New Mexico Treatment Guidelines For Medical Providers Who Treat Opioid Addiction Using Buprenorphine

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Produced by the New Mexico Behavioral Health Collaborative
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This document provides guidance to New Mexico qualified physicians who treat opioid addiction using medications that contain buprenorphine, which are schedule III controlled substances. At this time, the only controlled substances approved for such use are buprenorphine sold as a monoproduct (Subutex® and generic versions) and buprenorphine/naloxone (Suboxone®). This guide also provides guidance for other members of the healthcare team including nurses, Recovery Coaches, counselors, pharmacists, administrators, and also third-party payors.

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FOREWORD

Opioid abuse and addiction have long been a significant problem in New Mexico and throughout many areas of the country. The regulatory history of opioids in the United States began almost a century ago with the passage of the Harrison Narcotics Tax Act in 1914 which initiated federal regulation of opioid prescribing practices. Up until this point one of the treatment approaches employed for opiate addiction was the administration of morphine to patients. Although the Harrison Act did not prohibit prescribing opiates to addicts, it proved to inhibit this practice, and after a number of contentious years the last morphine clinic closed in the United States in 1923.

In 1929 the National Research Council of the National Academy of Sciences set up a "Temporary Advisory Committee on Drug Addiction" to address these problems from a scientific perspective. The charge to this committee was to analyze chemical and biological literature on opioids, to formulate rules and regulations for legitimate use of opioids, to educate the medical profession, scientific societies, and the public about opioids, and to investigate potential compounds to treat addiction.

In the following years a number of investigators gained a much better understanding of opioid addiction and its consequences. It wasn't until 1965 that Drs. Vincent Dole and Marie Nyswander from Rockefeller University published "A Medical Treatment for Diacetylmorphine (Heroin) Addiction" which provided the first objective evidence that medication-assisted treatment could be effective in opioid addicts (Dole and Nyswander 1965). They studied a long acting opioid compound known as methadone and reported on 22 patients who had been stabilized on oral methadone. They concluded the methadone maintenance therapy (MMT) plus rehabilitation programs improved psychosocial outcomes with minimal side effects in these patients. The therapeutic benefits of methadone have since been confirmed by numerous studies over more than four decades.

In the late 1960s the U.S. Food and Drug Administration (FDA) started issuing INDs for methadone research for treating heroin dependence, and by 1969 several thousand patients were in treatment. However, by 1970 MMT was being viewed as wrong by federal agencies, the psychosocial treatment community and advocates for some minority populations. In 1971 FDA placed extensive restrictions on MMT INDs and as a result suppressed medication-assisted treatment with methadone dramatically.

In 1971 the Nixon administration established the White House Special Action Office for Drug Abuse Prevention (SAODAP) and appointed Dr. Jerome Jaffe as Director. SAODAP worked with FDA to encourage and nurture MMT, and with the passage of the Drug Abuse Prevention Office and Treatment Act of 1972 developed a comprehensive coordinated long-term federal strategy to reduce drug abuse (Jaffe and O'Keefe, 2003). This Act also created the National Institute on Drug Abuse (NIDA). The FDA issued regulations that acknowledged MMT efficacy and safety but imposed a number of conditions for its use related to eligibility, dosages, and restriction of methadone to specialty clinics and pharmacies, inhibiting MMT by individual physicians. With the passage of the Narcotic Addict Treatment Act of 1974 the regulation of MMT was established in law, representing one of the only areas of medical treatment regulated by the federal government.

Meanwhile as MMT expanded other medications were developed including two opioid antagonists, naloxone (Lowenstein and Fishman, 1961) and naltrexone (Blumberg, 1967). Naltrexone was approved by the FDA for

heroin addiction in 1984, adding another medication in the clinical tool box to treat opioid addiction. Also in the 1960s a number of semi-synthetic opioid agonists were synthesized by K.W. Bentley and colleagues (Bentley et al 1965, 1967). One of these compounds, buprenorphine, exhibited both agonist and antagonist properties depending on the clinical context.

A British company, Reckitt and Coleman (now Reckitt Benckiser), wanted to develop buprenorphine as an analgesic. Much of the research on buprenorphine to treat opioid dependence was conducted at the NIDA Addiction Research Center (ARC) by Dr. Donald Jasinski and colleagues. In 1978 buprenorphine was launched as an analgesic in the United Kingdom by Reckitt and Coleman, and the seminal study Jasinski et al. (1978) demonstrated buprenorphine's potential as a medication for treating narcotic addiction.

During the next decade a large amount of research was conducted on buprenorphine, and in 1992 the first randomized controlled trial (RCT) demonstrating buprenorphine's efficacy for opioid dependence was published by Johnson et al. in the Journal of the American Medical Association (Johnson et al, 1992). Because of its great potential as an opioid treatment, and the long unmet need for additional treatment options for opioid addiction, the National Institute on Drug Abuse entered into a Cooperative Research and Development Agreement (CRADA) with Reckitt and Coleman to jointly develop buprenorphine as a treatment for opioid dependence. This involved a considerable investment by the NIDA, which agreed to fund clinical studies and perform pharmacokinetic studies while Reckitt would work on chemistry/formulations, pharmacology/toxicology, and regulatory issues.

During the following decade several RCTs were completed, and after consultation with the FDA naloxone was added to the formulation to decrease the abuse liability of this medication. By 1999, the great potential of Subutex (buprenorphine) and Suboxone (buprenorphine/naloxone) for the treatment of opioid dependence was clear, and the question was how would this medication-assisted treatment be delivered.

With Opioid Treatment Programs (OTP) so highly regulated there was concern that the treatment gap (200,000 in treatment at the time vs. 800,000 in need of treatment) would continue. As a result Congress passed the "Drug Addiction Treatment Act 2000" (DATA 2000) which allowed office-based treatment for opioid dependence with new medications in Schedules III, IV, V approved by the FDA for maintenance or detox treatment. The legislation was designed to expand access by creating a framework for medication-assisted treatment from office-based settings.

Practioners however were required to have additional specialized training in order to obtain a DATA waiver and a special DEA number for office-based prescription of opioid agonist treatment. The law also limited the number of patients for whom each practitioner could prescribe. The law called for these number restrictions to be re-evaluated periodically.

Shortly after passage of DATA 2000, a New Drug Application was approved by the FDA in October 2002, and Subutex and Suboxone were launched in January 2003. This represented a landmark change in the mode of opioid addiction treatment in the United States as well as unique public/private partnership between the federal government and private industry to address an unmet public health need. To date over 22,000 physicians have completed the required specialty training to be certified, and there are over 13,000 physicians who have DATA waivers.

In 2008, Dr. George Woody and colleagues published a landmark trial of buprenorphine efficacy in young adult populations (Woody et al 2008). Two of these sites for that multi-site trial were treatment programs here in New Mexico, working in collaboration with UNM researchers. New Mexico is fortunate to have a number of experienced and knowledgeable clinicians that have both extensive clinical and research experience with buprenorphine products.

The State of New Mexico Guidelines that follow represent a comprehensive and up-to-date manual on the evidence-based practices for the use of buprenorphine products in the treatment of opioid addiction. These guidelines represent the outstanding efforts of many dedicated authors and they come at a critical time in our state's history as New Mexico continues to struggle with the epidemic proportions of opioid abuse and addiction. We congratulate the authors of this guide for their critical work to improve the lives of so many New Mexicans who suffer from this disease.

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1. Regulatory Background

Robert Buser, M.D.

The Drug Addiction Treatment Act (DATA) passed in 2000 allows qualified physicians to prescribe buprenorphine for treatment of opioid addiction to patients cared for in office-based practice. It waives the requirement for obtaining a separate Drug Enforcement Agency (DEA) registration as an Opioid Treatment Program (OTP) for qualified physicians administering, dispensing, and prescribing buprenorphine drug products. *See Appendix 1: Physician Requirements, page 108.*

What drugs are classified as opioids? Opioid analgesics include hydrocodone, oxycodone, morphine, hydromorphone, codeine, methadone, fentanyl and others. Some of these may be sold in tablets that also contain acetaminophen (Tylenol). The most common Illicit opioid is heroin.

Physicians registered with the DEA as practitioners who apply and are qualified pursuant to DATA are issued a waiver and will be authorized to conduct treatment of opioid addiction (maintenance and detoxification treatment) using Subutex® and Suboxone® (or generic equivalents) without an OTP registration. DATA waivers are granted only to qualified physicians. Hospitals, in addition to Advanced-Practice Nurses, and Physician Assistants do not qualify under the DATA.

DATA-waived physicians may treat thirty (30) patients in year one, or up to one hundred (100) patients at any one time thereafter, dependent on individual authorization from the Center for Substance Abuse Treatment (CSAT). One year after submitting their original waiver request, physicians may submit a second notification of the need and intent to increase the patient limit from 30 patients up to 100 patients. Upon authorization by CSAT, the DEA will issue a new DEA certificate of registration to identify whether the physician is authorized to treat 30 or 100 patients.

Link to apply for initial waiver to prescribe buprenorphine http://buprenorphine.samhsa.gov/pls/bwns/waiver
Link to application for an expanded buprenorphine patient census
http://buprenorphine.samhsa.gov/pls/bwns/additional_notification_form?prefilled_or_online=ONLINE

Treating physicians need to keep track of how many patients they are treating with buprenorphine at any one time, in order to avoid exceeding these limits. *See Required Recordkeeping/patient census, page 70.*

Most physicians are required to complete an 8-hour live training or web-based training provided by a medical specialty society authorized by CSAT before they can receive the buprenorphine waiver. The content of the training includes pharmacology, addiction theory, legal and regulatory information, and specific instructions about starting and maintaining patients on buprenorphine treatment. In some circumstances, physicians may receive the buprenorphine waiver without receiving the official training; see link below for more information on alternate methods of qualifying for the buprenorphine waiver.

Link to description of physician qualifications for obtaining the buprenorphine waiver
http://buprenorphine.samhsa.gov/waiver_qualifications.html

2. Introduction to Buprenorphine/naloxone (Suboxone®)

Miriam Komaromy, M.D.

Some people who are opioid-addicted are able to stop using opioids without taking medication. However, the use of medication has been proven in many studies and settings to increase the likelihood of long-term abstinence and to reduce morbidity and mortality (Degenhardt, 2009).

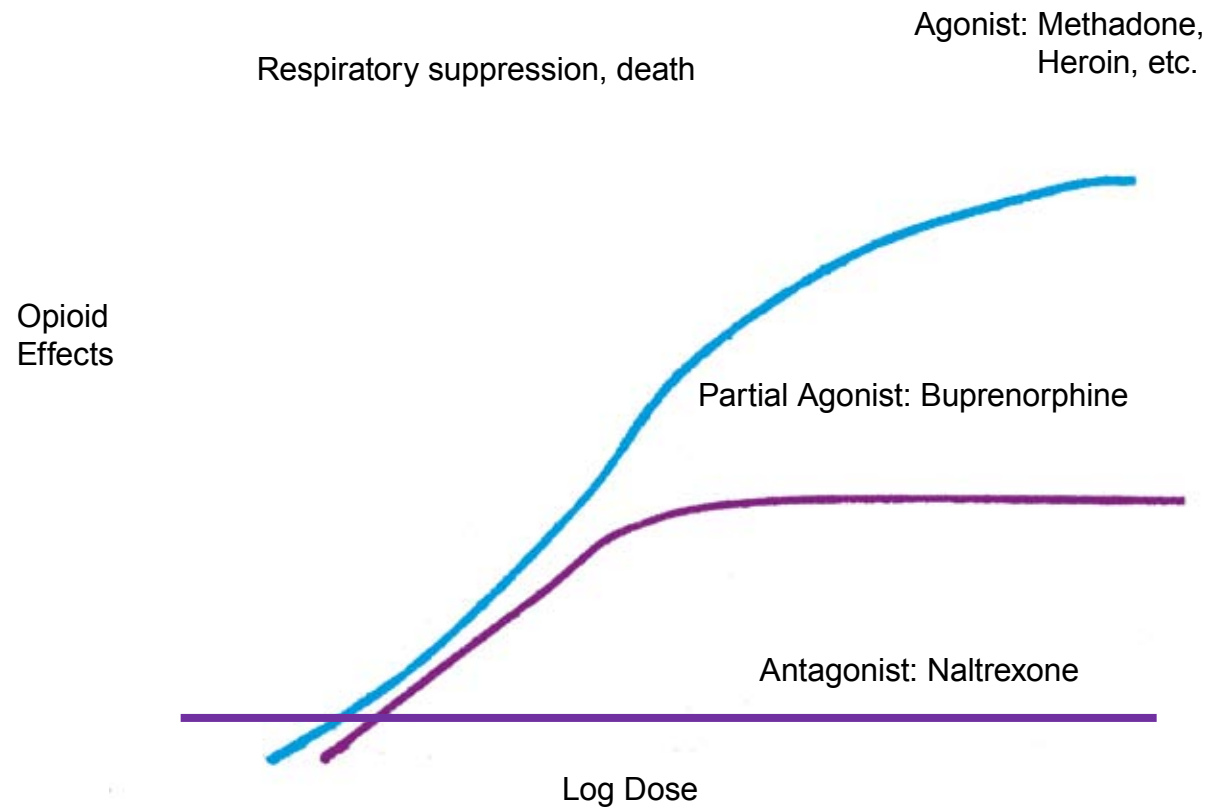
Methadone and buprenorphine are medications that activate the opiate receptor and are approved for treatment of opioid addiction. When used as directed, these drugs are not heroin/opioid substitutes. They are prescribed or administered under monitored, controlled conditions and are safe and effective for treating opioid addiction when used as directed. They are administered orally or sublingually (i.e., under the tongue) in specified doses, and their pharmacological effects differ from those of heroin and other abused opioids.

Opiates vs Opioids: The term "opiate" refers to drugs derived from the opium poppy, Papaver somniferum. The term "opioid" is a broader term that also includes semi-synthetic derivatives of the opium poppy (such as heroin) and purely synthetic derivatives (such as buprenorphine or fentanyl). Despite this distinction, these words are often used interchangeably.

Heroin, for example, is often injected, snorted (insufflated), or smoked, causing an almost immediate "rush," or brief period of euphoria that wears off quickly and ends in a "crash." The individual then experiences an intense craving to use again in order to stop the crash and reinstate the euphoria. The cycle of euphoria, crash, and craving—sometimes repeated several times a day—is a hallmark of addiction and results in severe behavioral disruption. These characteristics result from heroin's rapid onset and short duration of action in the brain. When opioid analgesics are abused, they are also typically used in a way that produces an intense "rush", such as inhaling the fumes of vaporized pills or injecting the pills after dissolving them in liquid. When used in this manner, they produce an experience that is very similar to that of heroin.

In contrast, methadone and buprenorphine have gradual onsets of action and produce stable levels of the drug in the brain; as a result, patients maintained on these medications tend to experience the medications as mildly pleasurable and do not experience a rush. The medications also markedly reduce their desire to use opioids. If an individual treated with these medications tries to take an opioid such as heroin, the euphoric effects are usually dampened or suppressed. Patients undergoing maintenance treatment do not experience the physiological or behavioral abnormalities from rapid fluctuations in drug levels associated with heroin use. Maintenance treatments save lives—they help to stabilize individuals, allowing treatment of their medical, psychological, and other problems so they can contribute effectively as members of families and of society.

Methadone maintenance treatment is conducted in specialized settings (e.g., Opioid Treatment Programs or OTPs, also known as methadone maintenance clinics). These specialized treatment programs offer the long-acting synthetic opioid medication methadone at a dosage sufficient to prevent opioid withdrawal, help to block the effects of illicit opioid use, and decrease opioid craving. When patients are treated in an OTP, the



medication is initially administered as a daily observed dose. Patients may eventually earn "take-home" doses if they are abstinent, adherent to treatment, and improving their level of function. This daily observed dosing helps to ensure adherence and safety, but is often burdensome for the patient.

Buprenorphine is the first medication in the United States that can be legally prescribed in a physician's office as an opioid agonist treatment for opioid dependence, and it remains the only medication that can legally be prescribed for this purpose. Physicians can prescribe the medication for up to a month at a time, and the patient can take the medication on a daily basis at home.

Patients stabilized on adequate, sustained dosages of buprenorphine have markedly improved social and mental functioning such that they can hold jobs, avoid the crime and violence of the street/drug culture, and reduce their exposure to bloodborne infection by stopping or decreasing injection drug use and drug-related high-risk sexual behavior (Tkacz, 2012; Metzger, 2010; Parran, 2010; Sullivan, 2008). Patients stabilized on these medications also tend to engage more readily in counseling and other behavioral interventions essential to recovery and rehabilitation (Caldiero, 2006).

a.) Basic Pharmacology of Buprenorphine

Miriam Komaromy, M.D. and Robert Buser, M.D.

Classification: Buprenorphine (Suboxone®, Subutex®) is a semi-synthetic thebaine-derivative that has opioid partial agonist properties. As an analgesic (pain killer), buprenorphine is at least 40 times more potent than morphine (on a milligram per kilogram basis), and recent studies have suggested that the correct ratio may be 110-140 times as potent, roughly similar to the potency of fentanyl (Pergolizzi, 2010). When buprenorphine is prescribed for pain as an analgesic, therapeutic dosages typically range from 0.3 – 0.6 mg when given intravenously. Sublingual buprenorphine may also be used for pain control, although this is an off-label use. A recent study estimated that 0.4 mg of sublingual buprenorphine is clinically equivalent to 5 mg IV morphine for control of acute pain from fracture (Jaililli, 2012). A transdermal form of buprenorphine (Butrans®) is approved for treatment of pain.

Larger daily doses (2-32 mg daily) are used for the treatment of opioid withdrawal or opioid maintenance therapy. Overdose symptoms include confusion, dizziness, pinpoint pupils, hallucinations, hypotension, respiratory difficulty, and possibly seizures and coma. It is thought that respiratory suppression is rare because of a ceiling effect whereby respiratory effects reach a plateau effect at a dose of approximately 32 mg, and further respiratory suppression is minimal as higher doses are ingested (Cowan, 2007).

Fatalities due to buprenorphine overdose alone are exceedingly rare because of this ceiling effect, but there are occasional reports of overdose when buprenorphine is used along with other drugs, especially sedatives and alcohol.

b.) Pharmacokinetics and Metabolism

Buprenorphine is absorbed through the buccal or gastric mucosa; however first-pass metabolism limits enteral (gastrointestinal) bioavailability to 15%. Transbuccal bioavailability is 27.8%, sublingual bioavailability is 51 % with intravenous bioavailability approaching 85% (Elkader, 2005; Chiang, 2003; Nath, 1999).

Buprenorphine is rapidly metabolized in the liver by the cytochrome P450 system to form a pharmacologically active N-dealkylated metabolite, norbuprenorphine, and glucuronide conjugates, which are biologically active (Brown, 2011). About 70% of buprenorphine is excreted in feces (Johnson, 2003). Buprenorphine and norbuprenorphine are excreted in urine almost exclusively as glucuronides with very little free drug being detected.

3. Safety Issues with Buprenorphine

Miriam Komaromy, M.D. and Robert Buser, M.D.

Buprenorphine is a partial agonist, meaning that it has both agonist and antagonist properties at opioid receptors. Buprenorphine is available in two formulations: as buprenorphine alone (sold under the brand name Subutex® and others) and the more commonly prescribed Suboxone® (a combination of buprenorphine and the opioid antagonist naloxone). The unique formulation with naloxone produces withdrawal symptoms when opioid-dependent individuals inject it to get "high," lessening the likelihood of diversion, whereas the naloxone is not active when taken sublingually (dissolved under the tongue) as prescribed (due to hepatic first-pass effect). Therefore, when patients take Suboxone® under their tongue they experience only the buprenorphine effects, and not the naloxone effects. If they inject or snort it while intoxicated on another opioid, they experience opioid withdrawal symptoms.

Suboxone 8 mg tablets

All buprenorphine products designed to treat addiction are intended to be taken under the tongue (sublingually). Because the drug has a long half-life, it is possible for most patients to take their dose only once a day and still maintain adequate drug levels to prevent withdrawal symptoms. When taken in doses of 12-16 mg, sufficient quantities of buprenorphine are available to occupy brain opioid receptors almost completely (Greenwald, 2003). Buprenorphine has an extremely high affinity for the mu opioid receptor in the brain. This means that buprenorphine can displace almost any other opioid from the opioid receptor, and if buprenorphine is attached to the receptor then it effectively prevents almost any other opioid from gaining access to the receptor. As a result, if a full dose of buprenorphine is taken upon awakening in the morning, it can act as a "chemical shield", effectively preventing the patient from becoming intoxicated by using other opioids later on in the day (Jones, 2011; Johnson, 2003).

However, this very high affinity means that if a patient is intoxicated (not yet withdrawing) from another opioid and the patient takes buprenorphine, the buprenorphine will immediately displace the other opioid from the patient's mu receptors. Because almost all other opioids are full agonists (activators) of the mu opioid receptor, but buprenorphine is only a partial agonist, this will cause the patient to experience immediate withdrawal symptoms, because the patient experiences a rapid drop from full agonist effect to partial agonist effect. This is referred to as **precipitated withdrawal**, and can be quite


Now also available as a fast-dissolving sublingual film

severe, with vomiting and agitation that are very uncomfortable and distressing for the patient. Therefore, it is very important to make sure that a patient is in a state of mild-to-moderate opioid withdrawal prior to starting buprenorphine. For more on this topic, see page 47, Pecipitated Withdrawal.

Buprenorphine has powerful analgesic effects, and is an excellent medication for patients who have concurrent opioid addiction and chronic pain problems. When taken for pain it is recommended that the total dose be divided and administered three or four times per day, or continuously via a transdermal patch, as the analgesic effects appear to have a shorter duration of action than the mediation's effectiveness for blocking withdrawal symptoms. Sublingual formulations of buprenorphine are not approved for pain control, but are often used off-label for this purpose. A transdermal forumulation of buprenorphine is approved for pain control. One interesting aspect of buprenorphine as an analgesic is that it does not appear to cause hyperalgesia. Hyperalgesia is a phenomenon that has been observed with most other opioids, in which the initial analgesic effect may be replaced by increased pain sensitivity (opioid-induced hyperalgesia) with chronic high-dose use. This has not been found to occur with buprenorphine (Pergolizzi, 2010).

As with all opioids, patients maintained on buprenorphine will be physically dependent on the medication and will experience withdrawal symptoms if the medication is stopped abruptly. This withdrawal syndrome is less intense than withdrawal from heroin and much shorter than withdrawal from methadone, but is still unpleasant (Kosten, 2003). When a patient wishes to discontinue treatment, a tapered schedule of the medication can be administered, and for most patients the drug can be completely withdrawn over the course of approximately one to two weeks (Ling, 2009).

Buprenorphine can be a very effective treatment for opioid withdrawal. When used for this purpose, the buprenorphine is substituted for the other opioid, and a tapering dose of the buprenorphine is administered over one week or so, minimizing withdrawal discomfort. However, this type of treatment, often termed "detox", has been shown to have virtually no impact on the subsequent course of the disease; in other words, relapse to an addictive pattern of opioid use is extremely likely, and undergoing medication-assisted withdrawal does not correlate with longer lengths of drug abstinence compared with simply stopping using (Shah, 2006; Kakko, 2003). On the other hand, studies of the effectiveness of buprenorphine maintenance treatment, in which a patient takes a steady fixed dose of buprenorphine on a daily basis in order to minimize craving and residual withdrawal symptoms, show a marked increase in the likelihood of success in avoiding relapse to opioid drugs. The effectiveness of treatment can be judged in a variety of ways, but one is the length of time that a patient remains engaged in treatment. Longer length of engagement in buprenorphine treatment has been shown to correlate with improvement in the proportion of urine drug tests that are negative over time and decreased reports of self-administration of other opioids (Soeffing, 2009). Table A summarizes results of some studies of buprenorphine treatment.

Author & Journal	Year	"n"	Setting	% still participating actively in treatment
Fudala, NEJM	2003	461	Multicenter research trial	57% @ six months
Alford, JGIM	2007	85	Academic health center/ Community clinic; ½ of the patients were homeless; nurse case manager for program.	81% @ 12 months
Mintzer, Ann Fam Med	2007	99	Four primary care practices	54% @ six months
Cunningham, Fam Med	2008	41	Urban community health center	71% @ three months
Soeffing, J Subst Abuse	2009	255	Urban academic health center	57% @ 12 months

Buprenorphine preparations approved for treatment of opioid addiction:

1. Buprenorphine monoproduct (Subutex® and generic formulations): This formulation consists of buprenorphine alone, without naloxone. It comes in two mg and eight mg strengths, and is intended for sublingual administration. Because it has a greater liability for misuse and diversion than does the combination buprenorphine/naloxone product (Comer, 2010), it is not recommended for use in anyone except pregnant opioid-addicted patients. http://pcssb.org/wp-content/uploads/2010/09/PCSS-B-Adherence-diversion-and-misuse-of-sublingual-buprenorphine1.pdf The rationale for using the monoproduct instead of the combination product in pregnancy is to reduce unnecessary fetal exposure to naloxone CSAT, 2005).

2.Buprenorphine/naloxone combination product, marketed under the brand name Suboxone®: this medication is available as two mg buprenorphine coupled with 0.5 mg naloxone, and eight mg buprenorphine coupled with two mg naloxone. When dissolved sublingually, as directed, there is very minimal absorption of the naloxone, so the effects of the buprenorphine are experienced in a way that is very similar to the effects of the monoproduct. However, if an opioid-dependent individual ingests the combination product via injection or snorting, the naloxone is active and causes a rapid-onset withdrawal syndrome that is typically severe. Because this effect is believed to decrease diversion, this formulation is preferred for treatment of all individuals except pregnant women.

Buprenorphine/naloxone is available in both film and tablet forms. The manufacturer reports that the film is less subject to diversion, but some anecdotal reports call this into question. Both formulations are equally effective. The film tastes better to some patients, and dissolves more quickly.

Currently, generic versions which cost less are available for the buprenorphine monoproduct, but not for buprenorphine/naloxone. However, buprenorphine/naloxone is no longer under exclusive patent protection, so

there is hope that a generic manufacturer will emerge for this product. In the meantime, it is recommended that non-pregnant patients be maintained on the combination product, since it does appear to have somewhat less abuse-liability than does the monoproduct.

Buprenorphine rarely causes fatal overdoses in adults, but when combined with benzodiazepines or alcohol the risk is much greater.

