UNIT    Center of Excellence

POLICY/PROCEDURE NO.
COE – 00A

SUBSECTION EFFECTIVE DATE
03/20/2017

POLICY/PROCEDURE
Initial Contact about COE admission
Intake Questionnaire

AMENDMENT / REVISION HISTORY
Approved:
Amended:

POLICY
Individuals calling for information about COE participation should be informed about program practices and medication assisted treatment available (buprenorphine/naloxone or injectable naltrexone).

PROCEDURE
The Initial Patient Contact form should be used to obtain information from a prospective patient and to provide information to them about the program, services offered and expectations of patients receiving MAT. If a person agrees to an appointment, information should be sent to them as well as an appointment card. Every patient should be called the day before their appointment (if the appointment is not going to happen the next day). This completed form should be place in the medical record.

Individuals coming to an appointment should also receive the Intake Questionnaire which they should be asked to complete before coming to the appointment so that the counselor/case manager can review the information which is important to planning the most appropriate care for the individual. This form should also be kept in the medical record of the individual.
INITIAL PATIENT CONTACT ABOUT COE PARTICIPATION:
CHECKLIST
(for use by treatment program personnel who answer inquiries about Opioid Use Disorder treatment)

PATIENT INFORMATION:
NAME ____________________________ DOB ________
ADDRESS FOR MAIL:
________________________________________________________________________
________________________________________________________________________
TEL: __________________ home, _______________ work

OK to leave message? ____
CONFIDENTIALITY: (check if discussed with patient)
__ Patient confidentiality discussed

REQUIREMENTS: (check if discussed with patient)
The following are required of patients who are admitted to a buprenorphine/naloxone treatment slot:
__ Actively addicted to heroin or prescription opioids or currently taking methadone (methadone dose 30 mg daily or less)
__ Notified about initial long appointment, includes history and physical
__ Notified of long appointment for first day of induction
__ Frequent (daily to weekly) follow-up visits at first
__ At least every 2 weeks to monthly visits thereafter
__ Requirement for random urine and breath testing
__ Requirement for regular attendance in substance abuse group therapy and/or 12-step recovery program
__ Agrees to release to talk to all other doctors and counselors, relevant family/s.o.

For injectable naltrexone: the above except for active use of opioids
__ Must be free of all opioids for at least 7 days

INSTRUCTIONS FOR INITIAL APPOINTMENT:
(check when discussed with patient)
__ Full bladder, will be urine drug tested
__ For buprenorphine patients: Withdrawal, (if methadone, more than 24 hours since dose); heroin or short acting opioids at least 12 hours since last use; withdrawal symptoms must be observable by staff before induction can take place; Note: this will be reinforced at first visit
__ Bring ALL pill bottles
__ Valid photo ID
__ Will be breath tested for alcohol

Appointment date and time __________ Mailed packet, date _______
INTAKE QUESTIONNAIRE FOR PATIENT
TREATMENT-PLANNING QUESTIONS

NAME __________________________ DATE ________________

PLEASE ANSWER THE FOLLOWING QUESTIONS WHICH WILL HELP US
DESIGN YOUR PLAN OF TREATMENT:

WHAT IS THE BEST TIME OF DAY AND DAY OF THE WEEK FOR YOU FOR
CLinic VISITS?

ARE THERE ANY MONTHS OUT OF THE YEAR WHEN YOU MAY HAVE
DIFFICULTY MAKING IT IN FOR APPOINTMENTS?

IS THERE ANY PROBLEM THAT MAKES IT HARD FOR YOU TO GIVE
ROUTINE URINE SPECIMENS?

DO YOU HAVE ANY DISABILITIES THAT MAKE IT HARD FOR YOU TO READ
LABELS OR COUNT PILLS?

WHAT ARE YOUR REASONS FOR BEING INTERESTED IN
BUPRENORPHINE/NALOXONE (SUBOXONE) TREATMENT?

WHAT ‘TRIGGERS’ DO YOU KNOW WHICH HAVE PUT YOU IN DANGER OF
RELAPSE IN THE PAST OR WHICH MIGHT IN THE FUTURE?

WHAT COPING METHODS HAVE YOU DEVELOPED TO DEAL WITH THESE
TRIGGERS TO RELAPSE?
WHAT PLANS DO YOU HAVE FOR THE COMING YEAR?
WORK?
HOME?
OTHER?

WHAT KINDS OF HELP WOULD YOU LIKE FROM YOUR COUNSELOR?

WHAT ARE YOUR STRENGTHS AND SKILLS TO HANDLE TAKE-HOME BUPRENORPHINE/NALOXONE (SUBOXONE)?

WHAT WORRIES DO YOU HAVE ABOUT EXTENDED TAKE-HOMES?

IS ANYONE IN YOUR HOME ACTIVELY ADDICTED TO DRUGS OR ALCOHOL?

WHAT ARE THE MAJOR SOURCES OF STRESS IN YOUR LIFE?

WHAT FAMILY OR SIGNIFICANT OTHERS WILL BE SUPPORTIVE TO YOU DURING YOUR TREATMENT?

WOULD YOU BE WILLING TO SIGN A RELEASE SO THAT THE PERSON(S) IDENTIFIED ABOVE CAN BE SPOKEN TO REGARDING YOUR TREATMENT?

WHAT MEDICAL CARE WILL YOU HAVE IN THE COMING YEAR?

HOW WILL YOU COMPLY WITH THE ANNUAL PHYSICAL EXAMINATION AND LABORATORY AND URINE TESTING REQUIREMENTS?

HAVE YOU EVER BEEN TREATED FOR A PSYCHIATRIC PROBLEM OR MENTAL ILLNESS OR PRESCRIBED PSYCHIATRIC MEDICATIONS?
UNIT  Center of Excellence  POLICY/PROCEDURE NO.
COE - 001

SUBSECTION EFFECTIVE DATE  POLICY/PROCEDURE
02/10/2017  Overview of COE’s Clinical Services

AMENDMENT / REVISION HISTORY
Approved:
Amended:

POLICY
The Overview of the Eleanor Slater Hospital, Center of Excellence’s Clinical Services related to the treatment of Opioid Use Disorder. This overview provides a general summary of the services and treatment that will be provided to individuals suffering from Opioid Use Disorder including a breakdown of the medication assisted treatment that is to be provided.

PROCEDURE
Description

1. Patient evaluation (see section #7).
2. Day of induction onto buprenorphine/naloxone procedure (see section #8).
3. Induction of injectable naltrexone (see section #8, second section).
4. Description of the Naltrexone Challenge Test related to withdrawal.
5. Maintenance treatment description.
6. Withdrawal symptoms related to buprenorphine.

LIST OTHER SUPPORTING DOCUMENTS/RESOURCES
SAMHSA TIP 40
Center of Excellence for the Treatment of Opioid Use Disorder
Overview of Clinical Services

1. Services to be offered in addition to Medication Assisted Treatment:
   - Primary medical care
   - Psychiatric assessment and treatment
   - Case management
   - Counseling services: individual, group, couples, family therapy
   - Peer support
   - Urine toxicology screening
   - Breath alcohol screening
   - Laboratory testing
   - Vocational/Educational services
   - Tobacco cessation services

2. Services to be implemented should be determined in a shared decision making model with the individual.

3. Determine available primary care resources are in the community for patients who completed COE treatment and need community referral. Have these resources recorded and available for rapid referral from the program. Begin the process of primary care referral when the patient is admitted to the program. Discuss referral with the patient and assist them with selection of a provider and/or a healthcare system that will accept their insurance (most patients in this program will be Medicaid beneficiaries). Obtain a CFR 42 compliant release of information so that you can communicate with the primary care provider that the patient will be referred to.

4. Counselors/Peer Recovery Coaches also function as case managers to their patients and will need to work with the physician to determine treatment needs; these staff will then develop a treatment plan for every patient within one week of admission and following the team discussion of the patient following admission assessment. Counselors/peer recovery coaches, in addition to providing counseling and support to the individual, must document interactions in progress notes. Progress notes should be written following each interaction and at least weekly. Similarly, other clinicians interacting with a patient must document those interactions in progress notes in the medical record.

5. In addition to resources directly provided by the COE, 12 Step groups can be a good source of support. Some groups are more accepting of medication treatment than others and this will need to be checked out in the community. It can be helpful to patients to provide them a list of such groups in your community when they start buprenorphine treatment. A support system for the patient will be very important to their recovery from opioid addiction.

6. Treatment norms for the COE are required and these will be provided to the patient in a treatment agreement. Treatment agreements can address specific questions: What is the response to not showing for appointments? Not participating in counseling? What about calling for refills? What about continued use of other illicit drugs or alcohol? All of these issues and additional issues (informed consent, risks/benefits of treatment with medication, checking of the RI PDMP, toxicology screening, etc).
7. **Patient Evaluation prior to induction onto MAT:**
   - Determine opioid dependence
   - History (length one year or greater)
   - Previous records
   - Evidence of injected opioid use (track marks)
   - Physiological evidence of opioid dependence (withdrawal symptoms)
   - Urine toxicology results
   - Other comorbid substance disorders?
   - Other comorbid medical conditions?
   - Other comorbid psychiatric conditions?
   - Is treatment required for other disorders and if so, what is the most appropriate treatment?

