Naltrexone in Treatment for Alcohol and Opioid Use Disorders: Case Studies and Practical Applications

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Disclosures

• The speakers have no relevant financial or nonfinancial relationships within the products or services described, evaluated, or compared in this presentation.

• The opinions and conclusions expressed in this presentation are those of the authors and do not necessarily represent the views of the University of Wisconsin, Department of Health Services, US Public Health Service, the Indian Health Service or the Ho-Chunk Nation.
Objectives

• Review of the trends in the opioid epidemic
  – implications for naltrexone therapy

• Naltrexone basics

• Naltrexone initiation and maintenance
  – clinical cases: alcohol, opioids

• Discussion: throughout…!

National epidemic: “the opioid crisis”

• Alcohol: among top three causes of preventable mortality

• Opioids: fastest growing drug problem
  – prescription opioids: gateway to heroin

Wisconsin Dept Health Services 2010
Untreated addiction → Overdose deaths 2016 every 9-10 min in the US → Opioid overdose deaths 2016 every 16 min in the US

Source: New York Times, Sept 2, 2017; data from the CDC National Center for Health Statistics

CDC 2016 overdose death data
Untreated addiction

Overdose deaths 2017
every 7 min in the US

Opioid overdose deaths 2017
every 10 min in the US


Overdose ED admissions,
change from 2016 to 2017

↑ by 30% in the US

↑ by 70% in Midwest

↑ by 109% in Wisconsin

CDC 2018
Trends in opioid misuse

• Prescription (Rx) opioids – plateaued rates but still leading the way…

• ↑ heroin-related deaths

• ↑ synthetic opioid-related deaths

• ↑ use of other drugs with opioid properties

Trends in opioids: potential impact on naltrexone therapy

• Drug testing: some opioids are not detected by the usual / available tests

• Long-term use of fentanyl and analogs:
  – very lipophilic: long “wash out” period before naltrexone can be started
Lethal Opioids

- Fentanyl is 50 – 100 times stronger than morphine
- Carfentanil is **10,000** times stronger than morphine
  - No safe dose for humans
  - Narcan may not be able to revive someone who has come in contact with carfentanil

Addiction treatment = evidence-based, effective public health strategy:

↓ mortality, ↓ relapse, ↑ health

enables getting one’s life back…
Existing effective treatments are underutilized
**MAT for Opioid Use Disorders (OUDs)**

- **Methadone (only licensed programs)**
  - full agonist of μ-opioid receptors
  - oral (daily)

- **Buprenorphine (any certified clinician)**
  - partial agonist
  - sublingual (daily); implant (q 6 months)

- **Naltrexone (any clinician)**
  - antagonist
  - oral (daily) or injectable (monthly)

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**MAT for Alcohol Use Disorders (AUDs)**

- All medications can be prescribed by any prescriber…
  
  - Disulfiram
  - Acamprosate
  - Naltrexone
  
  - oral (daily) or injectable (monthly)
Only a minority of patients is treated with MAT...

![Graph showing treatment options and OTP patient data](image)


2012 N-SSATS Data, SAMHSA

Courtesy of Nora Volkow, 2016 ASAM Conference

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Naltrexone basics

![Chemical structure of naltrexone](image)
Naltrexone is FDA-approved for both opioid and alcohol use disorders

*Treat Addiction Save Lives* © ASAM

Naltrexone: mechanism of action

- Blocks μ opioid receptors
  - binds to μ receptors stronger than agonists
  - can precipitate opioid withdrawal
  - do not start until opioids “wash out”…
  - competitive antagonism: high doses of potent opioids can override the blockade
Naltrexone: mechanism of action

- Reduction of opioid cravings

- “Can’t get high” on opioids while on it…
  - many patients will try to test this statement out, especially early in Tx…

Naltrexone: mechanism of action

- Reduction of alcohol cravings

- Takes away the pleasure of drinking…
  - many patients will try to test this statement out, especially early in Tx…
Naloxone Overdose Prevention