Safety Issues:

a.) Drug Interactions with Benzodiazepines and Other Sedatives: Concomitant use of benzodiazepines has been reported in the literature to be implicated in buprenorphine non-fatal overdose and overdose deaths (Reynoaud M., 1998). In many of these cases users crushed and intravenously injected the buprenorphine. For adults, fatal overdoses almost always involve co-ingestion of buprenorphine with sedative-hypnotic drugs, such as benzodiazepines or barbiturates, or with large quantities of alcohol (Ferrant, 2011; Lai, 2006; Schifano, 2005). Therefore, it is recommended that concurrent prescribing of buprenorphine with sedative-hypnotics be used only when absolutely required for treatment of psychiatric illness unresponsive to other medications, and that the administration be closely monitored (Suboxone manufacturer's prescribing information, http://www.suboxone.com/pdfs/SuboxonePI.pdf). Another reason to avoid this combination of medications is because of the significant abuse potential of benzodiazepines, and the fact that this medication class should generally be avoided in patients with an addiction history of any kind. Other CNS depressants, such as alcohol, may have a similar effect, and patients should be warned about this.

A minimal brief exposure to buprenorphine can be fatal in an infant. Medical monitoring for 24 hours is recommended following any known exposure.

b.) Unintentional Buprenorphine Exposure in Young Children: Serious adverse effects of buprenorphine exposure in young children have been reported (Bellot, 2011; Pedapati, 2011). Buprenorphine use in infants and young children produces the classic opioid syndrome of apnea, mental-status depression, and miosis. It is becoming increasingly clear that infants and small children who are exposed even briefly to buprenorphine, such as placing a tablet in the mouth that is promptly removed, must be monitored in a medical setting, as respiratory suppression or arrest and even death have been reported after very minimal ingestions(ibid). Thus, patients receiving buprenorphine on an outpatient basis should be warned about this risk, and instructed to keep their medication supply in a secure place, out of the sight and reach of children (Boyer, 2010).

c.) Buprenorphine Overdose:

Buprenorphine rarely causes dangerous or fatal overdoses when used alone (Bell, 2009; Soyka, 2006). Most reported deaths that have involved buprenorphine have involved co-ingestion of benzodiazepines, alcohol, or other substances. *See a) Drug Interactions with benzodiazepines and other sedatives, above.*

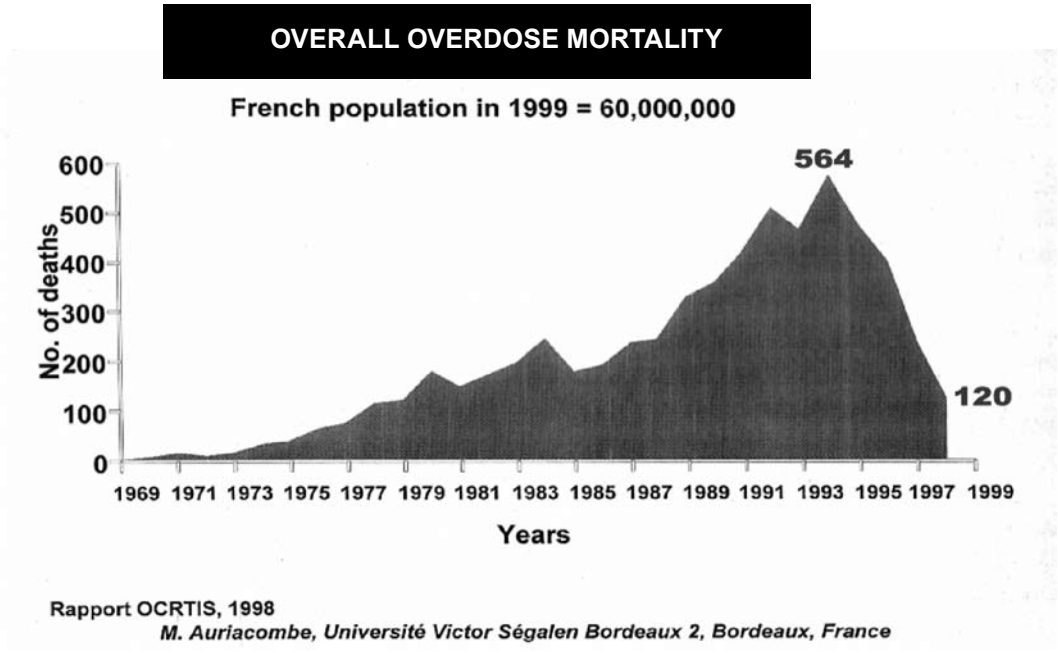
4. Abuse Potential and Diversion of Buprenorphine

Miriam Komaromy, M.D.

Like methadone, when buprenorphine is taken by an individual who is addicted to heroin or other opioids, buprenorphine reduces craving and helps the person remain drug-free. Because of its opioid effects, buprenorphine can also be abused, particularly by individuals who are not physically dependent on opioids. Compared with methadone and other opioids, buprenorphine has a relatively lower risk of abuse, dependence, and side effects. Nevertheless, diversion and abuse are an increasing concern (Bazazi, 2011; Yokell, 2011).

Data from the National Forensic Laboratory Information System (NFLIS) included in the 2010 Annual Report listed buprenorphine as the third most common narcotic analgesic and the tenth most common drug identified by State and local forensic laboratories in the United States during evaluation of drug evidence obtained during drug seizures, undercover drug buys, and other activities (U.S. Drug Enforcement Administration, Office of Diversion Control, 2011). In spite of the formulation of the buprenorphine/naloxone combination product as a less-abusable medication, both the combination and the monoproduct are widely available as street drugs. Despite buprenorphine's concomitant agonist and antagonist properties, it still has some reinforcing effects, producing a mild euphoria, especially in those who are not currently opioid dependent. This is often described by users as "taking the edge off." In settings in which full opioid agonists are not readily available, such as prison and certain geographic locations, buprenorphine may be abused very frequently (ibid). In fact, in France buprenorphine is widely abused and injected, which is interesting to note in light of the concurrent huge decrease in opioid-overdose deaths in France since buprenorphine was made widely available (Carrieri,2006; Auriacombe, 2004).

Change in the number of opioid overdose deaths in France after widespread introduction of buprenorphine in the mid-'90s.



Another group that may have a propensity for abusing this medication is adolescents. This medication may be perceived as safer by this population because it is prescribed by a physician and its overdose risk is minimal. Buprenorphine is consistently reported to make people feel "normal" rather than "high" or "intoxicated" when it is taken sublingually by opioid-dependent individuals. However, when taken by opioid-naïve individuals, and particularly when it is crushed and dissolved/injected or snorted, it is associated with intoxication despite the naloxone, and is undoubtedly diverted and abused for that reason as well.

5. Assessing a Patient for Buprenorphine Medication Assisted Treatment (MAT)

Miriam Komaromy, M.D.

Issues to address when assessing the appropriateness of a patient for office-based maintenance treatment with buprenorphine include:

- assessing whether the patient is dependent on opioids
- assessing the patient's readiness for change with regard to his/her opioid use
- assessing the patient for concurrent medical or psychiatric illness
- assessing for co-occurring substance use disorders
- educating the patient about different treatment options for opioid dependence
- educating the patient about buprenorphine MAT
- determining how the patient will pay for the medication and office visits
- determining whether the patient is interested in buprenorphine treatment and is willing to agree to the terms of your patient treatment agreement

a.) Is the Patient Dependent on Opioids?

In general, buprenorphine maintenance is an appropriate treatment only for individuals who are addicted to opioids, i.e., who meet DSMIV criteria for dependence (Table C). Notably, the medication is not needed as treatment for someone who has simply developed physiologic dependence on prescribed opioids, i.e., someone who was taking it only as prescribed and for its intended purpose, but who develops withdrawal symptoms when the medication is abruptly discontinued. Instead, it is indicated for someone who has addiction, characterized by a loss of ability to control their use of the drug, and compulsive seeking and self-administration of the drug in spite of negative consequences for self or others.

There are instances in which maintenance treatment is appropriate for an individual who is not physically dependent on opioids. An example would be someone who is being released from prison who has a history of opioid addiction but is not currently opioid dependent. Such a person has a very high likelihood of relapse to opioids and a tremendously elevated risk of opioid overdose death in the weeks after release from incarceration, partly because of decreased tolerance that has developed during incarceration (Moller, 2010; Merrall, 2010); Coffin, 2007)).

There are no clear guidelines for the length of time that an individual should be opioid-addicted before s/he is considered a candidate for buprenorphine maintenance. The argument is sometimes made that a certain minimum time period should elapse before maintenance treatment is begun, particularly for young people. However, this is not clearly supported by research, and there is no clear time cut off before which this treatment is contraindicated. Furthermore, discontinuation of buprenorphine maintenance is often associated with relapse to use of opioid drugs of abuse, so should generally only be considered if a patient has a strong support system or refuses to continue maintenance treatment (Weiss, 2011; Alford, 2011).

The medical history for a patient considering buprenorphine MAT should include a comprehensive review and cataloging of the patient's opioid use history (Table B). *See also the section below on assessing for other co-occurring addiction diagnoses, page 28.*

Table B: Checklist for opioid use history	
Age at first use	Opioid drugs used
Routes of drug use	Patterns of drug use (frequency, quantity)
Complications of use (e.g. overdose)	Consequences of use (legal, medical, social, psychological)
Past quit attempts	Past addiction treatment
Period of sobriety & how achieved	Participation in current treatment (counseling, mutual-help, medication)

Both patients who have been using prescription opioids (such as oxycodone and morphine) and those using illicit opioids such as heroin are likely to benefit from buprenorphine MAT. Some studies have suggested that buprenorphine treatment may be more successful for treatment of prescription opioid addiction than for heroin addiction (Soeffing, 2009; Alford, 2011). However, this may have more to do with confounding socio-economic factors rather than with a specific drug effect (Alford, 2011), and buprenorphine MAT is used successfully for treatment of heroin addiction in a wide variety of settings and communities in New Mexico (Trigg, 2012). Similarly, buprenorphine MAT may be used effectively whether patients are swallowing, snorting, or dissolving and injecting the opioid.

When assessing whether a patient it a good candidate for maintenance treatment with buprenorphine, it is useful to use a checklist of criteria for opioid dependence. An example of such a checklist is in Table C.

Table C: Checklist for determining the diagnosis of Opioid Dependence
Does the patient have tolerance to opioids? This refers to the need to use more of the drug over time in order to achieve intoxication or the desired effect, or marked decrease in the effect of using the same amount of drug.
Does the patient experience opioid withdrawal from opioids? This refers to development of opioid withdrawal symptoms when s/he stops using opioids, or using the drug in order to relieve or avoid symptoms of opioid withdrawal. *See Appendix 11, Symptoms and Signs of Opioid Withdrawal, page 128.*
Does the patient use an opioid drug in larger amounts or for a longer period of time than was intended?
Does the patient have a persistent desire to cut down or control use of opioids, or has s/he made unsuccessful attempts to cut down or control use of opioids?

Is the patient spending a lot of time obtaining and using opioids, or recovering from the effects of opioid drugs?
Has the patient given up or cut down on important social, occupational, or recreational activities because of opioid drug use?
Does the patient continue to use opioid drugs despite knowledge of having persistent or recurrent physical or psychological problems that are likely to have been caused or exacerbated by the use of opioid drugs (e.g., serious accidental overdose, injury from a motor vehicle crash caused by driving under the influence).
SCORING: THE DIAGNOSIS OF OPIOID DEPENDENCE REQUIRES MEETING THREE OR MORE OF THE ABOVE CRITERIA AT ANY TIME IN A SINGLE 12-MONTH PERIOD.

Adapted from DSMIV-TR, American Psychiatric Association, 2000.

B.) What Is the Patient's Level of Readiness To Change?

Persons with addiction are usually ambivalent about their addiction, and many minimize its negative consequences. They use substances because they experience benefits from using, such as pleasure, relief from anxiety or boredom, suppression of symptoms of mental illness such as depression or PTSD, expression of rebelliousness, and many other benefits. On the other hand, when people are addicted to drugs they are usually experiencing negative consequences as well. These include financial consequences, legal consequences such as DWI or incarceration, social consequences such as embarrassment, job loss, or social strife, and serious or life threatening medical consequences such as HIV infection, injuries from car crashes, and overdose.

Typically a person starts to consider changing his or her use of the addictive substance when negative consequences increase, especially if these negative consequences start to outweigh the perceived benefits. However, almost inevitably, making a change proves very difficult, and abstinence may seem virtually impossible. People may believe that they need or want to stop using the substance, but feel unable to do so. Sometimes an attempt to cut down on use of the substance may be more acceptable or less threatening than an attempt at total abstinence, or a person may try to change their pattern of use (rather than cutting down) in order to avoid the worst negative consequences. An example might be a patient who chooses to stop using alcohol while using opioids in order to avoid the additive risk of overdose from the combination of the two drugs. This approach is referred to as harm reduction, and healthcare providers may choose to relate to such a patient's addiction from a chronic-disease management standpoint (Saitz, 2008).

See Appendix 2: Harm Reduction, page 109.

It is important for a healthcare provider to assess a patient's readiness to change. A patient who acknowledges his or her drug use but is not considering changing it requires a very different treatment approach compared with a patient who arrives at the medical office because s/he is actively seeking buprenorphine MAT. Failure

to accurately assess a patient's readiness to change can result in miscommunication and frustration on the part of both the patient and the healthcare provider, whereas accurate assessment can allow effective intervention and treatment planning. The art and science of assessing a patient's level of change has generated an extensive literature. A few useful tools include the SOCRATES readiness to change scale, readiness rulers, and confidence rulers. *See Appendix 3: The SOCRATES Scale, page 112.* A popular model that can be useful for conceptualizing a patient's readiness to change is the "Stages of Change" model (Prochaska, 1982).

http://www.samhsa.gov/co-occurring/topics/training/change.aspx

For patients who are not ready to make an immediate change but are at risk for negative outcomes, healthcare providers can intervene very effectively to help move a patient in the direction of positive change, using the techniques of Motivational Interviewing/ Enhancement. This revolutionary set of techniques, developed in large part by New Mexico psychologist Dr. William Miller, is described in a number of books and websites.

http://www.motivationalinterview.org/

For the patient who is both opioid dependent (addicted) and ready to commit to change, the next step is to assess for concurrent medical and psychiatric illness.

c.) Assessing for Concurrent Medical or Psychiatric Illness

Patients with addiction often have a history of healthcare neglect associated with their addiction and/or poor access to healthcare. It is important to take an initial medical and psychiatric history and perform a baseline physical exam in order to detect concurrent illness or risk factors. In some cases, problems may simply need to be noted for later evaluation. In other cases, they may need to be addressed prior to proceeding with treatment; for instance, a patient with a history of anginal chest pain that has not been evaluated will need to be assessed for cardiac risk prior to proceeding with the stress of starting buprenorphine (buprenorphine induction). *See Table D and Working with Patients Who Are Medically Fragile, page 29.*

Liver disease may also be a relative contraindication to treatment with buprenorphine, and current recommendations are that patients who have transaminases (AST or ALT) elevated more than 3-5 times the upper limit of normal should not be offered buprenorphine treatment. However, recent data presented in abstract form suggests that the risk of hepatotxicity may be extremely minimal (Saxon, 2012). For more on buprenorphine and liver disease, *please see page 85.*

Often it may be possible to address the concurrent disorder at the same time that buprenorphine MAT is begun (for instance, a patient with longstanding Major Depressive Disorder without suicidal ideation, or a patient with new hypertension may start treatment for these problems at the same time that s/he begins treatment for opioid addiction.)

Table D: Medical and psychiatric conditions that may need further assessment prior to initiating buprenorphine MAT		
Unstable coronary artery disease or rhythm abnormality	Prior adverse reaction to buprenorphine or naloxone	Methadone maintenance therapy
Advanced heart failure	Uncompensated cirrhosis or other severe liver dysfunction	Benzodiazepine or other sedative-hypnotic dependence
Severe COPD	Pregnancy	Alcohol dependence
Severe chronic pain	Psychosis or other severe unstable psychiatric illness	Suicidality

Symptoms of depression and anxiety are also very common in persons who are addicted to opioids. It can be quite difficult to determine whether a patient who reports symptoms of depression or anxiety simply has symptoms that are caused by addiction or withdrawal, or has an underlying primary mood or anxiety disorder (which are also more common among people with addiction) (Compton, 2007). Symptoms of withdrawal can go on in a more subtle form for months (referred to as the "post-acute withdrawal syndrome"), especially when a person has also withdrawn from other drugs such as alcohol or benzodiazepines. Patients need ongoing monitoring for signs of an underlying mood or anxiety disorder. In addition to using formal screening and diagnostic tools the following tips may be helpful in distinguishing a primary mood or anxiety disorder from one that is induced by the addiction:

- ask about family history; a positive family history of a mood or anxiety disorder increases the likelihood that this is a primary disorder
- during past periods of sobriety/abstinence did the patient have a diagnosis or symptoms of a mood or anxiety disorder?
- did symptoms or a diagnosis of a mood or anxiety disorder pre-date the onset of drug use in the patient's life?
- do the symptoms persist after the patient has achieved 2-4 weeks of sobriety/abstinence?

A history of trauma and diagnosis of Post-Traumatic Stress Disorder (PTSD) is more common among people with addiction diagnoses. For instance, in study of patients with substance use disorders, 94% reported experiencing one or more DSM-IV PTSD criterion traumatic experiences, 39% met criteria for current PTSD and 52% for lifetime PTSD (Reynolds, 2005). Screening for PTSD and appropriate treatment or referral for treatment can be very helpful.

Personality disorders (PD) are also common in patients who are seeking treatment for addiction (Samuels, 2011). Borderline personality disorder and anti-social personality disorder are both prevalent, and are often trauma related. While treating the PD is beyond the scope of most primary care providers, it is helpful to recognize the constellation of characteristics that typify persons with these disorders. This can be helpful in

determining how to work with the patient, and what types of problems to be alert for. Difficulty maintaining appropriate boundaries is particularly common with Borderline PD patients, while a feeling of being conned or taken advantage of may be particularly common when treating a patient with Anti-social PD.

For more information on co-occurring mental health disorders, see Approach to Treating Patients with Complex Dual Diagnosis, page 77.

D.) Assessing for Co-occurring Addiction Diagnoses

Miriam Komaromy, M.D.

Co-occurring addictions occur in a majority of opioid-dependent patients presenting in many treatment settings (Fischer 2010; Subramaniam, 2009). Co-occurring addictions are not a contraindication to office-based buprenorphine MAT. However, the other addictions need to be addressed separately, and it is important to recognize that buprenorphine does not treat non-opioid addictions. Over time, however, many co-occurring addictions will also stabilize in patients maintained on buprenorphine MAT; for instance, numerous studies document decreasing use of cocaine over time in buprenorphine-maintained patients (Alford, 2011; Parran, 2009). This may be because of participation in psychosocial treatments that can address both types of addiction, or because of increased stability and decreased participation in the drug culture over time. It is also possible that buprenorphine treatment has some direct effect on cocaine addiction, which has not yet been elucidated.

As noted above, some types of co-occurring disorder pose a problem for use of buprenorphine MAT. In particular, patients who are using benzodiazepines or alcohol are at increased risk of respiratory suppression and overdose death if they are treated with buprenorphine MAT.

For each type of co-occurring addiction, a thorough drug history should be documented, including the elements listed in Table B (above). Co-occurring addictions to be considered include the drug categories listed in Table E, below.

Table E: All patients should be evaluated for concurrent use/abuse/dependence on other drugs

Alcohol	Tobacco	Marijuana	Cocaine
Amphetamine	Methamphetamine	Benzodiazepines	Hallucinogens (eg LSD)
Inhalants	Ecstasy	PCP	Synthetics (eg “bath salts”, “spice”)

Some excellent, validated tools are available to screen for addiction.

Examples for Alcohol: www.niaaa.org (AUDIT) http://www.who.int/substance_abuse/publications/alcohol/en/

Examples for other drugs: (DAST) http://archives.drugabuse.gov/diagnosis-treatment/dast10.html

e.) Is Office-based Buprenorphine MAT an Appropriate Treatment Option for this Patient?

As healthcare providers we have a tendency to think that a medication is the answer, no matter what the problem. It is important for us to take a step back and make sure that we and the patient are considering the fact that non-medication-based treatments/approaches to addiction can be highly successful; after all, countless people recovered from addiction to opioids, even before medication treatment was invented. Mutual help groups and individual counseling play an enormously important role in recovery, whether they are the primary agent or are an important adjunct to MAT (see sections below on B) Counseling/psychotherapy for Treatment of Opioid Addiction, age 34, and C) Mutual Help Groups for Supporting Recovery from Opioid Addiction, page 35). However, for opioid dependence, agonist and partial agonist medications have by far the strongest evidence base of any available treatments, and there is also increasing evidence to support MAT with opioid blocking (antagonist) medications.

If we choose medication, it is important to remember that buprenorphine/naloxone is not the only available treatment option (see the next section on A) Educating Patients about Treatment Options for Treatment of Opioid Addicton, page 33.

Methadone has a very long track record of success in the United States and worldwide. Many healthcare providers have a negative image of methadone, but it important to recognize that most methadone patients who come to medical attention are probably the subset of methadone patients who are not doing well on treatment. There are tens of thousands of patients in the United States who are doing well and are stable on methadone treatment, and they usually do not advertise the fact that they are being treated for opioid addiction. Such a person could be working next to you right now, or could in fact be you, yourself.

Methadone is proven to reduce injection drug use and relapse to opioid drugs of abuse, to decrease risk of infection with HIV and hepatitis, to decrease mortality, and to decrease crime and drug selling in communities where it is introduced (Marsch, 2009; Brugal, 2005). Studies comparing the effectiveness of methadone and buprenorphine show roughly comparable results, but slightly favor methadone (Curcio, 2011; Bell, 2009). It is speculated that this may be because the doses of buprenorphine used in these trials was lower than the current standard of care, but it could simply be because methadone is more effective or is delivered in a setting that is more conducive to success (Maremmani, 2010).

Patients may come to you seeking treatment with buprenorphine rather than methadone because of structural factors that make buprenorphine more appealing: namely, the fact that federal regulations require that methadone be administered in a federally-regulated Opioid Treatment Program (OTP) when it is used for treatment of addiction, and the fact that treatment requires a prolonged period of directly observed therapy. Buprenorphine treatment is also currently paid for by New Mexico Medicaid, whereas as of this writing methadone is not; however, it is anticipated that NM Medicaid will begin to cover methadone treatment in 2013.

There are patients who may do better on methadone treatment than on buprenorphine treatment. Such patients may benefit from the increased level of observation and support that is often available in the OTP

setting, or they may need the full opioid-agonist effects of methadone in order to achieve stability. This is a particularly important consideration in patients who have been stable on methadone treatment in the past.

Before starting a patient on buprenorphine, it is a good idea to take a moment to consider whether s/he would be better served by treatment in an OTP, and also whether you are likely to be able to meet that patient's needs in an office-based setting with buprenorphine treatment. Consultation with an addiction treatment specialist, or referral for treatment may be preferrable for patients with severe co-occurring addiction disorders, unstable psychiatric illness, or high risk of poor adherence or diversion.

6. Preparing the Patient for Buprenorphine M.A.T.

Miriam Komaromy, M.D and Bonnie Kraybill Mount, R.N.

a.) Educating Patients about Treatment Options for Opioid Addiction

Patients who are addicted to opioids have a variety of treatment options. These include medication options, group and individual counseling, mutual-help/peer support groups, intensive inpatient, and residential treatment, among others.

Other medication treatment options include:

1. **Methadone**, which is a full-opioid agonist. When used for treatment of opioid addiction, methadone can be administered only in a federally licensed OTP. It is not legal for physicians in office-based practice to prescribe methadone for treatment of opioid addiction, although they may do so for treatment of pain without concurrent addiction. When used properly, methadone is a safe and effective medication, and may be a better choice than buprenorphine for MAT in some patients. For instance, some patients benefit from the increased structure of a methadone clinic in which they generally have daily observed therapy with methadone, at least until they have been stable for a prolonged period. Methadone may also be preferred in patients with severe co-occurring chronic pain because of the ability to escalate the methadone dose as needed to control pain. However, although earlier literature suggested that buprenorphine's analgesic effect has a ceiling, more recent literature suggests otherwise (Pergolizzi, 2010).

For more information on methadone, *see Appendix 4: Methadone, page112.*

2. **Naltrexone**, which is an opioid-antagonist: oral naltrexone taken daily prevents an individual from becoming intoxicated or experiencing other effects of opioids, because the naltrexone occupies the opioid receptor without activating it. In spite of controlled trials suggesting that this medication would be effective, it has had limited effectiveness in the real world because patients simply stop taking it if they wish to use opioids (Litten, 1999). It does appear to have a role in treating opioid addiction when it is administered in a structured way (such as by a spouse or medical provider) and is used by a highly motivated population who greatly fear negative consequences of relapse, such as opioid-addicted health professionals who are closely monitored and fear loss of their license to practice if they relapse (Merlo, 2011).

A long-acting injectable form of naltrexone was recently approved for treatment of opioid addiction (brand name Vivitrol®). Studies suggest that this is an effective treatment option, although it has not been compared head-to-head with buprenorphine or methadone (Krupitsky, 2011). One potential challenge for office-based use of this medication is that patients must have a period of several days of opioid abstinence prior to initiating naltrexone injection. This may prove to be difficult to achieve and verify, and treatment may need to be initiated in an inpatient setting.

An advantage of naltrexone is that it does not produce any form of drug dependence, allowing patients to stop it without requiring a tapered dose or withdrawal period. A possible disadvantage is that it does not

activate the opioid receptor partly or fully, and so is non-reinforcing (not experienced as pleasurable). Thus it may not be as effective at reducing craving or residual withdrawal symptoms as methadone or buprenorphine. Also, patients who relapse on opioids after discontinuing naltrexone may be at increased risk for overdose (because of diminished tolerance). Another possible disadvantage of depot naltrexone may result when an individual needs pain relief as a result of accidental injuries. With depot naltrexone in the individual's system, analgesic options may be narrowed.