8. **Day of induction onto buprenorphine/naloxone**
   Instruct patients not to use opiates or other illicit drugs or alcohol from 5 PM the evening before the induction is to begin. Tell the patient that they must show objective signs and symptoms of opiate withdrawal or you will not be able to start them on medication. Make sure the patient understands that buprenorphine can only be given when withdrawal is present. Recent use of an opiate agonist such as heroin or prescription opioid analgesics followed by buprenorphine can precipitate withdrawal due to the high affinity of buprenorphine for the mu opioid receptor and its partial agonist property. Be sure to make the patient understand that if they fail to show evidence of opiate withdrawal they will be sent home to return on another day to re-attempt induction.

   If the patient shows signs of mild-moderate withdrawal, they may be started on buprenorphine. The combo product (buprenorphine/naloxone 4:1 mg) can be used to start induction. Have the patient drink a small amount of fluid to moisten the mouth (we use water). Give 4/1 mg of buprenorphine/naloxone (2 mg/0.5 mg x2) sublingually. The films/pills must be placed under the tongue and the patient needs to let the films/pills dissolve. This usually takes only a few minutes, but if the patient has dry mouth, it can take longer, up to 10-12 minutes. Have the patient sit at the clinic for 1-2 hours and reassess. If the patient has any withdrawal symptoms, even very mild symptoms, you may dose the patient again to a maximum of 8 mg/2mg on day 1. This may be increased up to 16 mg/4mg on day 2 if the assessment indicates that the patient experienced opiate withdrawal symptoms over the course of the first day (this is nearly always the case and may be characterized by complaints of hot flashes at night, insomnia, or other withdrawal symptoms). You can increase the dose more slowly, but most patients need the 16/4 mg dose to stop craving and abuse of opiates. By day 3, most patients have achieved a stable dose and this is usually the maintenance dose.

   Patients may complain of some continuing withdrawal symptoms for a few days after starting buprenorphine and may request dose increases. This is not usually necessary and the dose should be held at 16/4 mg daily (the symptoms almost always resolve and this will keep the cost of the medication lower for the patient and help to reduce the possibility of diversion).
Patients should not drive to the induction, but should have arranged transportation since buprenorphine can be sedating and may alter mental status (although this is quite rare).

The patient should continue on the maintenance dose. Each physician will need to decide how frequently the patient will need to be seen, but initially the patient will need to be seen daily while induction is being completed and probably weekly afterward until well stabilized, then every 2-4 weeks. Do not give prescriptions for large numbers of buprenorphine tablets or the patient may not come for appointments (but will still be on your patient limit). You can give no more than a 30 day supply, but you can write for refills. We do not recommend writing for refills. Patients with opioid addiction need to be seen frequently and they need to be engaged in psychosocial substance abuse therapy, giving refills will diminish the likelihood that they will participate in a recovery program. Criteria should be in place for determining who can have less frequent visits to the clinic. We suggest that the patient should be very stable (home, family, employment, medical/psychiatric issues), free of all illicit drug/alcohol use, and should be active in substance abuse treatment before considering once a month visits and prescriptions. It is also a good idea to get a release of information for the involvement of a significant other in the patient’s care. This person can give another opinion of how the patient is doing as the patient may not always give an accurate report.

Note to Physicians: Initial waivers allow a physician to treat 30 patients with buprenorphine/naloxone. Once you have had your waiver for a year, you can submit a second waiver to increase your patient load to up to 100. You cannot exceed 100 patients at any time unless you are board certified in Addiction Psychiatry or Addiction Medicine. Therefore, if you go to once a month visits and your patient does not show up, they are on your caseload until you formally discharge them. More frequent visits will allow for determination of who is progressing and who should remain on the buprenorphine caseload and will allow discharge of patients who may not be keeping appointments or following office procedures or who may need a higher level of care: methadone maintenance/inpatient treatment.

Make sure patients have the ability to store buprenorphine safely at home.
Make sure patients understand that injection of the buprenorphine/naloxone combination drug will produce a withdrawal syndrome in those who are dependent on opioids.

**Induction onto injectable naltrexone**
The physician or designee will obtain a thorough substance use-focused history and a baseline physical examination. Immediately prior to the first injection of XR-NTX, the physician or designee will conduct the following procedures:

1) Determine, based upon the patient’s self-report and any other available information, that the patient is interested in remaining abstinent from opioids and ready to begin trying to do so.

2) Perform urine drug screen (UDS) for opioids for natural and synthetic opioids to detect all possible opioids patient may have used.

3) If any significant doubt remains about the assessment of the patient’s opioid status or the veracity of patient self-reporting, the Naloxone Challenge should be administered for patients
with opioid addiction because it minimizes the duration of severe withdrawal. In regions known to have significant prevalence of buprenorphine diversion, the Naltrexone Challenge should also be administered, following Naloxone Challenge, because naloxone does not displace buprenorphine whereas naltrexone does.

Naloxone challenge test: naloxone i.m. 0.4 mg (repeat after 10 min if no reaction) or i.v. 0.2 mg (repeat after 1 min with 0.6 mg if no reaction); if test is positive, delay induction of naltrexone and repeat challenge test after min 24 hours;

BACKGROUND DOCUMENT PREPARED FOR THIRD MEETING OF TECHNICAL DEVELOPMENT GROUP (TDG) FOR THE WHO "GUIDELINES FOR PSYCHOSOCIALY ASSISTED PHARMACOTHERAPY OF OPIOID DEPENDENCE" 17-21 SEPTEMBER 2007 GENEVA, SWITZERLAND

The Naltrexone Challenge Test involves oral administration of 25 mg of Naltrexone (i.e., half of a 50 mg tab), and is negative if no withdrawal signs or symptoms are apparent after 1 hour.

4) If any clinical concern is raised by history or physical exam of either hepatic or renal status, liver function tests/ with transaminase levels and bilirubin should be performed and results should be within normal limits and/or creatinine clearance (estimated or measured) 50 ml/min or greater.

5) Perform urine beta-HCG (human chorionic gonadotropin) pregnancy test for females.

6) The physician or designee will:
   a. Explain to the client the benefits and risks/possible side effects as indicated in Patient Counseling and Information listed above.
   b. Provide the client with written support information based on Patient Counseling and Information listed above.
   c. Evaluate the client based on the above reference criteria and prescribe XR-NTX, as indicated.

XR-NTX will be administered by the appropriate medical personnel at the program, using aseptic techniques as follows:
   1) The patient will recline, face down and the gluteal muscle must be relaxed prior to injection.
   2) The injection will be given deep intramuscular (IM) using the 1 ½ inch or 2 inch 20 gauge needle provided in the XR-NTX kit into the upper, outer quadrant of the buttock.
   3) Always first aspirate for blood prior to injection, and if blood is withdrawn, abort injection in that site and move to another site in same side buttock and quadrant.
   4) Injection site will rotate monthly from right to left gluteal muscle.
   5) The first injection will always be in the right gluteal muscle. In the event of the suspension viscosity thickening to the point of causing a needle jam, the needle should be withdrawn, replaced with the second needle provided in the kit, and injection reattempted at a different site on the same side buttock and quadrant.
June 26, 2016

6) Appropriate medical personnel will monitor the injection site for any problems (redness, infection, swelling and/or itching at the injection site that gets worse over time), observe the client for any adverse reactions, and monitor the client for medication effectiveness and side effects over time.

7) Injection site side effects that develop and signs of allergic reaction must be reported immediately to the physician.

Maintenance Treatment:
Length of treatment with buprenorphine/naloxone or injectable naltrexone is a matter to be determined by the patient and physician. There are no pre-determined limits to MAT. Maintenance should be the treatment approach and not withdrawal (detoxification) unless there is a compelling clinical reason to undertake medical withdrawal. Patients should be encouraged to stay on MAT for an extended duration (months to years) to get the most benefit.

Withdrawal symptoms with buprenorphine are generally mild and usually do not require other medications for symptom reduction, although each patient needs individual evaluation. Noncompliant patients can be withdrawn from buprenorphine/naloxone by decreasing the buprenorphine dose by 50% daily. Compliant patients can be withdrawn more slowly and at the rate you determine will be best tolerated by the patient.
Clinical Use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder: A Brief Guide
Clinical Use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder: A Brief Guide

Revised February 2, 2015

U.S. Department of Health and Human Services
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Treatment
Division of Pharmacologic Therapies

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Clinical Use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder: A Brief Guide

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INTRODUCTION

The profile of opioid misuse and opioid use disorder in the United States is changing, in that nonmedical use of prescription opioids has become as significant a problem as the use of heroin. Federal data for 2013 indicate that approximately 4.5 million people in the United States reported nonmedical use of prescription pain relievers in the past month and 289,000 reported use of heroin in the past month. Despite the dimensions of the problem, nearly 80 percent of people with an opioid use disorder do not receive treatment because of limited treatment capacity, financial obstacles, social bias, and other barriers to care.

A diagnosis of opioid use disorder continues to carry significant social bias, which affects both the individuals who receive the diagnosis and the health care professionals to whom such individuals may turn for care.