Blocks opioid receptors
reverses overdose → saves lives
nasal naloxone is cheapest

Naltrexone vs. other MAT for opioid use disorders

• Methadone – best evidence
  – 75% retained in treatment at 6 months
  – but… available only in federally-licensed programs; many side/adverse effects; stigma
  – can be started “now” in active opioid users

Naltrexone vs. other MAT for opioid use disorders

- Buprenorphine – strong evidence
  - 50% retained in treatment at 6 months
  - can be prescribed in any Tx settings (prescriber needs a waiver); safer than other opioids; lesser stigma compared to methadone
  - typically initiated after opioid withdrawal starts


Naltrexone for opioid use disorders

- Introduced in 1970’s for PO daily use
  - poor acceptability, adherence, and efficacy

- 2010: FDA approved injectable extended release (XR) naltrexone (Vivitrol®)
Naltrexone for opioid use disorders

- **Comparison of XR vs. oral naltrexone:**
  - XR Naltrexone group: twice as high Tx retention rate (50-70%) at 6 months

  *Brooks 2010; Sullivan 2015*

Naltrexone for opioid use disorders

- **Comparison of XR naltrexone vs. placebo:**
  - XR Naltrexone: higher Tx retention rate and lower opioid use and cravings at 6 months

  *Comer 2006; Krupitsky 2011*

  - Positive outcomes through 18 months

  *Krupitsky 2013*
Naltrexone for opioid use disorders

• Comparison of XR Naltrexone vs. “usual care” in a criminal justice outpatients:
  – XR Naltrexone group: higher retention rate (60% at close to 6 months)

  Lee 2016

Naltrexone for opioid use disorders

• Comparison of XR Naltrexone vs. Buprenorphine/naloxone:
  – XR Naltrexone: slightly higher initial relapse rates (induction failures) compared to buprenorphine/naloxone but overall equally safe and effective at 24 weeks.

  Lee 2017
Naltrexone for opioid use disorders

- Lack of studies that directly compare naltrexone to methadone
  - Evidence is strong for methadone and buprenorphine MAT
  - More limited for naltrexone MAT
Naltrexone vs. other MAT for opioid use disorders

- Naltrexone – more limited evidence but…
  - can be prescribed in any settings, by any prescriber
  - lesser stigma
  - no diversion
  - overall safe

Injectable Naltrexone: extended release

- better adherence (works for 1 month)
Clinical challenges when initiating naltrexone therapy

- Patients using opioids and those treated with buprenorphine or methadone MAT: challenging to initiate / change to naltrexone
- **Pregnancy:** naltrexone is not recommended

Naltrexone vs. other MAT for opioid use disorders

- **Naltrexone**
  - start when absence of opioids and physical dependence (usually DAYS after last use)…
    - many are unable to get through the wash-out wait period and relapse;
    - many do not feel well early in the Tx…. 
Naltrexone vs. other MAT for alcohol use disorders

- Naltrexone
  - can be initiated any time
    - ideally, after the acute alcohol withdrawal
    - can be used despite a complete cessation of drinking
Great resource: www.pcssmat.org

XR-Naltrexone: A Step-by-Step Guide

https://indd.adobe.com/view/027eff2a-a0c6-4e52-bc8b-81f5b5b28cc1
The ASAM National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use

https://www.asam.org/resources/guidelines-and-consensus-documents/npg

Naltrexone therapy initiation
Naltrexone for OUDs:
patient selection

• Individualized approach is crucial
  – no naltrexone if…
    • pregnancy; intolerance; liver failure;
    • severe pain / opioid therapy
    • suicidality

Naltrexone for OUDs:
patient selection

• Individualized approach is crucial
  – no naltrexone if…
    • unable to stay off opioids;
    • severe disease or a prior failure of naltrexone: consider agonist MAT
Naltrexone for OUDs: patient selection

• Consider specifically naltrexone if….
  • patient preference;
  • job requirements (doctors, pilots)
  • failed other MATs;
  • high-risk of diversion or non-compliance

