



ACCEPT **Addiction & Co-morbid Conditions: Enhancing Prevention & Therapeutics**

Agenda

Join by video Webex link:

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For attendance, purposes please text the following code: QECRAN to 608-260-7097

Session Date: Friday June 19th, 2020

Didactic Topic and Presenter:

Methadone for OUD by Dr. Christopher Harkin

Content Experts:

Ritu Bhatnagar, MD and Susan Mindock, CSAC; and Sheila Weix, MSN, RN, CARN

-
- 12:30 PM: Attendance text-in – Introductions
 - 12:45 PM: Case Presentation
 - Presenter: Alison Miller, MD
 - 1:10 PM: Didactic Presentation
 - Presenter: Christopher Harkin, MD
 - 1:30 PM End of Session

CONTINUING EDUCATION INFORMATION:

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ACCEPT
Addiction & Co-morbid Conditions: Enhancing Prevention & Therapeutics
2018-2020

Methadone for OUD
Friday June 19th, 2020
Christopher Harkin, MD
Alison Miller, MD

Provided by the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP)

Intended Audience:

Physicians, Physician Assistants, Nurses, Social Workers, Pharmacists and Counselors.

Objectives:

As a result of this educational regularly scheduled series, learners will be able to:

1. Review appropriate opioid prescribing and monitoring practices.
2. Participate in office-based management of substance use disorders.
3. Seek, with greater frequency, overdose prevention education.
4. Identify the role of medication-assisted therapies, such as methadone, naltrexone, and buprenorphine in the management of substance use disorders.

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Name/Role	Financial Relationship Disclosures	Discussion of Unlabeled/Unapproved uses of drugs/devices in presentation?
Christopher Harkin, MD, Presenter	No relevant financial relationships to disclose	No
Alison Miller, MD, Presenter	No relevant financial relationships to disclose	No
Alyssa Tilhou, MD, Planner	No relevant financial relationships to disclose	No
Kathleen Maher, RSS Coordinator	No relevant financial relationships to disclose	N/A
Briana Kleinfeldt, RSS Coordinator	No relevant financial relationships to disclose	N/A
Randy Brown, RSS Chair	No relevant financial relationships to disclose	Yes
Paul Hutson, Planner, Pharmacy	Consultant for Projections Research Inc.	Yes
Ritu Bhatnagar, Planner, Psychiatrist	No relevant financial relationships to disclose	Yes
Melissa Ngo, Planner, Pharmacist	No relevant financial relationships to disclose	N/A
Susan Mindock, Planner, AODA Counselor	No relevant financial relationships to disclose	No
Sheila Weix, Planner, Nurse	No relevant financial relationships to disclose	No
Lindsey Peterson, MS, CRC, Planner	No relevant financial relationships to disclose	No
Kim Sprecker, OCPD Staff	No relevant financial relationships to disclose	No

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ACCEPT

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Patient Case Presentation

***Please do not attach any patient-specific files or include any Protected Health Information.**

1. Date: Friday June 19th
2. Presenter Name: Alison Miller
3. Presenter Organization: UW Health
4. Presenter Address (please complete for \$20 Amazon gift card): 2108 Rowley Ave, Madison WI 53726
5. ECHO ID: 5539
6. Have you presented this patient during this teleECHO clinic before? ☐ Yes ☒ No
7. Please state your main question for this case: Patient continues to use opioids with SL bup/naloxone want to discuss if methadone is appropriate and if so how to discuss this with patient. Also discussing the use of sublocade.

Patient Demographic Information:

8. Age: 23 yr old
9. Sex: Male
10. Education/Literacy: Finished HS
11. Income source: Works 2nd shift in factory
12. Social Factors/History: PMH for seizure disorder (on meds)

13. Substance Use History:

The patient started using opioids a high school around 18. He used oxycodone. He states that he would snort it would give him energy. Very quickly he started using them regularly and had to take more to get the same affect. He then started selling them in order to make money to buy them. He then got in trouble with the law. He was in jail for 6 months. He did occasionally go to meetings in jail.