Table F: Approximate costs of different medications for treatment of opioid addiction*

	Daily	Monthly
Suboxone	8mg/2mg = $7.93 2mg/0.5mg = $4.73	8mg/2mg = $475.99 (60 ea.) 2mg/0.5mg = $283.87 (60 ea.)
Methadone*	$7.50-$11	$200-300
Naltrexone (oral)	50mg = $3.4663 (discounted price)	50mg = $103.99 (30 ea., discounted price) they list a retail price of $133.38
Naltrexone (injectable)	$36.62 (discounted price)	380mg (1 vial) = $1,099.96 (discounted price) average retail price of $1,372.80

* medication costs provided by Shawn Quinn, Pharm D., Optum Health NM
** cost of treatment in an Opioid Treatment Program (methadone clinic) (personal communication, Olin Dodson)

b.) Counseling/psychotherapy for Treatment of Opioid Addiction

Counseling provided by a trained addiction therapist may be extremely helpful in assisting patients with recovery from opioid addiction. A number of federal publications review evidence-based techniques for addiction counseling (see below). Healthcare providers should identify addiction-counseling resources in their communities, and will have an easier time providing effective addiction treatment if they form good working relationships with counselors who work with their patients. The initial healthcare visit is a good time to refer the patient to counseling, and some healthcare providers make participation in counseling a requirement for patients whom they treat with buprenorphine.

http://store.samhsa.gov/product/TAP-21-Addiction-Counseling-Competencies/SMA08-4171

http://store.samhsa.gov/product/TIP-39-Substance-Abuse-Treatment-and-Family-Therapy/SMA08-4219

However, it is also important to note that recent data suggest that medical providers can provide effective support to patients who are being treated with buprenorphine, and in fact, outcomes are not necessarily

improved by referral to a specialist in addiction counseling (Weiss, 2011). Therefore, medical providers who work in rural New Mexico communities where they do not have access to specialized addiction counselors are still capable of providing high quality care to their patients.

c.) Mutual Help Groups for Supporting Recovery from Opioid Addiction

In addition to professional treatment of addiction, many patients seek support from Mutual Help Groups. These are a variety of types of group that provide peer support to individuals seeking to stop using alcohol or drugs. The most famous and widespread of these is the 12-step programs, which include Alcoholics Anonymous, Narcotics Anonymous, and Cocaine Anonymous. Hundreds of thousands of these groups operate around the world. (www.na.org) There are also smaller alternative groups that offer peer support without a spiritual message or basis, such as Rational Recovery and SMART Recovery (www.rational.org and www.smartrecovery.org).

There are limited data on the effectiveness of these groups (Magura, 2007; and Project Match Research Group, 1998), in part because the 12-step programs explicitly reject attempts to perform research on the effectiveness of their programs. However the tremendously widespread participation in the groups speaks to their impact, and many patients' anecdotal reports attribute their recovery success largely to participation in mutual help groups.

Advantages of participation in mutual help groups include development of a peer group that does not use drugs or alcohol, support from other individuals who have experienced addiction, and substitution of non-drug using activities and community service rather than prior patterns of drug using activity.

A possible disadvantage of participation is a tendency within 12-step groups to make patients feel that they are "not really in recovery" if they are using MAT. Patients are often made to feel ashamed of their MAT treatment, and occasionally even discontinue treatment because of this. It can be helpful to warn patients about this in advance. A thoughtful recent review of these issues has been published by William White, Narcotics Anonymous and the Pharmacotherapeutic Treatment of Opioid Addiction in the United States (White 2011).

http://atforum.com/addiction-resources/documents/2011NAandMedication-assistedTreatment.pdf

d.) How Will the Patient Pay for the Medication and Office Visits?

Bonnie Kraybill Mount, R.N.

Patients can pay for office visits in a number of ways:

Medicaid (Salud!) and State Coverage Insurance (SCI): If the patient has New Mexico Medicaid Salud! or SCI coverage, the office visit cost is covered through this insurance. Examples of these include Presbyterian Salud!, Lovelace Salud!, Blue Salud!, and Molina Salud! Each of these Salud! programs also provide insurance under the SCI program.

Behavioral Health benefit coverage through Optum Health NM: Patients who have coverage provided by Optum Health may have their office visits for buprenorphine treatment covered through Optum Health NM if their medication is prescribed by a psychiatrist.

Medicare: There is currently no Medicare fee-for-service coverage for buprenorphine prescribed by a physician during an outpatient visit. Some Medicare HMOs do have a substance abuse benefit. Please check with the HMO to understand what substance abuse treatment services are covered. In a Medicare-certified facility, buprenorphine may be covered as part of an inpatient or emergency visit. (SAMHSAhttp://buprenorphine.samhsa.gov/faq.html#A25)

Private Insurance: Office visits are usually covered through private insurance. Please check for approval with each insurance provider.

Self-Pay: Clients who do not have insurance coverage or do not wish to use their insurance for privacy purposes, may elect to pay cash or credit for office visits. Costs of these visits are determined by individual practices and reportedly range from $30 to $250 per visit.

Indigent funds: Each county in New Mexico has an indigent fund to provide care to those clients who are uninsured through other means. In Bernalillo County, these funds are through the UNM Cares program. Office visits may be covered through these funds, if the clinician is a contracted provider. Please check with your county about what assistance is offered, what services are covered, and who in your area is a contracted clinician.

Patients also have a number of different payment options for buprenorphine:

Medicaid (Salud!) and SCI: Buprenorphine is on each Salud! and SCI formulary. All Medicaid- managed care organizations in New Mexico, including Optum Health, have agreed to begin using a single prior authorization form. There is no co-pay for bupreorphine when provided through Medicaid managed-care programs. *See Appendix 7: Prior Authorization for buprenorphine, 118.*

Medicare: Medicare does not generally cover prescription drugs that are prescribed or dispensed to individuals on an outpatient basis, unless patients have Medicare Part D coverage. If the patient does have this coverage, individual Part D plans differ as to whether they cover the cost of buprenorphine, so you will need to contact the insurer. If buprenorphine is administered by a Medicare-certified facility as a component of inpatient or emergency treatment such as detoxification or early-stage stabilization treatment, rather than being a separate outpatient prescription, the medication's cost could be covered during that episode of care, just as the cost for any other medication used in the treatment process is covered when administered within a certified program/facility. However, this reimbursement would only occur if the Medicare-certified facility had buprenorphine on its list of eligible drugs and if the patient received the treatment at the facility. (http://buprenorphine.samhsa.gov/faq.html#A25)

Private Insurance: Buprenorphine is on most private insurance formularies. Please check with the patient's plan to make sure this medication is covered and what the co-pay is. If it is not a covered medication, there may be an appeal process.

Self-Pay: Buprenorphine/naloxone combination (Suboxone) currently costs $6-8 per tablet or $360-480 per month for 60 tablets at the usual dose of two 8mg tablets per day, or 16mg total daily dose. Buprenorphine may be purchased at a regular retail pharmacy.

Indigent funds: This payment method will vary from county to county. There may be some assistance available. Please contact the Indigent Fund for your county. For example, with UNM Cares (Bernalillo County Indigent Fund), the cost of a 30-day supply of buprenorphine is $60. This can be obtained only through the UNM Pharmacy.

Patient Assistance: The manufacturer of Suboxone (buprenorphine/naloxone combination) has very limited patient assistance available. Currently, physicians can apply for coverage for up to three simultaneous medically-indigent patients through the manufacturer. (http://www.suboxone.com/hcp/Default.aspx)

e.) What Do Patients Need To Know about Buprenorphine MAT before Starting Treatment?

Miriam Komaromy, M.D.

Patient education regarding buprenorphine is important in order to help a patient understand what is involved, including the risks and benefits, and to make a determination of whether this type of treatment is appropriate for him/her. It also helps patients to make an informed decision about whether they are prepared to commit to what is required for success with buprenorphine treatment.

Because education about buprenorphine MAT is time consuming, many clinics adopt a group-education format, often requiring that a patient attend a group-education session before s/he is eligible to meet with a physician to start buprenorphine MAT. This group can be conducted by a nurse or an addiction-trained community health worker. See below for a sample curriuculum that can be used for such an education group.

Appendix 5: Sample Curriculum for an initial education group for MAT, page 113.

f.) Treatment Agreements

Miriam Komaromy, M.D.

Treatment agreements are written documents that are signed by both the physician and patient prior to starting treatment with buprenorphine. They can serve several purposes. The treatment agreement can:

- provide an opportunity to obtain written, informed consent for treatment with buprenorphine
- describe the behaviors required from the patient and the healthcare team
- describe consequences of violating the agreement
- provide an opportunity to review the potential risks and side effects of treatment

There is no single, standard treatment agreement that must be used with all patients. Instead, you can modify an existing treatment agreement or create your own in order to get an agreement that fits your approach to treatment, your treatment setting, and your particular patient population. Writing the treatment agreement will give you and your team an opportunity to think through how you want to provide treatment, and what you need the patient to agree to in order to promote success.

Appendix 8: Treatment Agreement, page 120.

g.) Harm Reduction Training for Opioid-addicted Patients

Harm reduction training is an important part of teaching opioid-addicted patients to protect themselves. This generally involves educating patients about the availability of syringe exchange programs and about the use of naloxone for overdose prevention. Sometimes medical providers may feel uncomfortable giving harm reduction instructions to a patient who is seeking treatment for opioid addiction, because they do not want to suggest that the patient is likely to either try injection drug use for the first time or relapse into injection drug use at some point. In fact, addiction is a chronic, relapsing disease. An appropriate aim for addiction treatment is to make relapse shorter, less frequent, and less devastating for the addicted person. But on a statistical basis, the likelihood of relapse is extremely high.

If you do not feel comfortable providing harm reduction training directed at possible relapse on the part of the patient, another option is to frame it in terms of the patient acting as a resource for drug-using friends or family members. (See the links below for more information on harm reduction and on teaching patients to prevent fatal opioid overdoses.)

Appendix 2: Harm Reduction, page 109.

Appendix: Overdose Prevention Training, page 122.

h.) Assessment of the Patient's Access to Social Supports, Family, Friends, Employment, Housing, Finances, and Legal Problems

Miriam Komaromy, M.D.

Addiction is correlated with a variety of social problems. People who live in social disarray may be somewhat more likely to begin using drugs, but it is certainly the case that most people who develop addiction begin to have a wide variety of social problems as a result. These can include increasing social isolation, breakdown of important family relations, loss of child custody, loss of employment and housing, poverty, hunger, arrest and incarceration.

When people first enter into treatment and begin recovery, they can quickly become overwhelmed when they confront the social problems that face them. Mutual help groups and counseling can be enormously helpful in addressing these problems from a psychological standpoint, but patients often need practical assistance as well.

At a minimum, it is helpful to assess for social problems during the initial evaluation, monitor them during treatment, and provide patients with referrals to resources. A helpful first step is to develop a list of agencies that address social issues, and provide patients with contact information.

When possible, it is also very helpful to provide direct, practical assistance to address these problems. Practices that employ case managers have a way to address this. Another option is to include this in the duties of a Recovery Coach, who will often be an existing staff member such as a medical assistant who receives additional training in how to support recovery. *See B) The Role of a Community Health Worker (CHW)/Recovery Coach, page 64.*

i) Reviewing a Prescription Monitoring Report for the Patient

New Mexico, like many other states, has a Prescription Monitoring Program (PMP) that provides information that is extremely useful when initiating addiction treatment and during ongoing treatment. The PMP is a database of all controlled substances prescribed in New Mexico. Any health care provider who as a New Mexico controlled substance license is eligible to register for the PMP. Registration is free of charge, and is through the New Mexico Board of Pharmacy.

http://www.rld.state.nm.us/boards/Pharmacy_Prescription_Monitoring_Program.aspx

Registered users may request a report for any current or prospective patient. Only the patient's name and date of birth are needed to query the database. The report provides a list of all controlled substances filled for the patient within the past 12 months. It includes the name and location of the prescriber, the date that the prescription was written and the date filled, and the name, quantity, and instructions for taking the medication.

The report is available immediately after submitting the electronic request. The information that it contains is useful in a number of ways. It identifies other prescribers and the patient's pattern of obtaining prescribed controlled substances. It provides an excellent opportunity for discussion with the patient about the need to notify these prescribers that they should no longer prescribe controlled substances in the future because of the patient's problem with addiction.

Periodic monitoring of the report during treatment is essential in order to detect signs of relapse. *See B) How Can We Minimize the Risk of Buprenorphine Diversion?, page 68.*

7. Getting Ready To Start Buprenorphine Treatment

A.) Tasks You May Want To Accomplish before Initial Physician Visit

- Baseline lab testing: consider AST, ALT, BUN, Creatinine, HCG, Hepatitis panel, RPR, HIV, gonorrhea/chlamydia.
- Baseline urine toxicology screen. *See 0), Urine Drug Testing, page 55 and Appendix 15 Urine Drug Screening, page 134).*
- Have patient attend initial education session.
- Consider requiring that the patient attend an initial counseling session or mutual help-group session (e.g. Narcotics Anonymous).

b.) Tasks To Perform during the Initial Physician Visit

- Perform initial history and physical. *See Appendix 10: Sample of Addiction-focused and Physical Form, page 125.*
- Provide vaccination for Hepatitis A and B, tetanus, and any other vaccinations that are due.
- Review results of urine toxicology screen. *See 0), Urine Drug Testing, page 55 and Appendix 15 Urine Drug Screening, page 134.*
- Determine whether patient is a good candidate for buprenorphine MAT. *See E) Is Office-based Buprenorphine MAT an Appropriate Treatment Option for this Patient? page 31).*
- Confirm that patient attended education session and that the patient's questions were answered
- Review and sign treatment agreement. *See Appendix 8, Sample Treatment Agreement, page 120.*
- Determine where and how patient will obtain and pay for buprenorphine. *See page 35.*
- Write a prescription and give patient instructions to return with unopened bottle, or to follow home-induction instructions. *See page 132 and page 48.*
- Instruct patient to arrive at induction visit in mild-to-moderate withdrawal.

c.) Sample Prescription for Induction Visit and First Week of Buprenorphine Treatment

Patients need variable amounts of medication in the first week in order to achieve comfort and stability. Therefore, the amount of medication needed during week one cannot be precisely calculated. The sample below is a useful starting place, but you may find that a somewhat different prescription is desirable for your patients.

Most patients will stabilize quickly on approximately 16 mg of buprenorphine per day. However, during the first few days of treatment, they may need more or less medication to suppress withdrawal symptoms. Some patients may eventually need a considerably higher (or lower dose) to achieve clinical stability, but this is a good target dose to aim for in order to assess its effectiveness for your particular patient.

It can be helpful to explain to the patient that the goal is to rapidly achieve a daily dose between 12 and 16 mg per day, and so you are only writing for a few extra tablets in case they need them in the first 1-3 days.

Sample prescription for week #1:

Day 1 dosing 8-16 mg
Day 2 dosing 12-24 mg
Day 3 dosing 12-20 mg
Day 4-7 dosing 16 mg per day

According to these parameters, the maximum prescription for week one would be:

- **buprenorphine/naloxone 8/2 mg # 17 tablets.**

Some prescribers write for some quantity of the smaller buprenorphine/naloxone formulation, 2/0.5 mg. As an alternative, patients can be instructed to break the higher strength tablets in half or even in quarters. This is easily accomplished with a pill-cutter, and is quite economical. If the patient is taking the Suboxone film, s/he can cut the film in smaller pieces. Although this is not recommended by the manufacturer, anecdotal evidence suggests it does not produce a decrease in effectiveness.

d.) Tips for Writing Prescriptions for Buprenorphine

Only physicians are allowed by federal law to write prescriptions for buprenorphine; other prescribers, such as nurse practitioners, Physician Assistants, and prescribing psychologists, are not currently allowed to do so.

Every prescription for buprenorphine must include the prescriber's "X" number, the special DEA number that is issued to the physician at the time of issuance of the buprenorphine "waiver" allowing the physician to prescribe this medication.

In addition, the DEA requires that prescribers include their regular (non-"X") DEA number on the prescription as well as their "X" number (personal communication, Shirley J Scott, Division Investigator, Albuquerque Field Office, Drug Enforcement Agency; November 2011).

At the time the prescription is written it is a good idea to enter the information into the physician's buprenorphine log. *See B) Required Recordkeeping: The Buprenorphine Log, page 70.* This will help keep track of the date of the visit and avoid exceeding the physician's patient limit for buprenorphine patients (maximum of 30 simultaneous patients in year one following completion of training; then 100 simultaneous patients thereafter if a request form is filed with the DEA).

Link to DEA application for an expanded buprenorphine patient census
http://buprenorphine.samhsa.gov/pls/bwns/additional_notification_form?prefilled_or_online=ONLINE

e.) Confidentiality of Patient Records

The privacy of records related to addiction diagnosis and treatment is protected very strictly by federal regulations. This protection exceeds that of the HIPAA privacy rules, and is spelled out in section 42 CFR, Part 2. SAMHSA has an online document that clarifies the requirements at (http://www.samhsa.gov/HealthPrivacy/docs/SAMHSAPart2-HIPAAComparison2004.pdf). In brief, disclosure of any information requires prior informed consent. For the purposes of 42 CFR, any healthcare facility that receives federal healthcare dollars and provides any kind of addiction treatment is an addiction treatment program that is governed under these regulations.

A few key points:

- Informed consent should be obtained before communicating about the patient with any outside agency, including a pharmacy
- At the start of treatment it is a good idea to obtain informed consent from the patient to communicate with pharmacists, counselors, and any other treatment providers, as well as any agencies the

patient may be involved with, such as Children Youth and Families Division (CYFD) or probation/parole.

- Even the fact that a patient has applied for admission or scheduled a initial visit with your program is protected information, so front desk staff members need to be educated that they cannot reveal whether a patient is in the clinic or even whether the individual in question has ever been a patient in the clinic
- Information obtained about the patient from an outside agency, such as past medical records, cannot in turn be released to another agency requesting information about the patient unless the patient has formally consented to re-release of this information
- If patient information should ever be requested by subpoena, you can only release the records (or even provide confirmation that the patient is enrolled in your program) if the patient provides written informed consent to allow you to do so, or the subpoena complies with certain strict criteria compelling you to release the information. This includes a requirement for judicial review of the request, and the opportunity for the person holding the records to present evidence for why they should not be released. You can find updated information on this at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title42/42cfr2_main_02.tpl

f.) Informed Consent To Release Information

The required elements for the informed consent form include:

- Name or general designation of the program or person permitted to make the disclosure;
- Name or title of the individual or name of the organization to which disclosure is to be made;
- Name of the patient;
- Purpose of the disclosure;
- How much and what kind of information is to be disclosed;
- Signature of patient;
- Date on which consent is signed;
- Statement that the consent is subject to revocation at any time except to the extent that the program has already acted on it; and
- Date, event, or condition upon which consent will expire if not previously revoked.

SAMHSA provides a sample informed consent form to use for this purpose: http://buprenorphine.samhsa.gov/Bup_Guidelines.pdf, page 120.

8. Clinical Use of Buprenorphine

Note: this section is largely based on the 2011 ASAM Guidelines (Krauss, 2011).

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a.) Induction: The Process of Transferring a Patient Who Is Dependent on Opioids onto Buprenorphine

Induction is the process of transferring a patient from other opioids onto buprenorphine. It is complicated by the fact that a patient must be in a state of mild-to-moderate withdrawal from the opioid s/he have been using (e.g. heroin or oxycodone) before s/he can safely be transferred onto buprenorphine. The reason for this is the very high affinity of buprenorphine for the opioid mu receptor in the brain. *See page 53.*

In some treatment settings it may be possible (and desirable) to offer buprenorphine induction to the patient at the time s/he first engages with treatment. Sometimes referred to as "treatment on demand", this allows a patient to obtain immediate access to help, rather than delaying and perhaps losing the opportunity to engage the patient in addiction treatment.

On the other hand, it may be preferable in your treatment setting to have the patient engage somewhat in treatment before actually beginning medication. For instance, you could ask that patients attend an initial education session prior to the visit in which they will start buprenorphine treatment. As noted previously, other pre-treatment tasks could include completion of the history and physical exam, urine toxicology testing, or attending an individual or group therapy session or a mutual help group. Participation in these activities can demonstrate a patient's persistent interest in treatment, but should not pose a barrier or major delay to obtaining MAT, nor represent a form of "rationing by inconvenience."

The process of induction may occur in the office, or may be a process that the patient carries out at home. Increasingly, as a larger portion of the patient population with opioid addiction gains experience with buprenorphine, patients are likely to prefer in-home induction rather than induction in clinic.

In-home induction is less well studied than is in-clinic induction. However, the studies that are available suggest that this is a safe alternative to office-based induction, and does not result in a greater frequency of complications/adverse outcomes (Cunningham, 2011; Lee, 2009). In-home induction is not appropriate for a patient transferring from a long-acting opioid, such as methadone, as this is often more difficult and typically requires physician monitoring. It is also less appropriate for patients who do not have stable housing, those who have had prior bad experiences with buprenorphine induction, those with unstable medical or psychiatric conditions, and those with major co-occurring addictions.

b.) Buprenorphine Induction for Patients Dependent on Short-acting Opioids (e.g. oxycodone, heroin)

Most patients seeking treatment for opioid addiction will have been using short-acting opioid drugs. The only common exceptions to this are patients who have been using methadone (obtained by prescription for

chronic pain, in an OTP for addiction treatment, or on the street), OxyContin, or other long-acting opioid analgesic tablets. However, in the latter case, when these pills are being abused they are typically not swallowed, but instead are crushed and snorted or injected in order to obtain a greater "high". When ingested via routes other than swallowing, these analgesics typically lose their extended-release properties and act as short-acting opioid drugs.

The most important initial task is to determine whether or not a patient is in withdrawal from opioids. This is extremely important to determine accurately, because if a patient who is intoxicated with opioids (i.e., not yet withdrawing from opioids) starts taking buprenorphine, it will cause **precipitated withdrawal**. This withdrawal has a rapid onset and can be quite severe, with vomiting and agitation that are very uncomfortable and distressing for the patient. Therefore, it is very important to make sure that a patient is in a state of mild-to-moderate opioid withdrawal prior to starting buprenorphine. *See page 19 above for more on precipitated withdrawal.*

Typical symptoms of early opioid withdrawal include mild anxiety and restlessness, psychomotor agitation, upset stomach or nausea, and sweating. A helpful physical sign for when a patient is in sufficient withdrawal to safely start buprenorphine is that the pupils begin to enlarge, and become somewhat larger than normal.

Appendix 11: Symptoms of Opioid Withdrawal, page 128.

The best way to gauge a patient's degree of opioid withdrawal is the Clinical Opioid Withdrawal Scale (COWS). This scale quantifies the patient's level of withdrawal and helps the medical staff to be confident that the patient is able to start buprenorphine without causing precipitated withdrawal.

There is no "magic number" on the COWS score that means it is just the right time to start buprenorphine, but in general a score of 10-11 is adequate.

Appendix12: Clinical Opioid Withdrawal Scale, page 129.

Before starting patients on buprenorphine it is advisable to make sure of the following:

1. they are in mild-to-moderate opioid withdrawal
2. they have not taken opioids in the last 6-12 hours (depending on the quantities of opioid they have been using and their level of opioid dependence)
3. they have not taken high-dose methadone (>35 mg) in the last week or low dose methadone ($\leq$ 35 mg) in at least 48 hours)
4. they have not taken benzodiazepines in the last 12-24 hours and are not dependent on benzodiazepines

c.) What If My Patient Says that He or She Has Not Used Opioids Recently but Does Not Have an Elevated COWS Score?

No matter what your patient tells you, if he or she does not appear to be in withdrawal, do not start the induction process.

STOP and reassess the situation to try to figure out what is going on. Possible explanations include:

- The patient used opioid drugs more recently than stated. Opioid withdrawal is extremely unpleasant, and people who are addicted to opioids are very reluctant to allow themselves to enter into withdrawal. The patient may have had bad experiences with medical professionals, and may be afraid that you are not really going to stop their withdrawal symptoms, and so may have taken an opioid drug to protect him or herself.
- The patient may have used a long-acting opioid. Methadone is available on the street as well as by prescription and in OTPs. The patient may have only taken a "sip" of liquid methadone and may not feel that this warrants mentioning.
- The patient might not actually be opioid dependent. In this case, even though it has been more than 12 hours since the patient last ingested opioids, he or she will not go into withdrawal no matter how long you wait.
- The patient could be under the influence of other drugs or medications that mask the signs and symptoms of opioid withdrawal. For instance, a patient who is taking a beta-blocker or clonidine may not develop an elevated heart rate. Someone who has taken a benzodiazepine may not be restless or agitated, even though he or she is in opioid withdrawal. The patient could also have already started him/herself on buprenorphine prior to coming into the office.

Ask the patient about all of these possibilities in a non-confrontational, non-judgmental way. A useful way to ask is to make the behavior normative, e.g., "Patients are often afraid that they will be very uncomfortable from withdrawal, and so they take just one or two pain pills on their way into the clinic. Do you think you might possibly have done that?" Or explain the negative consequences again: "You know, if you have taken even a tiny bit of methadone recently the buprenorphine could make you really, really sick. I just want to double check with you and make sure that you haven't used any at all in recent weeks. Is that right?"

If you still can't figure out why the patient does not appear to be in opioid withdrawal, it is usually best to wait. You can ask the patient to come back in 2-3 hours, or reschedule for the next day if you are not convinced that he or she is in withdrawal. On the other hand, it is important to recognize that you do not have to wait for the patient to be completely miserable before you start buprenorphine. A COWS score in the range of 10-11 is usually an indicator of adequate withdrawal, and pupillary dilation is a fairly reliable sign as well.

d.) What Do I Do Once My patient Is in Opioid Withdrawal and Is Ready To Start Buprenorphine?

The exact optimal dosing sequence and interval for administering buprenorphine during the first few days of treatment has not been rigorously studied, and there is room for considerable variation in practice. The

government sponsored treatment guidelines produced by the Center for Substance Abuse Treatment, "Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction. Treatment Improvement Protocol (TIP) Series 40", known as "TIP 40" were published in 2004. This was early on in the US experience with buprenorphine, and clinical practice has evolved considerably since that time.

Early guidelines recommended use of buprenorphine monoproduct for induction, with a subsequent switch to buprenorphine/naloxone. This has been shown to be unnecessary (Amass, 2012); instead, non-pregnant patients can be treated with buprenorphine/naloxone from the start.