Naltrexone for OUDs: patient selection

• Consider specifically naltrexone if….
  • prolonged abstinence, sporadic use,
    lesser OUD severity;
  • those wishing to transition away from
    agonists
Naltrexone for OUDs: patient selection

• Consider specifically naltrexone if….
  • youth;
  • criminal justice system
    – better acceptability

Naltrexone for AUDs: patient selection

• Good candidates:
  – patients with severe alcohol use disorders (AUDs)
  – comorbid opioid and alcohol use disorders
Naltrexone initiation

• Prior to the initiation of naltrexone
  – negative pregnancy test in women
  • discussion of birth control
    – best long-lasting birth control!

• Prior to the initiation of naltrexone
  – liver function testing (AST, ALT, Tbili)
  • not more than 5 x upper limit of aminotransferases (asymptomatic)
  – HBV / HCV status does not impact initiation
Naltrexone initiation

• Prior to the initiation of naltrexone
  – urine drug testing
    • ideally, a point-of-care (POC) testing would be completed: expected to be NEGATIVE for opioids

Naltrexone initiation

• If the POC drug test is not available prior to the initiation, consider:
  • I.M. naloxone challenge at the clinic
  • P.O. naltrexone challenge at the clinic
  • P.O. naltrexone Rx for home
Naltrexone for OUDs: initiation

- Ensure absence of opioids & physical dependence
  - counsel about the risk of precipitated withdrawal if taken too soon;
  - offer anti-withdrawal Tx while opioids are “washing out”

Naltrexone initiation

- Ensure absence of opioids & physical dependence - advise on the expected duration of the “wash-out” period:
  - per medication insert: 10-14 days
  - clinical practice: heroin ~3 days; “typical” oral opioids ~ 5-6 days; methadone, buprenorphine, fentanyl / analogs with chronic use ~ 10-14 days
**Opioid Comparisons: Approx. Times to Withdrawal Effects**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Half-Life (T ½) (approximate)</th>
<th>Estimated Clearance (5 half-lives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin (diacetylmorphine) → 6-monoacetylmorphine (6-MAM) → morphine</td>
<td>Injected: (H) ~2-6 minutes (6-MAM) ~2.5-5.5 hrs. (Morphine) ~1.5-7 hrs.</td>
<td>~10-30 minutes ~12-27 hrs. ~8-35 hrs.</td>
</tr>
<tr>
<td></td>
<td>Smoked: 3.3/5.4/18.8 min.</td>
<td>~16-94 minutes</td>
</tr>
<tr>
<td>*Hydrocodone (Vicodin, Norco)</td>
<td>~8 hours</td>
<td>~40 hours</td>
</tr>
<tr>
<td>*Oxycodone IR (Percocet, oxycodone)</td>
<td>~2-4 hours</td>
<td>~10-20 hours</td>
</tr>
<tr>
<td>*Oxycodone ER (Oxycontin)</td>
<td>~5 hours</td>
<td>~20 hours</td>
</tr>
<tr>
<td>*Morphine (IR, MS Contin)</td>
<td>IR: ~ 2-4 hours ER: ~ 11-13 hours</td>
<td>IR: ~10-20 hours ER: ~55-65 hours</td>
</tr>
<tr>
<td>*Methadone</td>
<td>~9-87 hours</td>
<td>~45-435 hours/(2-18 days)</td>
</tr>
<tr>
<td>*Bupenorphine (Suboxone/Subutex)</td>
<td>~16-39</td>
<td>~80-195 hours/(3-8 days)</td>
</tr>
</tbody>
</table>

* Information adapted from UpToDate/Lexicomp®

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**Naltrexone for OUDs: initiation**

- Injectable naltrexone should be given as soon as possible to reduce the risk of relapse and opioid overdose.
Naltrexone for OUDs: initiation

• Injectable naltrexone should be given as soon as possible to reduce the risk of relapse and opioid overdose

