Opioid Use Disorder Education and Treatment ECHO Series

Session 7 – MOUD Treatment Options

February 15, 2022

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MINNESOTA ACADEMY OF FAMILY PHYSICIANS
STRONG MEDICINE FOR MINNESOTA

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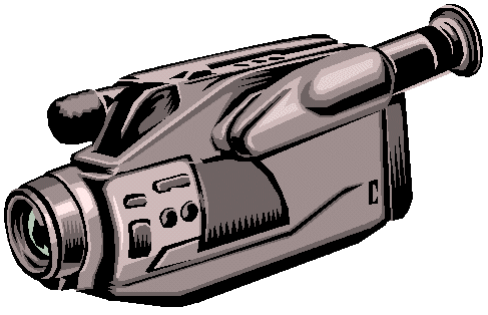
Announcements



SESSIONS ARE RECORDED

YES, THERE'S *FREE* CME

Attendance

- Please chat us the names of people on ECHO if there are multiple people in your room!
- "Re-name" your self so we know who's here!
- Please turn your video on!
  - Human connection!
  - And we do NOT care if you are eating!

Case Presentations!

The ECHO model is based on case-based learning! The case presentation form is on the MAFP website and also on the announcements email!
BUT feel free to present in any de-identified format!

Upcoming *Tuesday* ECHO Sessions

- **Tuesday, March 1, 2022:** Prescribing to Your First MAT/MOUD Patient (Induction/Micro-induction)
- **Tuesday, March 15, 2022:** Infectious Disease Complications
- **Tuesday, April 5, 2022:** Role of the Emergency Department

Upcoming *Wednesday* ECHO Sessions

- **Wednesday, February 16, 2022:** Fentanyl Test Strips THE Dr. Charles Reznikoff
- **Wednesday, February 23, 2022:** Contingency Management: Dr. Sarah Spencer (Live from Alaska!)

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Objectives:

- Identify the important legislation and history surrounding medications for opioid use disorder (MOUD)
- Describe the advantages and disadvantages of each medication used for OUD

MOUD Treatment Options

- 50 years of MOUD - how policy has advanced its use
  - Improved recognition of OUD
  - More standardized practices
  - Increased access
  - Improved reimbursement

MOUD Treatment Options cont.

- Despite positive federal policy promoting access to and utilization of MAT/MOUD treatment, the system has failed to keep pace with the continued worsening opioid crisis

MOUD Treatment Options cont.

- To that point…
  - From 2009-2019, treatment facilities offering MOUD increased by just 18%
  - During that same time, overdose deaths from opioids increased by 130%

MOUD Treatment Options cont.

- Five milestone acts that have impacted the standard of care for OUD, addiction treatment policy and the lives of millions of patients and their families

MOUD Treatment Options cont.

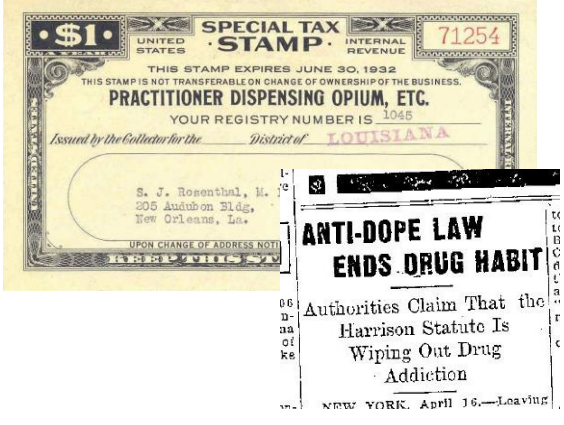
1. Comprehensive Drug Abuse Promotion and Control Act, October 27, 1970
2. Narcotic Addict Treatment Act of 1974, May 14, 1974
3. Drug Addiction Treatment Act of 2000, October 17, 2000
4. Comprehensive Addiction and Recovery Act of 2016, July 22, 2016
5. Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act, October 24, 2018

MOUD Treatment Options cont.