TIP 40 recommended a maximum buprenorphine dose on day one of 8 mg. Clinical experience with this protocol suggests that many patients will still experience marked withdrawal symptoms after receiving a total of 8 mg on their first treatment day, and will be quite uncomfortable. Therefore most New Mexico clinicians give repeated small doses of buprenorphine until the patient is comfortable, up to approximately 16 mg on day one. This is supported by the recently published consensus statement on use of buprenorphine from the American Society of Addiction Medicine (Kraus, J Addict Med, 2011) and the dosing guideline from the Physician Clinical Support System for Buprenorphine (PCSS-B):
http://pcssb.org/wp-content/uploads/2010/09/PCSS-B-Buprenorphine-induction.pdf

The rationale for exceeding the dosing guidelines from TIP 40 include the patient's likely level of discomfort, the need for using additional medications to help relieve symptoms if 8 mg is the maximum buprenorphine dose used on day one, and the concern that the patient will not persist with treatment if s/he or he does not believe that you are really able to relieve withdrawal symptoms adequately during early therapy (Mattick, 2003; Maremmani, 2010). A number of recent large-scale studies have used 16 mg as the maximum dose on day one of induction (e.g., Nielsen, 2012).

e.) A Sample Dosing Guide for Day One:

- ***Advise patient on how to take the medication:*** Empty mouth, swallow sip of water, sit in chair leaning forward. Place tablet or film under tongue and allow it to dissolve slowly. Let saliva pool forward in mouth until completely dissolved.
- ***Administer first dose:*** 4/1mg buprenorphine SL. Instruct patient to rest for 30-45 minutes. If withdrawal symptoms persist after 45 minutes, but the patient does not feel worse, administer an additional 4/1 mg tablet and have the patient wait for 45 minutes.
- ***If the patient feels worse after the first dose, precipitated withdrawal may be occurring.*** Delay subsequent dosing of buprenorphine. Re-question patient about last opioid use/long acting opioid use. Consider rescheduling induction.
- ***Reassess after second dose.*** Continue to dose in this manner until withdrawal symptoms are improved or absent or until 16 mg total is reached. If the patient still does not feel well, additional medications to alleviate symptoms may be needed (e.g., immodium, phenergan, naproxen, or clonidine.) Patient may also be sent home with an additional 8 mg tablet of Suboxone and instructed to take 4-8 mg SL if needed before the following day.

- ***Consider offering medication for sleep during the early recovery period (for example, trazodone).***
- ***The patient should be advised to avoid driving or operating other machinery until his or her dose is stabilized and s/he is familiar with the effects of buprenorphine.***
- ***Day 2-4:*** Patient instructed to take 16mg in the AM. Additional small doses (2-4 mg) may be taken if withdrawal symptoms persist. Day five and beyond: Patient instructed to take 16mg SL in the morning daily. Generally, the withdrawal symptoms are controlled with this dose. It is not necessary to take the medication more than once a day. If the patient is concerned because he or she used to "fix" multiple times per day, remind him or her that this is a medication to treat the opioid addiction, not a substance to use in order to recreate the pattern of drug use.
- ***During induction and early stabilization patients should be assessed frequently for signs of over- or under-medication, and dose adjustments should be made accordingly.***
- ***If patient has chronic pain issues, it may be necessary to divide the dose and administer smaller doses three to four times per day.***
- ***Schedule for nurse or medical provider follow-up visit within three days of induction.***

f.) Precipitated Withdrawal: What If the Patient Develops Worsened Symptoms of Opioid Withdrawal after the Start of Buprenorphine Induction?

In opioid-dependent patients undergoing induction who exhibit signs of precipitated withdrawal, the physician has two options:

1. Continue with buprenorphine induction by continuing to give additional doses of buprenorphine up to 16 mg (or perhaps more) or until signs and symptoms of withdrawal abate; or
2. To stop induction when the patient exhibits withdrawal symptoms, treat withdrawal symptomatically (eg, clonidine, antidiarrheals, nonsteroidal anti-inflammatory drugs) and instruct the patient to continue to abstain from opioids and return the following day for reassessment of induction. (Kraus, 2011)

There is often not a clear "right answer" in this situation, and patient preference can determine which of these two options is preferred.

One possible alternate clinical scenario to be aware of is that patients who are not actually opioid dependent, and thus are not tolerant, may have signs of opioid overdose, which in the case of buprenorphine can look a lot like withdrawal; in other words, the patient may be nauseated, vomiting, and anxious. It is therefore very important to reassess the situation and attempt to have a frank conversation with the patient about exactly how much opioid has been used and with what frequency, in order to gauge the likelihood of these two different scenarios. Obviously, if you conclude that the patient is actually experiencing opioid overdose symptoms, you will not give additional doses of buprenorphine at this point, and if you choose to continue use of

buprenorphine, to use a much lower subsequent dose. An example of such a situation might be a patient who has recently been released from incarceration and has a history of opioid addiction prior to incarceration, but has not been using opioids regularly while incarcerated.

Appendix 13: Rapid Induction Protocol, page131.

g.) Home Induction

Having patients start themselves on buprenorphine at home is an alternative to starting buprenorphine treatment in your office (Cunningham, 2011; Lee, 2009). Although there are fewer data on home induction than on office-based induction, there is an emerging literature suggesting that it is equally safe and effective. For instance, a 2010 study by Sohler found that in an urban community health center setting, 59% of patients chose home induction when given a choice. There were identical rates of difficult inductions and of patient retention at one month between the groups who participated in in-office induction vs home induction.

Home induction has several advantages, including less time in the office, less staff time required, and often an increased sense of control and comfort for the patient. Many (perhaps most) experienced buprenorphine treatment providers in New Mexico prefer this method of induction for these reasons. Furthermore, as more and more opioid-addicted patients have experience with prior use of buprenorphine, patients become better able to manage their own buprenorphine inductions outside of the office and are often very hesitant to come in to the office in mild withdrawal in order to accomplish an in-office induction. See link to appendix on Home Induction, below, for more specific information). *See Appendix 14: Instructinos for Starting Buprenorphine at Home, page 134.*

Key issues for patients who are going to attempt home-induction on buprenorphine are that they must receive adequate education about how to do it, must receive written instructions, and must have a way to contact a member of the healthcare team for help if the induction does not go well. Ideally, the patient should also be scheduled to come in to the office within one to two days for reassessment and trouble shooting of any side effects or problems that arise.

Appendix 14: Instructions for Starting Buprenorphine at Home, page 132.

PCSS-B guidance on Home Induction:
http://pcssb.org/wp-content/uploads/2010/09/PCSS-B-Buprenorphine-induction.pdf

h.) Buprenorphine Induction for Patients Dependent on Long-acting Opioids (i.e., patients switching from methadone to buprenorphine)

If a patient requests to switch from methadone maintenance treatment to buprenorphine treatment, it is appropriate to explore with the patient why he or she is seeking this change. There is some risk involved when a patient who has been stable long-term on methadone transfers to buprenorphine. If the patient wishes to make the switch because of financial or other practical reasons, it is important to review with the patient the risks of relapse during the period of instability that is likely to occur after making the switch. Although

patients often dislike having to go to the OTP on a daily or frequent basis to take methadone under observation, for some patients this structure and monitoring is very helpful for maintaining sobriety.

Appendix 4: Methadone, page 112.

If the patient still wishes to proceed with transfer from methadone to buprenorphine, it is a good idea to coordinate with the patient's OTP and obtain a recent dosing sheet. In general, it is recommended to have the patient taper down to a methadone dose of 30-35 mg per day before attempting transfer to buprenrophine. This is thought to help lessen the likelihood of precipitated withdrawal. However, there are published data demonstrating that uncomplicated transfer can occur from higher dose methadone to buprenorphine (Salsitz, 2010).

Patients requesting transfer from methadone to buprenorphine should gradually taper their methadone dose to 30 to 40 mg and remain clinically stable on that dose before starting buprenorphine induction. Because methadone has a long and variable half-life, patients will need to discontinue methadone for at least 36 hours and often up to 72 hours in order to experience moderate withdrawal before proceeding with buprenorphine induction (McNicholas, 2008). Transferring to buprenorphine from higher doses of methadone maintenance on an outpatient basis is not advised because it may precipitate prolonged withdrawal symptoms and increase the risk for severe relapse. An inpatient setting should thus be considered for higher doses (Kraus 2011).

See PCSS-B guidance on switching from methadone to buprenorphine:
http://pcssb.org/wp-content/uploads/2010/09/PCSS-B-Transfer-from-methadone-to-buprenorphine.pdf

i.) Stabilization Phase of Treatment

The stabilization phase is focused on finding the optimal dose for the individual patient. This dose should eliminate all withdrawal symptoms, decrease opioid craving, ideally eliminate other opioid use, and provide maximal functional status (Joseph , 2000; Baxter, 2009).

Most patients stabilize on 8 to 24 mg/day (Comer et al., 2005a; Comer et al., 2005b). There is no precise way to determine in advance the optimal dose for a particular patient. Because buprenorphine has a long plasma half-life and an even longer duration of action at the mu opioid receptor, ideally approximately five days should be allowed between dose adjustments to assess the effect. Most patients stabilize on a dose of 8 to 24 mg/day . Very rarely, is there a need to go up to 32 mg for the highly tolerant patient. If more than 16 mg per day appear to be needed clinically, the provider should assess the possibility that the patient may be diverting medication; this is particularly true for patients who appear to need more than 24 mg per day. On the other hand, a recent study found that patients prescribed higher doses of buprenorphine were more clinically stable than those prescribed lower doses (Fareed, 2012).

Certain medical factors may cause a patient's dosing requirements to change. These include (but are not limited to) starting, stopping, or changing the dose of other prescription medications; onset and progression of pregnancy; onset of menopause; progression of liver disease; and significant increase or decrease in weight (Baxter, 2009). Relapse should always be considered and ruled out as a reason for loss of stability, as should diversion. Continued or resumed use of short-acting opioids during treatment with buprenorphine may

increase tolerance and render the buprenorphine dose inadequate (Stephen, 2008). If a short-acting opioid of abuse produces euphoria, the buprenorphine dose may be increased to block this effect. A dose increase also may help to suppress drug cravings (Leavitt et al., 2000). Ideally, receipt of opioids from multiple providers should be avoided. However, in cases where this is not possible, coordination with other prescribing physicians to limit the number and duration of short-acting opioids obtained by prescription is essential (for example, for a patient who has a dental extraction and is given an opioid prescription by a dentist (Baxter, 2009) (Kraus 2011).

j.) Side Effects and Adverse Reactions to Buprenorphine

It is important to warn patients and to monitor for buprenorphine side effects. Serious side effects are extremely rare, and even minor side effects occur relatively infrequently except for constipation. Other fairly common side effects include headache, sweating, insomnia, mild sedation, decreased libido; and more rarely, pedal edema and urinary retention, allergic reaction to buprenorphine or naloxone, or serotonin syndrome.

- Constipation: routine use of a stool softener can be helpful.
- Sweating or mild Sedation: taking the buprenorphine dose at night may make these symptoms less bothersome.
- Decreased libido has been shown to be less of a problem with buprenorphine than with methadone, but may still be bothersome.
- Pedal edema sometimes responds to decreasing the buprenorphine dose, and can often be controlled with use of a thiazide diuretic, if necessary.
- Urinary retention sometimes responds to lowering the buprenorphine dose.

k.) Frequency and Type of Follow-up Visits

During the initial week of treatment it is desirable to have frequent contact with the patient either in person or by phone or email. It is important to address side effects and residual withdrawal symptoms promptly, and to help the patient establish recovery oriented activities and support, such as participation in mutual help groups and counseling. The frequency of follow-up visits can then decrease somewhat as long as the patient appears to be stabilizing. An example might be to see the patient two to three times in the first week, weekly for two more weeks, every two weeks for a month, and then monthly as long as progress/stabilization continue.

The physician does not have to be the only one conducting these visits; for instance, a nurse manager can be established for the opioid treatment patients, and can be the first point of contact for drop-in visits in order to help trouble shoot and answer questions. S/he can also conduct some of the scheduled follow-up visits, with the physician briefly seeing the patient and writing the buprenorphine prescription. Alford et al (2011 and 2007) have described a very successful nurse-manager model that has produced very high rates of retention in treatment. *See A) Role of a Program Manager, page 64.*

Advanced practice nurses (such as nurse practitioners or psychiatric nurse specialists) and Physician Assistants frequently perform much of the clinical management of patients treated with buprenorphine, with frequent

consultation and oversight by the prescribing physician. *See C) Advanced Practice Nurses (Nurse Practitioners and Psychiatric Nurse Specialists) and Physician Assistants, page 66.*

Another alternative is the use of group visits for patients who are stable on buprenorphine treatment. This is an efficient use of physician time, allows more than one member of the clinical team to participate in the visit, and offers support for patients who desire/consent to be seen in a group setting A brief individual visit could follow the group visit in order to address any private concerns and provide a prescription for ongoing buprenorphine treatment.

If your clinical team includes a counselor/therapist, visits with this team member could be scheduled to alternate with the visits with the physician in order to provide added support, or some visits could occur at the same time with both the counselor and the physician, perhaps as part of group visits.

There is no single best-practice model for how to structure follow up for patients being treated with buprenorphine.

L.) Dose Adjustment/Optimal Dosing

There is no clear guideline for the optimal dose of buprenorphine, and practice varies widely, even by experienced practitioners. Small studies have suggested that at a dose between 12 and 16 mg per day, >95% of opioid receptors in the brain are occupied. An oft-cited study (Greenwald, 2003) suggested that there is nearly 100% occupancy of mu-opioid receptors in the brain with 16 mg/day of buprenorphine. Most experts recommend 12-16 mg of buprenorphine per day, as it is believed that this is the quantity needed to completely, or nearly completely, occupy the mu-opioid receptors in the brain. This in turn is believed to correlate with patients having a diminished likelihood of feeling intoxicated if they use another full opioid-agonist, since most or all of the receptors will already be occupied by buprenorphine, which has an extremely high affinity for the mu-opioid receptor and cannot easily be dislodged by another opioid.

The manufacturer of Suboxone (Reckitt-Benckiser Corporation) recommends that doses higher than 16 mg should be used with caution, with particular attention to signs of medication diversion, and that doses higher than 24 mg should be used rarely, if ever (reference REMS).

An effective strategy is to tell patients prior to starting treatment that their dose will likely be 16 mg per day, but you will allow several days of higher dosing during the induction week. If patients understand this in advance, they are very likely to be comfortable on 16 mg per day, and not request higher doses.

In fact, patients often decide on their own to take less than the prescribed 12-16 mg per day, leaving them more susceptible to relapse, since many mu-opioid receptors are unoccupied, and they can become intoxicated if they use full opioid-agonist drugs. Reasons for this include wanting to cut medication costs, wanting to share medication with friends or family members, or to sell the medication. It may be helpful to warn the patient in advance that s/he should take the full prescribed dose, and explain why.

For instance, the care provider could say, "You may be tempted to decrease your dose because you feel that you do not need as much medication each day as I have prescribed. In my experience, the patients who do

the best are those who take the full dose, all at once, every morning before they leave home. If you do it this way, the medication acts as a "chemical shield" that prevents you from getting high from other opioids. This can help decrease craving and temptation, because you know if won't affect you if you slip up and use. If you take a lower dose, it leaves some opioid receptors in your brain unoccupied, and this will increase craving and chances of relapse."

Instances in which you might consider increasing the dose to more than 16 mg per day are situations in which the patient is still reporting a lot of craving or residual withdrawal symptoms (Fareed, 2012). In this case it may be best to frame things in terms of a short-term plan to increase the dose, with a plan to decrease it again after a certain time interval. It might also be appropriate to require that the patient attend additional groups or counseling during this period to support his/her sobriety and address the symptoms.

Another situation in which a higher dose may be required is chronic pain. However, it is often effective to continue the same total dose but have the patient take it in divided doses over the course of the day, since the duration of analgesia is shorter than the duration of suppression of withdrawal symptoms. For instance, a patient who is taking a total of 16 mg per day might be instructed to take 8 mg upon awakening, 4 mg in the mid-afternoon, and 4 mg at bedtime.

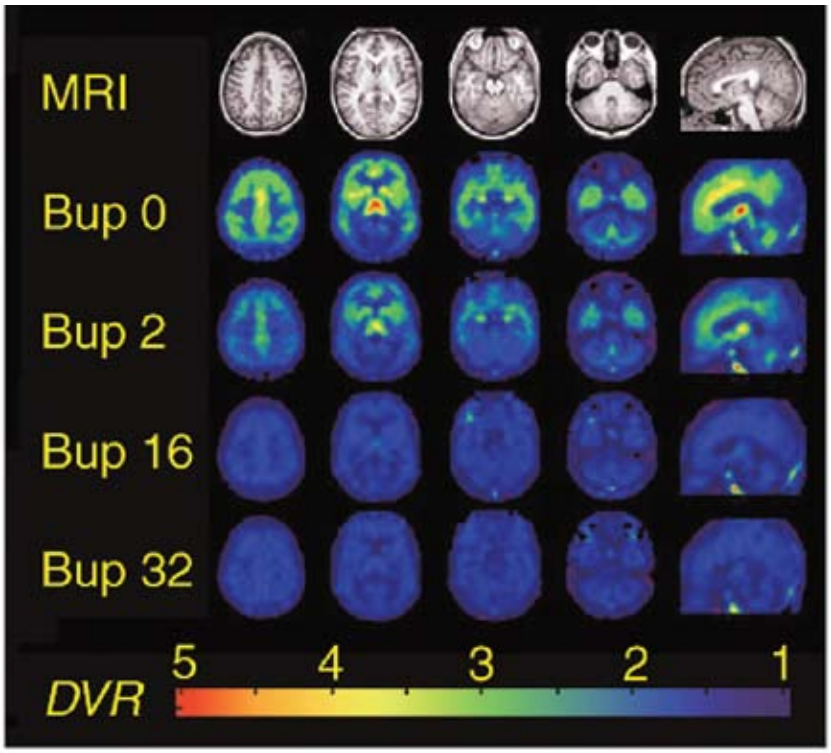
m.) How Long Should my Patient Continue Taking Buprenorphine?

There is no clear answer to this question in the medical literature. While it is clear that short -term treatment (detox) has no impact on long-term outcomes, it remains unclear whether there is a time period after which a patient should taper off of buprenorphine, or a minimum duration that is associated with successful long-term outcomes.

Unfortunately, the available evidence does not provide reassurance that patients tapered off of buprenorphine will generally do well and avoid relapse. Follow-up studies are difficult, particularly in patients who do relapse, but several studies suggest that relapse is as high as 90% after discontinuing buprenorphine maintenance (Weiss, 2011). On the other hand, there are no high-quality prospective studies of outcomes for patients maintained on buprenorphine long term (e.g., > one year) who are provided adequate recovery support and taper off of buprenorphine in a monitored setting.

In a retrospective study of 110 patients who had been on buprenorphine treatment for 18 months or more, Parran, et al (2010) found that those who remained on treatment at the time of the follow-up interview were significantly less likely to report use of any drug, including heroin, and were more likely to report 12-step affiliation and active participation.

The available evidence suggests that patients tend to do better in treatment over time, with progressively less evidence of use of other opioids and non-opioid drugs of abuse (Alford, et al, 2011; Soeffing, 2009). For instance, Alford and colleagues found that 91% of patients who remained engaged in buprenorphine treatment for 12 months had urine drug screens that were negative for other opioids. Alford also found that among homeless patients treated with buprenorphine for 12 months, 36% were housed by the end of the year (Alford, et al, 2007).



Mu-opioid receptor availability from a representative heroin-dependent volunteer during daily maintenance on BUP placebo (row 2), 2 mg (row 3), 16 mg (row 4), and 32 mg (row 5). (Greenwald, 2003)

It appears that patients are unlikely to do well with less than six months of maintenance treatment, and a minimum duration of one year may be more realistic (although as noted above, successful outcomes are probably optimized by ongoing buprenorphine treatment, rather than any limited duration of treatment). Patients and healthcare providers are often distressed at the thought that continuous long-term treatment may be needed in order to obtain ongoing stability and recovery. On the other hand, many other chronic medical illnesses also require continuous long-term treatment for most patients who need to start medication treatment. Examples include hypertension, asthma, and diabetes (McLellan, 2000). McLellan demonstrated that medication adherence rates and relapse rates are similar across these three diseases and drug addiction.

If your patient wishes to discontinue buprenorphine, a useful approach may be to ask the patient to consider whether s/he has achieved stabilization in the key life areas that had been disrupted before or during opioid addiction. For instance, has the patient achieved stable housing, legitimate income, addressed damage to key relationships, etc? If significant stabilization has occurred, then a taper attempt may be indicated. If, on the other hand, the patient is still experiencing problems in one or more key areas, then the time may not be right to consider tapering.

n.) Tapering off of Buprenorphine

Patients may be tapered off of buprenorphine for a variety of reasons.

1. **Opioid "detox":** If the patient is unable to gain access to long-term treatment with buprenorphine or does not desire it, buprenorphine may be used as a very effective agent to manage opioid withdrawal and

help a patient to discontinue use of opioids. This is often referred to as "opioid detox", or "medically assisted withdrawal." The general technique for using buprenorphine for management of withdrawal is to rapidly induce the patient onto buprenorphine, and then taper the patient off of buprenorphine as a way to alleviate the symptoms of untreated opioid withdrawal.

Drug dependence should be insured, treated, and evaluated like other chronic illnesses.

—McLellan, AT, *JAMA 2000*

Using buprenorphine to treat withdrawal symptoms has been shown to have a major impact on patients' subsequent engagement in psychosocial treatment of their addiction. Brigham, et al, in 2007 reported that approximately 80% of patients who received buprenorphine treatment of their withdrawal symptoms subsequently engaged in psychosocial treatment, compared with approximately 30% of patients who underwent a traditional clonidine-assisted withdrawal. However, it is less clear that this results in greater likelihood of long-term addiction treatment success, compared with use of other medications to manage withdrawal symptoms, or use of no medications.

Many different protocols for buprenorphine induction and taper have been studied, but there is not a consensus about an optimum taper duration. Ling, et al (2009) found that opioid-free urine samples at the end of the taper were somewhat more likely in patients tapered over one week compared with those tapered over 28 days, suggesting that there is no advantage to tapering slowly, although this study did not determine the optimal taper duration.

A sample taper schedule over one week might be:

Day one: 16 mg
Day two: 16 mg
Day three: 12 mg
Day four: 8 mg
Day five: 4 mg
Day six and seven: 2 mg

Such a taper is generally well tolerated, although patients differ significantly in the extent to which they have symptoms of opioid withdrawal during or after this taper. Treatment outcomes have not been shown to be improved by offering adjunctive non-opioid medications during buprenorphine tapering (Hillhouse, 2010).

2. **Tapering at the end of successful long-term buprenorphine treatment:** There are no high-quality published studies available to guide the pace of buprenorphine taper at the end of long-term treatment. Providers and patients are generally forced to take an empiric approach to this, as there is no standard of care in this arena. However, some patients report that they are unable to tolerate stopping buprenorphine completely, and may choose to stay on very low dose buprenorphine (e.g. 2 mg) for many months before they feel able to discontinue entirely.

o.) Urine Drug Testing

Leslie Hayes, M.D.

It is recommended that any provider who prescribes or manages buprenorphine do regular urine drug testing on patients. Some providers do it with every visit, some every three to six months, and yet others only if there are concerns. It is generally recommended that a patient starting buprenorphine be tested prior to starting the medication, one to two weeks after starting buprenorphine, and again with every visit until the urine does not show non-prescribed medications. After that, the provider may decide how often he or she wishes to test, but it is recommended it be done at a minimum every three months.

There are two types of urine drug screens: immunoassay testing, which uses antibodies to detect specific substance or class, and GCMS testing, which uses more sophisticated testing to detect exactly which substances are present. For both of these tests, the sensitivity varies according to cut-off criteria. In other words, different tests have different thresholds for calling a test positive, so one test might report a urine sample as positive for cocaine, for instance, while another test done on the same sample (but having a higher cut-off value for a positive test) would call the same sample negative.

Immunoassay testing is cheap, rapid, and available as point-of-care testing. However, it is subject to cross-reactivity. This is low for cocaine and high for amphetamines. In other words, immunoassay tests will sometimes report a sample as positive for amphetamine when the sample actually contains another drug or medication. It does not distinguish between codeine and morphine, may be less sensitive for semi-synthetic opioids (such as oxycodone) , and does not pick up synthetics (such as fentanyl) unless specified.

Gas-chromatography/mass spectroscopy (GCMS) testing is much more expensive, and the results take much longer to obtain. It is only available as a send-out test. However, it is much more specific. There are still occasional false positives for amphetamine, but most positives on a GCMS test are true positives. Because it is so much more expensive, it is often used as confirmatory testing. GCMS testing is able to distinguish between types of opioids and can pick up semi-synthetics and synthetics.

Most test manufacturers offer a large number of options for which substances are tested. When testing for a patient using buprenorphine, it is recommended that the test include the following: opioids, oxycodone, cocaine, benzodiazepines, marijuana, methamphetamine/amphetamine, and buprenorphine. Depending on the prevalence of abuse in your area, you may also want to test for methadone, barbiturates, and PCP.

p.) Interpretation of Urine Drug Test Results

When doing urine drug testing, it is important to make sure the test results are valid. The most important step is ensuring the sample is actually the patient's urine. There are any number of tests that can show that the subject liquid is indeed urine and that it came from the patient who is being tested. The urine temperature should be 90-100 degrees F. The urine specimen is expected to have a specific gravity level $\geq$1.003. The pH should be between 4.5 and 8.0. A spot check of urinary creatinine should be greater than 20mg/dL. A

creatinine less than 20mg/dL is considered dilute; if less than 5mg/dL then the sample should be discarded, since it is not consistent with human urine. *See Appendix 15: Urine Drug Screening, page 136.*

There are many possible results in a urine drug screen for a patient on buprenorphine. Here is a list of the most common, and how a provider may choose to react:

+ for buprenorphine, - for all other substances

All is well. Treatment is going as planned.

+ for buprenorphine, + for opiates

Provider needs to evaluate for relapse. Response will depend on how patient is doing with other aspects of treatment and how honest s/he is about relapse.

+ for buprenorphine, + for non-prescribed benzos

This is a high-risk situation. Provider needs to evaluate and determine if it was a one-time lapse or an ongoing problem. In addition, provider needs to determine what patient is willing to do about it. If it is one-time lapse and patient has otherwise been doing well, the provider may choose to give a small prescription and have the patient return. If it is a recurrent problem, or the provider has reason to suspect high-dose use or addiction, the provider should not prescribe the buprenorphine until the issue has been resolved.

+ for buprenorphine, + for other substances.

The provider needs to determine if the problem is addiction to other substance or occasional use. Even occasional use can be hazardous, but it is far less likely to undermine treatment than another untreated addiction.

- for buprenorphine, + for other substances

The provider needs to evaluate if the patient is actually taking the meds or not. The patient may be running out of meds early and using other substances until his or her appointment. The patient may also be a possible diverter. Response will depend on the history and how well the patient is doing in other aspects.

- for buprenorphine, - for other substances:

The provider needs to consider the possibility that the patient has provided someone else's urine.

