# Rapid Initiation of Naltrexone and Buprenorphine: Findings from the NIDA CTN

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# Disclosure Information

## Rapid Initiation of Naltrexone and Buprenorphine: Findings from the NIDA CTN

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- No Disclosures

# Learning Objectives

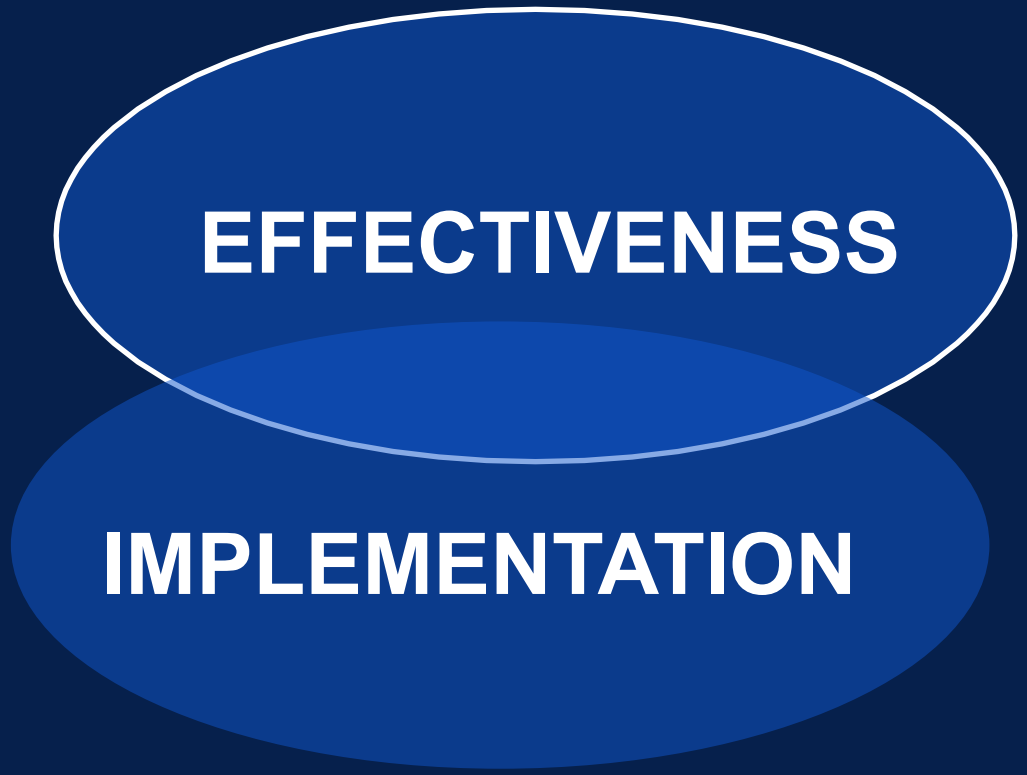
- To describe the implementation activities utilized in delivering the Rapid Procedure (RP) procedure in the CTN-0097 trial.
- Classify the main findings of barriers and facilitators from the CTN-0097 trial.
- To describe the association of fentanyl use with increased withdrawal after receipt of an initial dose of buprenorphine in the CTN-0097 trial.

# CTN-0097 SWIFT Trial

- Six community-based inpatient treatment sites
- **415** OUD participants.
- Both induction procedures started with a buprenorphine induction
- The lead study team provided clinical guidance to wait longer and use lower doses of buprenorphine in cases where patients were fentanyl positive

# Study Objectives

## Type 1 Hybrid Effectiveness-Implementation Trial




- To determine whether the Rapid Procedure (RP) is **non-inferior** to a Standard Procedure (SP) on the successful initiation of XR-naltrexone.
- To study barriers and facilitators to RP implementation and to develop an Implementation Strategy for dissemination of RP.

# Implementation Strategies

| Implementation Phases | Select Implementation Strategies |
|---|---|
| Preparation phase (8 weeks) | Identify and prepare champions<br>Facilitate staff buy-in/create incentives<br>Identify potential barriers and facilitators<br>Create implementation plan<br>Training and distribution of clinical materials |
| Implementation phase (14+ weeks) | Performance and fidelity monitoring<br>Clinical coaching/practice facilitation<br>Train-the-trainer strategies<br>Conduct ongoing training as needed<br>Learning collaborative<br>Re-examine implementation facilitation<br>Tailor implementation strategies |

# Methods

Iterative implementation package

Analysis:

- Rapid qualitative analysis of staff interviews.
- Descriptive data collection on implementation strategies using standardized approach.

