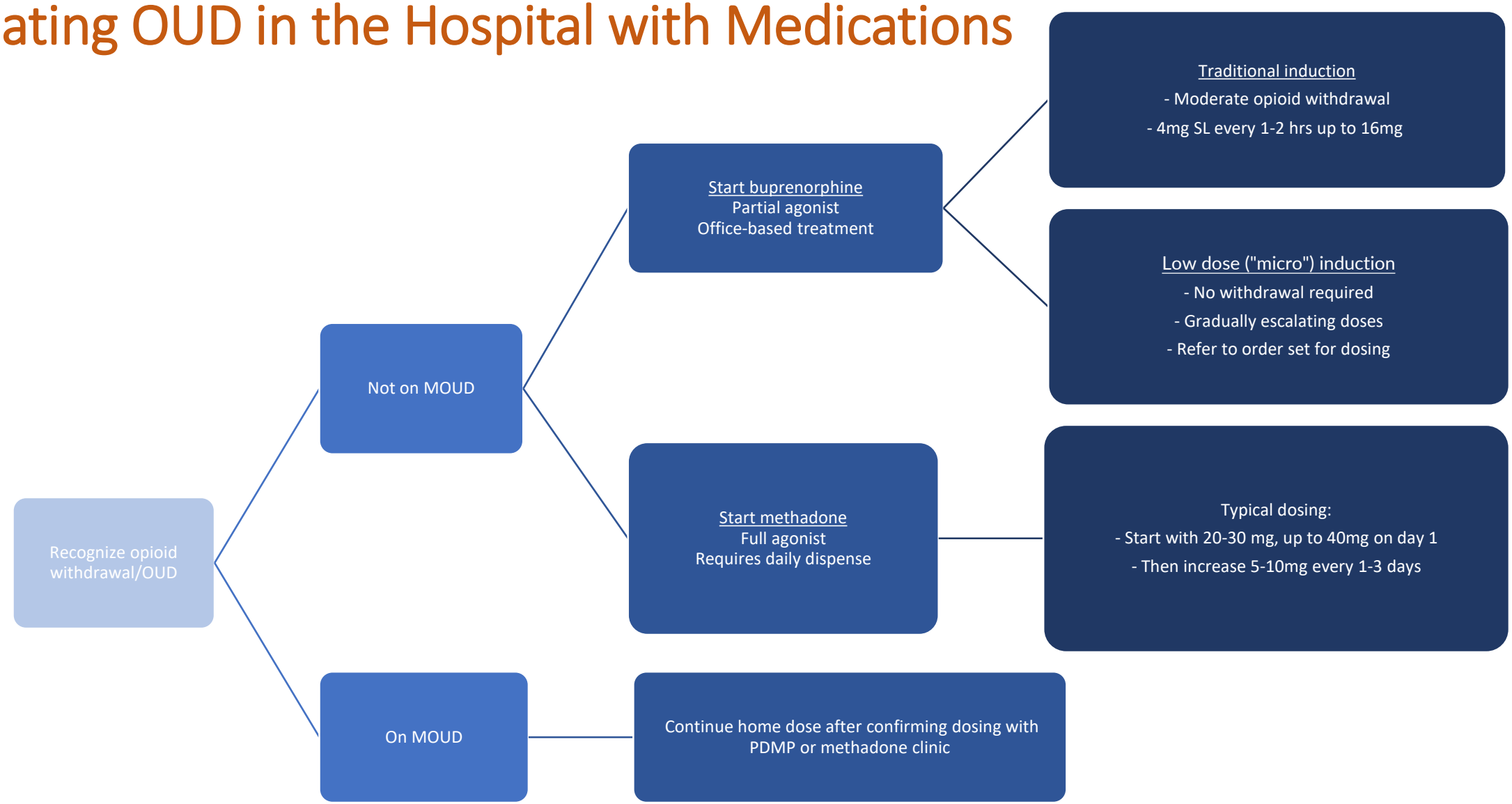
Treating OUD in the Hospital with Medications



Slide credit: Linda Peng, MD

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Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

Mr. Grey wants to try buprenorphine

COWS 16

You order buprenorphine to start now at a dose of 4mg, with additional as needed doses up to 16mg

When you check in with Mr. Grey a few hours later, he is feeling much better.