The provider needs to discuss how the patient is taking the buprenorphine and consider the clinical context as to whether it is possible the patient is diverting medications or if there is something else going on.

Occasionally, a provider may have a patient who has urine results that are positive for buprenorphine but the provider suspects the patient is diverting the medication. In that case, the urine may be sent out for GCMS confirmation that it contains norbuprenorphine, a metabolite of buprenorphine that will only show up if the patient is actually taking the medication.

The most important question is what do you do with an unexpected result. Always use the lab results in the context of what else is going on with the patient. First, the provider needs to determine if s/he thinks

the result is true, false, or indeterminate. Assuming the result is true, next ts/he needs to figure out what an abnormal result means. It could mean non-compliance with therapy, it could mean drug abuse, or it could mean drug addiction. It is important to think about how each of these will affect the care you offer or interventions you plan. **If you suspect drug abuse or addiction, the correct response is never to discharge the patient from your care with no further follow up.**

The first thing to do is to confirm the unexpected result. The best way is by asking the patient about it. If the patient acknowledges use of substance, deal with it as you would with any relapse. Next, review his or her medication list for medications that can cause false positives. If unable to explain based on above, do GCMS confirmation.

The question comes up frequently about what to do with an unexpected positive result and a patient who refuses to acknowledge use. It is important to realize that patients may have very strong motivations not to share use with you: shame over having relapsed; magical thinking that "If my provider doesn't know I've relapsed, it doesn't really count;" and fear of having the buprenorphine discontinued.

It is important that the provider acknowledge to herself/himself if s/he is upset or angry about the result, but try to keep his or her interaction with the patient kind and compassionate. Expressing disappointment in the patient can worsen the shame and make it less likely for the patient to be honest and more likely to continue to use. It often helps to acknowledge the patient's fears and try to normalize them. Some phrases that providers have found helpful include the following:

"Many people are afraid to tell me they've relapsed for fear I will be angry with them."

"It is very common to relapse while working toward abstinence from drug use."

If the provider will not be cutting off the patient's medication because of the abnormal drug screen, telling the patient will often let them acknowledge use. However, if the patient still continues to refuse to acknowledge use, accept it and document it in the chart. If the therapy needs to be changed (i.e., increase counseling), express the change in terms of result, not in terms of the patient.

"My policy is that anyone who has a urine showing cocaine needs to bring in documentation of counseling by the next visit," rather than, "You've relapsed, so you need to bring in documentation." If the buprenorphine needs to be discontinued because of the drug screen results and the patient feels they need to continue, discuss with them what needs to happen to resume therapy.

One of the most challenging situations is what do you do with an unexpected negative result and a patient who swears they are taking the medication The worst-case scenario is to discontinue buprenorphine based on a false negative urine test. This could precipitate relapse. However, continuing to prescribe buprenorphine in a patient who is potentially diverting is worrisome. Check the specific gravity of the urine sample. A dilute specimen will be more likely to have a false negative. You can also ask the lab to rerun using a lower cut-off criteria.

http://www.workplace.samhsa.gov/DrugTesting/pdf/2010GuidelinesAnalytesCutoffs.pdf (SAMHSA, Drug Testing, Drug Cutoff Concentrations, Viewed 5/30/12)

http://www.jfponline.com/Pages.asp?AID=4455

http://www.aafp.org/afp/2010/0301/p635.html (Standridge et al. Urine Drug Screening: A Valuable Office Procedure*Am Fam Physician.* 2010 Mar 1;81(5):635-640)

Q.) Anticipating and Managing Relapse

Miriam Komaromy, M.D.

Anyone who treats the disease of addiction must make peace with the fact that addiction is a chronic, relapsing disease. Although we strive to help our patients achieve a state of complete abstinence from drug use, in reality, addiction has a very high rate of relapse. In this way, it is similar to most other chronic diseases that we treat in the primary care setting (McLellan, 2000). However, we tend to take it much harder when a patient relapses to use of opioids or alcohol than when our patient comes in with elevated blood pressure or HA1C after a period of non-adherence to a medication regimen.

Fiellin, et al (2011) reported that 27% of patients maintained on buprenorphine for one year required re-induction at least once (indicating that they had relapsed to other opioids, and needed to restart buprenorphine). In clinical practice, patients who have experience with buprenorphine induction may relapse and re-induce themselves on buprenorphine frequently, and this may not be detectable unless very frequent urine toxicology screens are performed. Although this possibility may be cause for concern to the physician, in fact, patients who are not stable on their buprehorphine treatment are likely to show signs of this in their other behavior, such as decreased attendance at clinic visits and counseling, and increased legal and social problems, and the situation will become obvious fairly quickly. It is partly for this reason that so many studies of buprenorphine outcome use length of time remaining in treatment as a measure of the success of the treatment. Patients who are doing well enough to show up to scheduled visits consistently are generally succeeding in recovery.

In order to be effective in treating addiction, it is generally helpful to try to disengage our egos from the work as much as possible, and not invest in a patient's abstinence as our own success, nor conversely regard the patient's relapse as our personal failure. Relapse is a frequent occurrence that must be anticipated in the course of treatment and recovery. An appropriate goal of medical treatment of addiction is to try to help to minimize the frequency of relapse, the duration of relapse, and the negative consequences of relapse. Viewed from this harm-reduction standpoint, relapse can also be seen as an opportunity to help a patient assess what factors led to the relapse, with a goal of avoiding these factors in the future.

For most patients, relapse feels deeply shameful. Patients who relapse may simply not return to treatment, rather than having to face you and tell you that they relapsed. This is an unfortunate occurrence, since it keeps the patient from re-engaging in treatment and severs the relationship between the two of you. In order to avoid this, you may want to talk with your patient during your initial visits about your understanding

that relapse occurs frequently. By letting the patient know that you want to see him or her back in the office even in the event of a relapse, you can help to lessen some of the shame and avoidance that usually occurs with relapse. You can also encourage the patient to tell you immediately if relapse occurs, rather than waiting for you to discover it through urine testing or other means.

If you do discover that your patient has relapsed, either because the patient self-discloses or by other means, how should you handle it? The following steps may be helpful:

1. Address the relapse directly: e.g., "Mr. Smith, I see that your urine tox screen shows heroin. Tell me about that."

2. Remind the patient that at the start of treatment you both agreed that abstinence from all drugs of abuse was the goal. Ask the patient if s/he is still aiming for this goal.

3. Ask the patient to reflect on what led to the relapse, and then to focus on what factors need to be put in place to avoid relapse in the future.

4. Modify the written treatment agreement if necessary, and agree on a plan for what the patient needs from you in terms of support, and what you need to see in order to reassure you that things are back on track. For instance, that you will write prescriptions for only a week at a time; the patient will call and talk with the clinic nurse once a week in addition to meeting with you briefly once a week at the time that you write the prescription; weekly urine toxicology screening will be performed including buprenorphine testing; and that the patient will agree to attend at least three 12-step meetings per week.

5. Agree on a date when you will reassess the situation to decide if the new plan is working.

r.) Relapse and Re-engagement into Recovery

Harris Silver, M.D.

Substance use disorders are chronic, progressive, prone to relapse, and ultimately lethal without treatment. From this perspective, despite being discouraging, relapse should not be seen as a failure by either the provider or patient, but as an opportunity to learn more about the patient's disease so that behavioral modifications, and possibly buprenorphine dose changes, can be made to prevent further relapse. Sometimes, in retrospect, addicts can see how a relapse was therapeutic in the sense that it got them through another level of denial or increased negative consequences enough to the point that it enhanced his or her motivation to work harder at recovery. In fact, a central component of this disease that confounds ongoing recovery is denial (acronym: **D**on't **E**ven k**N**ow **I** **A**m **L**ying), and it can come in many forms – minimization, rationalization, justification, blaming and intellectualization, to name a few. In the presence of denial, people often do not realize they are headed toward relapse; but even when they are aware, they may have too much shame about this to report it to a support person or the provider.

Relapse may include a return to opioids or other illicit or prescription drugs, and occurs for many reasons:

- Not adherent to buprenorphine as prescribed
- Not changing "people, places, things and situations" associated with using, sometimes including the home environment
- Not developing a sufficient support system or "recovery program" (eg, as may be done through a 12-step program), and/or not using it adequately
- Stress management difficulties
- Undiagnosed and/or inadequately managed co-occurring mental disorder
- Untreated behavioral addictions (eg, sex, gambling, codependency)
- Not developing adequate coping skills for cravings and triggers
- Need for more intensive ancillary treatment (e.g., intensive outpatient treatment or counseling)
- Insufficient motivation for change or unsuitable for treatment with buprenorphine for a variety of reasons – this should be essentially a diagnosis of exclusion

Typically, after a significant period of sobriety, emotional relapse and then behavioral relapse often occur before chemical relapse and can actually reveal relapse warning signs, giving an opportunity for the addict and support group members to intervene before drug use occurs. Some signs and symptoms of emotional relapse include anxiety and agitation, intolerance, anger, defensiveness, reactivity, and mood swings, Of course, many of these can be signs of a mental disorder or post-acute withdrawal syndrome from other drugs. Behavioral relapse signs include isolation, not asking for help, not attending support groups, diminished self-care, missed appointments or lateness, and a return to old behaviors characteristic of using, such as conscious lying, spending time with old using friends and spending time in "slippery places," where using (or a "slip") is more likely to happen.

Relapse can be prevented through adequate ancillary treatment as noted above and utilization of all components of a relapse treatment plan. Being prepared for a relapse is the best way to prevent one. A relapse prevention plan can be developed during intensive outpatient or residential treatment, or with the assistance of someone such as a counselor, 12-step program sponsor or Recovery Coach. Copies should be made of the relapse prevention plan and given to significant support persons, and should be reviewed and revised regularly with the Recovery Coach. The relapse recovery plan includes:

- Plans for managing cravings (people to call and activities to distract from cravings)
- List of environmental cues and stressors that can act as triggers for relapse
- List of coping skills that can be used to deal with triggers and cravings
- A list of people who can be contacted when dealing with triggers or cravings
- Relapse warnings signs – those emotional or behavioral changes that can be detected by the person or support group members
- Identification of denial methods utilized
- People, places, things and situations that should be avoided
-

Recovery requires complete honesty. Re-engagement into recovery can be promoted by the provider by informing the patient that he or she has an incurable but treatable disease in which relapse, although not a

necessary component of the disease, is very common. This can help promote the perception of a safe environment and relationship with the provider so that the patient can be honest about a relapse. Patients should be encouraged to report their relapse so that re-induction can be done more safely and with the greatest chance of success.

With relapse, consideration should be given to mandating an increase in intensity of behavioral treatment, increasing frequency of patient visits, and encouraging regular attendance at a support group (e.g., AA, NA). It is helpful to have other treatment services and participation in support groups documented. Buprenorphine maintenance dose should also be re-evaluated for increase to possibly reduce cravings. Patients should be reassured by the provider of the provider's commitment to help with all aspects of their disease, including relapse. As in relapse prevention, Recovery Coaches should be informed and intimately involved when possible in re-engagement in recovery.

When patients are unstable due to repeated relapse with opioids or other drugs despite the above steps, when patients are poorly adherent to their buprenorphine treatment, and/or continue to have persistent illicit drugs on urine toxicology after a significant period of time from original induction (e.g.., two months), physicians need to determine if they can appropriately provide further treatment for these patients. Options include referring to an addiction treatment specialist, referring to another buprenorphine provider, having the patient evaluated for psychiatric diagnosis and treatment, offering to help the patient seek a more structured treatment setting, referring the patient to a methadone treatment program where they will undergo directly observed therapy, and as a last resort, terminating treatment. In the latter case, if the patient will not be receiving MAT in another setting, the physician should manage the appropriate withdrawal of the buprenorphine if necessary. Patients having treatment terminated may not be willing to accept referrals made on their behalf, but the physician should not abandon the patient and should make a good faith effort to ensure that the patient has an appropriate level of care offered to them after their own therapeutic involvement has ended.

s.) Recovery From Substance Use Disorders

Harris Silver, M.D.

Recovery from substance use disorders is a lifelong process that may be defined along several significant axes. First, a prerequisite is abstinence from the drug(s) of abuse and from the use of other psychoactive substances (including alcohol) unless appropriately prescribed and not misused. For purposes of buprenorphine treatment, proper use of the medication as prescribed without use of other misprescribed, misused or illicit drugs should be considered as abstinence. It is implicit then that the provider carefully consider the risks and benefits of the use of seemingly legitimate psychoactive medications utilized during buprenorphine treatment. Next, recovery is a growth and healing process that occurs along emotional, mental, physical, and spiritual dimensions. The goal of recovery is wellness along each of these dimensions, and often involves the attainment of self-knowledge of the individual's disease, an understanding of the triggers for relapse and how to manage or avoid them, coping skills to deal with life events that previously would have triggered drug use, appropriate social functioning, healed relationships, and the development of a support system.

Another important component of the recovery process is diagnosis and treatment of co-occurring mental health and addictive disorders, which if left unmanaged, often lead to relapse and/or poor functioning along one or more of the dimensions of recovery. This includes management of other non-chemical addictions (eg, gambling and sex). Accordingly, management of physical health issues and making improvements leading to a healthy lifestyle are imperative because of their impact on mental and emotional health. Many in recovery describe a spiritual aspect to their recovery they find central to their healing and growth, and in their ability to accept the imperfections and difficulties of life. Spirituality need not imply religion or belief in a higher power, and should be acknowledged as a practice that can take many different forms.

Recovery learning and enhancement are obtained through numerous practices, including participation in 12-step programs (eg, Alcoholics Anonymous and Narcotics Anonymous) and other non-12-step recovery programs (eg, Rational Recovery and SMART Recovery), criminal justice interventions, counseling, participation in faith-based organizations and treatments, and substance use disorder treatments of varying intensity (eg, intensive outpatient treatment). Likewise, guidance in recovery can come from 12-step program sponsors and others who have had similar recoveries and who can share their experience, counselors, clergy, family, and other support systems, Recovery Coaches, and other types of mentors.

t.) When to refer to a higher level of care

Miriam Komaromy, MD

Sometimes a patient may be making genuine efforts during treatment, but may be unsuccessful in gaining stability. This can occur for many reasons, but one of them could be that the patient needs a higher level of care in order to be successful. A good example would be a patient with severe, unstable mental illness. This patient is unlikely to get what s/he needs in order to be successful in a traditional primary care setting. Instead, referral to treatment in an integrated setting where medical and psychiatric treatment are both provided along with counseling and case management is more likely to help the patient.

Referral options for other patients include a setting where medication is administered under daily observation, such as an opioid treatment program (OTP) (opioid treatment programs that dispense methadone in some cases also dispense buprenorphine within the OTP structure). A program that has a requirement for directly observed therapy offers patients an excellent chance to achieve stability, since they are required to show up and take their medication every day if they are to stay in the program. This ensures that they get adequate doses over a sustained period, and is likely to be helpful in stabilizing their mental and emotional state. This is often not a practical option in New Mexico, since only four New Mexico cities currently have methadone treatment programs.

At times patients may benefit from inpatient addiction treatment. This is a scarce resource, and fortunately is not needed by most people with addiction. However, it can be extremely helpful for patients who have serious co-occurring disorders, very unstable or dangerous social situations, or a history of multiple failed attempts to achieve recovery in an outpatient treatment setting. Again, New Mexico has limited resources for inpatient treatment of addiction. (For further on inpatient treatment:

State-funded facilities:
Turquoise Lodge Hospital (Albuquerque) 505-841-8978 (medically managed)
Yucca Lodge (Fort Bayard) 575-537-3302 (non-medical rehab)
New Mexico Rehab Center (Roswell) (575) 347-3400 (non-medical rehab)

Private facilities:
Mesilla Valley Hospital (Las Cruces) 800-877-3500 (hospital that treats mental illness and addiction)
Vista Taos (Taos) (877) 772-2616.

9. Roles for Members of the Clinical Team

Miriam Komaromy, M.D.

a.) Role of a Program Manager

In practices where many patients participate in buprenorphine treatment it can be especially helpful to have a Program Manager. This role can be filled by a registered nurse, counselor, nurse practitioner, or physician assistant, and include several functions:

1. The Program manager can provide a **consistent point of contact for the patient**. If s/he knows the patients in the program s/he can do a better job of assessing the urgency of a patient concern, and can help to reassure the patient and strategize about temporary solutions to problems.

2. **Coordinator**: the manager can help to ensure adequate cross-coverage and communication between prescribers and other team members within the clinic. S/he can also help ensure that the patient is attending recovery support activities by tracking attendance at counseling or peer-support groups.

3. The manager can conduct some of the scheduled **patient visits**. For instance, a patient who needs to be seen frequently could be scheduled to see a physician alternating with the manager every other visit.

4. The manager can also **conduct support groups**: This can be a therapeutic group or a lay support group, and can also have a health-education component (such as teaching refusal skills, relaxation techniques, how to manage cravings, etc)

Some of the best buprenorphine treatment outcomes in the published literature were achieved using a (nurse) program manager model (Alford 2011 and 2007). In 2009 the Center for Substance Abuse Treatment published a buprenorphine treatment guide for nurses (Center for Substance Abuse Treatment, 2009).

b.) The Role of a Community Health Worker (CHW)/Recovery Coach

Jeanne Block, R.N.

Paraprofessionals - including medical assistants, community health workers, and peer support specialists - can receive additional training and support to allow them to serve in the role of Recovery Coach. Once trained, they can play major support roles in buprenorphine treatment, both for prescribing physicians and for patients. We will use the term Recovery Coach in the rest of this document to refer to this group of paraprofessionals.

By providing office and clinical support, patient education, psychosocial support, and referrals, Recovery Coaches can help expand access and improve outcomes of buprenorphine treatment. Their duties can range from office tasks necessary for buprenorphine treatment (e.g., prior authorizations, checking the Prescription

Monitoring Program) to providing phone support and facilitating recovery support groups, all of which frees the physician and other licensed members of the treatment team to focus on patient care and support the patient in recovery.

Below is a list of duties and responsibilities that Recovery Coaches can provide, along with brief descriptions of each. While some of these duties are basic and may be part of normal responsibilities or may be provided with just a few minutes of explanation by the physician or other experienced staff member, some of the duties may require additional training and ongoing support in order to master the skills involved.

The Community Addictions Recovery Specialist (CARS) Program is one source for this training and support. CARS utilizes a combination of face-to-face education and teleconferencing to train and mentor paraprofessionals to provide all of the roles of a Recovery Coach. CARS is part of the Integrated Addictions and Psychiatry Program of Project ECHO, UNM Department of Medicine.

1. **Office Tasks** - may include obtaining prior authorization or notification for treatment, checking the Prescription Monitoring Program for patient prescription history, and keeping detailed buprenorphine logs for the physician(s). *See the section on Office Staff Education, page 94.*
2. **Clinical Tasks** - may include taking vital signs, obtaining urine specimens for testing. *(See Office Staff Education)*, and administering checklists or self-tests on readiness for treatment (See SOCRATES Stages of Change test), or screening for co-occurring addictions. *See section on Assessing for Co-occurring Addiction Diagnoses, above.*
3. **Patient Education** - Many clinics and offices that provide buprenorphine treatment require patients to attend a group or individual class prior to scheduling an appointment with the physician. This class can provide an overview of buprenorphine (what it is, how it works, how to take it), an understanding of patient requirements (urine analysis (UAs), frequency of appointments, counseling requirements), and harm reduction messages. After working with the medical team to develop the content for this class, the Recovery Coach can teach the class and answer questions, pulling in other members of the healthcare team to address issues that require medical expertise. Additionally, some clinics or providers either mandate or offer their patients additional health education classes (e.g., overdose prevention, relapse prevention education) to help them better understand their addiction and support their recovery. After gaining some experience with addiction treatment, the Recovery Coach can teach or co-teach these classes. *See section above, What Do Patients Need To Know about Buprenorphine MAT before Starting Treatment? page 37 and Appendix 5: Sample Curriculum, page 113.*
4. **Psychosocial Support** - is very important for patients in recovery. It is highly recommended that all prescribing physicians have one staff member who is a designated contact for buprenorphine clients, especially for social support reasons. Psychosocial support by Recovery Coaches can range from asking how the patient is doing to facilitating support groups, and can include all of the following:
    - checking in with patients to ask how they are doing at each office visit with the physician, offering support and referrals if necessary
    - checking in with patients between physician office visits, either by phone or via patient visit to office, offering support and referrals if necessary
    - being the phone contact for patients calling the office
    - calling patients who are having a difficult time to offer support and referrals

- facilitating a recovery support group
- Relapse prevention and intervention messages should be part of all the interventions listed above.

5. **Referrals:** Many clients considering or seeking addictions treatment need referrals to other resources that can help to support their recovery or provide harm reduction services if they are not yet ready to seek treatment. Recovery Coaches can develop and/or update resource lists that are relevant to their clients' needs. At a minimum, referrals should be given for counseling and support groups, such as AA, NA and SMART Recovery. Other resources that would be helpful to include for buprenorphine patients include:
   - Inpatient treatment programs
   - Crisis line phone numbers
   - Harm reduction sites - syringe exchange, overdose prevention and Narcan distribution
   - HIV and hepatitis testing and treatment services
   - Emergency food resources - food banks, soup kitchens, etc.
   - Emergency housing and utility resources
   - Employment and education resources.

c.) The role of Advanced Practice Nurses (Nurse Practitioners and Psychiatric Nurse Specialists) and Physician Assistants

Miriam Komaromy, M.D.

The Drug Abuse and Treatment Act of 2000 (DATA 2000), which authorized use of buprenorphine to treat opioid addiction, specified that only physicians may prescribe. In some states this is the only medication that physicians are able to prescribe, but Advanced Practice Nurses (APRNs) and Physician Assistants (PA's) are not. It is unclear what motivated this initial restriction, but it would require congressional action to overturn it. At this point there appears to be insufficient political will to make such a change, and so this restriction remains in effect.

In spite of this restriction, APRNs and PAs play a very large role in expanding access to addiction treatment in New Mexico. Depending on the practice setting, these providers may work closely in tandem with a prescribing physician, for instance, performing the initial history and physical and then referring the patient to the physician for initiation and treatment with buprenorphine. In other settings, the APRN or PA actually provides the full spectrum of care and treatment with buprenorphine, other than signing the prescription itself, which must still be done by the physician. In either situation the physician remains the official treatment provider, and patients treated in this way are included in the tally of patients being treated by the physician, which must not exceed 30 simultaneous patients in year one after training, or 100 thereafter if an additional waiver is obtained.

The role played by these non-physician providers has been very important in expanding access to treatment in New Mexico.

10. Diversion and Abuse of Buprenorphine

Miriam Komaromy, M.D.

a.) Why and How Is Buprenorphine Diverted and Abused?

The combination of buprenorphine and naloxone was created in order to decrease the risk of diversion of buprenorphine by causing precipitated withdrawal if someone dependent on other opioids injected the medication. This has been successful to some extent. For instance, studies have shown that opioid-addicted individuals rate the buprenorphine monoproduct as more desirable than the combination product, and it tends to have a higher street value. However, it has become increasingly clear that the combination product still has abuse and diversion liability.

It is somewhat reassuring that studies generally show that the reason for using diverted buprenorphine/naloxone is primarily to self-treat opioid addiction. For instance, in 2011 Bazazi et al reported that although 76% of surveyed opioid addicted patients reported having obtained this medication illicitly, the majority of participants who had used buprenorphine/naloxone reported doing so to treat opioid withdrawal symptoms (74%) or to stop using other opioids (66%) or because they could not afford drug treatment (64%).

Even the bupenorphine monoproduct, which is widely used for treatment of opioid addiction in other parts of the world, is usually not rated as a highly desirable as drug of abuse, and is often used as a form of self-treatment for opioid addiction or a way of managing withdrawal symptoms. For instance, an Italian study found that 51% of patients who reported past injection of buprenorphine reported that they had used it to treat heroin addiction or manage withdrawal symptoms, and only 13% had used it for euphoria purposes (Morati, 2010).

Both the tablet and the film form of buprenorphine appear to be easily misused. Tablets can be crushed and insufflated ("snorted"), and both tablet and film can be dissolved in water and injected. The patient's goal in using these alternative methods of ingestion is that they cause a more rapid peak in blood levels, creating more of a feeling of euphoria or "high". Either of these methods of ingestion will result in precipitated withdrawal in a patient who is currently dependent on other full-agonist opioid drugs, such as heroin or oxycodone. However, in patients who are not currently opioid dependent or who are using only buprenorphine, precipitated withdrawal does not occur and intoxication will occur.

Buprenorphine may also be diverted for sublingual use by patients who are seeking treatment but are unable to access it, or are seeking to withdraw from other opioids relatively comfortably. Common scenarios include one member of a couple splitting their buprenorphine dose with their addicted partner who is not in treatment. Patients may also learn how to use buprenorphine some of the time but periodically transfer to and from more abusable opioids for recreational purposes. Finally, patients may divert buprenorphine for financial purposes; for instance, they may take half of their dose as prescribed and sell the other half, perhaps in order to help pay for their treatment; or they may not take their prescribed buprenorphine at all but may instead sell it.

Some settings are particularly prone to abuse of buprenorphine. In countries in which heroin is less available, buprenorphine is more widely abused. In settings in the United States in which heroin may be more difficult to obtain, this may occur as well. For instance, it is widely abused in prisons. Because it is often not detected on a standard urine drug screen test, it may also be abused by people who are on probation, in treatment, or in drug court. Teens may perceive it (correctly) as a safer alternative to heroin or opioid analgesics, and so may choose to experiment with it.

From a public health standpoint, abuse of buprenorphine is far more desirable than abuse of full-agonist opioids because of the very small risk of overdose death from buprenorphine. However, abuse of buprenorphine has numerous adverse consequences including the risk of addiction to buprenorphine itself, the decreased utility of buprenorphine as a therapeutic agent when it is widely abused, and the risk of regulatory action to withdraw it from the market if the risk is perceived as too great. For all of these reasons, it is very important to do everything that we can to decrease the risk of diversion of this powerful therapeutic agent.

b.) How Can We Minimize the Risk of Buprenorphine Diversion?

It is important to address diversion risk from the beginning of our relationship with a new patient. It should be part of the treatment agreement. Patients should be made aware that selling controlled substances is a felony, and that they will be immediately discharged from the clinic if staff believe that they are diverting the medication. You should also consider whether you would press charges in such a situation, and consider including this information in your treatment agreement.