Researchers, federal health agencies, and pharmaceutical manufacturers have focused on developing medications that can be used to expand access to treatment of an opioid use disorder in medical office settings, rather than limiting use to specialized opioid treatment programs (OTPs). This effort has yielded two important products that the Food and Drug Administration (FDA) has approved for use in treating an opioid use disorder and/or preventing relapse: buprenorphine (alone and in combination with naloxone) and naltrexone (in an oral formulation and an extended-release injectable formulation). These medications differ in mechanism of action, route and frequency of administration, and certain regulatory restrictions on their use as shown in Table 1 on page 4.

After reviewing multiple studies, many experts in addiction have concluded that patients who have an opioid use disorder should be offered medication-assisted treatments on a routine basis. However, considerable resistance to the use of such treatments persists. A diagnosis of opioid use disorder continues to carry significant social bias, which affects both the individuals who receive the diagnosis and the health care professionals to whom such individuals may turn for care.

With practical resources, the unmet need for treatment and the largely untapped resource of primary care medicine can be brought together to yield healthier patients who are treated in safer environments and an expanded repertoire of effective professional practices for primary care providers. In fact, many studies show that the treatment of an opioid use disorder can be successfully integrated into general office practice by physicians and health providers who are not addiction specialists.

To review the options available for the treatment of opioid use disorder, the Substance Abuse and Mental Health Services Administration (SAMHSA) and the National Institute on Drug Abuse (NIDA) jointly convened the Consensus Panel on New Pharmacotherapies for Opioid Use Disorders and Related Comorbidities (see Appendix A). Composed of experts in research, clinical care, medical education, and public policy, the panel reviewed current evidence on the effectiveness of available medications for the treatment of an opioid use disorder and developed a guidance for clinical practice. The panel’s guidance is presented in this document.

* The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) uses the term opioid use disorder to include abuse of or dependence on opioids. The specific indication for which extended-release injectable naltrexone was approved by FDA is prevention of relapse to opioid dependence, following opioid detoxification, which is subsumed by the DSM-5 term opioid use disorder.
ASSESSING THE NEED FOR TREATMENT

Patient Assessment

A patient who is identified with a potential opioid use disorder should undergo a thorough assessment to confirm the diagnosis.\textsuperscript{16} The objectives of the assessment are to determine the patient's need for treatment, to develop a treatment plan, and to establish a baseline measure for evaluating the patient's progress. Accordingly, the patient assessment should:

- Confirm the opioid use disorder diagnosis
- Establish current opioid use—when, what, and how much opioid the patient used most recently
- Document the patient's substance use history, including alcohol and other drugs of abuse
- Identify patients who require medically supervised detoxification from alcohol, benzodiazepines, or other sedatives, in addition to opioids
- Determine where and when such detoxification should be accomplished
- Identify comorbid medical and psychiatric conditions and disorders and prioritize and coordinate their management
- Screen for infectious diseases for which people who misuse opioids are at elevated risk, such as hepatitis B, hepatitis C and HIV/AIDS
- Assess the patient's access to social supports, family, friends, employment, housing, finances, and assistance with legal problems
- Evaluate the patient's degree of motivation for behavior change and readiness to participate in treatment

The physical examination should focus on problems the patient is experiencing and include screening for common consequences or co-occurring problems associated with the patient's current and past substance use.

Substance Use History. A complete substance use history is essential to development of a safe and appropriate treatment plan.\textsuperscript{17} In-depth interviews, combined with the use of standardized assessment instruments, are effective methods of gathering this information. Ideally, the substance use history should include the nature of the patient's substance use disorders, underlying or co-occurring diseases or conditions, the effect of opioid use on the patient's physical and psychological functioning, and the outcomes of past treatment episodes.

It is essential to find out whether the patient is currently taking (or recently took) methadone or other long-acting opioids.\textsuperscript{18,19} Urine toxicology screens must also be completed. It also is advisable to access the patient's prescription drug use history through the state's prescription drug monitoring program (PDMP)\textsuperscript{20} where available, both to confirm compliance in taking prescribed medications and to detect unreported use of other prescription medications.\textsuperscript{17} Information about PDMPs and how to access them is available from state boards of medicine and pharmacy.

Information about PDMPs and how to access them is available from state boards of medicine and pharmacy.

In addition to securing the patient's PDMP record, obtaining information from family members and significant others can provide useful perspectives on the patient's behavior and level of function, so consent to speak with family members and other providers must be obtained. Contact with or records from clinicians who have treated the patient in the past and information from the prescription benefit provider should also be sought out.\textsuperscript{10}

Physical Examination. The physical examination of a patient who is being evaluated for a substance use disorder should focus on physical findings related to addiction and its complications. For example, examination of skin injection sites can provide useful information about the duration of injection drug use. Recent injection marks are small and red and sometimes are inflamed or surrounded by slight bruising. Older injection sites typically are not inflamed but sometimes show pigmentation changes (either lighter or darker), and the skin may have an atrophied or sunken appearance. A combination of recent and old injection sites suggests that the
patient may be currently using opioids and may have a complex opioid use disorder.\textsuperscript{21}

The physical examination should address body systems related to reported symptoms. In asymptomatic people, height, weight, and blood pressure should be recorded, and a cardiac examination (listening for murmurs or cardiac rhythm abnormalities) should be performed.\textsuperscript{22}

**Laboratory Tests.** A urine drug screen or other toxicology screen should be part of the patient assessment to confirm recent opioid use and to screen for use of other drugs. A urine test for alcohol (ethyl glucuronide) also needs to be included. Ideally, a drug screen should test for all opioids commonly prescribed and/or misused in the local community, as well as illicit drugs that are available locally.\textsuperscript{23}

Other useful tests include those of liver enzymes and serum bilirubin, as well as tests for hepatitis B and C and HIV, particularly in patients who have engaged in injection drug use. For those patients who inject drugs, serum creatinine levels should be tested for the presence of silent renal disease.\textsuperscript{22}

**Developing a Treatment Plan**

Treatment of an opioid use disorder should be guided by an individualized plan that is developed in consultation with the patient.\textsuperscript{24} Elements of such a plan include the following:

- The role of medications in the patient's treatment and the rationale for their selection
- Referral and follow-up plans for specialty addiction treatment, psychosocial treatment, and/or family therapy, if clinically indicated
- Motivation for participating in mutual-help groups
- A discussion of the involvement of family or significant others in treatment
- A plan for treating co-occurring medical or psychiatric disorders
- Schedules for follow-up office visits and laboratory testing to monitor the patient's progress and health status
- Criteria for discontinuing use of the medication

The plan should be written to measure progress during the monitoring process.\textsuperscript{22,25} The plan and the steps taken to implement it should be documented in the patient's medical record.\textsuperscript{17}

**Use of Medications.** Whenever a medication is to be used, the treatment plan should give attention to steps that will promote medication adherence.\textsuperscript{26} Depending on the needs of the patient, these steps might include specific strategies for remembering to take medications, use of blister-card packs or pill boxes, a schedule for monitoring medication adherence that reflects the patient's history of adherence to other medication regimens, and steps to involve the patient's family members in monitoring adherence.

\begin{quote}
Naltrexone functions as an opioid antagonist, whereas methadone is an opioid agonist and buprenorphine is an opioid partial agonist. Patients should abstain from using any opioids, including opioid-containing medicines, for a minimum of 7 to 10 days before starting extended-release injectable naltrexone to avoid precipitation of opioid withdrawal. Patients transitioning from buprenorphine or methadone may be vulnerable to precipitation of withdrawal symptoms for as long as 2 weeks.\textsuperscript{25,27}
\end{quote}

All medications for the treatment of the opioid use disorder should be prescribed as part of a comprehensive treatment approach that includes counseling and other psychosocial therapies delivered by a psychiatrist, psychologist, or professional counselor, as well as social support through participation in Narcotics Anonymous (NA) and other mutual-help programs.\textsuperscript{15} Health care providers who choose to offer medication-assisted treatment in their office practices need to understand the nature of the underlying disorder, the specific actions of each available medication (and the associated contraindications or cautions), and the importance of careful patient selection and monitoring.\textsuperscript{8}

Table 1 summarizes key information about three medications currently approved to treat opioid use disorders (extended-release injectable naltrexone, methadone, and buprenorphine). Only one column in the table is devoted to naltrexone because the prescribing considerations for extended-release injectable naltrexone and oral naltrexone are similar.\textsuperscript{28}
### Table 1: Key Features of Medications Approved for Treating Opioid Use Disorder