Hamilton et al., Psych Research 2019
Averill et al., Qual Health Research 2002
Proctor, Powell, and McMillen, Implement Sci 2013

# Implementation Outcomes: Preliminary Findings

**Facilitators**

- Administrative buy-in
- Local clinical champion
- Train-the-trainer strategy

# Implementation Outcomes: Preliminary Findings

**Barriers**

- Staffing shortages (study during COVID pandemic).
- Getting clinical staff to fully implement–research staff hands on at some sites.
- Sustainability—3/5 sites implementing RP at follow-up; other 2 sites not implementing due to understaffing.

# Implementation Tools: easyMOUD.com

easyMOUD

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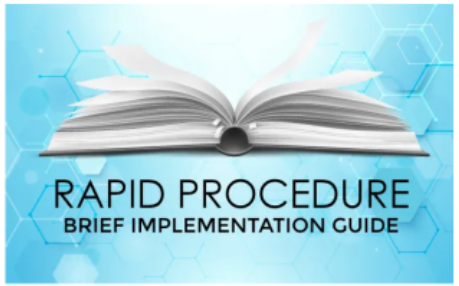
## Rapid induction procedure overview

Home » Medications » Naltrexone » Initiation » Rapid induction procedure overview

- Naltrexone
  - Initiation
    - Rapid induction procedure overview
      - Step 1: Identify your champions
      - Step 2: Create a shared vision
      - Step 3: Plan for clinical practice change
      - Step 4: Training




### WELCOME TO THE RAPID PROCEDURE!

This guide is an introduction to the process of implementing the Rapid Procedure for Vivitrol® induction. We hope this guide helps your team understand the scope of work involved and prepares you for the Rapid Procedure.

# Implementation Tools: Shared Decision-Making Guide

## QUIT OPIOIDS

FOR GOOD

WITH MEDICATION

REASONS YOU MIGHT CHOOSE MEDICATION

AND

WHICH MEDICATION IS BETTER FOR YOU?

## Few words about opioid addiction

- Opioid addiction is **a chronic medical condition**, once it develops it remains present whether people are using opioids or not
- Patients with opioid addiction have abnormal function of some brain centers which cause them to have strong, and difficult to resist urges to use opioid drugs
- In people with opioid addiction, stopping opioid use is a first step to improve quality of their life, **BUT**, most people are unable to resist using opioids **without the help of a medication**
- Many who go to the hospital to detoxify off opioids and return home **without medication relapse within few weeks, and some die of overdose**
- There are three medications to help with craving and the urge to use to prevent relapse:

methadone | buprenorphine (Suboxone) | naltrexone (Vivitrol)

**Each of these medications have a different mechanism of action**

**Your chance of having good medication response is best if you take the medication that fits your personal needs, preferences, and treatment goals**

- The doctor is here to help you make a choice about your path to the recovery

**Addiction is difficult to cure, but it is a disorder that can be managed, like diabetes or hypertension, with medications and lifestyle changes**



## What medications can I take?

METHADONE


- A "gold standard" in the treatment of opioid addiction, it is considered to be the most effective medication
- Methadone strongly activates opioid receptors in the brain (similarly to heroin), and eliminates withdrawal, reduces craving, and blocks the high from heroin/painkillers
- Patients taking methadone either stop using heroin or other opioids, or use much less, have fewer medical problems, and have better social and work functioning

**METHADONE DOWNSIDES**

- Methadone can only be given in a specialized methadone clinic, where you need to go every day at the beginning of treatment to receive the dose and be observed
- Needs to be taken every day and if you miss the dose you may go into withdrawal
- Methadone is a potent medication and can cause sedation and overdose if not taken properly and if mixed with alcohol or sedatives
- Methadone may produce side-effects like nausea, sweating, constipation, sexual problems, and heart problems



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# Implementation Tools: Shared Decision-Making Guide

## BUPRENORPHINE
*(Suboxone, Zubsolv)*




- Works similarly to methadone, eliminates withdrawal and drug craving, but it only partially activates opioid receptors and therefore is safer and has fewer side effects
- Buprenorphine is safer than methadone, and therefore it can be prescribed by a doctor or a nurse and taken at home
- Both methadone and buprenorphine will protect you from the overdose, but only if you keep taking the medication every day
- Both methadone and buprenorphine cannot be stopped abruptly, or you will experience withdrawal symptoms

### BUPRENORPHINE DOWNSIDES

- Need to be in withdrawal before taking the first dose
- Occasional side-effects such as nausea, constipation, headache, and drowsiness
- Overdose can occur if buprenorphine is mixed with large amount of sedating medications or alcohol



