The Role of MAT in Treating Opioid Use Disorder

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I have no disclosures to report.
Objectives

• Review DSM-V Criteria for diagnosis of Opioid Use Disorder
• Discuss the evidence supporting MAT
• Explain pros and cons of different medications
• Review detoxification versus maintenance
• Discuss MAT in a public health context
Case 1

- Ms. A is a 40 yo female with a 10 year history of oxycodone use. She started to take oxycodone 10mg 3-4x/day following an MVA at the age of 30. Over the following years she increased her dose to approximately 100mg daily. She lost her job as an ER tech due to calling in sick frequently. Last year her oxycodone became too expensive and, though she did not want to switch to heroin, she started smoking and then injecting it daily in order to avoid withdrawals. On one occasion she overdosed with heroin however a friend called 911 and the overdose was reversed with Narcan.
Does Ms. A have an Opioid Use Disorder?
DSM-V Criteria for OUD

• >2 of the following, occurring within a 12-month period:
  • Opioids often taken in larger amounts or over longer time than intended
  • Persistent desire or unsuccessful efforts to cut down
  • A lot of time spent trying to obtain or use the opioids, or recover from effects
  • Cravings or strong urges to use opioids
  • Recurrent opioid use resulting in failure to fulfill major role obligations
  • Continued use despite having recurrent problems caused by opioids
  • Important activities are given up or reduced due to opioid use
  • Continued opioid use despite knowledge of having a problem
  • Tolerance, defined by either needing an increased amount of opioids to achieve desired effect, or a diminished effect when using the same amount
  • Withdrawal, evidenced by the COWS or by the need to take opioids to relieve or avoid withdrawal symptoms
Ms. A would like your help to get off opioids. What can you offer her?
Medication Assisted Therapies

- Methadone
- Buprenorphine
- Naltrexone
What evidence exists to support the use of these medications?
Methadone

- Full mu-opioid receptor agonist.
- Approved for the treatment of heroin addiction in 1964.
- Prescribed at addiction treatment centers under federal guidelines.
- Cochrane review (11 studies, 1969 participants) found methadone had a statistically significant decrease in heroin use and increased retention in treatment than non-ORT methods.
- A study in 1991 (Bell and Ross) found a retention rate of about 60%. For those who stayed in treatment more than 4 years, IVDU fell by at least 75%. Criminal activity fell by 80%.
- Significantly decreased risk of HIV transmission in those on methadone maintenance. (1983 study out of NYC showed 50-60% seroconversion in those with IVDU, however 9% if on methadone).
- Decreased mortality from opioid use disorder for those who remain in treatment.
Buprenorphine

- Partial mu-opioid receptor agonist.
- FDA approved for treatment of opioid use disorder in 2002 (following DATA which passed in 2000).
- Can be prescribed in primary care clinics by providers with ‘X’ waiver.
- Comes in 2 forms: Subutex (Buprenorphine) or Suboxone (Buprenorphine + Naloxone)
- Buprenorphine at any dose is better than placebo at retaining people in treatment, and at doses of 16mg/day or higher is associated with decreased opioid use.
- Buprenorphine is as effective as Methadone when prescribed at doses of at least 7mg/day.
- Kakko et al, 2003: Randomized, placebo-controlled trial in Sweden: 1-year retention in treatment was 75% and 0% in the buprenorphine and placebo groups, respectively (p=0.0001, with 75% negative urines for those remaining in treatment.)
Naltrexone

• Mu-opioid receptor antagonist.
• FDA approved for treatment of opioid use disorder in 1984. (Was subsequently approved for alcohol use disorder in 1994).
• Comes in oral daily dose and monthly injection.
• Has not been shown to decrease cravings.
• Cochrane review in 2011 (13 studies, 1158 participants) concluded that there was no statistical difference in primary outcomes (opioid use and retention in treatment) when compared to placebo or no medication.
• May be most useful for those who cannot be on ORT for medical or social/legal reasons.
Ms. A would like to know which medication you recommend. How would you counsel her?
Methadone vs. Buprenorphine

• A personal choice, but considerations to help guide someone:

• Buprenorphine has a better safety profile due to ceiling effect, and can be prescribed in the outpatient setting.

• Standard doses of Buprenorphine do not affect the QTc.

• Buprenorphine has less interactions, especially with HIV meds.

• Some studies show similar outcomes with Methadone and Buprenorphine treatment, however some show better retention with Methadone. Need to consider how structure may help.

• Cochrane review (2016) showed little/no difference in...
What if she were pregnant?

- The largest RCT (MOTHER study) on ORT in pregnancy found that fewer people on Buprenorphine stayed on treatment than those on Methadone (33% v. 18%), however manifestations of NAS in infants born to mothers on Buprenorphine were less severe.

  Buprenorphine required 89% less morphine to treat NAS, 43% less time in hospital. Child outcomes were tracked up to 36 months, 97 of 131 infants followed. Data to be published showing no differences in development with regards to medications or treatment for NAS vs. no treatment needed.
Source:
Ms. A would like to know how long she will need to be on medication?
Detoxification vs. Maintenance

- Once the proposed use of buprenorphine and methadone was for detoxification.
- We now understand that detoxification is not treatment.
- Addiction is a chronic disease.
- 2008, Gruber et al: randomized controlled trial of 111 people on methadone concluded that 6 months of methadone with standard or minimal counseling decreased use of heroin when compared with 21 days of detoxification. Findings are consistent with several prior studies.
- POATS: randomized controlled trial at 10 US sites looked at 653 participants dependent on prescription opioids who were entered in a 2 phase (1 mo -> 3 mo) trial while randomized to buprenorphine only vs. bup plus counseling. Found in patients tapered off after either phase, in either arm, relapse was high.
- 2014, Fiellin: randomized clinical trial comparing maintenance on buprenorphine vs. 3 week taper after 6 weeks of stabilization for those with prescription opioid use disorder. Significant relapse for those who tapered.
Case Conclusion

Ms. A would like to start on Buprenorphine and also appreciates seeing the counselor at your clinic. She undergoes a successful home induction and stabilizes on 16mg daily. After a few initial bumps in the road, her urine tox screens are negative for oxycodone and opiates and she plans to look for employment in the near future. You are careful to also ensure that she has filled a prescription for Narcan, keeps a supply at home, and that her partner is aware of its location. You have screened her for HIV and Hepatitis C and both tests were negative. At one year post-induction, she sees you monthly and is doing well.
MAT: Public Health Implications

• Decreased mortality due to opioid overdoses.
• Decreased transmission rates of HIV and Hepatitis C.
• Decreased incarceration and increased employment.
• Often find an associated decrease in use of other substances.

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• Remember to prescribe Narcan to each patient on an opioid pain medication or on opioid replacement therapy.
• Remember to screen everyone for mood disorders, adverse childhood events and other forms of trauma.
• Also screen everyone for HIV and Hepatitis C.
Thank you!

What questions do you have?
Sources

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  • Adjunctive counseling during brief and extended buprenorphine-naloxone treatment for prescription opioid dependence. Weiss et al., Archives of General Psychiatry. 68(12) - 2011