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<td>Injection</td>
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Clinical use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder: A Brief Guide
<table>
<thead>
<tr>
<th>Prescribing Considerations</th>
<th>Extended-Release Injectable Naltrexone</th>
<th>Methadone</th>
<th>Buprenorphine</th>
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<tr>
<td><strong>Clinical Uses/Ideal Candidates</strong></td>
<td>Prevention of relapse to opioid use disorder following opioid detoxification; studies suggest benefits for patients who are experiencing increased stress or other relapse risks (e.g., visiting places of previous drug use, loss of spouse, loss of job). Appropriate for patients who have been detoxified from opioids and who are being treated for a co-occurring alcohol use disorder. Extended-release naltrexone should be part of a comprehensive management program that includes psychosocial support. Other good candidates include persons with a short or less severe addiction history or who must demonstrate to professional licensing boards or criminal justice officials that their risk of opioid use is low.</td>
<td>Detoxification and maintenance treatment of opioid addiction. Patients who are motivated to adhere to the treatment plan and who have no contraindications to methadone therapy. Methadone should be part of a comprehensive management program that includes psychosocial support.</td>
<td>Treatment of opioid dependence. Patients who are motivated to adhere to the treatment plan and who have no contraindications to buprenorphine therapy. Buprenorphine should be part of a comprehensive management program that includes psychosocial support.</td>
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<tr>
<td><strong>Contraindications</strong></td>
<td>Contraindicated in patients receiving long-term opioid therapy. Contraindicated in patients who are engaged in current opioid use (as indicated by self-report or a positive urine drug screen) or who are on buprenorphine or methadone maintenance therapy, as well as in those currently undergoing opioid withdrawal. Contraindicated in patients with a history of sensitivity to polyethylene-glycol, carboxymethylcellulose, or any components of the diluent. Should not be given to patients whose body mass precudes IM injection with the 2-inch needle provided; inadvertent subcutaneous injection may cause a severe injection site reaction. Should not be given to anyone allergic to naltrexone.</td>
<td>Contraindicated in patients who are hypersensitive to methadone hydrochloride or any other ingredient in methadone hydrochloride tablets, diskettes, powder or liquid concentrate. Contraindicated in patients with respiratory depression (in the absence of resuscitative equipment or in unmonitored settings) and in patients with acute bronchial asthma or hypercarbia. Contraindicated in any patient who has or is suspected of having a paralytic ileus.</td>
<td>Contraindicated in patients who are hypersensitive to buprenorphine or naloxone.</td>
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<td>Potentially for Abuse and Dependence</td>
<td>Positron-Emitted Progynone Category C</td>
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<td>Naloxone use may be necessary in patients receiving opiates.</td>
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**Warnings**

Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder: A Brief Guide
Extended-Release Injectable
Naltrexone

The extended-release injectable formulation of naltrexone (Vivitrol) was approved by the FDA in 2010 for the prevention of relapse to opioid dependence following opioid detoxification. It is supplied as a 380 mg IM injection to be administered in the gluteal muscle every 28 to 30 days, alternating buttocks for each subsequent injection.

Packaging. The drug is packaged in a kit containing a vial of naltrexone microspheres as a dry powder, which must be suspended in a liquid diluent immediately before use. Kits must be refrigerated during storage but should be brought to room temperature approximately 45 minutes before an injection is given. The microspheres suspended in solution must be mixed vigorously to prevent clumping, which can clog the needle during injection.27

Each kit also contains a syringe and five needles—one for mixing the microspheres with the diluent and four needles (two 1.5-inch needles and two 2-inch needles) for injecting the suspension into the upper outer quadrant of the gluteal muscle.27

Formulation. Extended-release injectable naltrexone was developed by embedding the drug molecule in microspheres composed of a biodegradable copolymer, resulting in release of the active ingredient over a predetermined period. Upon injection, the microspheres begin to absorb water almost immediately, leading to a swelling of the microspheres. This process begins an initial release of the drug.

As water absorption continues, the polymer begins to undergo hydrolysis. Later, physical erosion of the polymer occurs. The drug diffuses into the surrounding media as the polymer continues to undergo hydrolysis and erosion, resulting in a sustained release of the drug from the microspheres. The polymer matrix eventually breaks down into lactic acid and glycolic acid, which are completely metabolized by the body and eliminated as carbon dioxide and water.

Pharmacodynamics and Pharmacokinetics. Naltrexone is a competitive antagonist at the opioid receptors in the brain. It is metabolized in the liver to the opioid antagonist 6-ß-naltrexol. The absorption of extended-release naltrexone is mediated by its gradual and prolonged release for 2 to 4 weeks after injection through hydrolysis of the copolymer microspheres.27,45 Two peak blood levels occur after injection of the extended-release formulation: a transient initial peak occurs approximately 2 hours later and a second peak occurs about 2 to 3 days later. About 14 days after injection, the blood level slowly begins to decline in a linear fashion.

Efficacy. The phase 3 clinical trials of extended-release injectable naltrexone showed a consistent pattern of clinical efficacy for maintaining abstinence, achieving medication adherence, maintaining retention, protecting against reestablishment of opioid physical dependence, and may reduce craving for opioids for some individuals, while showing good safety and tolerability.27,29

Indications, Contraindications, and Cautions. The FDA-approved indication for extended-release injectable naltrexone is the prevention of relapse to an opioid use disorder following opioid detoxification.27 Other information on indications, contraindications, and cautions appears in Table 1. It is advisable to download a copy of the full prescribing information from the FDA (available at http://www.fda.gov/safety/medwatch/safetyinformation/ucm208449.htm).

Safety. Based on its use in the treatment of alcohol dependence (an indication approved by the FDA in 2006), extended-release injectable naltrexone appears to be reasonably well tolerated. Its side effect profile is similar to that of oral naltrexone, with the addition of possible injection site reactions (ISRs).1,46

Side effects reported in clinical trials include nasopharyngitis, influenza, upper respiratory tract infection, sinusitis, insomnia, headache, dizziness, upper abdomen pain, diarrhea, fatigue, and back pain.46-50 Muscle cramps, dizziness, sedation, decreased appetite, and an allergic form of pneumonia also have occurred in patients treated with extended-release injectable naltrexone, as have common cold symptoms, and toothaches.1,27,29
therapy of patients who are not interested in
propofol's, and allow propofol's
improved health care professionals' process,
comprehensive experience on what drug
response [propofol's] for patients who are not interested
in administering drugs may be a good
highly motivated to achieve and maintain
no motivation for administering drugs who are not

In the absence of depression or suicidal ideation,
patients should be informed of the risk of
exaggerated effects of propofol's, which may be
antagonistic to the effects of mirtazapine. Efficacy
of propofol's, treatment with propofol's should be
continued as noted in the following categories:

- Overdose
- Fever
- Hypersensitivity reactions, including anaphylactic shock
- Hypoadrenalism
- Hypercalcemia
- Class of propofol's, and antagonized by mirtazapine.

Adverse effects of propofol's, which may be
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- Class of propofol's, and antagonized by mirtazapine.
agonist therapy to treat their opioid use disorder: Some patients may be successful on agonist treatment and want continued pharmacologic help to prevent relapse but prefer another type of treatment. Other patients may not be interested in agonist therapy. The latter group typically includes individuals who (1) feel they are discriminated against (or are embarrassed or ashamed) because they are on agonist therapy or (2) would like to reduce the time devoted to daily or multiple OTP visits per week, as is frequently required for methadone treatment.

Patients may be suitable candidates for treatment with extended-release injectable naltrexone even if past episodes of medication-assisted treatment were not successful. However, experts agree that the following patients are unlikely to do well on extended-release injectable naltrexone:

- Patients who do not tolerate extended opioid-free periods. For example, a patient who is not tolerating withdrawal is better managed with a partial agonist (buprenorphine) or an antagonist (methadone) than with an antagonist medication.
- Patients who are unable to complete withdrawal.
- Patients who experience protracted abstinence symptoms following withdrawal.
- Patients whose psychiatric symptoms worsen during withdrawal.
- Patients whose chronic pain requires treatment with opioid analgesics. Treatment with extended-release naltrexone is not a viable option if pain requires chronic opioid therapy.
- Patients who have advanced liver disease, impending liver failure, or acute hepatitis. Use of extended-release injectable naltrexone probably is safe in patients with chronic hepatitis B or C provided that the patient is not at the end stage and starting to go into liver failure. Patients with routine elevated liver enzymes usually tolerate naltrexone approaches (medication-assisted treatment, professional counseling, and mutual-help groups) are complementary. They support the same goals while addressing different aspects of opioid use disorder: neurobiological, psychological, and social.

Offering the full range of effective treatments maximizes patient choice and outcomes, because no single approach is universally successful. Many studies show that the combination of pharmacologic and nonpharmacologic interventions may be more effective than either approach used alone.

Sources of information on psychosocial therapies suitable for patients being treated in medical office settings are shown in Appendix B.

Encouraging Participation in Mutual-Help Programs. The support of a mutual-help group can be critical to long-term recovery. The oldest, best-known, and most accessible mutual-help program for people with an opioid use disorder is offered by NA. Patients may resist attending NA meetings and may fear that disclosure of medication use will make them unwelcome. Although some NA members may have negative attitudes toward medication, the organization itself supports appropriate medication use.

Providers should encourage patients to try meetings of different groups until they find one that is a good fit. Lists of local meetings to give to patients can be obtained from the Narcotics Anonymous World Services Web site (http://www.na.org).

Other mutual-help groups, although not as universally available as NA, have a strong presence in many communities. Contact information for several groups that may be helpful to patients and their families is provided in Appendix B.

