Initiating Medications for Opioid Addiction Treatment in the E.D.

An Educational Production in collaboration with the
STR-TA Consortium, Stat Targeted Response Technical Assistance
Eric Ketcham, MD, MBA, FACEP, FASAM, FACHE & Kathryn Hawk, MD, MHS

Key Take Home Points

1. SAMHSA's State Targeted Response Technical Assistance (STR-TA) Consortium provides resources and technical assistance needed to address the opioid crisis:
    a. Provides local expertise to communities and organizations to help address the opioid public health crisis.
    b. Each state/territory has a designated team, led by a regional Technology Transfer Specialist (TTS) who coordinates the implementation of evidence-based practices.
    c. Questions or assistance request: Visit www.getSTR-TA.org, Email str-ta@aaap.org, or call 401-270-5900
2. The mortality from the opioid epidemic continues to worsen:
    a. Drug overdose is now the #1 cause of death for Americans under age 50, the majority due to opioids.
    b. Life expectancy for Americans is falling -- two years in a row
    c. >49,000 American died in 2017 from opioid overdoses, ~ 134/day.
    d. Most recent mortality increase primarily due to fentanyl analogs.
    e. Opioid overdose mortality far exceeds the peak mortality from gun violence, MVCs, and HIV combined.
    f. Opioid overdose reversal with naloxone by EMS predicts the same one year mortality as a STEMI treated with PCI.
3. Opioid "Addiction," or Opioid Use Disorder (OUD) is NOT the same as opioid dependence:
    a. Tolerance (need for increasing doses), and withdrawal (when opioids are missed) are properties of dependence alone, and only two potential criteria of OUD.
    b. Addiction is defined by social/functional impairments, and behaviors (adverse, risky, even self-destructive) related to using or obtaining the drug.
    c. OUD is a MEDICAL illness, due to altered brain chemistry (receptor vs. transmitter imbalance):
4. The only successful treatment is MAT – Medication for Addiction Treatment.
    a. OUD is due to a different brain chemistry from alcoholism, and OUD does not respond to the same treatments.
    b. For OUD, abstinence-based treatments (e.g. 12 step programs), have only a ~ 5% sobriety rate at one year.
    c. Retention rates in MAT programs vary, but even a ~40% one-year sobriety rate far exceeds sobriety rates in abstinence programs.
    d. Participation in MAT programs reduces 1 year overall mortality by ~ 60%, and overdose mortality by >80%.
    e. Landmark studies in France (Paris), USA (Baltimore), and Sweden demonstrate the profound mortality benefit due to expansion of access to MAT programs.
    f. Addition of routine counseling adds no measurable Tx retention or mortality benefit.

5. MAT can be successfully introduced in the ED. Yale/"D'Onofrio" study:
    a. Patients who receive a dose of bupe in the ED, and/or a short Rx for bupe vs. counseling intervention in the ED:
        i. Nearly twice as likely to be in OUD Tx at 30 days if they receive a dose of bupe.
        ii. Only 1/3 as likely to need inpatient addiction Tx.
    b. No sig improvement in follow up Tx rates, if patients did not receive bupe, whether received an SBIRT or receiving a pamphlet only.
    c. Current Yale algorithm is attached (slide #29), and other algorithms are attached at the end of the slide set.
6. Forms of MAT:
    a. MAT medications are methadone, naltrexone, and buprenorphine:
7. Naltrexone (IM, depot, monthly injection):
    a. Antagonist. Abstinence Tx. Blocks effects of opioids if used (Rx opioids or heroin).
    b. Patient must have already completed physiologic withdrawal, or completely weaned off mu agonist therapy (or will precipitate withdrawal). No opioids for 7 days before starting.
        i. Otherwise precipitates acute withdrawal. This is a huge hurdle.
    c. Used more widely in correctional and residential programs.
    d. Does not treat cravings directly. With time (6 mo to ? 2 years), cravings progressively decline due to consistent lack of reinforcement.
    e. NOT a medication to be initiated in the ED.
8. Methadone (oral):
    a. Full mu agonist, long half life (~ 24 hrs) in Tx of cravings, ~ 3-4 hrs to peak onset.
    b. Very effective when dosed properly.
    c. Administered and dispensed only in licensed clinics.
    d. Administered in a liquid form, enables specific dose titration, and deters diversion.
    e. Dosing is very patient specific, with a broad range of therapeutic dosing (and gradually titrated).
    f. High rates of patient retention, but can be inconvenient, not available in all areas.
    g. A dangerous medication for treating pain; the half-life as an analgesic is only ~ 8 hours, but slow peak onset and ~ 24 hr half life as a respiratory depressant.
        i. Vast majority of methadone diversion and overdose involves the tablet form of methadone prescribed for pain.
    h. Methadone tx for OUD is NOT begun in the ED.
9. Buprenorphine (usually sublingual), known as "bupe" or "bup":
    a. PARTIAL agonist, long half-life (similar to methadone), HIGH affinity for mu receptor, more rapid onset than methadone (peaks in ~ 1 hour).
    b. Much less euphoria than other opioids (if any). Safe for office-based Tx.
    c. Dosing is more standard than methadone, and pts can begin tx at a therapeutic dose
    d. A very effective analgesic (especially in the opioid experienced pt).
    e. <u>Ceiling effect on respiratory depression</u> (except in small children).
        i. Respiratory depression can be enhanced, and can still be lethal when combined with benzodiazepine abuse, alcohol intoxication, etc.
    f. Must be administered sublingually (as a tablet or film strip). Absorption significantly diminished if swallowed.