Naltrexone for OUDs: initiation

• Prior to initiation – consider a challenge with naloxone or naltrexone
  – withdrawal symptoms correlate to:
    • the antagonist dose
    • the amount of opioid still present in the system
    • the severity of physical dependence
Naltrexone initiation

• Challenge at the clinic
  – I.M. naloxone (deltoid muscle)
    • 0.4 mg, then 0.8 mg
    • withdrawal starts in 5-10 min, lasts 30 minutes
  – P.O. naltrexone
    • 12.5-25 mg, 1-2 hours prior to the injection
    • withdrawal starts in 30-60 minutes

• Challenge at home
  – Rx P.O. naltrexone (50 mg tabs) x few days
    • tabs are easy to split
    • start low dose naltrexone (e.g., ¼ or less of a tablet) when the “wash out” period is expected to be completed
Naltrexone initiation

• If no withdrawal after the challenge:
  – at the clinic: proceed with the injection
  – at home: continue low-dose increments q 2-3 hours until 50 mg are reached; then 50 mg daily until the injection;

• If withdrawal with the challenge: hold the process, start again in 1-2 days

Naltrexone for OUDs: initiation

• Opioid withdrawal assessment
  – many scales
    • Clinical Opioid Withdrawal Scale (COWS)
Naltrexone therapy maintenance

• “Monthly” injections
  – typically q 4 weeks long-term
    • some clinicians prescribe additionally oral naltrexone (25-50mg) PRN for cravings to help prevent relapse

XR Naltrexone for OUDs: maintenance
XR Naltrexone for OUDs: maintenance

• “Monthly” injections

• Pharmacokinetics:
  – Oral naltrexone: T½ - approx. 4 hours
    • caution in renal impairment: primary metabolite is excreted in the urine
  – XR naltrexone: concentrations slowly decline after 14 days post administration
    • cleared within 33-35 days post injection

http://www.accessdata.fda.gov/drugsatfda_docs/label/2010/021897s005s0106l.pdf
http://dailymed.nlm.nih.gov/dailymed/lookup.cfm?setid=0d929bf5-2eaa-4679-8334-1ac159b2b55c

XR Naltrexone for OUDs: maintenance

• “Monthly” injections

  – first 2-3 months of therapy, often:
    • injections q 3 weeks (off label) AND/OR
    • oral (50mg/day) supplementation
      – during the 3rd-4th week of the injected dose
      – during the first 1-2 days of the 1st injection
XR Naltrexone for OUDs: maintenance

• Duration of therapy
  – Tx is long-term (chronic disease model)
    • duration correlates with improved outcomes…
    • individually-tailored, may be even life-long
      – best at least 12 months
        » starting from the date of “doing well”

XR Naltrexone for OUDs: maintenance

• Monitoring
  – LFTs
    • baseline, in 2-3 months, then q 3-6 months
  – urine pregnancy (birth control!)
  – urine drug testing
XR Naltrexone for OUDs: maintenance

• Monitoring – frequency of clinic visits
  – early on: even weekly
    • Specific frequency depends on other Tx the patient is receiving; OUD problem severity; comorbid conditions; adherence to recommendations (behavioral therapy!)

  – later on: can be less frequently
    • recommended by the ASAM Practice Guidelines to be conducted at least monthly
      – monthly injections are an opportunity to check in and counsel…
XR Naltrexone for OUDs: maintenance

• Monitoring
  – naltrexone is recommended in conjunction with behavioral therapy
  – mutual self-help support groups are effective, widely available, and free
  • have a sponsor; become a sponsor…

Naltrexone for OUDs: maintenance

• Monitoring – serious (rare) side effects
  – worsened mood / suicidality
    • may not be the 1st line Tx for suicidal patients…
  – allergic (eosinophilic) pneumonia
  – systemic allergic reactions
Naltrexone for OUDs: maintenance

• Monitoring – rare interactions…
  – caution with glyburide: may increase serum concentration of naltrexone
  • increased risk of toxicity