Integrating Pharmacologic and Nonpharmacologic Therapies

Some patients respond to psychosocial interventions or medication therapy alone, but most patients need both. The different
Special Considerations in Treatment Planning

Some patients present with specific conditions or at life stages that require special consideration in formulating a treatment plan.

Patients With Psychiatric Comorbidities. Studies of treatment populations have shown that co-occurring psychiatric disorders are present in 20 percent to 60 percent of people entering treatment, depending on the treatment group of the study and its methodology. Even higher rates have been reported among older adults, people with low socioeconomic status, and those who reside in urban areas as well as those who are homeless or incarcerated.

When psychiatric and substance use disorders co-occur, the two disorders typically become intertwined, thus complicating the treatment plan and process. Therefore, whenever a patient enters treatment for either a substance use disorder or a psychiatric disorder, he or she should be assessed for the co-occurrence of the other. To establish how a patient's substance use and a psychiatric disorder are linked, the order of onset of their psychiatric disorder and substance use, family history, and effect of previous treatments of the co-occurring psychiatric disorder should be determined.

Patients With Co-Occurring Medical Disorders. Individuals with substance use disorders almost always are at higher risk for disease and other medical disorders than are those without addiction disorders. Furthermore, people with substance use disorders typically miss opportunities to receive preventive health care.

Like individuals with other chronic medical conditions, those who misuse opioids exist on a continuum ranging from less to more medically complicated. Moreover, the management of unrelated medical illnesses is complicated by addiction, its effect on adherence to the treatment regimen, and the direct consequences of the misused substances. This complication warrants a targeted approach to the conditions for which a patient is at risk.

Hepatic disorders: Hepatic monitoring is important because HCV seroprevalence is high among people with opioid use disorder. The U.S. Departments of Veterans Affairs and Defense guidelines for the use of naltrexone recommend measuring baseline transaminase levels, followed by periodic monitoring at 6- or 12-month intervals.

HIV/AIDS: Methadone interacts with several antiretroviral treatments for HIV, buprenorphine causes fewer concerns, and extended-release injectable naltrexone causes almost none. However, treatment is worth considering because of the prevalence of HIV infection among people who inject drugs.

Pain: Because of their opioid agonist activity, methadone and buprenorphine offer advantages in treating patients who have chronic pain. Naltrexone is not a good choice for people whose pain needs to be treated with opioid analgesics, but it can be used in patients whose pain is treated with non-opioid analgesics.

Obesity: In obese patients, a longer needle is needed to reach the muscle with injections. The risk of rare aseptic abscesses and other severe ISRs may increase when the injection goes subcutaneously into fatty tissue instead of the muscle.

Renal disorders: Renal problems do not require dose adjustments with naltrexone or buprenorphine.

Hospitalization: If a patient who is taking extended-release injectable naltrexone is hospitalized for medical reasons, special attention must be directed to the provision of adequate pain control.

Alcohol dependence: Extended-release injectable naltrexone has dual activity for the prevention of relapse to both high-risk drinking and opioid use.

Marijuana use: Patients who use marijuana or other substances containing tetrahydrocannabinol may need other types of pharmacotherapy until research studies clearly show whether extended-release injectable naltrexone increases the cardiovascular risks of cannabinoids.

Adolescents. The lack of treatment resources geared specifically to young people, coupled with the epidemic of prescription opioid and heroin abuse in this population, has left many young people with few effective treatment options.
Ample evidence demonstrates the failure of detoxification-only treatments and the high rates of dropout from psychosocial-only treatments on the part of adolescents and young adults. Yet, despite an increasing body of evidence that medications such as buprenorphine, methadone, and naltrexone are effective and easily combined with psychosocial treatments, only buprenorphine is approved by the FDA for the treatment of patients younger than 18, and the safety and effectiveness of buprenorphine hydrochloride sublingual tablets in patients younger than 16 have not been established. Therefore, the best course of action is to refer young patients to an addiction specialist or program with experience in treating adolescents.

**Pregnant and Postpartum Women.** Opioid use disorder is associated with increased maternal and neonatal complications. Currently, no medications have been approved by the FDA for treatment of opioid use disorder during pregnancy. Treatment with methadone or buprenorphine has been used, but the risks are not known. Although there is some interest in the potential for extended-release injectable naltrexone in this population, no research to evaluate its safety or efficacy has been conducted to date.

FDA-approved prescribing information for extended-release injectable naltrexone states that “there are no adequate and well-controlled studies of either naltrexone or extended-release injectable naltrexone (Vivitrol®) in pregnant women. This product should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.” Accordingly, patients dependent on opioids who are pregnant or nursing should be referred to an addiction specialist or program with experience in treating this population.

**Older Adults.** Members of the baby boom generation had more experience with nonmedical drug use than members of prior generations, and this continues to be true as members of this population reach retirement age and experience consequences of aging such as chronic pain. Furthermore, substance use disorders in older adults often are misdiagnosed, as are the consequences of such disorders. For example, dementia, malnutrition, self-neglect, functional decline, sleep problems, and anxiety or depression all may be attributed to “normal” aging when the true cause is substance misuse or a substance use disorder.

Studies show that older adults can and do benefit from treatment and in some cases have better outcomes than do younger adults. However, there are few studies of extended-release injectable naltrexone in this population. In the absence of a specific evidence base for naltrexone in older adults, pharmacologic treatments should follow the evidence base for the general adult population. Health care providers may need to consider using oral naltrexone if the fixed dose extended-release injectable naltrexone is not appropriate in elderly patients with age-related pharmacokinetic and pharmacodynamic changes, as well as any mental or physical comorbidities.

Studies show that older adults can and do benefit from treatment and, in some cases, have better outcomes than do younger adults.

**Other Populations.** Certain highly motivated licensed individuals, such as health care professionals, attorneys, and pilots, may be ideal candidates to accept and persist with treatment with extended-release injectable naltrexone. Many professional groups have specialized programs that promote treatment, monitor recovery, and provide advocacy to maintain licensure. It has been suggested that professional advocacy might be the “voucher” or “contingency” that makes compliance with extended-release injectable naltrexone worthwhile for licensed professionals with opioid use disorder. For example, some clinical evidence suggests that this may be the case with anesthesiologists.

In contrast, some individuals who are relatively less motivated or at an early stage in the addiction process may need specific counseling approaches to addressing their motivational issues before treatment with extended-release injectable naltrexone is initiated.
INITIATING MEDICATION-ASSISTED TREATMENT

Educating the Patient and Obtaining Informed Consent

The clinician should discuss with the patient the risks and benefits of medication-assisted treatment as compared with the risks associated with no treatment or treatment without medication. In addition, certain topics should be reviewed with every patient who is a candidate for medication-assisted treatment. Face-to-face conversations, supplemented by written fact sheets, are helpful in answering the following questions:

- Which medication is to be used? How is it administered? How does it work? What are its advantages and disadvantages?
- What is the duration of treatment, its cost, and associated routines?
- What are the known side effects?
- What are the contraindications?
- What are the issues related to pregnancy, lactation, and contraception?
- What are the dangers of concurrent use of nonprescribed drugs?
- What are the potential interactions between extended-release injectable naltrexone and other therapeutic medications?
- What is the potential impact of treatment with extended-release injectable naltrexone on driving, other activities of daily living, and employment?

Because methadone normalizes endocrine functions, it is not unusual for women in the early phases of medication-assisted treatment to become pregnant unintentionally, especially if they do not receive counseling for this possibility.

Patients should be educated about the effects of using opioids and other drugs while taking the prescribed medication and the potential for overdose if opioid use is resumed after tolerance is lost. Some health care providers supply a laminated card that identifies the individual as a patient of their practice. This is helpful to other health care providers who may see the patient in an emergency department.

Informed Consent. The patient's informed consent to treatment should be documented in a written form that is discussed with and signed by the patient. Such a form can be helpful in reinforcing the information provided and establishing a set of ground rules. Typical provisions of an informed consent document include:

- The medication and other therapies to be employed, with a rationale for their use
- Schedules for follow-up office visits and laboratory testing to monitor the patient's progress and health status
- Goals for attendance at meetings of mutual-help groups
- Involvement of family or significant others in treatment
- Symptoms that should be reported to the prescribing physician
- A plan for treating any co-occurring medical or psychiatric conditions, as well as other substance use disorders, including smoking
- Criteria for discontinuing the use of medication or other therapies and referral to specialty addiction treatment, if indicated

The patient should be advised to carry a medical alert card identifying the use of extended-release naltrexone, describing any potential adverse effects, and providing contact information for the treating clinician or institution in an emergency.

The patient should be advised to carry a medical alert card identifying the use of extended-release naltrexone, describing any potential adverse effects, and providing contact information in an emergency.

The fact that a patient has received and understands this information should be documented in a written informed consent agreement, which should be signed before treatment is initiated and filed in the patient's medical record.