After he got out of jail he was sober for about 18 months, did go to Newstart and talked to a therapist there but no form of MAT. He then started using oxycodone again. He states that somebody just gave it to him. Very quickly started buying them on the street again. He snorted them never used any IV drugs. He states he never used heroin. A month prior to me seeing me for the first time he had a non-fatal overdose. He did have to go to the hospital and was given Narcan.

I initially saw patient for 2 months and started him on bup he was doing really well. He then decided that he did not want to be on bup anymore he thought it was a crutch. Stopped using and then within weeks he relapsed again using oxycodone, snorting it. We then restarted him back on bup. That was two months ago.

I have been seeing patient weekly he continues to struggle with polysubstance. He continues to use oxycodone, but will use cocaine to give him energy and when he has back pain will take his girlfriends valium. He states when he wants to use Oxy he will just not take the buprenorphine and instead will snort the oxycodone. He states he will do that if he has too much anxiety. that way he is able to numb himself. Recently his back pain has been flared and has been using his girlfriend's Valium. Last urine drug screen positive for oxy, bup and norbup, cocaine, fentanyl and valium.

14. Consequences of Substance Use:

- Social/occupational/educational: Incarcerated for 6 months, recently had an episode of domestic violence and is currently on probation and is in anger management treatment. Patient does live with his parents they do not know that he has relapsed since being out of prison. He lives with his girlfriend and she is aware of his active addiction history.
- Physical (including evidence of tolerance/withdrawal): Non-fatal overdose, if stops oxycodone has withdrawal symptoms

15. Interventions that have been tried:

Has been using buprenorphine on and off. Patient has been non compliant. He has been in AODA treatment at new start therapy only after he was released from prison.

16.

Current Addiction and Mental Health-related Medications:	Medical/Behavioral Health Diagnosis:
<ul style="list-style-type: none">• Bup 8 mg twice a day (but with recent back pain flare has been using 4 mg every 6 hr)	<ul style="list-style-type: none">• OUD

17.

Patient Strengths/protective factors:	Risk factors:
<ul style="list-style-type: none">• Family is supportive, no FH of addiction, no history of trauma.• Works full time and very diligent about getting to work	<ul style="list-style-type: none">• Seizure disorder he does have a speech impediment due to his seizures as a child I am wondering if there is also a learning disability