g. On an outpatient basis, usually prescribed as combination of bupe and naloxone (bup/nx).
    i. Deters abuse (crushing or melting into liquid) and inhalation (IN) or injecting (IV, IM, etc.). The naloxone is absorbed (IN, IV, IN, and SQ), blocks the effect of the bupe, and may precipitate acute withdrawal.
    ii. Naloxone is poorly absorbed sublingually and orally.

10. Bupe is the superior medication for treating acute opioid withdrawal in the ED:
    a. Usually obviates the need for placing an IV in a patient population in which it may be very difficult to get an IV started.
    b. Enables the use of non-sedating medications, and much more rapidly controls withdrawal symptoms. The patient now is much more able to participate in a discussion about OUD treatment.
    c. Bupe actually treats the underlying disease (OUD), and simultaneously initiates MAT.
    d. Dramatically improves ED throughput, and reduces RN and medication utilization.
11. Patient selection for Tx with bupe in the ED for OUD:
    a. Any patient can receive bupe for acute withdrawal.
    b. Patients should be in at least "Mild withdrawal" per the COWS score (at least 8).
    c. If prescribing bupe for OUD, patient should meet DSM-5 criteria (majority of ED patients presenting in acute opioid withdrawal).
        i. If treating OUD and pt is not in acute withdrawal, consider bupe Rx for home induction, and clinic referral.
    d. Contraindications to initiating MAT with bupe in the ED
        i. Methadone tx in the last 48 hours (not an absolute contraindication).
            1. If pt not in severe withdrawal, consult an expert, before dosing with bupe.
            2. Want to avoid precipitating withdrawal with bupe (can be severe).
        ii. Intoxicated with alcohol, benzodiazepines, etc.
        iii. Patients with polypharmacy SUD, particularly if include other, non-opioid, sedating medications (alcohol, benzos, etc.).
        iv. Chronic pain patients, as the dosing is different (best begun in clinic).
        v. Severe medical illnesses (COPD, advanced renal or liver disease, etc.).
            1. Bupe may be an appropriate medication option for patient's OUD, but this care must be coordinated. Requires a team approach.
12. ED bupe dosing concepts:
    a. Screen out high-risk patients.
    b. Initial dose based on volume of opioid use, and severity of withdrawal.
    c. Initial dose is 4-8mg. Dose can be repeated after 30 minutes, if only minimal improvement.
    d. If acute withdrawal symptoms are relieved, the patient can engage with a social worker, peer counselor, etc.
    e. If no contraindications (e.g. the polypharmacy patient):
        i. Consider bupe loading (a total of 24-32mg), to extend the time a patient can get into a clinic (prolongs the return of w/d sx).
        ii. Or, if ED doc has an X-waiver, write the patient a prescription for bup/nx.
13. Avoid bupe precipitated withdrawal (BPW) – which can be horrible!

a. Bupe binds tightly to the Mu receptor (blocking other opioids).
b. Bupe displaces full agonist opioids (heroin, morphine, methadone, etc.)
c. Requires higher doses of naloxone to displace bupe (than other opioids).
d. Patients must be in withdrawal – (or craving post w/d) -- to benefit from bupe!