Patients who are obtaining buprenorphine in order to resell it for financial gain are less likely to find this worthwhile if they are required to make frequent visits to the clinic and meet with staff regularly, and if they are required to participate in group or individual counseling. The more "hoops" we require the patient to "jump through", the greater the barriers to obtaining buprenorphine in order to sell it. Conversely, the more contacts we have with a patient for the purposes of support and monitoring, the better the patient is likely to do if s/he is motivated to pursue recovery. We need to strike a balance between requiring a patient to participate in multiple supportive activities vs. making so many requirements or pre-requisites that patients give up and stop pursuing treatment.

If we are going to require a patient to engage in multiple recovery-related activities we need to monitor participation both to promote recovery and to discourage diversion. Options include obtaining a release of information from the counselor to whom you have referred the patient and asking that you be informed if the patient is failing to participate in counseling at an agreed-upon rate. For mutual-help groups, you can require that the patient record the date, name, and location of the group, and obtain a signature from the group leader or speaker.

Doses of buprenorphine that are too high or too low can also increase the risk of diversion. Although there is some individual variation, most patients will stabilize on a dose of 12-16 mg of buprenorphine per day. Prescribing higher doses increases the likelihood that some of the medication will be diverted, and the manufacturer strongly warns against doses greater than 24 mg per day for this reason. Conversely, lower doses may increase the likelihood of concurrent use of other opioids, since the patient's opioid receptors are less likely to

be fully occupied with buprenorphine. Doses required to prevent withdrawal may be very low, e.g. 2 mg per day, while higher doses are needed in order for the medication to act as a "chemical shield".
Objective measures for monitoring for diversion include the following.

1. Check the prescription monitoring program frequently in order to detect patients obtaining prescriptions for opioids or other controlled substances from other sources. This is a major red flag that the patient is not taking his or her buprenorphine, and should prompt a very serious conversation and limit setting with a patient. *See Section I) Reviewing a Prescription Monitoring Report for the Patient, page 39.*

2. Check urine toxicology screens frequently. In addition to checking for the presence of opioids other than buprenorphine, the tox screen is useful to check for buprenorphine itself in the urine. Inexpensive CLIA-waived test strips are available for office use, and provide immediate feedback. Some patients become savvy to this kind of testing, and may sprinkle crushed buprenorphine into a urine sample. This may be circumvented by testing for norbuprenorphine, which is a metabolite of buprenorphine.

3. Pill counts are also effective for determining whether a patient still has approximately the correct number of tablets left at a particular interval after his/her last prescription fill. This is most effective if patients are called in unexpectedly. If you intend to use this method, it is worth including it in your prescription agreement, so that the patient is on notice that s/he must appear within 24 hours of receiving a phone call to an agreed-upon phone number and present their pill bottle at that time.

4. A final option is to provide directly observed therapy (DOT). In this method, either the physician/clinic hold the patient's medication supply and require the patient to come in daily for administration, or the patient is required to bring their bottle to the clinic daily or every other day for pill counts and administration. By observing the patient ingesting the medication, staff can ensure that the patient is taking the medication on schedule and taking a correct dose.

Participating in these enforcement activities can seem discouraging to physicians. However it is important to keep in mind that addiction is a chronic relapsing disease. Patients who have been in the habit of breaking rules or breaking the law in pursuit of the drug they are addicted to need reinforcement and support for the importance of following the rules. Structure and support are critical for promoting successful treatment.

11.) Office Management Issues

Miriam Komaromy, M.D.

a.) Prescribing or Dispensing Buprenorphine

The DATA 2000 Act allows physicians to either write prescriptions for buprenorphine or to dispense it out of their office. For physicians who work in a building with a pharmacy, dispensing may be a useful option, particularly for patients who need more frequent visits or directly observed therapy. For physicians who do not have immediate access to a pharmacy, the DATA 2000 Act specifies that buprenorphine must be stored in a double-locked storage container, and that careful records must be kept of medication ordering, receipt, and dispensing. Because of the street value of buprenophine, storing and dispensing this medication in the office could increase the risk of theft by patients or even by staff. Physicians should consider security concerns carefully before attempting this.

b.) Required Recordkeeping: The Buprenorphine Log

The Data 2000 Act requires that physicians keep a log every time that they prescribe or dispense buprenorphine. For a low-volume practice, simply keeping a notebook in which you include a copy of the prescription may be adequate. For physicians caring for a larger volume of patients it is essential to keep track of the total number of patients who you are treating concurrently so that you do not exceed your limit of 30 concurrent patients in year one, or 100 thereafter if you have increased your prescribing limit by filing paperwork with CSAT. It is simple to keep a written or electronic log so you know how many patients you have treated in the preceding 30 days. If you usually prescribe a 30-day supply, this will roughly correspond to how many patients have current buprenophine prescriptions from you and thus how many patients should be included in your total number of patients in current treatment. This log can also be a useful resource when responding to patient phone calls, because it tells you how recently the patient was seen and how much s/he was prescribed.

c.) Flagging Medical Records of Buprenorphine Patients

The DEA recommends that you have some way of identifying the medical records of all patients who are treated with buprenorphine. With paper records this can be accomplished by keeping these charts physically separate from others or by flagging them in some other way, such as using a different color chart. For electronic records, identification of the records of treated patients may be possible by searching for a specific problem in the problem list or using other electronic methods of flagging. In any case, the New Mexico DEA agents seem satisfied if a physician is keeping an adequate patient log, since this allows the records of patients who are currently being treated to be easily identified.

d.) Cross-coverage Issues

When there is only one physician in a practice who is certified to prescribe buprenorphine this may present a problem when the physician is out on leave, particularly when the leave is unscheduled. In urban areas it will often be possible to arrange for a physician who has a buprenorphine waiver from another institution to see

your patient on an emergency basis if you are out of the office. In rural areas it is worth making a major effort to persuade another physician in the community or region to become certified to prescribe, so that you have back-up in an emergency.

e.) Preparing for a DEA audit

The DEA is concerned about making sure that physicians follow the rules laid out in DATA 2000. They occasionally audit the practices of physicians who prescribe buprenorphine in order to check on recordkeeping, patient numbers, etc. Although going through such an audit is not pleasant, physicians generally describe it as a fairly benign experience. If the agents find some minor breach in rules (such as having an outdated practice address on your DEA license) they will write you a letter of reprimand and ask that you correct the problem within a certain time frame. There is generally no more serious consequence of an audit than this. One issue that occasionally arises is that in New Mexico, at least, they have asked several physicians who were not currently prescribing buprenorphine to give up their DEA waiver (certification) that allows them to prescribe. Be aware that there is no reason that you need to do this. We have been contacted by several physicians who gave up their waiver and later regretted it.

f.) Obtaining Support and Advice Regarding Buprenorphine Treatment

There are both national and local resources available to support you in treating opioid addiction in your practice.

Here in New Mexico, the Project ECHO Integrated Addictions and Psychiatry (IAP) Program, based in the Department of Internal Medicine at the University of New Mexico Health Sciences Center, offers a weekly tele-video conference focused on supporting primary care providers who are treating addiction. Participants join from around the state, and the discussion addresses challenges and solutions for common, addiction-related patient problems as well as common psychiatric problems encountered in primary care practice. The IAP Program also offers periodic live trainings on addiction-related topics around the state. There is no charge for participation, and free CME/CEU credits are offered.
Contact echo@salud.unm.edu, 505-750-ECHO.

Nationally, the Physician Clinical Support Service for Buprenorphine (PCSS-B) is a SAMHSA-funded program providing education and mentorship. They offer some very good free monthly webinars on addiction-treatment topics, and you can also sign up through their website to be connected with a mentor who can answer questions and provide support. Their web address is:
www.pcssb.org

Project ECHO also offers a program to train office support staff in how to support a practice that is providing addiction treatment. *See B) The Role of a Community Health Worker (CHW)/Recovery Coach, page 64.*

14. Buprenorphine Use in Treating Special Populations

Care of Opioid-addicted Women Who Are Pregnant or Breastfeeding

Leslie Hayes, M.D.

Unlike many drugs, in which the effects on a pregnancy and the developing baby depend solely on the drug itself, the effects of opioid addiction on pregnancy are caused by both use and withdrawal.

Withdrawal effects are usually considered more serious. Withdrawal causes a hyperadrenergic state, which causes constriction of blood vessels in the placenta. This is exacerbated by cocaine use. The biggest direct effect of opioid use is Neonatal Abstinence Syndrome (NAS) at birth.

Opioids may possibly be teratogenic at a low rate, but most of the effect of opioid addiction comes from addiction itself, with its poor self-care and multiple co-occurring disorders. Many of the risks associated with opioid abuse during pregnancy are actually related to injection drug use,rather than the risk of the substance itself. These risks include infection with hepatitis B, hepatitis C, HIV, endocarditis and abscesses. Because of their relatively immunosuppressed state, pregnant women are more vulnerable to the infectious complications of opioid addiction.

Common co-occurring disorders with opioid addiction include depression and other addictions, which can substantially worsen the prognosis. Both addiction and depression cause poor self-care. Concurrent addictions can worsen the problems of opioid addiction. Concurrent stimulant and cocaine use cause placenta problems, especially when combined with opioid withdrawal. Alcohol can cause fetal alcohol syndrome.

Domestic violence is also quite common with opioid addiction in pregnancy. This is associated with an increased risk of a low birth weight baby, even if there is only verbal abuse. There is an increased risk of fetal and neonatal death if there is physical abuse. Domestic violence is the second-leading cause of trauma-related death in pregnancy, accounting for 31% of all trauma deaths.

Depression, substance abuse, and domestic violence have a strong correlation with each other during pregnancy. When one is present, it is recommended to screen for the other two.

There are substantial psychosocial implications with opioid abuse. Most mothers have a high motivation to change. There is a lot of guilt associated with these issues for many women. There may also be legal implications around custody of the baby. In addition, most addicted patients have very poor self-care behaviors. If they continue to use drugs, they are unlikely to take good care of themselves during pregnancy. There is also a high rate of incarceration with opioid dependence, which can complicate both prenatal care and treatment of opioid dependence. Women will often pay for their drugs through prostitution, with implications for their medical and physical health and that of their fetus.

In addition, pregnant women with opioid addiction often have a history of childhood sexual abuse or physical abuse (with implications for parenting and labor). There is a high incidence of PTSD. In addition, most

women who abuse drugs start using because their partners abuse drugs. If they are still with that partner, it can be difficult for them to quit unless he quits as well.

Even without treatment, there is a substantial decrease in drug use when women become pregnant. One study showed that for women under 25, the percentage of women using drugs drops from 16.8% to 8.0%. For women over 25, the percentage drops from 7.0% to 1.6%. Unfortunately, there is a very high rate of relapse post-partum. Another study showed that before pregnancy, about 10.6% of women use drugs. During pregnancy, 4.3% use drugs. Post-partum, the rate of use increases to 8.5%.

Treatment of opioid addiction during pregnancy includes harm reduction, psychosocial therapy, and opioid replacement therapy, but detoxification is not recommended. Much of the treatment is similar to that for non-pregnant individuals, but there are special considerations for pregnant women.

Harm reduction specific to pregnancy includes encouraging regular prenatal care. In particular, monitoring for fetal growth is important because of the potential for placental problems. The clinician should discuss decreased immune function in pregnancy, with increased likelihood of infections, including abscesses and endocarditis. The clinician should consider rechecking for infections late in pregnancy, including STD's, HIV, Hepatitis C, and Hepatitis B.

Abstinence-based therapy is not recommended during pregnancy for anyone who is dependent on opioids. Because the rate of relapse without Medication Assisted Therapy (MAT) is quite high and the period of pregnancy is limited, it is recommended that all pregnant women with opioid addiction be treated with MAT. Methadone is currently standard of care for pregnant women addicted to opioids (although not FDA approved for this use.) However, most experts think buprenorphine is likely to become the standard of care, either as an alternative to methadone or on its own. Neither methadone nor buprenorphine is known to be teratogenic.

Buprenorphine is usually prescribed in combination with naloxone, which makes it less likely to be injected. Naloxone is FDA Category B (generally accepted as safe during pregnancy.) However, naloxone could theoretically precipitate withdrawal in the fetus. (This has never actually been studied and probably never will be.) The current recommendation is to use buprenorphine monotherapy (Subutex) in pregnant women.

Buprenorphine is somewhat risky to induce in a pregnant woman who is addicted to opioids because the patient needs to be in withdrawal to begin buprenorphine treatment (see Clinical Use of Buprenorphine, above). Most providers who start buprenorphine in pregnancy do fairly extensive counseling about risks and benefits. For patients who have been on buprenorphine/naloxone and get pregnant, switching to buprenorphine alone is an acceptable alternative. If buprenorphine is not available immediately, it is recommended to continue buprenorphine/naloxone until it is available. Most providers will start buprenorphine on a pregnant patient who stops opioids on her own and presents in withdrawal.

A recent study in the New England Journal of Medicine (NEJM) showed less severe NAS with buprenorphine compared to methadone (Jones, 2010). There was significantly less morphine needed for treatment of NAS in the buprenorphine group, shorter hospital stays, and shorter treatment duration. However, retention in treatment was significantly higher in the methadone group.

It is recommended that pregnant patients who are addicted to opioids keep using until they can get on opioid-replacement treatment. Recurrent withdrawal is more dangerous for the baby than short-term abuse. The clinician should discuss clean needles and risk of overdose. The clinician should also try to get them into treatment within one to two days.

Because of the risks noted above, induction of pregnant women onto buprenorphine from heroin or pain pills has some risks and is best done by a practitioner with some experience with buprenorphine and pregnancy. Providers who are not experienced should consult or refer. Patients need to be in withdrawal from opioids in order to start buprenorphine. However, as noted above, withdrawal causes a hyperadrenergic state that can cause constriction of blood vessels in the placenta, potentially causing placental abruption, miscarriage, or pre-term labor with or without pre-term delivery. These risks are low but real. The exact rate of these complications has not been studied, but none were seen in the NEJM study. Any patient who wishes to be started on buprenorphine should be counseled about these risks and referred to a methadone clinic if she does not want to start buprenorphine because of this.

The location of the induction will depend on the gestational age of the fetus. It is recommended to get an ultrasound prior to starting a patient on buprenorphine, both to confirm gestational age and to rule out any high-risk conditions, such as twins, placental problems, intrauterine growth retardation, or other conditions, which might complicate induction on buprenorphine.

A pregnant patient with a gestation less than viability (< 20 weeks) can have their induction in an office setting. The clinic should be located in a community with providers who are able to take care of miscarriage, should induction precipitate miscarriage. It is not recommended that the induction be done at home for pregnant patients. A patient with a viable but pre-term fetus (usually, 20-36 weeks) should be induced in a facility with a neonatal intensive care unit (NICU) capable of taking care of a pre-term newborn at the gestation of the pregnancy. A pregnant patient from 36 weeks on may be induced at any hospital capable of doing a delivery. It is recommended that induction to buprenorphine be done by a provider experienced with buprenorphine inductions.

Induction proceeds as usual, with the first dose of buprenorphine given when the COWS score is 9-11. It is important to coordinate with the patient, so that the provider doing the buprenorphine induction will be ready to give the medication as soon as the patient is clinically ready, and so that the patient will not stop the opioids too soon or too late. Monitoring of the fetus and monitoring for contractions during the induction phase is essential, with prompt and appropriate obstetric response to any abnormalities.

There have been no studies of buprenorphine dosing in pregnancy, but some providers have noted that dosage of buprenorphine may need to be increased in the late second and third trimester because of cravings, even in patients who were previously stable on a dose.

Detoxing pregnant patients off methadone or buprenorphine can be done relatively safely in the second trimester but any possible benefit is outweighed by the risk of relapse to opioids. About half of detoxed women relapse. In addition, babies can still go through NAS even with detoxification.

Pain relief during labor can be somewhat tricky. Epidural anesthesia is the preferred method. If opioids are needed, it is recommended to use a full agonist with strong binding potential. Fentanyl is the preferred agent. The clinician needs to use extreme caution giving opioids close to delivery, as withdrawal will be precipitated if Narcan is given to a depressed newborn.

NAS is a common consequence of opioid replacement therapy. If it is properly anticipated and diagnosed, it is fairly straightforward to treat and should not be considered a reason to avoid opioid replacement therapy. Infants are suspected of having NAS if they exhibit any of the following signs: high-pitched cry, restlessness, poor sleep, jitteriness, hypertonia, rapid respiratory rate, poor feeding with frantic sucking, and loose or watery stools. The onset is usually within one to three days, although may be delayed up to five days with methadone. All newborn nurseries should be able to monitor for NAS. The most popular method of assessing the severity of NAS is the Finnegan scale. Any hospital that delivers women on opioid replacement therapy needs to have a protocol in place to treat NAS.

Buprenorphine has not been well studied during breastfeeding. There is a fair amount of controversy about allowing a woman with a history of drug addiction to breastfeed, and the Academy of Breastfeeding Medicine has an informative policy with a summary of the recommendations on their website: http://www.bfmed.org/Media/Files/Protocols/Protocol%2021%20English.pdf Buprenorphine is excreted into human milk in low concentrations and also has poor oral bioavailability to infants. The amount of Buprenorphine excreted in breast milk is insufficient to prevent NAS. For these reasons, the use of Buprenorphine in breastfeeding is considered acceptable by the US Dept. of Health & Human Services Substance Abuse and Mental Health Services Administration (SAMHSA). Breastfeeding should be encouraged for all opioid-dependent pregnant patients, regardless of whether they are on methadone or buprenorphine.

No studies exist on the long-term behavioral effects of buprenorphine and methadone on the fetus. These studies are difficult to do because of the confounding effects of opioid addiction and other co-occurring addiction, and there may never be a definitive study. However, even if an effect is found, it will likely be quite small compared to the devastating effects of addiction in the mother.

It is important to follow these women post-partum. There is a high risk of relapse during the first six months post-partum. Women should be encouraged to continue with recovery behaviors and opioid replacement therapy. Often, these women do not have good parenting skills. The clinician should consider home nursing and parenting classes. Because of the opioid use, women may have a more fussy baby than average and will likely need a lot of support.

Acknowledging that the buprenorphine monoproduct used during pregnancy has a greater potential for abuse and higher risk of diversion, more frequent monitoring of patients and their medication supplies is indicated. Other steps to prevent abuse and diversion include limiting quantities of prescribed medication, and urine screening for the presence of buprenorphine to ensure compliance.

The American Society of Addiction Medicine (ASAM) and the American College of Obstetrics and Gynecology (ACOG) have recently released an opinon statement regarding treatment of opioid addiction in pregnant and breastfeeding women (ACOG Committee, 2012). To access it, go to:
http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Health_Care_for_Underserved_Women/Opioid_Abuse_Dependence_and_Addiction_in_Pregnancy

b.) Buprenorphine vs. Methadone in Pregnancy

Julie Bohan, M.D.

Providers of addiction care to opioid-dependent pregnant women are currently at a crossroads when it comes to deciding whether to use Subutex or Methadone for opioid replacement therapy.

Historically, methadone has been the standard treatment for pregnant patients addicted to opioids. Numerous studies have demonstrated its safety in pregnancy as well as associated reductions in illicit drug use, criminal activity, and hospitalization among pregnant women on methadone. Methadone's long half-life prevents the fetus from experiencing frequent peaks and troughs in opioid serum concentration. When a pregnant mother experiences opioid withdrawal symptoms, the fetus experiences hypoxia. However, the fetus can experience intrauterine abstinence syndrome in the absence of maternal distress. This raises some concern about the safety of buprenorphine in pregnancy, as the patient must be in withdrawal before buprenorphine induction can be initiated. The MOTHER Study, which examined neonatal abstinence syndrome (NAS) in buprenorphine vs. Methadone patients, found shorter duration of NAS treatment with buprenorphine. Lower doses of morphine were used in the buprenorphine-exposed infants and their hospital stay was shorter than infants exposed to methadone.

Buprenorphine inductions in the MOTHER trial were performed in an in-patient setting with close fetal monitoring and medical supervision. No protocols currently exist for out-patient buprenorphine induction of pregnant women. Also, the rate of discontinuation of buprenorphine in the MOTHER trial was ten times the discontinuation rate of women on methadone. Though the MOTHER trial allows promise for the use of buprenorphine in pregnancy, its findings and the need for patients to be in withdrawal for buprenorphine induction provide a compelling need for more randomized controlled trials before we can safely replace methadone with buprenorphine as the standard of care in opioid-dependent women.

Buprenorphine is a Category C Drug in Pregnancy.

Buprenorphine continues to be a Category C medication in pregnancy (no adequate well-controlled studies in humans). Current data indicate that buprenorphine is probably safe in pregnancy but more research is needed. Methadone is also a Category C medication. Buprenorphine should be considered when the prescribing physician believes the benefits outweigh the risks. Patients already maintained and stable on buprenorphine who become pregnant probably should continue on it with close monitoring. Lack of availability or intolerance of Methadone are additional circumstances in which to choose buprenorphine over methadone. Clear documentation in the patient's chart of the patient's awareness that there is insufficient data about the safety of buprenorphine in pregnancy is essential. It is important for the physician to inform the patient about the still unproven status of buprenorphine treatment in pregnancy and explain the use of methadone or buprenorphine in terms of benefit vs. risk.

Physicians should use buprenorphine monotherapy (Subutex) because there is no data on the effects of Naloxone on the fetus.

c.) Buprenorphine and Pain

Julie Bohan, M.D.

For patients who are taking buprenorphine for opioid replacement therapy, adding another opioid for pain management is not effective due to the high affinity of buprenorphine for the opioid receptors. The action of other analgesic opioids is significantly blocked. Therefore, when an acute pain episode is predicted, such as after elective surgery in persons on buprenorphine, it is advisable to stop buprenorphine one-two days before surgery. Short-acting opioids can be prescribed post-operatively until they are no longer needed, at which time buprenorphine can be resumed. An alternative is to increase the buprenorphine dose temporarily in order to manage the pain. Dividing the total dose into three to four smaller doses per day is also helpful. If acute pain occurs unexpectedly, such as in a motor vehicle crash, full agonist opioids can be titrated upward to overcome the buprenorphine blockade. IV Fentanyl is often recommended but should be given in a closely monitored setting, such as an emergency department.

Many patients with chronic pain are requesting a trial of buprenorphine when other traditionally used opioids have become ineffective. In July, 2010, the FDA approved a once weekly buprenorphine transdermal patch (Butrans) for the management of moderate to severe chronic pain for patients requiring continuous, around the clock opioid analgesic. Buprenex is an IM/IV buprenorphine preparation that has been available for many years for the treatment of pain. Though not approved by the FDA, sublingual Buprenorphine is being used off-label for pain control. A total daily dose of Buprenorphine (usually 8mg) is divided into four times daily dosing for pain. The analgesic effect of buprenorphine, like methadone, requires more frequent dosing. Numerous studies have demonstrated the effectiveness of sublingual buprenorphine in the treatment of acute and chronic pain syndromes.

d.) Approach to Treating Patients with Complex Dual-diagnosis

Daniel Duhigg, D.O.

Screening for psychiatric comorbidity in persons with problematic opioid use (E.g. "Dual Diagnosis"):

Substance Use Disorders (SUD) co-occurring with other psychiatric illness worsen the severity of social dysfunction, and make treatment much more difficult. Dually diagnosed persons have more difficulty getting to appointments or remembering to take their medications. They are less likely to maintain gainful employment. Substance use is often done in an attempt to modify one's emotions and thoughts. Having a mood disorder, anxiety disorder, or psychotic disorder, and learning through experience that opioid use momentarily decreases bothersome symptoms dramatically increases the likelihood of regular use, which can lead to addiction. Tragically, the dually diagnosed suffer greatly from the division of mental health services into substance-related treatment versus all other psychiatric treatment. Of those who have access to healthcare services, they are often inadequately treated for either SUDs or their other non-SUD psychiatric disorders, which are split into separate treatment domains in the majority of the current healthcare system, despite evidence and guidelines supporting co-located service delivery.

Screening for psychiatric symptoms in persons with SUDs:

The diagnosis and appropriate treatment of a primary mood or anxiety disorder is likely to increase the chance of recovery from comorbid opioid use. The following are guidelines for clinicians to consider in making a diagnosis of Major Depressive Disorder (MDD), Bipolar Disorder, Generalized Anxiety Disorder (GAD), and Post-traumatic Stress Disorder (PTSD):

Major Depressive Disorder (unipolar depression): The two symptoms most specific to depression are 1) a depressed mood, and 2) a loss of desire, pleasure, or enjoyment in activities (termed anhedonia). The PHQ-2 is a two-question screen for depression that asks about depressed mood and anhedonia.
See http://www.commonwealthfund.org/usr_doc/PHQ2.pdf

An individual needs either of these two symptoms to qualify for depression. Other symptoms to consider include sleep disturbances, irritability, and lethargy, all of which can be caused by intoxication or withdrawal from opioids, mimicking depression. Only symptoms that are not caused by opioid intoxication or withdrawal are considered towards the diagnosis of depression. Qualifying symptoms include significant appetite changes, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or low energy nearly daily, feelings of worthlessness or excessive guilt, poor concentration nearly daily, or recurrent thoughts of death. At least five of the above symptoms, including either a depressed mood or anhedonia for greater than two weeks, is required to diagnose Major Depressive Disorder.

Bipolar Disorder

The diagnosis of Bipolar Disorder requires a history of at least one episode of Major Depressive Disorder as well as a history of one or more episodes of either mania or hypomania. Mania is a state of hyper-arousal lasting at least seven days. Hypomania is a similar state lasting between four and seven days. The symptom most specific to mania is a decreased need for sleep. A decreased need for sleep differs from insomnia in the following way: insomnia is when sleep is desired and felt to be needed, yet is not occurring; a decreased need for sleep is the experience that sleep is not necessary due to increases in energy and perceived alertness. During an episode of mania, an afflicted person will commonly feel that sleep is unnecessary, and their uncharacteristic heightened level of energy allows them to go days on end with little or no sleep, yet their energy does not appear to diminish without sleep, even as their ability to reason deteriorates as a result of not sleeping.

Other symptoms of mania include euphoria, psychotic symptoms such as hallucinations or delusional beliefs, marked increases in hedonic and/or risky behavior (this does not include chronically high levels of risky or hedonic behavior, which are more likely to indicate the presence of a personality disorder), increases in irritability, pressured speech, distractibility. The last five symptoms are not specific to mania. Euphoria, a decreased need for sleep, irritability, hallucinations, and increases in hedonic behavior can be caused by opioid intoxication and withdrawal, and if only present together in those situations, they cannot count towards a diagnosis of Bipolar Disorder. Many screening tools for Bipolar Disorder exist. However, they have a high false-positive rate, primarily due to tool users not understanding that all the symptoms of mania are required to occur at the same time, in discrete episodes, in order to count towards the diagnosis of Bipolar Disorder. Chronically

high levels of irritability and impulsivity are seen in a variety of disorders, ranging from traumatic brain injuries to personality disorders, and do not, by themselves, indicate the presence of Bipolar Disorder.