## NALTREXONE
*(Vivitrol)*


- Naltrexone works differently from methadone or buprenorphine. It completely blocks opioid receptors
- It can be used only after completing detoxification
- Naltrexone can decrease your craving for heroin to prevent relapse
- If you use heroin while on naltrexone, it will block heroin effects and will prevent craving for more drugs
- It has no abuse potential, no overdose risk, and there is no withdrawal when it is stopped
- Is available as a monthly injection give into the buttock

### NALTREXONE DOWNSIDES

- You can only receive the first naltrexone injection after you have been fully withdrawn from the opioids (aka detoxified), which can be difficult because of withdrawal symptoms
- It usually takes a week or more from your last dose of heroin to be ready for naltrexone injection, which can be difficult because you may continue having urges to use while waiting
- When you take naltrexone, opioid painkillers will not control your pain, you would need to use different medication/procedures
- Injection of naltrexone can be painful and irritate injection site and it can cause liver problems
- It may take few weeks for people to feel completely well after receiving first injection of naltrexone

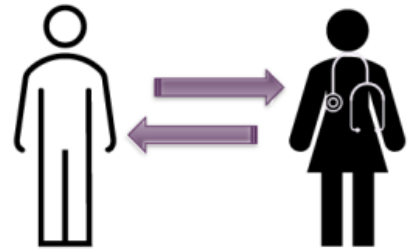


## TREATMENT PLAN

**You and your doctor have discussed ALL medication options**

methadone | buprenorphine (Suboxone) | naltrexone (Vivitrol)

**and made a decision today about the BEST medication to help you overcome your addiction to opioids**



**MEDICATION NAME**

_____

# Fentanyl Background and Pharmacology

- Fentanyl is in the illicit opioid supply across the US.
- **High affinity and high potency.**
- **More lipophilic (absorbed in fat).**
- **Prolonged clearance rates with regular use.**

(Silverstein et al., 2019)
(D'Onofrio et al., 2023)

# CTN-0097 SWIFT Trial

- Six community-based inpatient treatment sites.
- **415** OUD participants.
- Both induction procedures started with a buprenorphine induction.
- The lead study team provided clinical guidance to wait longer and use lower doses of buprenorphine in cases where patients were fentanyl positive.

# Methods: Population

- 218 SWIFT participants :

  1) received at least one dose of buprenorphine.

  2) had Clinical Opioid Withdrawal Scale (COWS) data from before and after their first buprenorphine dose.

  3) had a urine toxicology screen for fentanyl at consent.

***64.7% (141/218) were fentanyl positive***

# Methods: Withdrawal Outcome

- Outcome-

Change in COWS following the first buprenorphine dose was trichotomized:

- no significant increase (< 5)
- mild increase (5 -10)
- moderate/severe increase (>=10)

# Fentanyl Findings:

Association between fentanyl use prior to admission, and more severe opioid withdrawal during buprenorphine induction

## Buprenorphine Dosing

- More participants in the FEN+ group (72%) received a first buprenorphine dose less than or equal to 2mg, compared the FEN- group (27%).
- Total Buprenorphine dose within the first 24 hours was about the same for both groups.
- Hours from last opioid use to the first buprenorphine dose was slightly higher for the FEN+ group (52, SD:33.6) compared to the FEN- group (45, SD:29.4).

# Fentanyl Findings:

Association between fentanyl use prior to admission, and more severe opioid withdrawal during buprenorphine induction

| Withdrawal by Fentanyl Status | | | |
|---|---|---|---|
| | **Fentanyl positive (N=141)** | **Fentanyl negative (N=77)** | **Total (N=218)** |
| | Mean (SD) or N (%) | | |
| Maximum COWS before 1st BUP dose (within 24h) | 8 (4.6) | 7 (4.4) | 7 (4.5) |
| Maximum COWS after 1st BUP dose (within 24h) | 9 (4.3) | 6 (3.8) | 8 (4.3) |
| Change in COWS after 1st BUP dose | 0.74 (5.5) | -0.27 (4.3) | 0.38 (5.1) |
| Increase < 5 | 103 (73%) | 72 (94%) | 175 (80%) |
| **Increase 5-9** | **30 (21%)** | **2 (3%)** | **32 (15%)** |
| Increase >= 10 | 8 (6%) | 3 (4%) | 11 (5%) |

# Final Takeaways

- Implementation
  - Training a local champion and administrative buy-in were key facilitators.
  - The implementation package is now available on the easyMOUD website.
  - Future research needed to replicate these methodology and to evaluate validity of approach/final tool.

- Buprenorphine Induction and Fentanyl
  - Significantly more FEN+ participants experienced a mild (5-9 point) increase in COWS.
  - ***More significant withdrawal increase (≥10 point increase) was not common.***

# References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