Withdrawing the Patient From Opioids

Naltrexone displaces heroin or prescribed opioids from receptors to which they have bound, so it can precipitate significant withdrawal symptoms. Therefore, it is important that detoxification from
opioids be completed at least 7 to 10 days before extended-release injectable naltrexone is initiated or resumed. A urine drug screen to confirm abstinence should be conducted before naltrexone is started. Patients who are transitioning from buprenorphine or methadone to naltrexone may be vulnerable to precipitation of withdrawal symptoms for as long as 2 weeks. Clinicians should be prepared to manage withdrawal symptomatically with non-opioid medications.27

The withdrawal syndrome that occurs spontaneously is marked by a predictable constellation of signs and symptoms that follow a rapid decrease in, or abrupt discontinuation of, intake of an opioid that has been used consistently for a period of time.85

The withdrawal syndrome that occurs spontaneously is marked by a predictable constellation of signs and symptoms that follow a rapid decrease in, or abrupt discontinuation of, intake of an opioid that has been used consistently for a period of time. Some patients experience prolonged withdrawal signs or symptoms, known as protracted abstinence syndrome. Symptoms of the syndrome include sleep disturbances, anxiety, irritability, and mood instability.1 Suggested nonpharmacologic approaches include educating patients about expected symptoms, offering support and understanding, monitoring the patient for sleep disturbances or co-occurring disorders, encouraging physical and mental activities, and promoting the use of mutual-help groups. For some patients with protracted withdrawal, additional psychosocial interventions (such as cognitive behavioral therapy) or pharmacotherapy may be necessary to avoid relapse.86

Precipitated withdrawal is much more severe than spontaneous withdrawal, and patients undergoing precipitated withdrawal can become very ill. Patients must understand that withdrawal precipitated by administration of an opioid antagonist may be severe enough to require hospitalization if they have not been opioid free for an adequate period and is different from the experience of spontaneous withdrawal that occurs with discontinuation of opioid in an individual with an opioid use disorder.

Bell and colleagues37 suggested that following one of the following two approaches to induction into naltrexone treatment can help avoid precipitated withdrawal:

1. The conventional approach is to undertake detoxification and, when patients have been free of opioids for 7 to 10 days or free of methadone for 10 days, begin treatment with naltrexone. Patient histories can be unreliable, so it is advisable to perform a nalozone challenge test before giving the first dose of naltrexone to avoid inadvertently precipitating a significant or prolonged withdrawal reaction. Patients may experience precipitated withdrawal despite tolerating a nalozone challenge test.

2. Antagonist-accelerated induction (rapid detoxification68) involves administration of naltrexone or nalozone, while providing symptomatic relief to make the ensuing precipitated withdrawal tolerable. See footnote for cautions on this procedure issued by the Centers for Disease Control and Prevention (CDC)89

Health care providers should always be prepared to manage precipitated withdrawal, even if the steps identified above are taken.

Reported cases of precipitated withdrawal have frequently involved patients transitioning from buprenorphine.

Successful management of withdrawal can facilitate entry into addiction treatment by reducing uncomfortable withdrawal symptoms that negatively reinforce drug taking. This is best managed by a specialized practitioner or treatment program.8

Many individuals undergo withdrawal more than once, and some do so many times. When people who were recently dependent return for repeat detoxification they do so generally with a more

1 Anesthesia-assisted rapid opioid detoxification (AAROD) for the purpose of induction onto naltrexone carries additional risks, including death. The CDC advises against the use of AAROD because of those risks and the fact that less risky yet effective protocols are available for detoxification and maintenance pharmacotherapy.88
realistic expectation of what is needed to remain free from alcohol and drugs.\textsuperscript{69} People in the early stages of treatment often relapse to substance use and get caught up in a revolving door of repeated detoxification. Therefore, it is important to educate patients that short-term treatment of withdrawal does not eliminate the need for long-term treatment of addiction.\textsuperscript{65,77,80}

**Induction Onto Extended-Release Injectable Naltrexone Treatment**

The clinician should consider how best to induct a patient into treatment with extended-release injectable naltrexone. Product labeling and standard practice call for 7 to 10 days of abstinence from short-acting opioids before starting naltrexone.\textsuperscript{81} A urine drug screen should be conducted to verify abstinence before beginning induction.\textsuperscript{51}

**Dosing and Administration.** For patients who are appropriate candidates, the recommended dose of extended-release injectable naltrexone is 380 mg, delivered intramuscularly approximately every 30 days, alternating buttocks for each subsequent injection. The following cautions should be observed:\textsuperscript{1,83,92}

- Injectable naltrexone should be administered only by a medical professional (a physician, nurse, or physician assistant) who knows how to administer IM gluteal injections.
- Injectable naltrexone is packaged in a kit containing a vial of naltrexone microspheres as a dry powder that must be suspended in a liquid diluent immediately before use. Kits must be refrigerated during storage but should be brought to room temperature approximately 45 minutes before an injection is given. The powder and diluent must be mixed vigorously to prevent clumping, which can clog the needle during injection.
- A syringe and five needles are provided—one for mixing the microspheres with the diluent and four (two 1.5-inch needles and two 2-inch needles) for injecting the suspension into the upper outer quadrant of the gluteal muscle. Body habitus should be assessed before each injection for each patient to ensure that needle length is adequate for IM administration. Injectable naltrexone must be administered only with one of the administration needles supplied in the carton. A spare administration needle of each size is provided in case of clogging.
- Proper IM injection technique is essential. Serious ISRs, some requiring extensive surgical debridement, have been observed with extended-release injectable naltrexone. It has been reported that likelihood of these severe reactions may increase if the product is inadvertently administered subcutaneously rather than intramuscularly.
- The medication should be administered every 4 weeks. If a dose is delayed or missed, the next injection should be administered as soon as possible. However, it is not recommended that medication be readministered at less than 4-week intervals.
- It is not recommended that the medication be administered at a dose higher than 380 mg.

Following IM injection, the plasma concentration time profile is characterized by a transient initial peak at about 2 hours after injection, followed by a second peak approximately 2 to 3 days later. At approximately 14 days after administration, concentrations begin to slowly decline, with measurable levels detectable for more than 30 days after administration. However, the therapeutic benefit of a single dose has not been established for periods longer than 4 weeks.\textsuperscript{27}

**Supportive Care Following Induction.**

Careful follow-up is a critical element in optimizing the benefits of naltrexone treatment. The practitioner performing induction onto naltrexone treatment should schedule two office visits in the first week of induction to assess the patient. Weekly clinical reviews should be conducted in the first month of treatment. Other elements of supportive care include the following:\textsuperscript{67}

- Medical monitoring such as a regular review by the prescribing physician, with monitoring of compliance, review of drug use, and sometimes urine drug screens to confirm self-report
- Counseling in regularly scheduled sessions with a professional counselor
- Mutual-help groups and family involvement
Transfer to Extended-Release Injectable Naltrexone. If a patient is being transferred to extended-release injectable naltrexone from methadone or buprenorphine, the taper should be completed 7 to 10 days before naltrexone induction begins. Special Considerations in Pain Management. Extended-release naltrexone blocks the effects of opioid analgesics. For acute pain (e.g., that associated with dental work, surgery, traumatic injury), regional analgesia, conscious sedation, use of non-opioid analgesics, or general anesthesia may be needed for pain management. If regional anesthesia is not used, then a larger amount of opioid analgesic may be needed to override the opioid blockade, but this should be done in a hospital setting because it may result in respiratory depression that is deeper and more prolonged than usual. For this reason, a rapid-acting opioid analgesic that minimizes the duration of respiratory depression is preferred. The amount administered should be titrated to the needs of the patient. In such cases, the patient should be monitored closely by trained medical personnel.

Careful follow-up is a critical element in optimizing the benefits of naltrexone treatment. The practitioner performing induction onto naltrexone treatment should schedule two office visits in the first week of induction to assess the patient. Weekly clinical reviews should be conducted in the first month of treatment.

MONITORING PATIENT PROGRESS AND ADJUSTING THE TREATMENT PLAN

As with patients with other chronic relapsing disorders, patients diagnosed with opioid use disorder require long-term monitoring and support, as well as periodic adjustment of the treatment regimen.

Monitoring Patient Progress

Use of medication-assisted treatment requires careful monitoring throughout treatment, with special attention to problems that may arise at the time of induction.

Monitoring patient progress is an ongoing process that assesses the patient on four dimensions: (1) adherence to the treatment plan, (2) ability to maintain abstinence, (3) levels of craving, and (4) overall health status and social functioning. Toxicology screening is an important part of monitoring patient compliance and progress. At each visit, the health care provider should:

- Assess the patient for continued use of any illicit or nonprescribed drug
- Assess the patient’s adherence to the treatment regimen
- Assess changes in the patient’s social functioning and relationships
- Review whether the patient is involved in counseling
- Monitor for side effects of the extended-release injectable naltrexone and other prescription medications

With this information, the clinician can decide whether to continue pharmacotherapy, modify the treatment plan as indicated, and address any co-occurring medical, psychiatric, and substance use issues.

Sources of Information. Patient self-reports can be useful indicators of treatment progress. In eliciting such information, it is important to avoid conveying a judgmental attitude toward the patient’s behavior. The clinician should ask about the quantity and frequency of alcohol and drug use, especially during stressful periods (e.g., holidays, celebrations, major life changes). The patient also should be asked about current craving and how he or she felt over the preceding week (by assigning a rating between 1 and 10, with 1 indicating no craving and 10 the most...
intense craving the patient has ever experienced. In addition, the patient may be asked whether any episodes have caused particular problems. Identifying patterns of craving over time allows both the clinician and the patient to see that the patient’s patterns of craving may fluctuate throughout the day and over longer periods, indicating the need to continue, adjust, supplement, or discontinue use of a particular medication.