- We must also consider what it was like before there was MOUD and legislations
  - Following the Civil War >300,000 Americans were on chronic opioids by 1900
  - Doctors prescribed morphine, heroin, and cocaine, sometimes to taper/ detoxify, often to maintain, yet control their addiction

MOUD Treatment Options cont.

- The practice of prescribing opioids as a treatment or to detoxify patients came to an end in 1919 when the Supreme Court ruled on the interpretation of the Harrison Narcotic Act of 1914



MOUD Treatment Options cont.

The result:

- Prescribing or dispensing opioids for the purpose of treating opioid addiction was prohibited

MOUD Treatment Options cont.

- Opioid addiction at that point was reconceptualized as a criminal justice problem (not a medical problem)

MOUD Treatment Options cont.

- A bit in the weeds…

MOUD Treatment Options cont.

- The federal response in 1929 was the “Narcotics Farm Act of 1929” established two “narcotic farms”

MOUD Treatment Options cont.

Two ways to get there:

- People convicted of drug related crime were sent there
- Patients could check themselves in

MOUD Treatment Options cont.

- These isolated facilities in Lexington, KY and Fort Worth, TX were the only treatment options for the next 30 years until methadone

MOUD Treatment Options cont.

- "…for the preventative custody and remedial care of individuals acquiring a sedative dependence for habit-forming narcotic drugs."

MOUD Treatment Options cont.

- The theory was that if one's environment was transformed to be natural, pastoral and wholesome then the patient would be transformed (cured)

MOUD Treatment Options cont.

- Mission
  - Understand the hows and whys of drug addiction
  - Rehabilitate person addicted to drugs completely
  - To find a permanent cure

MOUD Treatment Options cont.

- Results over the decades in existence…
  - No “cure” found
  - 90% relapsed after leaving
  - Hows and whys…well a lot was learned, but at an ethical cost

MOUD Treatment Options cont.

- What went on at the “farms”
  - Treatment model exploration
  - Addiction research on “volunteer” inmates and residents

MOUD Treatment Options cont.

- According to NIDA (National Institute of Drug Abuse) the following are contributions and discoveries of ARC- addiction research center
  - Advances the use of methadone
  - Explanation of relapse
  - Recognizing other drugs that caused dependence
  - Discovery of opioid receptors
  - Recognized significance of opioid receptors
  - First group to define addiction as a chronic, relapsing disease

MOUD Treatment Options cont.

- Ethical concern later discovered that often “volunteers” were given their drug of choice to be in the studies

MOUD Treatment Options cont.

- Comprehensive Drug Abuse Prevention and Control Act of 1970
- This legislative step:
  - Required providers to register if prescribing controlled substances with the Bureau of Narcotics (later DEA)
  - Laid the framework for methadone regulation

MOUD Treatment Options cont.

- Narcotic Addict Treatment Act of 1974
  - Congress recognized methadone as a maintenance treatment for OUD
  - Established requirement for DEA registration to prescribe methadone

MOUD Treatment Options cont.

- Drug Addiction Treatment Act of 2000 (this is where data waiver comes from)
  - Allowed physicians to prescribe buprenorphine (bup) and bup/naloxone for opioid addiction

MOUD Treatment Options cont.

- Comprehensive Addiction and Recovery Act of 2016 (CARA)
  - Expanded prescribing of buprenorphine to nurse practitioners and physician assistants

MOUD Treatment Options cont.

- Substance Use Disorder Prevention That Promotes Opioid Recovery and Treatment for Patients and Communities Act (2018)
  - Improve reimbursement
  - Allowed Medicare to cover methadone
  - Allowed some providers to not be limited to 30 patients the first year

MOUD Treatment Options cont.