Starting Buprenorphine (standard induction)

1

Day 1

When COWS > 10* or >12 hours since last short acting opioid give 4mg SL buprenorphine **

2

Day 1 continued

Give additional 4 mg every 1-2 hours PRN, until withdrawal and or cravings abate

Do not exceed 16 mg

3

Day 2

Give total day 1 dose in AM

Then 4-1mg does PRN for max 24 mg daily dose

4

Day 3+

Continue buprenorphine throughout hospitalization

5

At discharge

Provide 1-2 week bridge Rx (must have x-waiver) and schedule follow up appointment with a waivered provider

* COWS threshold may be higher depending on clinical scenario

** Buprenorphine formulations:
Suboxone = sublingual buprenorphine/naloxone
Subutex = sublingual buprenorphine

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Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

What if Mr. Grey says his withdrawal feels better after 4mg buprenorphine but he is having significant acute pain due to cellulitis?

- Switch to low dose buprenorphine induction (“micro-induction”)
- Start short acting full agonist opioids (oxycodone or hydromorphone) at higher doses and in liquid formulation if PO

Low Dose Buprenorphine ("micro-") Induction

- Takes withdrawal out of the equation
- An approach that introduces buprenorphine gradually
- Buprenorphine binds to mu receptors slowly displacing full agonists so patients don't experience withdrawal and can **CONTINUE** full agonists (e.g. oxycodone or hydromorphone)

DAY	TOTAL BUPRENORPHINE DOSE
1	0.5 mg – 1 mg
2	0.5 mg BID
3	1 mg BID
4	2 mg BID
5	4 mg BID
6	4 mg TID
7	8 mg BID
8	Stop/taper full agonists OR may continue longer for acute pain

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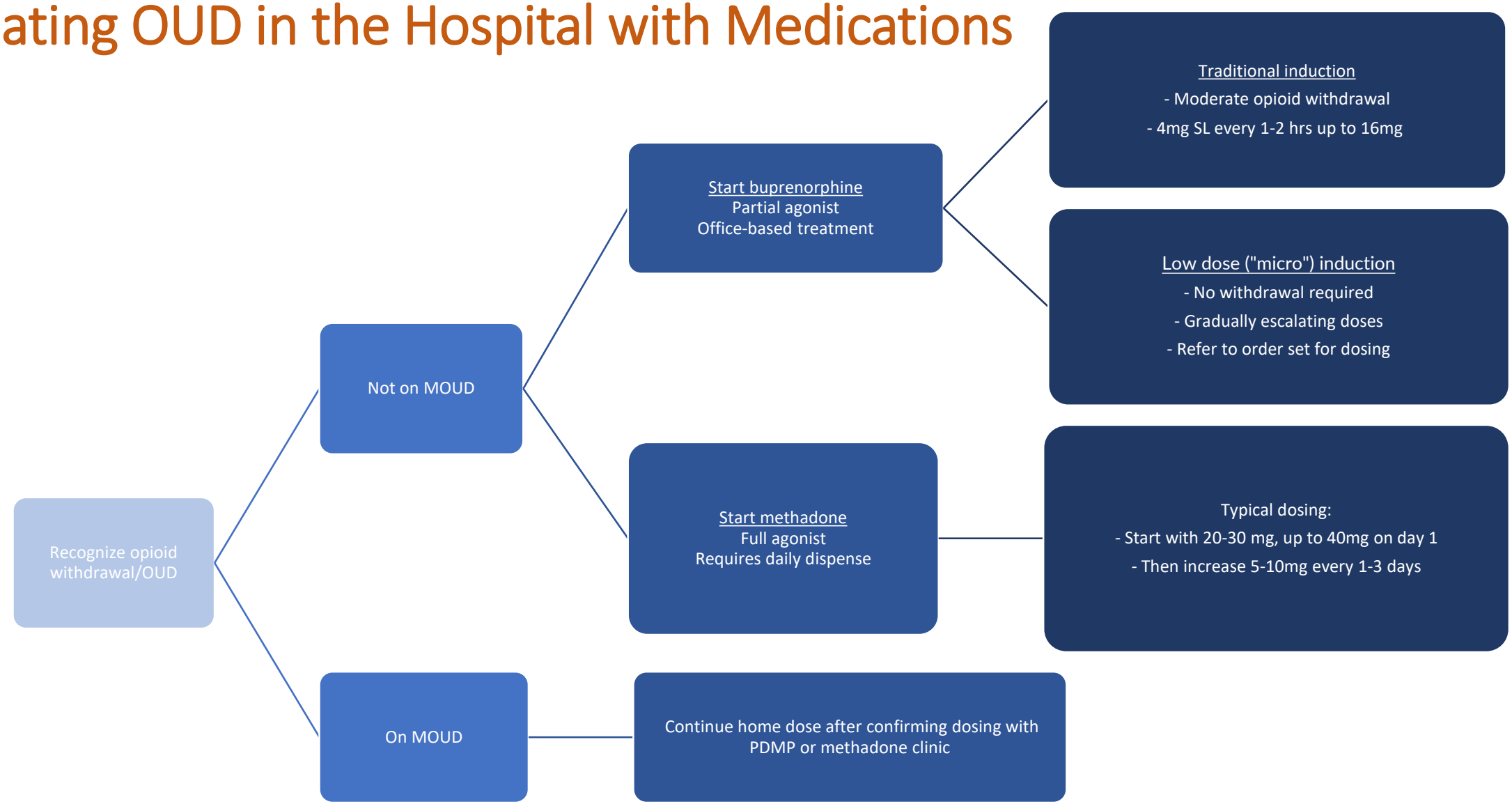
Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

What if Mr. Grey tells you he's tried buprenorphine in the past and it didn't work for him?