18. Labs (as indicated), include summary of urine testing or last urine drug screen results:

CODEINE, URINE (CUTOFF 40 NG/ML) (ARUP)	Not Detected
MORPHINE, URINE (CUTOFF 20 NG/ML) (ARUP)	Not Detected
6-ACETYLMORPHINE, URINE (CUTOFF 20 NG/ML) (ARUP)	Not Detected
OXYCODONE, URINE (CUTOFF 40 NG/ML) (ARUP)	Present
NOROXYCODONE, URINE (CUTOFF 100 NG/ML) (ARUP)	Present
OXYMORPHONE, URINE (CUTOFF 40 NG/ML) (ARUP)	Present
NOROXYMORPHONE, URINE (CUTOFF 100 NG/ML) (ARUP)	Present
HYDROCODONE, URINE (CUTOFF 40 NG/ML) (ARUP)	Not Detected
NORHYDROCODONE, URINE (CUTOFF 100 NG/ML) (ARUP)	Not Detected
HYDROMORPHONE, URINE (CUTOFF 40 NG/ML) (ARUP)	Not Detected
BUPRENORPHINE, URINE (CUTOFF 5 NG/ML) (ARUP)	Present
NORBUPRENORPHINE, URINE (CUTOFF 20 NG/ML) (ARUP)	Present
FENTANYL, URINE (CUTOFF 2 NG/ML) (ARUP)	Present
NORFENTANYL, URINE (CUTOFF 2 NG/ML) (ARUP)	Present
MEPERIDINE METABOLITE, URINE (CUTOFF 50 NG/ML) (ARUP)	Not Detected
TAPENTADOL, URINE (CUTOFF 100 NG/ML) (ARUP)	Not Detected
TAPENTADOL-O-SULF, URINE (CUTOFF 200 NG/ML) (ARUP)	Not Detected
METHADONE, URINE (CUTOFF 150 NG/ML) (ARUP)	Not Detected
PROPOXYPHENE, URINE (CUTOFF 300 NG/ML) (ARUP)	Not Detected
TRAMADOL, URINE (CUTOFF 200 NG/ML) (ARUP)	Not Detected
AMPHETAMINE, URINE (CUTOFF 100 NG/ML) (ARUP)	Not Detected
METHAMPHETAMINE, URINE (CUTOFF 400 NG/ML) (ARUP)	Not Detected
MDMA-ECSTASY, URINE (CUTOFF 200 NG/ML) (ARUP)	Not Detected
MDA, URINE (CUTOFF 200 NG/ML) (ARUP)	Not Detected
MDEA-EVE, URINE (CUTOFF 200 NG/ML) (ARUP)	Not Detected
METHYLPHENIDATE, URINE (CUTOFF 100 NG/ML) (ARUP)	Not Detected
PHENTERMINE, URINE (CUTOFF 100 NG/ML) (ARUP)	Not Detected
BENZOYLECGONINE, URINE (CUTOFF 150 NG/ML) (ARUP)	Present
ALPRAZOLAM, URINE (CUTOFF 40 NG/ML) (ARUP)	Not Detected
ALPHA-OH-ALPRAZOLAM, URINE (CUTOFF 20 NG/ML) (ARUP)	Not Detected
CLONAZEPAM, URINE (CUTOFF 20 NG/ML) (ARUP)	Not Detected
7-AMINOCLONAZEPAM, URINE (CUTOFF 40 NG/ML) (ARUP)	Not Detected
DIAZEPAM, URINE (CUTOFF 50 NG/ML) (ARUP)	Not Detected
NORDIAZEPAM, URINE (CUTOFF 50 NG/ML) (ARUP)	Not Detected
OXAZEPAM, URINE (CUTOFF 50 NG/ML) (ARUP)	Not Detected
TEMAZEPAM, URINE (CUTOFF 50 NG/ML) (ARUP)	Not Detected
LORAZEPAM, URINE (CUTOFF 60 NG/ML) (ARUP)	Not Detected
MIDAZOLAM, URINE (CUTOFF 20 NG/ML) (ARUP)	Not Detected
ZOLPIDEM, URINE (CUTOFF 20 NG/ML) (ARUP)	Not Detected
BARBITURATES, URINE (CUTOFF 200 NG/ML) (ARUP)	Not Detected
CREATININE, URINE (ARUP)	197.5
20.0 - 400.0	
ETHYL GLUCURONIDE, URINE (CUTOFF 500 NG/ML) (ARUP)	Not Detected
MARIJUANA METABOLITE, URINE (CUTOFF 20 NG/ML) (ARUP)	Present
PCP, URINE (CUTOFF 25 NG/ML) (ARUP)	Not Detected
CARISOPRODOL, URINE (CUT-OFF 100 NG/ML) (ARUP)	Not Detected

19. Patient Goals/Motivations for Treatment:

Fearful of overdose, death, going back to jail.

All his money is going to drugs wants to get his own place with his girlfriend

20. Proposed Diagnoses:

OD

Polysubstance Abuse

Seizure Disorder

21. Proposed Treatment Plan:

Discuss transferring him to an OTP, needs more support than I can offer. Not using Bup appropriately, seeing him weekly and still not making much progress. How do you discuss transferring to a higher level of care with patient. He does not want to go to a clinic everyday. He knows people on methadone and they all seem to be home and not able to function.

Neuropsych testing

Discuss the use of sublocade but concerned with his Benzo use.

IOP

By initialing here ARM you have acknowledged that Project ECHO case consultations do not create or otherwise establish a provider-patient relationship between any ECHO clinician and any patient whose case is being presented in a teleECHO clinic.