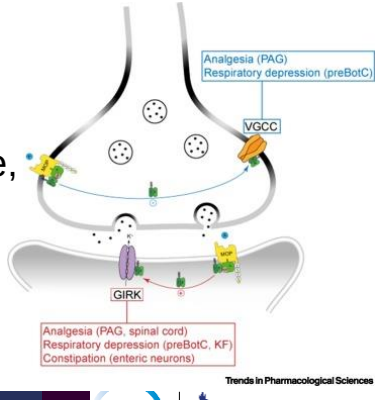
- Methadone
  - First discovered and marketed in Germany in 1939 as a pain medication
  - Used in the US in the 1950s for heroin detox
  - Not approved to treat addiction until 1972

MOUD Treatment Options cont.

- Methadone is different from other opiates in the following ways
  - Methadone patients generally do not develop tolerance
    - Meaning that once the patient reaches stabilization (meaning pain is controlled or cravings subside) no dose increases are generally necessary

MOUD Treatment Options cont.

- Methadone is different from other opiates in the following ways
  - Methadone binds to only about 30% of the Mu receptor. The 70% left to function normally as far as pain regulation, pleasure, and reward
  - Because it has a very long ½ life the withdrawal tends to be less severe

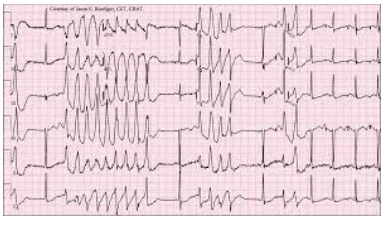


MOUD Treatment Options cont.

- Methadone dosing and schedule
  - Generally started at 5-10mg/day
  - Dose increases every 3-5 days
  - Serum levels can be checked, generally, <200 Ng/ml is considered subtherapeutic

MOUD Treatment Options

- Methadone Side Effects/Risks
  - Disproportionate risk of overdose and deaths in relation to number of scripts written
  - Minor side effects like other opioids- nausea, constipation, insomnia, anxiety, and so on…
  - QT prolongation may cause fatal cardiac rhythm including torsade de pointes



MOUD Treatment Options cont.

- Methadone Side Effects/Risks (continued)
  - There is also a higher risk of overdose and respiratory depression

MOUD Treatment Options cont.

- Despite all this…there has never been a significant difference related to mortality between buprenorphine and methadone

MOUD Treatment Options cont.

- Methadone - Cost
  - Cost of providing methadone per year is roughly $6,000

MOUD Treatment Options cont.

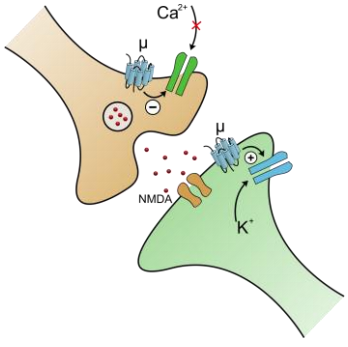
- Success
  - Treatment retention at 24 weeks roughly 74% (2014)
  - Higher dosing, higher retention

MOUD Treatment Options cont.

- Buprenorphine/Buprenorphine-Naloxone
  - Discovered in the 1960s
  - FDA approval in 2002

MOUD Treatment Options cont.

- Buprenorphine is different from other opioids in the following ways
  - Partial agonist
  - Ceiling effect
  - Low respiratory depression
  - High affinity for Mu receptor



MOUD Treatment Options

- Buprenorphine Dosing/Schedules
  - Dosing range generally 8-24 mg
  - Can be once daily dosing
  - Often dosed BID or TID for pain

MOUD Treatment Options cont.

- Buprenorphine Side Effects Risk
  - Buprenorphine/naloxone will cause immediate withdrawal if injected
  - Side effects of other opioid-nausea, vomiting, abdominal pain, and so on…
  - No serious side effects like methadone
  - Recent reports of dental concerns

MOUD Treatment Options cont.

- Buprenorphine- Cost
  - Yearly treatment cost $4,000-$5,000

MOUD Treatment Options cont.

- Buprenorphine Success
  - Older studies showed more significant retention with methadone, but more recent studies show only slightly better long-term retention

MOUD Treatment Options cont.