Naltrexone therapy: common issues…
XR Naltrexone maintenance

• Monitoring – injection site reactions
  – similar to other I.M. injections…
  – site tenderness and nodule are common, usually mild, resolve in 2-3 days
  – Problems arise if injected into the fat tissue

XR Naltrexone maintenance

• Monitoring – common side effects
  – usually during the first 1-2 injections
  – many symptoms can be explained by a protracted withdrawal syndrome
    • Rx anti-withdrawal medications for support
XR Naltrexone maintenance

• Monitoring – common side effects
  – HA
  – N/V, diarrhea, poor appetite
  – fatigue; insomnia; malaise
  – mm and joint aches / cramps
  – precipitated withdrawal if injected “over” opioids

XR Naltrexone maintenance

• Monitoring – LFTs
  – if substantial increase → stop naltrexone
  – remember: alcohol / drug use, and acute hepatitis can cause ↑ LFTs
  • hepatitis B/C by itself is NOT a contraindication to naltrexone!
Injectable naltrexone for OUDs: maintenance

• Testing of the blockade...
  – many patients will test the blockade
  • especially early in the treatment
  – few will try to override it
  Counsel about dangers
  Counsel that it’s not going to work 😊

Prescribe naloxone for overdose prevention!

Naltrexone for OUDs: maintenance

• Patients who discontinue naltrexone and resume opioid use should be made aware of the increased risks of overdose death
  – counsel up front about NOT going back to the previously “usual” dose
  Prescribe naloxone for overdose prevention!
XR Naltrexone for OUDs: maintenance

- Opioid blockade typically wears off…
  - in 2-3 days after oral Tx
  - in 5-6 weeks after injectable Tx

Risk of overdose
Counsel about it!

XR Naltrexone maintenance

- The blockade and its duration is important for pain management
  - patients (and clinicians) worry about the efficacy of analgesia for acute severe pain
    - barrier to the patients’ acceptance of this Tx
XR Naltrexone for OUDs: maintenance

• Prior to a scheduled elective surgery:
  – stop oral naltrexone 3 days prior;
  – stop XR naltrexone at least 30 days prior
    • use oral naltrexone until 3 days prior to the surgery if needed

Naltrexone for OUDs: maintenance

• Management of acute, severe pain
  – maximize non-opioid approaches;
  – in-patient settings: IV administration of potent agonists can reverse the blockade of the opioid receptors
    • close monitoring of respiratory status (ICU)
**Naltrexone maintenance**

- **Management of chronic, severe pain**
  - maximize non-opioid approaches;
  - If long-term opioids are needed:
    - stop naltrexone
    - buprenorphine and methadone are the first-line choices (with doses q6-8 hours)

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**XR Naltrexone for OUDs: maintenance**

- **Patient is late for the next dose…**
  - bridge with oral naltrexone until able to get injection;
  - ensure absence of opioids / physical dependence prior to administering the dose
XR Naltrexone maintenance

• Patient is not progressing in Tx…
  – drug/alcohol use, non-adherence…
    • maximize behavioral Tx;
    • closer monitoring / stepped-up care;
    • explore underlying reasons
      – treat co-morbid problems…

Injectable naltrexone administration
Injectable naltrexone for OUDs: administration

• Get “buy-in” from the clinic’s staff
  – staff are often afraid of “these patients;”
  – nurses are afraid of injecting naltrexone…

  Discuss it up front, explain details….