DSM 5 Criteria for Substance Use Disorder

A use disorder is characterized by maladaptive use resulting in repetitive consequences over the previous 12 months. A minimum of 2-3 criteria is required for a mild substance use disorder diagnosis, while 4-5 is moderate, and 6-7 is severe (American Psychiatric Association 2013)

1. Taking the substance in larger amounts and for longer than intended
2. Wanting to cut down or quit but not being able to do it
3. Spending a lot of time obtaining the substance
4. Craving or a strong desire to use
5. Repeatedly unable to carry out major obligations at work, school, or home due to use
6. Continued use despite persistent or recurring social or interpersonal problems caused or made worse by use
7. Stopping or reducing important social, occupational, or recreational activities due to opioid use
8. Recurrent use in physically hazardous situations
9. Consistent use despite acknowledgment of persistent or recurrent physical or psychological difficulties from using

10. *Tolerance as defined by either a need for markedly increased amounts to achieve intoxication or desired effect or markedly diminished effect with continued use of the same amount. (Does not apply for diminished effect when used appropriately under medical supervision)
11. *Withdrawal manifesting as either characteristic syndrome or the substance is used to avoid withdrawal (Does not apply when used appropriately under medical supervision)



Methadone Therapy for OUD

Christopher Harkin, MD

Medical Director

Addiction Services and Pharmacotherapy,
Madison

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Case Presentation

- ▶ 28 year old male presents to ASAP with a 8 year history of using IV heroin. He uses between 1-3 grams of heroin daily and has had 4 overdoses, 2 of which needed Narcan for reversal. He has been incarcerated numerous times for possession and drug related criminal behavior. He has been given Vivitrol at the end of incarceration but was not able to stay abstinent. He has not tried other medical therapy. Obvious needle tracks on both upper extremities. His COWS is 15 and he is in obvious withdrawal.

Addiction Definition (ASAM)

- ▶ A primary, chronic disease of the brain reward, motivation, memory and related circuitry. Dysfunction in those circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substances or other behaviors

What is Addiction Really?

▶ BOTTOM LINE:

- Addiction hijacks the pleasure/reward pathways of the brain
- At first, its all about reward (*getting high*)
- As addiction progresses, anti-reward takes over (*avoid feeling sick*)

▶ SO REALLY, IT'S:

- Starts with the pursuit of pleasure/reward and morphs into the avoidance of definite pain