- Naltrexone History
  - First synthesized in 1963 by Endo Laboratories (they were bought by Dupont)
  - No future work was done on this drug for several years
  - In 1972 Congress passed the Drug Abuse Office and Treatment Act, which encouraged the development of non addiction (non agonist) opioid addiction treatments
  - At that time, methadone was the only approved treatment

MOUD Treatment Options cont.

- Naltrexone History
  - Interest in Naltrexone was reignited for several reasons
    - Non sedating
    - Non addictive
    - No potentially fatal side effects of methadone

MOUD Treatment Options cont.

- Naltrexone History
  - In 1974 studies were done to facilitate FDA approval
  - Studies were promising, but compliance of an oral daily dose was problematic
  - Noncompliance led to relapse
  - Regardless, the FDA approved in 1984 noting some of these issues in labeling

MOUD Treatment Options cont.

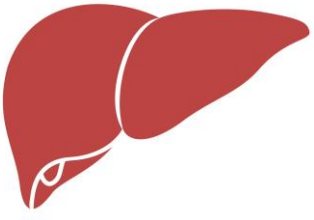
- Naltrexone History
  - Vivitrol (monthly injectable Naltrexone) showed markedly improved compliance
  - FDA approvals
    - AUD 2006
    - OUD 2010

MOUD Treatment Options cont.

- Naltrexone MDA
  - Full agonist
  - Competitive binding with Mu receptors

MOUD Treatment Options cont.

- Advantages of injectable Naltrexone over oral MOUD treatments
  1. No first pass liver metabolism
  2. Total monthly dose less (due to #1)
  3. Compliance generally better



MOUD Treatment Options cont.

- Advantages of injectable Naltrexone over oral MOUD treatments
  – Can be treatment for both AUD and OUD
  – Compliance improved over oral meds
  – Can be initiated while patient continues to drink EtOH

MOUD Treatment Options cont.

- Disadvantages of injectable Naltrexone over oral MOUD treatments
  - Pain control in the event of a significant injury will be challenging potentially for weeks
  - Neither form of naltrexone will induce tolerance which can be an issue if patient stops naltrexone and relapses
  - Patient must go through withdrawal prior to starting
  - Cost

MOUD Treatment Options cont.

- Dosing and Schedule
  - Oral typically 25-50mg qd
  - Injectable 380mg a month, may need some oral supplemental doses last 4-5 days of the month

MOUD Treatment Options cont.

- Naltrexone Side Effects
  - Nausea
  - vomiting
  - Headache
  - Abdominal pain
- Side effects generally not severe

MOUD Treatment Options cont.

- Naltrexone Risks
  - Precipitated withdrawal
  - NO addiction risk
  - Liver toxicity in oral formulation

MOUD Treatment Options cont.

- Naltrexone Cost
  - Injectable formulation $1,200-$1,400
  - Oral preparations very inexpensive
  - Yearly cost approximately $14,000 per year (Sublocade similar)

MOUD Treatment Options cont.

- In one study 28% of patients did not finish induction period and start naltrexone injectable (Bup 6%). All induction failures relapsed.
- If naltrexone and buprenorphine patients made it through induction, the effectiveness of the two drugs was similar.

MOUD Treatment Options cont.

- Naltrexone Success
  - Drug treatment, non-fatal and fatal overdoses were similar in both groups
  - Main difference between the two treatments is 20% of naltrexone relapse awaiting induction, and concern for lost tolerance and overdose risk after discontinuation of naltrexone

MOUD Treatment Options cont.

- Summary
  - Each method of MOUD has advantages and disadvantages
  - Medication choices must be tailored to each patient's unique circumstances

Sources

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Poll Questions

1. Are you currently prescribing buprenorphine for opioid use disorder?
   - **YES**
   - **NO**
2. If yes, what is the approximate number of patients you are treating with buprenorphine?

   _____

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The Addiction
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