Injectable naltrexone for OUDs: administration

• Logistics - ordering injectable naltrexone
  • Pre-order it to store at the clinic
  • Send Rx to the pharmacy
  • Have it administered in (selected) pharmacies
XR Naltrexone administration

• **Logistics** - ordering XR Naltrexone
  
  • Pre-order it to store at the clinic
    
    – takes min. 1-2 days to arrive
    
    – check the PA (takes several days)
      
      » clinic pays for it “up front”
      
      » Rx oral naltrexone until the injection

• **Logistics** - ordering injectable naltrexone
  
  • Send Rx to the pharmacy
    
    – patient then brings it to the clinic
      
      » not allowed in many clinics, including UW Health
      
      » not recommended, unless the pharmacy is on site
    
    – pharmacist then administers it
      
      » Hometown pharmacies (call to give heads up)
XR Naltrexone administration

• Logistics - ordering XR Naltrexone
  • to offset patient cost, refer to:
    www.vivitrolcopay.com

XR Naltrexone administration

• Logistics – storage
  – in the fridge
  – needs to be at “room temperature” for the injection
    • take out from the fridge ~45 min beforehand
    • can be put back to the fridge if needed
      (can stay out for up to 7 days..)
XR Naltrexone administration

• Logistics – injection technique
  – instructional materials for the injectors…
    https://vimeo.com/101010120/940e72505d
  – “kit” comes with a syringe, needles and two bottles of medication to mix together
    • short window after mixing: hardens (“gorilla glue”) within 2 min

XR Naltrexone administration

• Logistics – injection technique
  – consider having extra needles available
    • if it clogs – replace the needle;
  – single injection 380 mg (4 mL) per dose
    • alternate injection sides monthly
Case 1

- 22 yo man, actively using I.V. heroin daily;
- no prior treatment;
- highly motivated, in a drug court;
- lives with a roommate who also uses heroin
• Naltrexone is well suited for highly-motivated individuals, especially teens and young adults
• Drug court provides assurance of additional monitoring and behavioral Tx
• Lives with heroin-using roommate: risk of diversion of agonist MAT

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Case 1

– best to initiate MAT ASAP…
– agonist MAT can be started sooner…
– wait at least 2-3 days after his last heroin use before considering naltrexone (with or without the “challenge”)
Case 1

• Checklist:
  – ensure absence of opioids and physical dependence;
  – POC urine drug test: negative for opioids;
  – LFTs: favorable

Case 1

• Checklist:
  – HIV, Hepatitis B and C
    • HBs Antigen (Ag);
    • HBs Antibodies (Ab): vaccinate if not immune!
    • HCV Ab
      – order viral load PCR if Ab positive
Case 2

• 31 yo man, stopped using heroin (and other drugs) 3 months ago; has a lot of cravings;
• h/o prior methadone and buprenorphine Tx;
• attends behavioral therapy;
• active in NA groups;
• lives with wife and 2 kids

Case 2

• Important: he has been abstinent for 3 months, which means he is past a withdrawal window and can start naltrexone any time…
  – always consider verifying the appropriateness of the candidate using objective testing…
  – follow the checklist…
Case 3

• 36 yo woman, stopped using daily oxycodone 1 month ago; now uses sporadically;
• last use yesterday;
• lives with husband and kids;
• reports bilateral tubal ligation

Case 3

• Sporadic use likely means that she will need a shorter wash-out period compared to those who use daily (2-3 days)
• Consider verifying the appropriateness of the candidate using objective testing…
• Follow the checklist… (pregnancy test)
Case 4

- 29 yo woman, uses large quantity of daily heroin and other drugs;
- last use today (does not appear intoxicated);
- has a h/o numerous prior overdoses;
- No prior Tx;
- lives with significant other (“in recovery”)

Case 4

- Consider agonist MAT as first-line Tx;
- If wishes naltrexone: longer wash out period
  - can be “sped up” especially if inpatient
    (buprenorphine or naloxone/naltrexone)
  - ensure absence of opioids and physical dependence
Case 5

• 38 yo woman, doing well on methadone maintenance, would like to “be off narcotics”;
• methadone 90 mg/day x 3 years;
• lives with husband; has full-time job

Case 5

• Explore reasons underlying her wish to be off it
  – family pressure? side effects? ‘wishful thinking’?
• Communicate with the methadone provider;
  – can transition first to buprenorphine, then taper it down to 2-4 mg/day before stopping
• Wait 10-14 days before starting naltrexone
• Offer withdrawal management
Opioid withdrawal
(sign of physical dependence)