Generalized Anxiety Disorder (GAD)

Generalized Anxiety Disorder (GAD) is marked by the perception that one worries excessively, and that this worry contributes to at least three of the following: increases in muscle tension, irritability, insomnia, fatigue, restlessness, and/or worsened concentration. This constant, chronic worry needs to be a significant barrier to adequate functioning in order to qualify towards the diagnosis of GAD. Craving for and withdrawing from opioids can mimic GAD, and symptoms experienced in either state do not indicate GAD, rather they represent opioid-induced symptoms.

Post-Traumatic Stress Disorder (PTSD)

Post-Traumatic Stress Disorder (PTSD) is a state of heightened vigilance and anxiety resulting from trauma. The nature of the trauma can range from single events to chronic, repeated events that threaten or are perceived to threaten a person's safety. A substantial proportion of people who experience substance use disorders (SUD) and/or other mental health problems have also experienced trauma. Trauma is an experience that is emotionally painful, distressing, or shocking, which often results in lasting mental effects that can manifest as a trauma-related mental disorder such as Post-Traumatic Stress Disorder (PTSD), and involves an event (or repetitive events) and a response that includes an overwhelming experience of helplessness or powerlessness. Trauma can be a result of a single acute traumatic event (e.g., car accident, physical or sexual assault, death of a child), prolonged events (e.g., natural disasters, combat, domestic abuse) and childhood abuse (i.e., emotional, sexual and/or physical trauma, abandonment and neglect). Trauma may also result from witnessing traumatic events.

Addressing a history of trauma and associated disorders is often key to addressing complex mental health and substance use problems that do not respond well to traditional treatment, and yet past traumatic experiences are often not considered by clients or behavioral health providers when addressing present difficulties. In one study, less than half of all individuals reporting a trauma and only one out of 20 who currently met the diagnosis of PTSD had been identified by treating clinicians in case notes (Reynolds, 2005).

The diagnostic criteria (**see Table G**) for PTSD include experiencing or witnessing with helplessness and horror of one or more severe or life-threatening events followed by some form of re-experiencing, avoidance and psychic numbing, and hyperarousal and/or hypervigilant symptoms relating to the original trauma. The symptom complex must be of at least one month duration and associated with impaired functioning.

A number of validated screening tools for PTSD are available in the public domain. A useful tool is available through the VA, the PTSD Symptom Checklist for civilians.

www.mirecc.va.gov/docs/visn6/3_PTSD_CheckList_and_Scoring.pdf

Table G: DSM IV Criteria for PTSD*

A: Exposure to a traumatic event

This must have involved *both* (a) loss of "physical integrity", or risk of serious injury or death, to self or others, and (b) a response to the event that involved intense fear, horror, or helplessness (or in children, the response must involve disorganized or agitated behavior).

B: Persistent re-experiencing

One or more of these must be present in the victim: flashback memories, recurring distressing dreams, subjective re-experiencing of the traumatic event(s), or intense negative psychological or physiological response to any objective or subjective reminder of the traumatic event(s).

C: Persistent avoidance and emotional numbing

- avoidance of stimuli associated with the trauma, such as certain thoughts or feelings, or talking about the event(s);
- avoidance of behaviors, places, or people that might lead to distressing memories;
- inability to recall major parts of the trauma(s), or decreased involvement in significant life activities;
- decreased capacity (down to complete inability) to feel certain feelings;
- an expectation that one's future will be somehow constrained in ways not normal to other people.

D: Persistent symptoms of increased arousal not present before

These are all physiological response issues, such as difficulty falling or staying asleep, or problems with anger, concentration, or hypervigilance.

E: Duration of symptoms for more than one month

If all other criteria are present, but 30 days have not elapsed, the individual is diagnosed with Acute Stress Disorder.

F: Significant impairment

The symptoms reported must lead to "clinically significant distress or impairment" of major domains of life activity, such as social relations, occupational activities, or other "important areas of functioning."

** American Psychiatric Association. Diagnostic and statistical manual of mental disorders IV (Text Revision) (DSM-IV-TR), 4th edition, revised. Washington, DC: American Psychiatric Association, 2000.*

Craving for, intoxication, and withdrawal from opioids can mimic psychiatric symptoms, and the astute clinician should keep in mind the following differences:

1) Craving for opioids is a state of anxiety. However, this anxiety is the direct result of not having opioids, and is thus a secondary anxiety, rather than a primary illness. (An example of a primary anxiety disorder is Generalized Anxiety Disorder (GAD). GAD is a chronic condition, and its presence is not caused by drug

use.) Craving causes a transient anxiety, and is focused on substance use, or triggered by a substance-related cue (such as seeing paraphernalia, or passing by a location used to use opioids, etc.). Craving can occur in people with primary anxiety disorders as well, and in these cases the result is a worsening of baseline anxiety. Oftentimes, given the natural course of opioid dependence, a person with opioid addiction will frequently experience cravings on a daily basis, making the determination of a chronic (primary) versus intermittent (secondary to substance use) anxiety difficult.

The key to differentiating craving from a primary anxiety disorder is to assess the following:

A) *The chronology of the symptoms: do the anxiety symptoms predate substance use?* If so, then the individual likely has a primary anxiety disorder. The next step is to make a specific diagnosis.

B) *If present before the onset of substance use, did the anxiety symptoms worsen with use?*

C) *Are the anxiety symptoms only relieved with opioid use?*

D) *Are the anxious thoughts concerned primarily with opioid use?* If so, this is most likely a craving, rather than a primary anxiety disorder.

2) Intoxication with opioids frequently mimics depression, although some individuals paradoxically experience an increase in energy with opioid use, which can mimic mania. If these symptoms are present only in the setting of opioid use, then they are the result of intoxication, rather than a primary mood disorder. When individuals are using opioids daily it can be very difficult to differentiate a primary vs. secondary mood disorder, since they will likely be experiencing cravings, intoxication, and withdrawal multiple times throughout the day. The chronological relationship between symptom onset and initiation of opioid use/relapse can often be helpful in the differentiation of primary versus secondary illness. In cases where the onset of substance use and symptom onset coincide, especially if they both occurred in adolescence or early adulthood, information about the presence or absence of symptoms during a period of sobriety greater than one month can be helpful in making a distinction between a depression, mania, or opioid-caused disorder.

3) Opioid withdrawal causes extreme emotional changes, including anger, anxiety, sadness, frustration, despair, hopelessness, etc. In opioid withdrawal these emotions are paired with extreme physiological changes, and can increase and decrease dramatically over a very short period of time. This transient emotional instability is often misinterpreted as mood lability, raising the suspicion of Bipolar Disorder. The difference between the two is that emotional instability as a result of opioid withdrawal disqualifies that symptom as counting towards a diagnosis of Bipolar Disorder, which is only ever a primary disease, never secondary to the use of or withdrawal from a substance (DSM-IV-TR, APA, 2000). The natural course of opioid dependence at times when procuring the drug is difficult often includes experiencing withdrawal symptoms on a daily basis, making it difficult to differentiate opioid withdrawal from a primary anxiety, depression, mania, or Impulse Control Disorder. Information about the presence or absence of mood or anxiety symptoms during times of abstinence can help clarify whether they are primary or secondary to chronic/frequent withdrawal.

Specialty dual diagnosis clinics such as the Dual Diagnosis Rehab program at UNM's Addiction and Substance Abuse Programs (ASAP) are an optimal model, as drug-related and non-drug-related illnesses are

treated comprehensively in an integrated manner. Group therapies such as "Double Trouble in Recovery" use the 12-step model from Alcoholics Anonymous, but also speak about psychiatric symptoms and the importance of treatment.

e.) Pharmacologic Treatment of Co-occurring Psychiatric Disorders in Patients with Substance Use Disorders (SUD)

Deliberation about what medications to prescribe to patients with active substance use disorders requires a careful consideration of their psychiatric diagnoses, their medical co-morbidities and overall health status, and how the specific substances they are using might interact with the medications being considered.

In the case of opioid abuse and dependence, the most dangerous medications to recommend or prescribe are those that depress respiratory drive, such as the benzodiazepines (e.g. Valium, Ativan, Klonopin, Xanax, etc.). The majority of unintentional lethal overdoses with opioids in New Mexico include a mixture of an opioid with a benzodiazepine. Although benzodiazepines can be effective at decreasing anxiety symptoms, the risks of using them in individuals who are misusing opioids typically outweigh their benefits.

There are typically two clinical situations where providers consider the use of a benzodiazepine: 1) when facing an incredibly anxious patient; and 2) when considering a benzodiazepine taper to assist a patient to get off of alcohol or benzodiazepines and decreasing the risk of withdrawal seizure. We will consider them separately.

1) Facing an incredibly anxious patient

Benzodiazepines are effective anxiety relievers. However, patients who misuse opioids are at high risk of lethal respiratory depression if they add a benzodiazepine to their system. Alternatives to benzodiazepines for same-day effects on anxiety include antihistamines (e.g. Benadryl, hydroxyzine, trazodone, quetiapine, etc.), anti-adrenergic medications (e.g. Clonidine, guanfacine, prazosin, tizanadine, etc.), and certain GABA-ergic medications (e.g. Gabapentin, pregabalin, etc.). Many of these medications do not carry FDA indications for the treatment of anxiety, but the medical literature provides some support for the use of all those mentioned in this capacity. The long-term treatment of anxiety disorders is often best attained with medications affecting the serotonin system.

2) Considering a benzodiazepine taper to prevent a withdrawal seizure in someone trying to stop using alcohol and/or benzodiazepines in the presence of concomitant opioid use

Benzodiazepines are not effective in the treatment of acute opioid withdrawal, and pose a significant risk of respiratory depression. Benzodiazepines are effective in reducing the risk of an alcohol or benzodiazepine withdrawal-induced seizure, and are first-line treatment for alcohol and benzodiazepine withdrawal that is severe enough to require medical treatment. That said, the risk of respiratory depression is more significant than the risk of a withdrawal seizure for many patients, making alternatives to benzodiazepines reasonable options in such cases. Withdrawal seizures have been prevented with time-limited tapers using antiepileptic medications, such as Carbamazepine. Patients with a history of withdrawal seizures, traumatic brain injuries,

or epilepsy are at a significantly higher risk of experiencing an alcohol or benzodiazepine withdrawal induced seizure, underscoring the need for timely assessment and treatment.

Selective Serotonin Reuptake Inhibitors (SSRIs) are the first-line treatment for Generalized Anxiety Disorder (GAD) and Post Traumatic Stress Disorder (PTSD). Providers are reminded that SSRIs can take four to six weeks to have an effect at a given dose, and may transiently increase anxiety initially. The most common side effects are gastrointestinal upset and headache. Patients can be counseled that if they can tolerate these side effects they will resolve in almost everyone by the end of two weeks. An adequate trial of an SSRI is four to six weeks at a given dose.

SSRIs do have some risks. SSRIs are capable of triggering a manic or hypomanic episode in individuals with Bipolar Disorder. For this reason, it is pertinent to screen all patients for Bipolar Disorder prior to prescribing an SSRI, and to avoid using this class of medications in those patients. Although the FDA placed a box warning about increased suicidal thinking in youth on all medications in this class, the data overwhelmingly shows that the risk of suicide decreases incrementally with each week of treatment with antidepressant medications. In recent years post-marketing analyses have identified an increased risk of Atrial Septal Defect (ASD) in newborns of mothers treated with Paroxetine during pregnancy.

A non-SSRI medication that decreases anxiety by affecting the serotonin system is Buspirone. Buspirone has been shown to be as effective as Valium for treating anxiety in a head-to-head trial (Am J Psychiatry, 1979;136:1184-6). Like SSRIs, Buspirone requires four to six weeks to have a therapeutic effect. Unlike any of the SSRIs, Buspirone needs to be taken two to three times a day, which can be hard for some patients to remember.

Alternatives to SSRIs include Serotonin and Norepinephrine Reuptake Inhibitors (SNRIs) such as Venlafaxine and Duloxetine, and the Norepinephrine Reuptake Inhibitor (NRI) Bupropion.

First-line treatment for Major Depressive Disorder (MDD) is with an antidepressant, including SSRIs, SNRIs, and Bupropion.

The goal of the treatment of bipolar disorder is to effectively treat periods of depression and mania/hypomania. Some medications treat both, while others only treat one or the other. Lithium is an example of the former. It is an effective antidepressant, and an anti-mania medication. Lithium has a very narrow therapeutic window, as well as a narrow safety window. This means that success with lithium treatment requires educating patients about the risks of lithium toxicity, steps that limit those risks (proper hydration, holding doses if the patient experiences emesis or diarrhea, not over-taking the medicine, etc.), and consistent monitoring of serum drug levels. Medications that control mania but not depression include valproic acid, and carbamazepine. Many atypical antipsychotic medications have demonstrated an ability to control mania. Lamotrigine has been shown to decrease the frequency of depressive episodes in individuals with Bipolar Disorder, but its ability to treat symptoms of depression is limited.

f.) Working with patients who are medically fragile

Miriam Komaromy, M.D.

Buprenorphine can be used in patients who have a wide variety of serious medical conditions. In a few cases, special care needs to be taken because of possible interaction between buprenorphine treatment and the co-occurring medical condition.

Patients who have unstable or very severe cardiovascular disease, such as advanced heart failure or angina/coronary artery disease, may have difficulty tolerating the stress of induction onto buprenorphine. The same may be true for patients with severe lung disease, such as COPD. These patients may need to undergo induction in an inpatient setting to allow for close monitoring, or may be better served by methadone treatment.
Most patients do not experience excessive daytime somnolence with buprenorphine treatment, but this is somewhat variable. Patients who have underlying conditions that increase somnolence, such as sleep apnea or narcolepsy, will need close monitoring during early treatment to evaluate the effects of buprenorphine.
For patients who are pregnant and patients with liver disease, *see Care of Opioid-addicted Women Who Are Pregnant or Breastfeeding, page 72* and *Buprenorphine vs. Methadone in Pregnancy, page 76*.

g.)Buprenorphine and Liver Disease including Hepatitis C.

Miriam Komaromy, M.D.

Current guidelines (Kraus, 2011) recommend that patients not be offered buprenorphine treatment if their transaminases (AST or ALT) are elevated more than three to five times the upper limit of normal.

Case reports and some case series have documented a very small risk of extreme elevation of the transaminases associated with buprenorphine treatment, which seems to be more likely to occur in persons who inject buprenorphine and in those infected with hepatitis C (e.g. Bruce, 2011; Pevriere 2009; Herve, 2004). Interestingly, however, a recent study in teens and young adults treated with buprenorphine found that mild elevations of transaminases occurred in study participants, but the elevations were actually greater among those who were tapered off of buprenorphine rapidly compared with those who were maintained on buprenorphine for nine weeks. Furthermore, in participants who were infected with hepatitis C, those treated with buprenorphine for nine weeks had significantly lower transaminases compared with those who were rapidly tapered off (Bogenschutz, 2010). Recent data presented in abstract form suggests that the risk of hepatotoxicity may be extremely minimal (Saxon, 2012), so treatment restrictions based on elevation of transaminases may prove to be unnecessary.

Patients infected with hepatitis C may need to be maintained on buprenorphine in order to withstand the stress of hepatitis C treatment. Studies have shown that these patients may do extremely well on treatment, particularly if they receive daily directly observed treatment with buprenorphine (Waizmann 2010; Belfiori, 2009).

h.) Buprenorphine and HIV Disease

Miriam Komaromy, M.D.

Buprenorphine treatment has been shown to be safe and effective in patients who are opioid-addicted and have HIV disease.

Opioid injecting drug users are less likely than other HIV-infected patients to be treated with Highly Active Anti-Retroviral Treatment (HAART), and when treated with HAART, are less likely to achieve non-detectable viral loads (Spire, 2007).

Treatment with methadone or buprenorphine has been shown to reduce frequency of drug use, and to reduce HIV risk behaviors; and methadone has been shown to reduce rates of HIV infection in opioid injecting drug users (IDUs) (Gowing 2011; Altice 2011; Metzgar 2010). Adherence to buprenorphine treatment is associated with greater likelihood of viral suppression and higher CD4 counts (Altice 2011, Roux 2009). Treatment of HIV infected patients with buprenorphine is associated with an approximately 50% decrease in opioid injection drug use, and this use decreases with increasing time on treatment (Fiellin, 2011). HIV-infected patients who are treated with buprenorphine have about the same rates of retention as non-HIV infected patients (49% at 12 months) (Fiellin, 2011).

Recent studies of the provision of buprenorphine as part of an integrated HIV/addiction treatment program have shown that this approach results in a far greater proportion of HIV- infected patients entering into treatment compared with referral to outside services (41% vs. 10%) (Lucas, 2010).

Use of buprenorphine to treat HIV-infected patients with opioid addiction is very similar to its use in other populations. Although interactions with Anti-Retrovirals (ARVs) cause several changes in buprenorphine levels and in ARV levels, these do not appear to be clinically significant. A possible exception is the interaction with atazanavir, which may raise the buprenorphine levels significantly, and has been reported to cause drowsiness and cognitive impairment (Gruber, 2010); however, a subsequent study found no clinical effect from interaction with atazanavir (Vergara-Rodriguez, 2011).

An additional consideration has been the fact that most opioids have been shown to produce immune suppression, raising concern that this could interfere with treatment of HIV-infected patients (Sacerdote 2010). However, studies have shown that buprenorphine has unique immunologic properties, and does not lead to immune suppression, making it an ideal agent for use in an HIV-infected population (Pergolizzi, 2011).

i.) Buprenorphine Treatment in Adolescents

Robert Buser, M.D.

Disclaimer: Information and recommendations provided in this section are not intended to create a legal standard of care for any physician or to interfere with his or her clinical judgment or practice of medicine.

Adolescence: There are unique aspects of adolescence that warrant consideration in the treatment of a teenage youth who presents with opioid abuse or opioid dependence problems.

Little research has been conducted to date addressing the unique status of the opioid-dependent adolescent. Only a few reports have been published in the last 30 years reporting on some general characteristics of this population. At this time, no established absolute standard of care exists for opioid-dependent adolescents although consensus recommendations have been evolving regarding the promising efficacy of buprenorphine for this population of opioid- addicted individuals (Krauss, 2011).

High Risk for Substance Abuse: Adolescents are in the age group, which is at greatest risk for initiating substance use. The recreational use of heroin and other opioids plus the potential for developing addiction to opioid drugs by adolescents are growing public health concerns in the United States.

Many adolescent users of prescription pain pills do not recognize them as narcotic drugs, believe these drugs are safer than illicit drugs (because they are "my parents' prescription") and many do not realize that it is illegal to take a prescription opioid pain killer that was not prescribed to them. Illicit opioid prescription abuse and dependence not uncommonly is also a pathway toward heroin dependence.

The relative ease of access to heroin in some communities has caused a marked increase in heroin use in this age group through the smoking of heroin rather than through needle injection although some adolescents progress rapidly to daily injection of heroin.

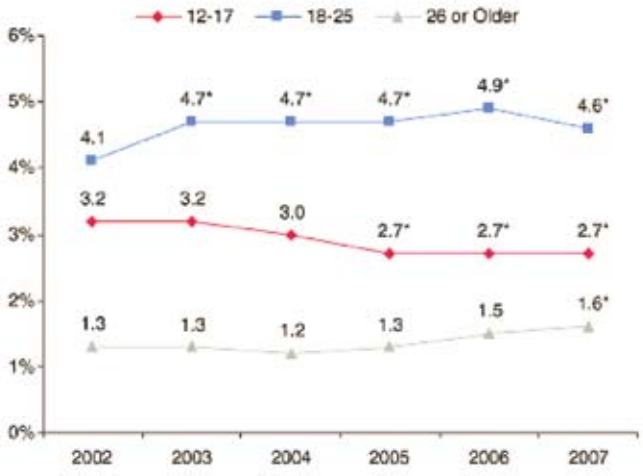
Regarding heroin use in New Mexico: 4.7% of New Mexico high school age youths reported lifetime heroin use, compared to 2.5% of U.S. high schoolers. Similarly, 3.6% of New Mexico high schoolers reported lifetime injection drug use, compared to 2.0% of the broader U.S. high school population. Female high schoolers in New Mexico were less likely than males in New Mexico high schools to report lifetime heroin use (3.6 percent versus 5.8 percent respectively) or to report heroin injection drug use (1.3 percent versus 2.7 percent) (CDC, 2009; NIDA 2011).

There is a subset of adolescent users of opioids in New Mexico, mostly heroin, that represent a subpopulation of multigenerational heroin-dependent individuals where grandparents and parents have introduced their children to heroin (Greenfield, 2011).

Non-medical use of prescription opioids: The prevalence of non-medical use of prescription opioids among adolescents has significantly increased over the past decade and surpasses rates of heroin use in this population. Since 1992 the percentage of adolescents who report having taken a narcotic drug that was not prescribed to them in the past year has risen from 3.3% to the current rate of 9.5%.

The Substance Abuse and Mental Health Services Administration (SAMSHA) recently reported on the use of the prescription drugs morphine, oxycodone and hydrocodone (Vicodin) without physician approval. Overall, 2.1 percent of all Americans over age 12 used one of these drugs in a non-medical fashion, making it the second most abused type of drug nationally after marijuana. Young adults age 18-25 had the highest rate of use at 4.6 percent in 2007—down slightly from the 2006 rate of 4.9 percent but still above the 2002 low (see table below). Additionally, use has similarly increased among adults aged 26 or older.

Nonmedical Use of Prescription Pain Relievers in the Past Month, by Age Group: Percentages, 2002 to 2007



Source: SAMHSA, 2002 to 2007 National Surveys on Drug Use and Health.

Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (February 5, 2009). *The NSDUH Report: Trends in Nonmedical Use of Prescription Pain Relievers: 2002 to 2007.* Rockville, MD. http://oas.samhsa.gov/2k9/painRelievers/nonmedicalTrends.cfm

There are many factors that underlie this trend with the most salient factor being the ease in which these drugs can be obtained. One in five teenagers reports being offered a prescription painkiller to get high, and 36% of high school seniors report these drugs are "fairly easy" or "very easy" to obtain with the most common source of these pills being a friend or relative. A common scenario is that a legitimate opioid prescription was taken from a medicine cabinet at home and either consumed by the teen or given or sold to another teen without the parent's or relative's awareness (Johnston, 2010; Manchikanti, 2010; Shah, 2011).

The Albuquerque office of the Drug Enforcement Administration (DEA) cited controlled prescription drugs as the primary drug threat in the first half of 2010 (*Proceedings of the Community Epidemiology Work Group, January, 2011).*

Although the majority of teens who experiment with opioids will naturally quit or have the good fortune to successfully transition out of this dangerous and risky phase of life, some unlucky teenagers do progress to serious life-threatening opioid abuse or opioid dependence. This exposes the teen to risk of serious complica-

tions or unfortunate outcomes, which may include accidental death by unintentional drug overdose, suicide by intentional overdose; drug impaired driving accidents, death by other types of accidents caused by drug impairment, marked increased risks of contacting infectious diseases including HIV, hepatitis C, and criminal association with attendant serious legal implications (Hahn, 2002). In 2007-2008, New Mexico ranked first among all states for illicit drug dependence among persons age 12 and older. *Source: National Survey on Drug Use and Health (NSDUH) 2007-2008.*

Drug-Induced Deaths: As a direct consequence of drug use, 471 persons died in New Mexico in 2007. This is compared to the number of persons in New Mexico who died from motor vehicle accidents (379) and firearms (295) in the same year. New Mexico drug-induced deaths (23.9 per 100,000 population) exceeded the national rate (12.7 per 100,000) (Shah 2011).

Assessment and evaluation before recommendation for buprenorphine treatment:
As with adults, the decision to initiate medication-assisted therapy in an adolescent begins with an evaluation of the patient to confirm the diagnosis of opioid dependence and to determine if the youth is an appropriate candidate for office-based treatment with buprenorphine.

Buprenorphine has been approved by the Food and Drug Administration (FDA) for the treatment of opioid-dependence for those 16 years of age and older. Few studies have systematically evaluated buprenorphine in the treatment of opioid-dependent adolescents and the literature is not clear regarding the duration of addiction that is necessary prior to initiating buprenorphine maintenance in an adolescent. However, all available evidence (including two randomized trials) suggests that in spite of their shorter duration of dependence, opioid-dependent youth respond to buprenorphine similarly to adults, and that they tend to relapse at high rates once buprenorphine is discontinued (Woody, 2008; Marsch, 2005).

This is in contrast to individuals under age of 18 who are requesting methadone maintenance where it is legally mandated that methadone maintenance cannot be used until the youth has had two documented unsuccessful attempts at short-term opioid treatment withdrawal procedures or drug-free treatment within a 12-month period.

Consideration for potential buprenorphine diversion and abuse: Consideration of the potential for diversion and abuse of buprenorphine among the adolescent population is relevant to an understanding of its safety. Because it is prescribed by a physician and because of the minimal overdose risk, this medication may be correctly perceived as safer by this population. Buprenorphine is consistently reported to make people feel "normal" rather than "high" or "intoxicated" when it is taken sublingually by opioid-dependent individuals. However, when taken by opioid-naïve individuals, and particularly when it is crushed and dissolved/injected or snorted, it is associated with intoxication and is thus diverted and abused.

Because buprenorphine is a partial agonist, its opioid effects, such as euphoria and respiratory depression reach a ceiling of maximum effect, unlike heroin or methadone. For this reason, buprenorphine may be safer than methadone, as long as it is not combined with sedatives such as tranquilizers or alcohol; however, diversion is still an illegal and an undesirable side effect of buprenorphine prescribing.

The physician also needs to consider the patient's stability, home environment and ability to manage take-home dosages when deciding on whether the youth is an appropriate candidate for office-based treatment with buprenorphine.

Some adolescents may present with very short histories of opioid drug use (weeks to a few months), and so it is important to clarify whether the client has true dependence.

Assessment and evaluation before recommendation for buprenorphine treatment:
Just as for adults, a thorough assessment of current and past opioid use includes attention to the types of opioids used, which may include prescription opioids, heroin, or a combination of opioids. The current use pattern and the presence of opioid withdrawal symptoms are also assessed in each potential patient.

The physician also needs to assess for misuse and abuse of substances other than opioids. Some types of co-occurring disorders pose a problem for use of buprenorphine MAT. Patients addicted to benzodiazepines or alcohol are at increased risk of respiratory suppression and overdose death if they are treated with buprenorphine MAT.