Brain Anatomy

Periaqueductal
Grey

Analgesia

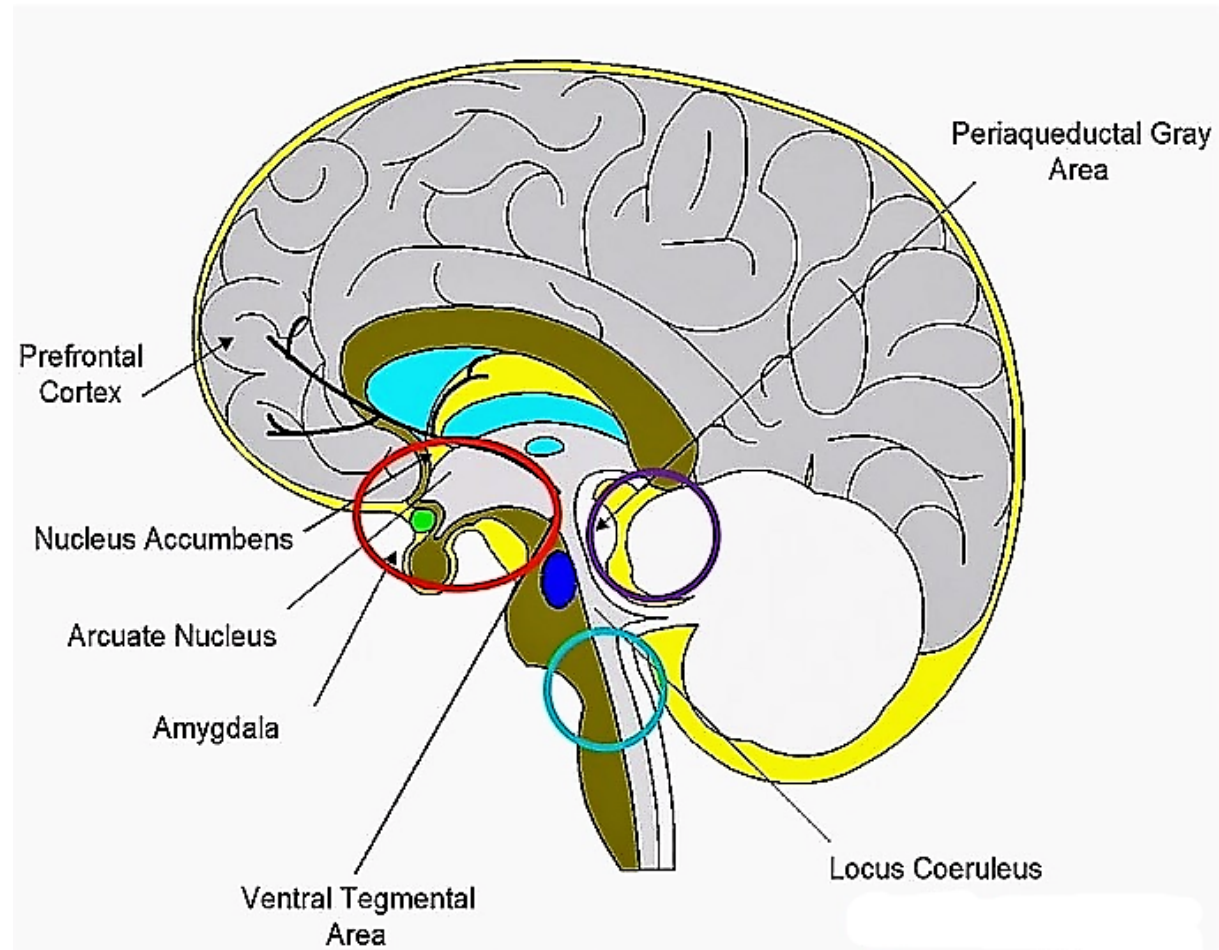
Limbic Area

Reward

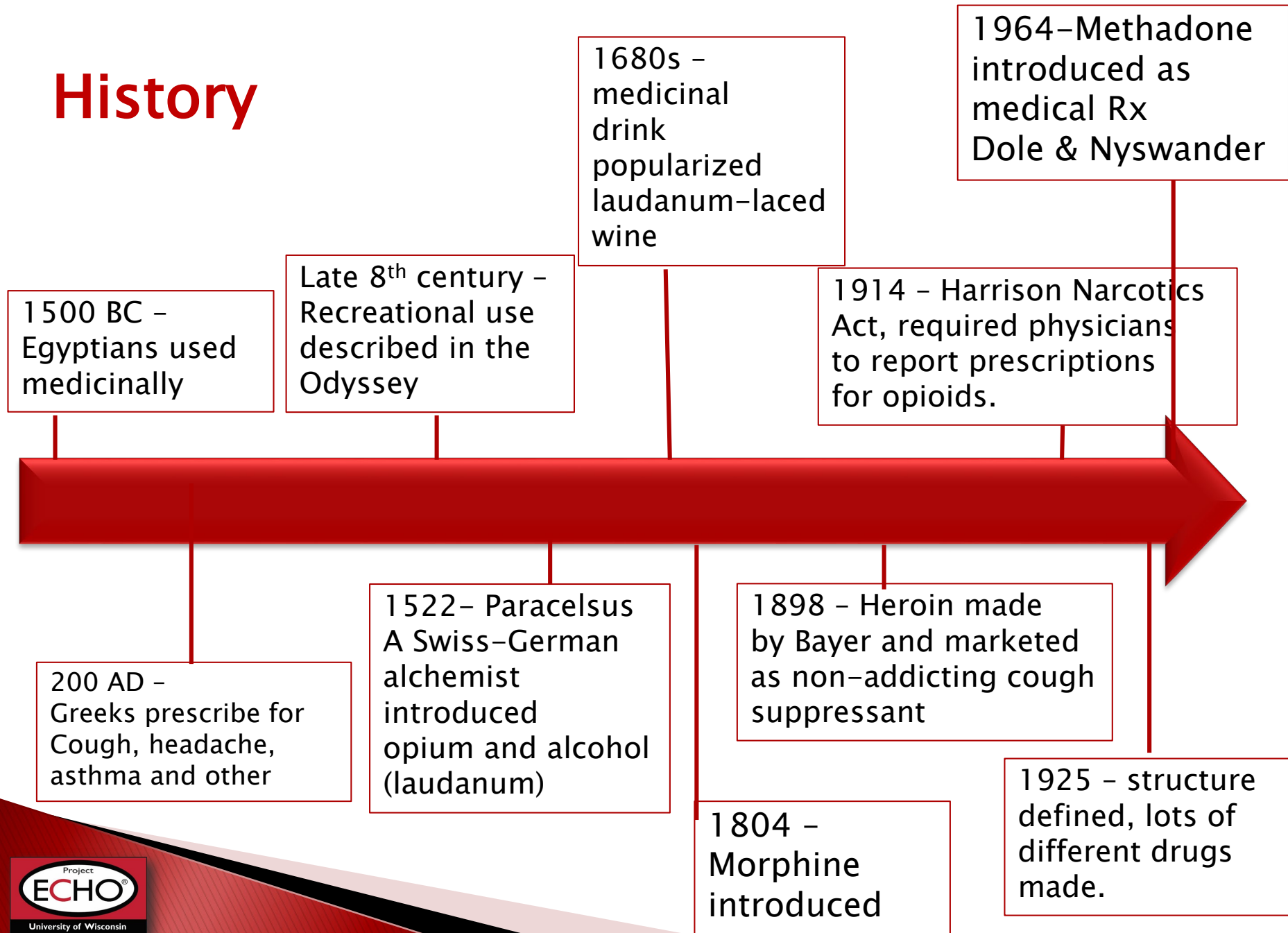
Euphoria

Locus Coeruleus

Physical
dependence
Withdrawal

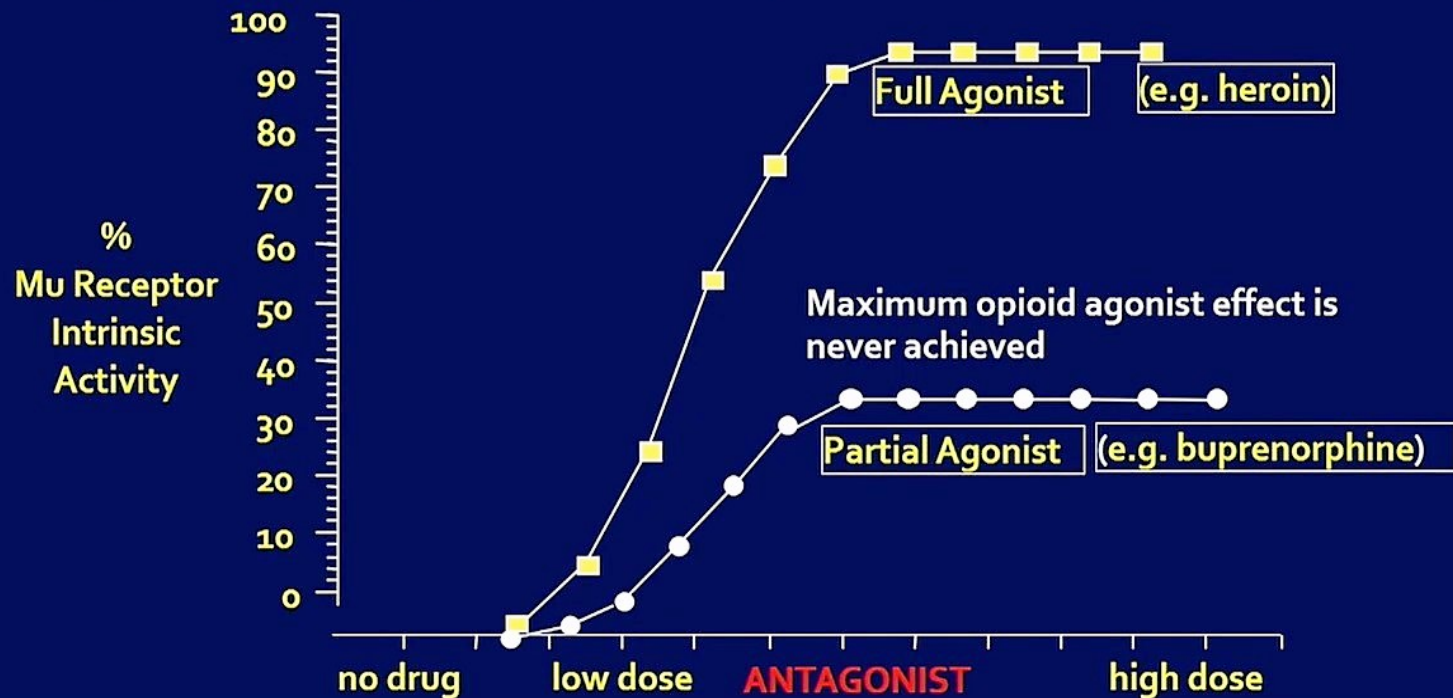


History



Medications Differences

Full, Partial Agonist, Antagonist Activity Levels



Methadone

- ▶ Full *mu* opiate receptor agonist
- ▶ Most patients need between 60 mg to 150 mg for a therapeutic dose
- ▶ T_{1/2} is 24-36 hours
- ▶ Prolonged QT
- ▶ Still the gold standard for opiate maintenance treatment
- ▶ At a stable dose, will block euphoria of heroin use
- ▶ Cost effective, reducing healthcare cost 50-62%
- ▶ Unfortunately has bad stigma related to it

Buprenorphine 24 mg = Methadone 80 mg

Buprenorphine