Treating OUD in the Hospital with Medications



Slide credit: Linda Peng, MD

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Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

What if Mr. Grey tells you he's tried buprenorphine in the past and it didn't work for him? You offer methadone as an option, and he agrees.

- Start 30 mg oral liquid methadone now and 10 mg oral liquid methadone in 2 hours PRN withdrawal/cravings
- Continue 40 mg liquid methadone daily if patient does not want to continue after discharge or if no connection to methadone OTP possible.
- If methadone OTP an option and patient wants to continue, increase methadone by 5-10 mg daily every 3-5 days and arrange for continuous dosing at OTP
- **Do not prescribe methadone at discharge**

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Medications for OUD in Hospital Setting

- Use of naltrexone often limited by withdrawal/pain
- Buprenorphine and methadone are effective treatments for withdrawal and can both be used in the setting of acute pain
- Buprenorphine induction can be done using traditional approach or low dose (“micro”) induction
- Buprenorphine can be prescribed and continued in office-based treatment settings post discharge
- Methadone cannot be prescribed at discharge and patients must follow up at an Opioid Treatment Program (OTP)/Methadone Clinic

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Case

Mr. Grey is a 48-year-old man admitted to the hospital with sepsis from severe cellulitis of his right leg.

After 48 hours in the hospital, Mr. Grey expresses need to leave. He states hospital environment is too restrictive and reminds him of being in jail.

- Blood cultures are no growth to date and cellulitis is only minimally improved on IV vancomycin. T max 100.3 overnight.
- You express concern, determine he has capacity and attempt to partner around restrictions
- After informed consent and review of non-standard treatment options, Mr. Grey opts to discharge with oral antibiotics, wound care supplies and return precautions
- He declines medications for opioid use disorder at discharge

What other interventions might you consider?

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DO THIS

Recognize Harm Reduction* as Treatment

DON'T DO THIS

Shy away from effective interventions that may be politically controversial

* Harm Reduction: a group of policies and practices aimed at reducing the negative consequences or harms associated with drug use (can occur at individual, community, or system level)

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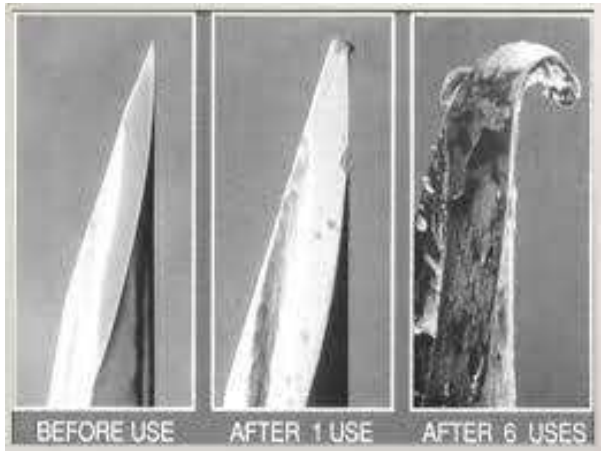
Harm Reduction from the Hospital

NALOXONE

- Take home naloxone is recommended for any individual at risk of experiencing or witnessing an overdose
- Strong association with overdose survival and low rates of adverse events

STERILE DRUG USE EQUIPMENT

- Shown to reduce infectious complications of injection drug use including HIV/hepatitis transmission
- Typically done in the community at Syringe Service Programs - SSP Locations (nasen.org)
- Has been evaluated from hospital with feasibility and acceptance by patients/staff



Lennox et al. International Journal of Drug Policy. 2021

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Thank You

- Diagnose Substance Use Disorders using DSM V
- Avoid stigmatizing language
- Treat withdrawal (this talk focused on opioids)
- Reduce harm
- Ask for help: **OHSU Addiction Consult Line**

  Call 503-494-4567 and ask for the addiction consult line (available M-F 8am-5pm)

QUESTIONS?

OHSU Addiction Consult Line

Available 8am-5pm Monday – Friday

503-494-4567

OHSU Link

References

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