Other sources and types of information that are useful in patient monitoring include the following:5,17

- Laboratory tests, such as the ALT, AST, GGT, CDT, and random urine drug screens, including ethyl glucuronide, to detect recent alcohol use
- The patient’s history of keeping (or not keeping) appointments for office visits, following-up on referrals, or attending mutual-help groups
- Data from the state PDMP (if available) on the patient’s use of prescribed opioids or other prescribed medications
- Information about other nonprescribed drugs being used
- Reports from family members (obtained with a signed release from the patient)
- Periodic status reports from consultants on the patient’s use of psychosocial therapies or other supports

**Opioid use disorder is a chronic illness that, despite treatment, may wax and wane in intensity over time.**

Documenting Patient Progress. In the event of a legal, regulatory, or civil (malpractice-related) challenge, detailed medical records documenting what was done and why are the foundations of the practitioner’s defense. Every clinician needs to be aware of and understand the federal requirements for recordkeeping, as well as the laws and regulatory requirements of the state in which he or she practices.17 State laws and medical board rules may differ substantially from federal requirements and from one state to another. The board of medical licensure or board of pharmacy in each state can provide information about relevant requirements. At a minimum, patient records should contain the following information:93,94

- **Patient history and physical examination:** The patient’s record must include a history of all controlled drugs used to treat the patient, a history of illicit substances used, and patient allergies. Past treatment attempts also should be documented. Medical records obtained from clinicians who have treated the patient in the past should be included. (Caution should be exercised in accepting records supplied by patients, because these occasionally are fraudulent.) The medical record also should include information about the patient’s personal and family history of alcohol, tobacco, and other substance use as well as a personal history of major depression or other psychiatric disorder.
- **Treatment plan:** The treatment plan and goals should be documented in the record so that there is evidence of clear-cut, individualized objectives to guide the choice of therapy. Patient improvements after a brief trial should be documented in the record, as should all regimens that were tried but failed.
- **Consultants’ reports:** Whenever the best clinical course is not clear or the patient’s response is not as expected, consultation with an appropriate specialist should be obtained. Generally, the results of the consultation should be discussed with the consultant and a written consultation report should be added to the patient’s medical record.
- **Prescription orders:** The patient record must include all prescription orders, whether written or telephoned. Written instructions for the use of all medications should be given to the patient and documented in the record. The prescription order should list medication name, formulation, route of administration, and amount.
- **Informed consent:** A written informed consent or treatment agreement signed by both patient and practitioner can be helpful in establishing a set of ground rules and appropriate expectations.
- **Monitoring visits:** Medication monitoring visits are billable and can be performed by a nurse. They should be carefully documented in the medical record, in the same manner as a visit with the physician.
- Treatment progress/outcomes: The patient’s record should clearly reflect the decision-making process that led to a medical, psychiatric, or behavioral outcome.

A patient’s goals may change over time, requiring the clinician to adapt to new objectives.

Good records demonstrate that a service was provided to the patient, and that the service was medically necessary. Even if the outcome is less than optimal, thorough records protect the clinician as well as the patient.94

Adjusting the Treatment Plan
Opioid use disorder is a chronic illness that, despite treatment, may wax and wane in intensity over time.9 If a patient begins to experience problems with adherence, the clinician should revisit the treatment plan to determine whether different strategies or treatment modalities (pharmacologic and nonpharmacologic) might be useful. For example, switching the patient from oral naltrexone to extended-release injectable naltrexone may enhance compliance with medication use.

A patient’s goals also may change over time, requiring the clinician to adapt to new objectives. Also, as with patients who receive treatment for other chronic diseases, patients receiving treatment for an opioid use disorder may relapse.

Responding to Changes in Treatment Progress. Individuals receiving medication-assisted treatment often demonstrate dramatic improvement in addiction-related behaviors and psychosocial functioning. Such positive changes should be acknowledged and reinforced by the prescribing physician whenever possible.10,96

However, lack of adherence to pharmacologic regimens occurs in a substantial proportion of patients, with some studies reporting that as many as 7 out of 10 patients fail to follow the treatment plan.5 If a patient experiences problems with adherence, the clinician should revisit the treatment plan to determine whether different strategies or treatment modalities (pharmacologic or nonpharmacologic) might be useful. Other strategies to improve adherence and reduce the risk of relapse during treatment include providing incentives to take the monthly injections (i.e., contingency management); involving significant others in monitoring the patient to ensure adherence to the medication plan, in a manner consistent with patient privacy requirements; offering relapse prevention counseling; and using motivational interviewing techniques.44,47,96

Behaviors that violate the treatment agreement or that indicate limited progress in treatment may not constitute grounds for automatic termination of medication-assisted treatment. Such behaviors should trigger a reassessment of the patient’s needs and goals and a corresponding revision of the treatment plan. Aberrant or dysfunctional behaviors may indicate the need for more vigorous engagement in peer support, counseling, or psychotherapies or possibly referral to a more structured treatment setting.55

Alternative pharmacologic therapies such as methadone or buprenorphine maintenance therapy also should be considered for these patients.27,64 Such changes should be documented in the patient’s medical record.10

Relapse rarely is caused by a single factor and often is the result of an interaction of physiologic and environmental factors. It is best conceptualized as a dynamic process in which the patient’s readiness to change interacts with other external and internal factors.

Preventing and Responding to Relapse. As with patients who receive treatment for other chronic disorders, patients receiving treatment for an opioid use disorder may experience relapses. Relapse rarely is caused by a single factor and often is the result of an interaction of physiologic and environmental factors.97 It is best conceptualized as a dynamic process in which the patient’s readiness to change interacts with other external and internal factors.98

If relapse occurs, the clinician should consider several options:

- Examine social, medical, or behavioral factors that contribute to the patient’s substance use
- Increase monitoring
- Change the medication
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- Increase or change the intensity of psychosocial services
- Refer the patient for specialty care

Relapse risk is highest in the first 6 to 12 months after achieving abstinence and then diminishes gradually over the years. It may be necessary to escalate other treatment or to resume therapy with extended-release injectable naltrexone services if relapse appears imminent. Patients should be cautioned that they will be more sensitive to lower doses of opioids after treatment with extended-release injectable naltrexone is discontinued.24

Reinduction Onto Naltrexone Treatment.
Many patients who have relapsed express a desire to resume naltrexone treatment. If a patient experiences multiple relapses, the clinician should consider whether to continue treatment with naltrexone or whether to offer a different treatment modality.

Patients may benefit from referral to a specialist for additional evaluation and treatment. For example, the treatment of addiction for a patient with a comorbid psychiatric disorder may be best managed through consultation with or referral to a specialist in psychiatry or addiction psychiatry.92

DECIDING WHETHER AND WHEN TO END MEDICATION-ASSISTED TREATMENT

Long-term treatment, which is common to many chronic medical conditions, should not be seen as a failure. In fact, it is a cost-effective way of prolonging life and improving the patient’s quality of life by supporting the natural and ongoing process of change and recovery.24 Nevertheless, the physician and patient may wish to weigh the potential benefits and risks of continuing medication-assisted treatment and discuss whether such therapy remains appropriate.

Factors to consider in determining a patient’s suitability for long-term, medication-free status include the presence of stable housing and income, availability of adequate psychosocial supports, and the absence of legal problems. For patients who have not achieved these indices of stabilization, a period of maintenance to address these barriers usually is advised.53

Ideally, the patient and practitioner will reach a decision about whether and when medication-assisted treatment should be discontinued, usually for one of the following reasons:24

- The patient reports substantially diminished craving.
- The patient has maintained stable abstinence over a sustained period.
- The patient feels ready to discontinue the medication.

- The patient is engaged in ongoing recovery, including community supports (such as attendance at mutual-help group meetings).

Less than ideally, some patients simply stop taking their medication without consulting the prescriber. Alternatively, a patient may ask to discontinue medication use because of side effects or other reasons. Still other patients must discontinue medication use because of a significant negative laboratory finding or problem with their physical health status.5,24

The clinician should help the patient withdraw from the medication at an appropriate pace and encourage the patient to continue with psychosocial therapies and participation in mutual-help groups. In the case of extended-release injectable naltrexone, withdrawal is termination of the monthly injection. Patients who resist treatment should be reassessed for co-occurring disorders.

If the patient wishes to continue treatment, his or her engagement in counseling and other psychosocial services should be intensified.100 However, if the patient does not want to continue treatment, the physician may consider referring him or her to an addiction specialist or treatment program.17

Relapse can be fatal. Patients who relapse to opioid use after being treated with extended-release injectable naltrexone or other medications
are at risk for accidental overdose and overdose-related death.\textsuperscript{101} If a patient reverts to pretreatment opioid use, as the blockade wanes, he or she may experience overdose and life-threatening consequences, including respiratory arrest and circulatory collapse.\textsuperscript{27} Therefore, it is recommended that clinicians and patients jointly develop a relapse prevention plan.\textsuperscript{84} SAMHSA's Opioid Overdose Toolkit\textsuperscript{102} includes strategies for developing such a plan that includes ways to address emergency reversal of actual or suspected opioid overdose (see Appendix B for more information).