• Very uncomfortable (relapse & OD risk)

• Detox (withdrawal management):
  – usually out-pt; in-pt in selected cases only
    • admit for medical reasons?
  – it’s illegal to prescribe opioids for opioid withdrawal in addiction except
    • methadone in licensed programs
    • buprenorphine by certified MD

Opioid withdrawal: clonidine-based detox

• Clonidine 0.1-0.2 mg every 4-6 hours
  – max. 1.2 mg/day; # 20-30 tabs; for 10-14 days
  – check for contraindications (pulse; BP)
    • do not prescribe to “unknown” pts
      – assess vitals and co-morbidities
      – consider clonidine patch especially for longer use
  • with prolonged use: taper off
Opioid withdrawal

- **Symptomatic management:**
  - diarrhea: loperamide
  - mm / joint aches: NSAIDs, acetaminophen, heat, baclofen, cyclobenzaprine...
  - nausea: ondansetron, prochlorperazine
  - abd cramping: dicyclomine
  - anxiety / insomnia: gabapentin, trazodone, quetiapine, hydroxyzine
    - caution: benzos and z-drugs in those with addiction

Protracted opioid withdrawal

- Low-grade prolonged withdrawal;
- Typically lasts for 2-4 weeks
  - if longer, consider other reasons
- Relatively common in those who started XR
  Naltrexone soon after a longer period of opioid use (or agonist Tx)
Protracted opioid withdrawal

• Sometimes called “naltrexone flu” - flu-like Sx:
  – irritability, not feeling well, fatigue;
  – worse mood, anhedonia, anxiety, insomnia
  – aches and pains
  – nausea, lose stools

• Tx similar to an acute opioid withdrawal:
  – clonidine PO PRN or patch; other supportive medication

Naltrexone therapy: special populations
Pregnant women

- Pregnancy while on naltrexone:
  - typically: stop naltrexone
    - consider switching to agonist MAT
  - continue it if the woman wants to stay on it to prevent relapse; obtain informed consent

Youth

- Although only one small case series demonstrated the efficacy of XR Naltrexone in adolescents, it is appropriate choice for selected youth / young adults.

Fishman 2010
Patients with co-occurring mental health problems

- Psychiatrically stable patients: good candidates
  - monthly injections may help medication adherence
  - monitor for worsened depression / suicidality;

- Unstable patients (severe psychopathology, suicidality): not optimal candidates
  - concern for worsened suicidality risk

Patients in criminal justice (CJ) system

- More and more often used for prisoners
  - better accepted in CJ than agonist MAT

- Limited data about efficacy

- Consider for patients before their release
  - similar premise applies to those in other “monitored” settings, eg, residential Tx…
Naltrexone therapy: resources

Great resource: www.pcssmat.org
XR-Naltrexone: A Step-by-Step Guide

Step 1: Patient History
- Initial Assessment (Naltrexone Readiness Form)
  - Patient information
  - Drug use type, amount, route
  - Treatment history: medications, response, adherence

Step 2: Medical Evaluation
- Medical history:
  - Complications (infections, overdoses, liver disease)
  - Physical exam: vital signs, infections (diabetes, corticosteroids)
  - Labs: CBC, chemistry, UA, pregnancy, hepatitis panel, drug toxicology, breathalyzer

Step 3: Shared Decision-Making
- Appropriateness for XR-Naltrexone:
  - Provide information about patient's medical status and diagnosis
  - Review consequences of opioid use
  - Provide information about opioid use disorder and its treatment
  - Review information on use and side effects of naltrexone

https://indd.adobe.com/view/027eff2a-a0c6-4e52-bc8b-81f5b5b28cc1

The ASAM National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use

https://www.asam.org/resources/guidelines-and-consensus-documents/npg
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References

CNN's series of short movies about the opioid crises

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Thank you!

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