Partial μ agonist
36–48 hour half-life
Daily or alternate day dose frequency
Less abuse potential
Ceiling effect limits overdose risk
Limited to mild–moderate dependence
Mild withdrawal symptoms
Tablet preparation—risk of injection

Moderately expensive

Methadone

Full μ agonist
24–36 hour half-life
Daily dose frequency
More abuse potential
No protective overdose factors
More effective for severe dependence
Moderate/severe protracted withdrawal
Oral liquid^a—less risk of injection
Tablet preparation is available

Inexpensive

^aMethadone is sometimes prescribed as an intravenous preparation

Comparison of Heroin, Buprenorphine and Methadone in daily users

	Heroin	Buprenorphine*	Methadone
Route of Administration	Injection or nasal	Sublingual (under tongue)	Oral
Onset of Action	Immediate	4-8 minutes	30 minutes
Duration of Action	3-6 hours	24-36 hours	24-36 hours
Euphoria	First 1-2 hours	None	None
Withdrawal Symptoms	3-4 hours	24-48 hours	24-36 hours
*Usually prescribed in combination with naloxone as Suboxone, Zubsolv or generic.			

Methadone Treatment

- ▶ Start Methadone 30 mg po daily
- ▶ Increase Methadone 5 mg every 3 days
- ▶ Nurse does COWS evaluation prior to every dose increase
- ▶ Issues:
 - Must dose daily (including Sundays for first 90 days)
 - Must come to clinic daily
 - Must give weekly UDS
 - Must participate in in-house counselling

Conclusions

The medication
is the *Band-Aid*
Controls the
Limbic Area
and the **Locus**
Coeruleus

Counseling
retrains the
Prefrontal Cortex
to control the
Limbic System