Relapse to drug use often is preceded by emotional and cognitive relapse. Negative mood states may be warning signs of impending relapse, as are behaviors such as isolating or overcommitting oneself or failing to maintain healthful sleeping and eating habits. People in recovery may need to plan how to respond to disappointments and celebrations without relapsing to drug use.

Cognitive patterns that may predict relapse include thinking that others are having more fun, glamorizing past drug use, and seeing opportunities to relapse without getting caught when others are otherwise occupied or away. The relapse prevention plan should include strategies for managing these thoughts when they arise, such as contacting a supportive person, imposing a specific waiting period before acting, distracting oneself with physical or enjoyable activities, making a list of the pros and cons of drug use, and deciding not to use drugs “just for today.”

Although relapse may be seen as a normal part of a chronic medical disorder, relapse to using opioids after a period of abstinence is strongly associated with overdose. Patients should understand that medication treatment can be resumed if they find themselves unable to cope with negative moods or thoughts.

Every effort should be made to avoid secretiveness and shame about relapse. Providers may wish to consider providing newly medication-free patients with naloxone and supporting their family and friends in learning how to use it. This effort conveys the message that relapse may occur but that the patient has the opportunity to reenter treatment alive and well.

Voluntary Termination of Medication-Assisted Treatment

When the patient and physician agree to discontinue medication-assisted treatment, medically supervised withdrawal should be followed by long-term, drug-free treatment to minimize the risk of relapse.

Both the physician and the patient should accept that the patient may need or want to resume medication-assisted treatment, either with extended-release naltrexone or with another medication.\textsuperscript{100} Patients also should be assured that relapse need not occur for them to be reinstated on medication-assisted treatment.\textsuperscript{10}

If the best clinical course is not clear, consultation with a specialist may be helpful. The results of the consultation should be discussed with the patient and added to the patient's record.\textsuperscript{25}

Referring a Patient for More Intensive Care

If office-based interventions are not effective for a given patient or if the clinician does not have the resources to offer needed care, the patient should be referred for more intensive or specialized services. Many specialty treatment programs provide services that address withdrawal and craving; management of long-term abstinence through pharmacotherapy; case monitoring; individual, group, and family/couples counseling and therapy; other psychosocial services such as vocational counseling; and referral to mutual-help groups.\textsuperscript{5}

Specialized treatment programs anywhere in the United States can be identified through use of the Substance Abuse Behavioral Health Treatment Services Locator on the SAMHSA Web site at http://www.findtreatment.samhsa.gov.

A physician who is planning to treat a patient for opioid use disorder should become familiar with local treatment resources. Developing relationships with such specialized practitioners and programs facilitates the process of consultation and referral. In addition, understanding a program's treatment duration, modality, philosophy, and continuing-care options helps the physician identify appropriate placements for patients who no longer are
candidates for treatment in the general medical office.

A patient may become a candidate for referral to a more structured treatment environment (such as an OTP) for the following reasons:

- **Noncompliance with the treatment plan:** For example, a patient may continue to misuse opioids or fail to appear for scheduled monthly doses of extended-release injectable naltrexone. In such a situation, it may be advisable to transfer the patient to another medication or to refer him or her to a specialized practitioner or treatment setting for more intensive care.

- **Noncompliance with agreed-on activities:** A patient who refuses to participate in counseling or mutual-help groups may need more structure than can be provided in a general medical office and may be better served by an addiction specialist or in an OTP.

- **Threats or verbal abuse:** The patient who verbally abuses office staff, exhibits out-of-control behavior, or otherwise threatens the safety and well-being of office personnel or other patients is a special concern. Such a patient requires more structure than can be provided in a general medical office and should be referred to an addiction specialist or OTP.

- **Nonpayment for services:** If payment is owed for a backlog of bills and the patient has made no effort to arrange a payment plan or to access resources for payment, treatment termination may be necessary but should be done with care to ensure the patient does not leave without treatment options (i.e., patient abandonment).

Conditions that result in termination of treatment in a general medical office setting should be outlined in the treatment agreement or informed consent.99

### Special Considerations

Situations that may require additional arrangements or a delay in referring or discharging a patient include the following:99

- If the patient is in an acute phase of treatment, termination must be delayed until the acute phase has passed. If the practitioner is the only source of treatment for the patient's opioid use disorder in a reasonable driving distance, the practitioner may need to continue care until other arrangements can be made.

- If the practitioner is the only source of a particular type of specialized medical care, he or she may need to continue care until the patient can be safely transferred to another practitioner who can provide such care.

- If the patient is a member of a prepaid health plan, the patient cannot be discharged until the practitioner has communicated with the third-party payer to ask that the patient be transferred to another practitioner.

It may become necessary to reinstate pharmacotherapy with extended-release injectable naltrexone or another medication or to provide other treatment services if relapse appears imminent or occurs.25

### Documenting the Decision and Notifying the Patient

When terminating the physician–patient relationship (and no special considerations are present), the reasons for such termination should be formally documented in the patient record.

The patient also should be given a written notice that he or she must find another health care provider within a stipulated period. The notice should be mailed to the patient by certified mail, return receipt requested. Copies of the letter should be filed in the patient's medical record, along with the original certified mail receipt and the original certified mail return receipt (even if the patient refuses to sign for the certified letter).10,25
SUMMARY

Medication-assisted treatment has shown much promise in reducing nonmedical use of opioids and restoring patients to a healthier life. Considerable research evidence and consensus among experts support the use of pharmacologic treatments for an opioid use disorder in primary care settings. In fact, primary care physicians and members of their health care provider teams are ideally situated to employ these medications to help their patients—particularly those who have been unwilling or unable to access treatment in specialized settings—achieve and sustain a robust recovery from drug use and a safer, healthier life.

A number of FDA-approved medications have been shown to be important elements of such treatment. Although some patients do not benefit from medication-assisted treatment, most do. For each patient deemed an appropriate candidate for such treatment, multiple pharmacologic agents offer a variety of options so that treatment can be tailored to each patient's needs and circumstances.

Medication-assisted treatment has shown much promise in reducing nonmedical use of opioids and restoring patients to a healthier life.

In addition, new patient care models and improvements in the quality and quantity of treatment options are being encouraged through implementation of the Affordable Care Act. These new developments reveal the considerable potential for expanding the use of medication-assisted treatment as clinicians recognize their safety, efficacy, and cost-effectiveness.
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APPENDIX B: SOURCES OF INFORMATION

SAMHSA Publications and Web sites
National Registry of Evidence-based Programs and Practices
http://www.nrepp.samhsa.gov/Index.aspx

Treatment Improvement Protocol 45.
Detoxification and Substance Abuse Treatment.
HHS Publication No. (SMA) 08-4131

SAMHSA Treatment Locator

SAMHSA Advisory: The Role of Biomarkers in the Treatment of Alcohol Use Disorders, 2012 Revision
http://www.kap.samhsa.gov/products/manuals/advisory/pdfs/Advisory_Biomarkers_Revision.pdf

Coding for Screening and Brief Intervention Reimbursement
http://www.samhsa.gov/sbirt/coding-reimbursement

General Principles for the Use of Pharmacological Agents to Treat Individuals with Co-Occurring Mental and Substance Use Disorders
http://www.samhsa.gov/co-occurring/docs/Pharm_Principles_508.pdf

Opioid Overdose Toolkit

NIDA Publications and Web Sites


Mentoring Network
Physician Clinical Support System for Medication-Assisted Treatment
http://www.pcssmat.org

Information About Mutual Support Groups
Narcotics Anonymous (NA)
http://www.na.org

Dual Recovery Anonymous (for patients with co-occurring psychiatric disorders)
http://www.draonline.org

Self-Management and Recovery Training
http://www.smartrecovery.org

Web-Based Courses
American Society of Addiction Medicine (ASAM)
SBIRT Core Training Program
http://www.sbirtraining.com/

ASAM e-Live Learning Center
http://www.softconference.com/asam/default.asp

ASAM From Assessment to Service Planning and Level of Care Course
http://www.changecompanies.net/ASAMcriteria/elearning.php

Other Web Sites, Articles, and Texts
Alliance of States with Prescription Monitoring Programs
http://www.pmpalliance.org/

U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. Fact Sheet: Substance (Other Than Tobacco) Abuse Structured Assessment and Brief Intervention (SBIRT) Services.
Clinical Use of Extended-Release Injectable Naltrexone in the Treatment of Opioid Use Disorder: A Brief Guide

U.S. Departments of Veterans Affairs and Defense. VA/DoD Clinical Practice Guideline for Management of Substance Use Disorders in the Primary Care Setting. 


British Association for Psychopharmacology. Evidence-based guidelines for the pharmacological management of substance abuse, harmful use, addiction and comorbidity: Recommendations from BAP. London: June 2012.


APPENDIX C: ACKNOWLEDGMENTS

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