14. Keys to avoiding BPW:
    a. Express empathy to patient.
    b. Determine which opioids a patient uses, how much, and last dose.
    c. If patient NOT in obvious severe withdrawal, then perform a COWS.
    d. Quick 11 element scale. Takes <1 minute to perform. Readily available as a phone app.
    e. A quick 11 element scale, which includes elements of heart rate, pupil size, rhinorrhea, tremor, restlessness, vomiting, etc.
    f. COWS ≥ 8 mild, ≥ 13 moderate, ≥ 36 severe.
15. Treating Precipitated Withdrawal (BPW):
    a. Not well studied. Somewhat controversial.
    b. Can offer non-opioid Tx.
    c. Alternatively .. More bupe! (recommended by most experts, although not well studied)
    d. Titrate additional doses, while the patient is monitored, until withdrawal symptoms have subsided.
    e. CAUTION:
        i. Nausea is a common adverse effect of buprenorphine.
        ii. DO NOT ASSUME that all nausea induced by buprenorphine is due to BPW.
16. Bupe after naloxone:
    a. This has not been well studied.
    b. Recommend shared decision-making with patient.
    c. Consider initiating bupe:
        i. Particularly if pt only uses short acting opioids (e.g. heroin, oxycodone),
        ii. And be prepared to monitor pt until the naloxone would have worn off, and until bupe effects peak.
    d. May offer non-opioid w/d tx as well
    e. After NALOXONE, caution with giving bupe to pts on long half-life opioids, such as methadone, MS Contin, Opana, etc.
        i. BPW more likely!
        ii. Then will have to manage BPW – which may incur an extended ED stay.
17. DATA 2000 & obtaining an X-waiver:
    a. Provided a “waiver” to treat opioid addiction outside of a traditional opioid treatment program (e.g. “methadone clinic”).
    b. X-waiver is required to Rx bupe for OUD (provide a prescription to be filled at a pharmacy)
    c. Requirements:
        i. Active state medical license (including PA, APRN)
        ii. Valid individual DEA
        iii. Eight-hour course for MD/DOs
        iv. PA/APRNs require 24 hours
        v. Patient limits apply to patients treated “at any one time” (30/100/275).
    d. Any provider can Rx bupe for pain!

    e. Any provider can order bupe to be administered in a hospital or in the ED (no X-waiver is required)!
18. The DEA "Three Day Rule" – applies only to the outpatient setting:
    a. " .. allows a practitioner who is NOT separately registered as a narcotic treatment program or certified as a waivered DATA 2000 physician, to administer (but not prescribe) narcotic drugs to a patient for the purpose of relieving acute withdrawal symptoms while arranging for the patient's referral for treatment, under the following conditions:
        i. Not more than one day's medication may be administered or given to a patient at one time.
        ii. Treatment may not be carried out for more than 72 hours
        iii. The 72-hour period cannot be renewed or extended"
        iv. http://www.samhsa.gov/medication-assisted-treatment/legislation-regulations-guidelines/special-circumstances-providing-buprenorphine
19. Per the DEA "Three Day Rule," Is it necessary to be able to refer a patient to an opioid addiction treatment clinic, to administer bupe in the ED for withdrawal or MAT?
    a. Officially, it is required, however …
    b. The DEA cares about DIVERSION of prescribed, or dispensed, bupe.
    c. The DEA is far, far less concerned about medications ordered and administered in hospitals, in the ED, etc.
20. Naloxone distribution:
    a. Broad Support in the medical community: Surgeon general, CDC, WHO, NIDA, AMA, etc.
    b. Many EDs are developing "take home" naloxone programs to engage patient, and friends and families of patients with OUD.
    c. Some ED staff distribute to patients/friends/families of individuals at risk of opioid overdose 24 hours/day.
    d. Prescription is another model, but filling can be problematic (state and insurance dependent).
    e. We must engage in these discussions with our patients about their health!
        i. Most are very willing!
    f. Table provided of cost of various forms of naloxone.
21. Course summary:
    a. Addiction is a disease.
    b. Treatment works.
    c. You DON'T need a waiver to treat withdrawal with buprenorphine.
    d. Methadone, buprenorphine, naltrexone and naloxone save lives.
    e. You can be part of the solution!
22. Contact information:
    a. Eric Ketcham, MD keter16.ek@gmail.com
    b. Kathryn Hawk, MD Kathryn.hawk@gmail.com
23. Additional Slides attached, including ED buprenorphine flow diagram/treatment protocol.