See section above on assessing a patient for buprenorphine MAT, page 88.

Acceptance for treatment with recommendation for buprenorphine: After the physician has determined through extensive assessment and evaluation that the adolescent is appropriate for admission to outpatient treatment with buprenorphine, a treatment contract with the client should be executed that stipulates if the client does not comply with the buprenorphine MAT program, he or she may be tapered off of buprenorphine or transferred to another program.

Detoxification with buprenorphine/naloxone over an extended period of 12 weeks was shown to be significantly more effective in reducing opioid and other drug use than a 14-day short-term detoxification among opioid-dependent youth. Insufficient information is available on how long buprenorphine-naloxone should be continued if treatment with buprenorphine/naloxone has progressed to the maintenance phase. However, high rates of relapse were found after the buprenorphine was tapered in both the two week and the 12 week conditions (Woody 2008; Subramaniam 2011).

Although strong evidence is lacking on the best methods for managing high-risk patients, compared to lower risk patients, potential risks can be minimized by more frequent and intense monitoring. Existing data does suggest that once *DSM-IV* criteria for opioid dependence with physiologic features are met, the course of addiction appears similar regardless of its length, and clinicians should be in no hurry to stop an effective medication simply because the patient is young and has been addicted for a short time.

Treatment outcomes appear optimal when medication is provided along with intensive behavioral therapy to promote alternative rewarding behaviors and to strengthen inhibitory control.

Providing evidence-based treatment to this young population greatly reduces their likelihood of continued and escalating substance involvement and may prevent a substance-abusing life trajectory.

Addiction, particularly in minors, can adversely affect the whole family. It is important that family members be educated on the seriousness of the addiction and the critical nature of the treatment regimen so that Buprenorphine can be administered as intended to improve and maximize the opportunities for recovery. Whenever possible, the families and the opioid- addicted young person should be treated together.

Educating family members on the seriousness of opiate addiction is a critical piece of buprenorphine treatment. Buprenorphine treatment must be coupled with counseling. Buprenorphine should be treated as a tool that is effective only when it is used appropriately and only in conjunction with counseling since opioid addiction is as much a mental, psychological, and emotional addiction as it is a physical addiction (Marsch 2006 and 2007).

http://www.attcnetwork.org/explore/priorityareas/science/blendinginitiative/bupyoungadults/

Naltrexone is approved for treating heroin addiction but has not been widely utilized due to poor patient compliance. This medication blocks opioids from binding to their receptors and thus prevents an addicted individual from feeling the effects of the drug. Naltrexone as a treatment for opioid addiction is usually prescribed in outpatient medical settings, although initiation of the treatment often begins after medical detoxification in a residential setting. To prevent withdrawal symptoms, individuals must be medically detoxified and opioid-free for several days before taking naltrexone.

Naltrexone may be more useful in teens than it has been with opioid-addicted adults, especially if parents supervise adherence.

Depot naltrexone (Vivitrol) is another formulation that is FDA approved for adults with opioid dependence and is administered monthly by injection, potentially improving treatment adherence. Although this would appear to be an attractive option for treatment of adolescents, there have not been controlled studies of Vivitrol in adolescents.

The medical treatment provider can also play an important role for patients with non-substance psychiatric disorders by correctly identifying the condition and referring for treatment. It is important to take a trauma history in all minors being treated for opioid addiction. Childhood physical, sexual, and emotional trauma is extremely common in individuals with a history of addiction.

Parental Consent

This section provides excerpts from New Mexico laws and regulations governing the ability of minors to consent to treatment, and treatment providers' obligations.

The following material is intended as a guide, and is not intended to provide legal advice. Additionally, new laws may have been adopted related to any or all of the subjects addressed. Please check with your legal counsel for site-specific clarification about confidentiality and disclosure issues, including any policies related to the HIPAA privacy rule.

The following list of applicable laws is not exhaustive, but is merely intended to illustrate some of the laws

that apply in New Mexico with respect to minors' ability to consent to treatment. The provider should consult with an attorney whenever a question arises as to whether a minor has the legal ability to consent to treatment, or whether the provider should require parental consent in a given case.

Disclaimer: This manual provides information. It does not constitute legal advice or representation. For legal advice, readers should consult their own counsel.

A Minor:
A minor is a person under the age of 18.

Parental consent is a critical issue for physicians who treat adolescents addicted to opioids. Adolescents' rights to consent to or refuse medical treatment differ from those of adults. Rules differ from state to state regarding whether an adolescent may obtain substance abuse treatment without parental consent.

In New Mexico as a general rule, New Mexico law requires a minor who seeks medical treatment to obtain the consent of a parent or guardian. Several exceptions are described below. In certain situations, a minor who understands the risks, benefits, and proposed alternatives to certain health services may give informed consent without the consent of a parent or guardian.

If a minor fits into one of the following categories, she/he may consent to all healthcare evaluation and treatment without the consent of a parent or guardian:

- A minor who is married or has been married.
- A minor who serves in the armed forces.
- A minor who is age 16 or older who has been legally emancipated by a court order, unless the court order specifies otherwise.

Mental health treatment:

A. A child fourteen years of age or older is presumed to have capacity to consent to treatment without consent of the child's legal custodian, including consent for individual psychotherapy, group psychotherapy, guidance counseling. Case management, behavioral therapy, family therapy, counseling, substance abuse treatment or other forms of verbal treatment that do not include aversive interventions. Nothing in this section shall be interpreted to provide a child fourteen years of age or older with independent consent rights for the purposes of the provision of special education and related services as set forth in federal law.
B. Psychotropic medications may be administered to a child fourteen years of age or older with the informed consent of the child. When psychotropic medications are administered to a child fourteen years of age or older, the child's legal custodian shall be notified by the clinician.
C. A clinician or other mental health and developmental disabilities professional shall promote the healthy involvement of a child's legal custodians and family members in developing the child's treatment plan, including appropriate participation in treatment for children fourteen years of age or older. However, nothing in this section shall limit the rights of a child fourteen years of age or older to consent to services and to consent to disclosure of mental health records. NMSA § 32A-6A-15 (New Mexico Children's Mental Health and Developmental Disabilities Act).

NEW MEXICO STATUTES AND COURT RULES UNANNOTATED
http://www.conwaygreene.com/nmsu/lpext.dll?f=templates&fn=main-h.htm&2.0

Mental Health Services Under age fourteen: Except as provided in Subsection B of this section, the informed consent of a child's legal custodian shall be required before treatment or habilitation, including psychotherapy or psychotropic medications, is administered to a child under fourteen years of age. NMSA § 32A-6A-14 (NM Children's Mental Health and Developmental Disabilities Act).
http://www.conwaygreene.com/nmsu/lpext.dll?f=templates&fn=main-h.htm&2.0

Emancipated, married or divorced minors: "Notwithstanding any other provision of the law, and without limiting cases in which consent may otherwise be obtained or is not required, any emancipated minor or any minor who has contracted a lawful marriage may give consent to the furnishing of hospital, medical and surgical care to such minor, and the consent is not subject to disaffirmance because of minority. The consent of a parent of an emancipated minor or of a minor who has contracted a lawful marriage is not necessary in order to authorize hospital, medical and surgical care. For the purposes of this section only, subsequent judgment of annulment of the marriage or judgment of divorce shall not deprive the minor of his adult status once attained." NMSA § 24-10-1 (NM Public Health Act).

When a minor needs immediate hospitalization, medical attention or surgery, and a parent or guardian cannot be located after a reasonable effort has been made, another person standing in lieu of the parent or guardian may give consent.

Confidentiality is not absolute. Confidentiality must be overridden when:

- Child abuse reporting is required, or
- There is a risk of harm to self or others.

http://www.conwaygreene.com/nmsu/lpext.dll?f=templates&fn=main-h.htm&2.0

HIPAA Privacy Rules or other medical records laws may require that confidentiality be overridden in specific circumstances.

Providers should be aware of their obligation to protect the confidentiality of patient substance abuse patient records, as set forth in Federal regulations at Title 42 of the Code of Federal Regulations, Part 2. Patient privacy becomes especially important with the national movement toward electronic health records. Additional information about privacy and substance abuse treatment is available at http://www.samhsa.gov/healthPrivacy/ and http://www.samhsa.gov/HealthPrivacy/docs/SAMHSAPart2-HIPAAComparison2004.pdf

If medical personnel have reasonable suspicion that a minor is an abused or neglected child, then an immediate report must be made to a local law enforcement agency, to the New Mexico Children, Youth and Families Department office in the county where the minor resides or to a tribal law enforcement or social services agency.

Facilitating Communication:
Encourage minor patients to involve their parents or guardians when appropriate.
Establish a trusting relationship with patients and parents and discuss the issue of confidentiality.

Initiate conversations with minors about when they can expect healthcare to be confidential. Discuss whether and how minors' parents or guardians will be involved in their healthcare.

Open communication with parents is not always possible for young people. Some come from homes where physical violence, sexual abuse or emotional abuse is prevalent. For these and other reasons, minors may legally receive certain health services without being required to tell their parents or obtain their parents' consent.

www.kessjones.com/documents/10-Ford.ppt

15. Office Staff Education

Bonnie Kraybill Mount, R.N.

When a medical practice begins to provide MAT, office staff may express anxiety about working with addicted patients and about providing MAT. The following section outlines training topics that can be useful in allaying staff fears about providing this treatment and preparing staff to work effectively in a treatment team providing care to addicted patients.

Buprenorphine Office Staff Training	Who should be trained
1. Prior Authorizations	Medical Assistants, Front Office or designated staff who may assist with billing or Prior Authorization
2. Prior Notification	Likely the same staff that participates in Prior Authorization
3. Basic understanding of addiction	All staff
4. Handling challenging behaviors and setting appropriate boundaries	All staff
5. Behavior Contract	All staff should participate in drafting the behavior contact to ensure participation and ownership
6. Addressing staff concerns with working with persons with addictions	All staff
7. Follow up visit protocol	Nurse or Medical Assistant
8. Phone Script	Front office staff or any staff answer phones
9. Prescription Monitoring Program (PMP)	One selected agent for each site per prescriber

1. Prior Authorizations: Private insurance, State Coverage Insurance (SCI), and Medicaid often require prior authorization for treatment with buprenorphine. *See sction D: How Will the Patient Pay for Medication and Office Visits page 35.*

2. Basic understanding of addiction and how the disease of addiction may manifest in behaviors that office staff may find challenging. Education and on-going learning is encouraged.

Components for understanding addiction:

- Addiction as a disease
- Basics of buprenorphine: how it works in the brain and body
- Withdrawal from opioids
- The basics of other substances that may be used in addictive disorders (benzodiazepines, alcohol, cocaine, marijuana)
- Maintenance
- Relapse
- Recovery

4. **Handling challenging behaviors and setting appropriate boundaries:** We can support a person in their recovery by giving encouragement and support. We cannot be lax in boundaries by being judgmental or by being overly supportive i.e. lending money, providing special favors.

5. **Behavior Contract:** Clinic guidelines for acceptable patient behavior: addressing diversion, mutual respect, customer service, dangerousness, self-harm, and missed appointments.

6. **Addressing staff concerns about working with persons with addictions:** listening to each other's ideas, problems, beliefs, and experiences about working with people who have the disease of addiction can open up discussion and solve team issues.

7. **Follow-up visit protocol:**

Pill counts – have the patient bring their pill bottle to the visit. Documents the date the prescription was filled and have the patient empty their bottle on a clean surface. Use a tongue depressor or other clean instrument to count each tablet while the patient watches. If there is a disagreement, count again. Document the number of pills.

Urine testing: in-office test or collect specimen to send to the lab. An observed specimen may be required. For an observed urine test, staff must be trained to complete this procedure.

Before collecting the urine specimen:

- Labeling the specimen: Name, Date of birth, date and time of collection
- Verify of donor identity with a drivers license or medical record photo
- Ask the client to remove any unnecessary outer clothing (e.g. coat, hat) and leave any personal belongings in a secure area. Ask the client to empty his or her pockets and display the items to ensure that no items could be used to adulterate the specimen. Have the client wash their hands. Allow the client to select the specimen cup and allow them to open the cup, breaking the seal.

For unobserved collection, direct the client:

- To enter the restroom used for urine specimen collection with the collection container
- To provide a specimen of at least 30 ml

- Not to flush the toilet, and
- To return with the specimen within approximately four minutes of completing the void (i.e., longer wait periods may cause the temperature to be out of range and necessitate a direct observed collection).

The staff member records the temperature on the urine specimen cup immediately.

For observed collection:

- The observer must be the same gender as the donor. The individual serving as the direct observer enters the restroom with the client.
- The observer must directly watch the urine go from the donor's body into the collection container.
- The donor and observer leave the restroom and the donor hands the collection container directly to the collector

(DHHS, SAMHSA, Center for Substance Abuse Prevention, Urine Specimen Collection Handbook for Federal Agency Workplace Drug Testing Programs, 2004)

Prescription: Ensure that the patient has their next prescription for the proper number of pills to last long enough to get to their next scheduled appointment.

Any new medical or social stressors: ask about any new conditions or issues that may impact their treatment or are triggers for relapse. Report any changes to the physician for assessment of increased levels of care or changes in treatment. Examples include, but are not limited to:
Any change in health status
New prescription
New over-the-counter medication
Report of infection or abscesses
Change in relationship status
Change in living situation
Change in employment status

8. Phone Script
Office staff may use a phone script during an initial contact to orient the potential new client to clinic policies and procedures. For instance, if the clinic policy requires that the patient attend an initial education session prior to meeting with the physician to discuss buprenorphine treatment, staff can schedule the patient for this session rather than setting up a new patient appointment. Using a script or checklist for the contact minimizes the risk of forgetting important information and increases efficiency. Phone scripts may also be utilized during follow-up contacts or for missed appointment contacts to ensure consistency.

9. Prescription Monitoring Program (PMP)
The PMP is a service through the New Mexico State Board of Pharmacy that provides data that allows prescribers (physicians, nurse practitioners, Physician Assistants) to look at prescriptions for controlled substances that have been filled by a pharmacy within the preceding 12 months. You may search for prescriptions

written under the physician's name or by each patient. The Board now allows for one agent per site, other than the prescriber, who may run reports for that prescriber. You must first submit an Authorized Agent of Practitioner Request Form. This agent may be any office staff and is not limited to medical professionals.

PMP instructions:
http://www.rld.state.nm.us/pharmacy/PDFs/PrescriptionMonitoring/PMP%20instructions.pdf

Authorized Agent of Practitioner Request Form
http://www.rld.state.nm.us/pharmacy/PDFs/Forms/PMP%20AGENT.pdf

16.) Emergency Crisis Intervention Information Regarding Opioid Overdose: Working with Family Members

Jennifer Weiss,Susan Cianciabella, The Heroin Awareness Committee

Educating family members on the seriousness of opioid addiction is a critical piece of buprenorphine treatment. Families may view buprenorphine with a false sense of security when helping their loved one battle opioid addiction. It is critical for the family members to have a thorough understanding of how opioids affect the brain and how powerful an opioid addiction is. They should also understand how buprenorphine works, how it can be abused, and how buprenorphine treatment should be coupled with other forms of treatment such as outpatient counseling. Buprenorphine should be treated as a tool that is effective only when it is used appropriately and with appropriate supports.

Critical information that should be shared with family members includes a detailed explanation of how opioids affect the brain, why opioids are so addicting, how they affect the opioid receptors in the body and why overdoses occur so often after a person has abstained from use. It is also important for physicians to explain why buprenorphine is effective at relieving withdrawal symptoms for an opioid addict. This information is critical as it provides the entire picture of the addiction itself and how the buprenorphine assists with the process of abstinence from opioids. The effectiveness of Narcan for treatment of opioid overdose should also be explained and, when possible, Narcan training should be provided to the family and the addicted person as well.

Once opioid addiction and buprenorphine treatment is explained, it is important for family members to understand how important the sublingual administration of buprenorphine is, how important it is to take a full dose as prescribed, and how easily it can be abused. It should be explained that buprenorphine must be taken as prescribed, that it is important that the addicted individual let the strip or pill dissolve under their tongue, and that the absorption will be decreased by drinking water or swallowing the dose, which is something that may be desired by someone who is taking buprenorphine while still abusing other opioids. This is typical behavior for someone who is abusing buprenorphine while still using opioids. Family members should also be educated that buprenorphine has a significant street value. Addicts can get high from crushing and snorting buprenorphine, and addicts often use it to curb withdrawal symptoms when the opioids they are abusing are unavailable.

Addiction is a family disease, and it is important that family members be educated on the seriousness of the addiction and the critical nature of the treatment regimen, so that buprenorphine can be administered as intended. This will give the best odds of recovery. The families and the addicted person should be treated together. Useful resources for family support include Al-Anon and Nar-Anon, as well as family counseling based on the Community Reinforcement Approach (CRAFT). http://casaa.unm.edu/crainfo.html

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Appendix 1: Physician Requirements

US Code of Federal Regulations

TITLE 21—FOOD AND DRUGS

§ 823. Registration requirements

(g) Practitioners dispensing narcotic drugs for narcotic treatment; annual registration; separate registration; qualifications; waiver

(ii) The term "qualifying physician" means a physician who is licensed under State law and who meets one or more of the following conditions:

(I) The physician holds a subspecialty board certification in addiction psychiatry from the American Board of Medical Specialties.

(II) The physician holds an addiction certification from the American Society of Addiction Medicine.

(III) The physician holds a subspecialty board certification in addiction medicine from the American Osteopathic Association.

(IV) The physician has, with respect to the treatment and management of opiate-dependent patients, completed not less than eight hours of training (through classroom situations, seminars at professional society meetings, electronic communications, or otherwise) that is provided by the American Society of Addiction Medicine, the American Academy of Addiction Psychiatry, the American Medical Association, the American Osteopathic Association, the American Psychiatric Association.

(V) The physician has participated as an investigator in one or more clinical trials leading to the approval of a narcotic drug in schedule III, IV, or V for maintenance or detoxification treatment, as demonstrated by a statement submitted to the Secretary by the sponsor of such approved drug.

(VI) The physician has such other training or experience as the State medical licensing board (of the State in which the physician will provide maintenance or detoxification treatment) considers to demonstrate the ability of the physician to treat and manage opiate-dependent patients.

Appendix 2: Harm Reduction

Jeanne Block

Harm reduction is a set of strategies to reduce the negative consequences of drug use without requiring drug use cessation. For opioid users, harm reduction can include syringe exchange (providing a person who is injecting drugs with sterile syringes and needles in exchange for used ones) and overdose prevention education, including the use of Narcan (naloxone hydrochloride) to reverse an opioid overdose. Because relapse is often part of the recovery process, patients seeking or currently taking buprenorphine for opioid addiction should be provided harm reduction education and referrals.

Syringe exchange has been legal in New Mexico since 1997 and is funded by the New Mexico Dept. of Health. The program provides a 1-for-1 exchange of clean for used syringes, with goals including reducing the incidence of blood-borne infections such as HIV, HBC, and HCV and other diseases caused by reusing or sharing syringes.

Opioid overdose prevention and intervention education should include both prevention strategies for safer use and intervention strategies so that patients know how to react in case of overdose, including the use of Narcan, an opioid antagonist that can counteract life-threatening respiratory depression in an opioid overdose. Its only purpose is to reverse overdose; it is not a "recreational" drug and does not cause a "high". The use of Narcan, in combination with rescue breathing, can save a life. For a printable patient handout on opioid overdose prevention. *See Appendix 9: Harm reduction programs also often provide information on drug treatment options, page 122.*

In New Mexico, both syringe exchange and Narcan are currently available through many New Mexico Department of Health offices and at numerous community-based organization. For a list of sites and contacts for harm reduction services, go to http://www.health.state.nm.us/IDB/harm_reduction.shtml and scroll down the right side of the screen for a downloadable list.

Appendix 3: The SOCRATES Scale

Miller, W. R., & Tonigan, J. S. (1996). Assessing drinkers' motivation for change: The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors* 10, 81-89.

SOCRATES STAGES OF CHANGE READINESS & TREATMENT EAGERNESS

	No! Strongly Disagree	No Disagree	? Undecided or Unsure	Yes Agree	Yes! Strongly Agree
1. I really want to make changes in my use of drugs.	1	2	3	4	5
2. Sometimes I wonder if I am an addict.	1	2	3	4	5
3. If I don't change my drug use soon, my problems are going to get worse.	1	2	3	4	5
4. I have already started making some changes in my use of drugs.	1	2	3	4	5
5. I was using drugs too much at one time, but I've managed to change that.	1	2	3	4	5
6. Sometimes I wonder if my drug use is hurting other people.	1	2	3	4	5
7. I have a drug problem.	1	2	3	4	5
8. I'm not just thinking about changing my drug use, I'm already doing something about it.	1	2	3	4	5
9. I have already changed my drug use, and I am looking for ways to keep from slipping back to my old pattern.	1	2	3	4	5
10. I have serious problems with drugs.	1	2	3	4	5

11. Sometimes I wonder if I am in control of my drug use.	1	2	3	4	5
12. My drug use is causing a lot of harm.	1	2	3	4	5
13. I am actively doing things now to cut down or stop my use of drugs.	1	2	3	4	5
14. I want help to keep from going back to the drug problems that I had before.	1	2	3	4	5
15. I know that I have a drug problem.	1	2	3	4	5
16. There are times when I wonder if I use drugs too much.	1	2	3	4	5
17. I am a drug addict.	1	2	3	4	5
18. I am working hard to change my drug use.	1	2	3	4	5
19. I have made some changes in my drug use, and I want some help to keep from going back to the way I used before.	1	2	3	4	5

Appendix 4 : Methadone

Olin Dodson

Methadone as a treatment for opioid addiction has been studied in this country since the early '60s. It is classified as a Schedule 2 drug and is a full opioid agonist. It is used for pain, but is available for addiction treatment only through methadone maintenance programs (Opioid Treatment Programs, or OTPs). OTPs, by law, must be nationally accredited, operated according to national standards and receive oversight by SAMHSA, State authorities and DEA, since programs purchase, store and dispense methadone.

In OTP's methadone is given in a liquid form, under observation by medical personnel. Patients are also required to have initial and periodic medical exams, urine screens, regular counseling, and abide by a host of other regulations. After building a reasonable track-record of compliance, patients are eligible for "take-home" doses in individual daily bottles, for durations from seven to 28 days in most clinics.

Methadone does not offer strongly euphoric, tranquilizing or analgesic effects. A therapeutic dose reduces or blocks cravings and the euphoric or tranquilizing effects of other opioids. Tolerance for a given dosage does not develop over time and it is non-toxic.

Reactions and preferences for methadone as opposed to buprenorphine are individual in nature, perhaps even idiosyncratic. The necessity of appearing at a clinic on a daily basis, at least initially, is undesirable for many; for others it provides a structure and environment which is appealing.

It is not unusual for patients to request dose changes to feel more "normal," even after being stable in treatment for long periods. This phenomenon seems to happen more frequently with methadone than with buprenorphine.

Methadone has acquired a certain stigma both within and outside the drug community. It carries a very real risk of overdose when combined with certain drugs. (The number of overdoses has decreased dramatically since the banning of 40 mg. methadone tablets for pain in 2008.)

Methadone, on its own, also carries certain potential health risks, especially for the cardiovascular system. It is also considered to be more difficult to taper from methadone than buprenorphine.

On balance, numerous studies have demonstrated the personal and social benefits of methadone programs. While critics deride the long-term necessity for methadone for many, methadone maintenance has operated historically, and successfully, from a chronic care model.

It is helpful to keep in mind the words of experts William White and Lisa Nujer-Torres in their paper "Recovery-Oriented Methadone Maintenance" (White, 2010):
Long-term recoveries from opioid addiction with or without the use of methadone (or naltrexone or buprenorphine/Suboxone/Subutex) are issues of style of recovery and should not be framed in categories of inferiority or superiority.

Appendix 5: Sample Curriculum for a Group Education Session for Buprenorphine MAT

Miriam Komaromy

1. Who needs treatment with buprenorphine?
    a. Buprenorphine is a medicine that helps to treat addiction to heroin, pain pills, and other types of opioids. It does not treat other kinds of addictions, such as alcohol, methamphetamine, marijuana, etc.
    b. Not everyone who is opioid-addicted needs medication treatment with buprenorphine or methadone; people may choose to get support from counseling, support groups, etc, and not take any medications
    c. However, taking medication (buprenorphine or methadone) increases rates of sustained recovery (*show data in binder*) for patients who have been addicted to heroin, pain pills, or other opioids
    d. Medication alone is not enough; participating in support groups, counseling, etc is necessary to have a good chance for long-term recovery

    Sometimes people who are not physically dependent on opioids right now are still helped by taking buprenorphine. For instance, it could be very helpful for someone who has been incarcerated and has a history of opioid addiction. Even if the person is not physically dependent on opioids when they leave incarceration, they have a very high risk of relapse after release. Risk of overdose death is also increased 120x in the weeks following release from incarceration.

2. What is maintenance treatment with buprenorphine?
    a. "Maintenance treatment" is taking buprenorphine every day in order to
        i. cut craving
        ii. stop withdrawal symptoms
        iii. act as a "chemical shield"; buprenorphine holds on to the opioid receptors in the brain so tightly that other opioids can't make you high if buprenorphine is already holding on to all of the opioid receptors in your brain. (*show illustration in binder*)

3. How is buprenorphine different from methadone?
    a. Both medications cut the risk of relapse to other opioids
    b. Some things people often prefer about buprenorphine treatment:
        i. No sedation (sleepiness, nodding)
        ii. No "high"; (for folks who are currently addicted to other opioids, buprenorphine usually makes them feel "normal" rather than "high"). This is because buprenorphine attaches tightly to the opioid receptors in your brain, but it only activates them (turns them on) part way. Almost all other opioids, including methadone, activate these receptors fully.
        iii. Don't have to go to a clinic every day to take it
        iv. "chemical shield" effect; when a full dose it taken, it blocks the effect of other opioids, so less temptation to relapse

v. It's pretty easy to "detox" off of Suboxone—usually a seven to 10 day taper is enough, compared with methadone which can take months
vi. Doesn't show up on most standard urine tox screens (although we use a test here that shows if you have been taking it)

4. What is Suboxone?
    a. Suboxone is a pill or a film strip that gets dissolved under the tongue (*show picture of Suboxone and of how to take it under the tongue, from binder*). It contains buprenorphine and also Narcan (naloxone). If you take it under the tongue the narcan is not absorbed (not active). But if you crush it up and inject it or snort it, the Narcan is active and will make you withdraw if you have other opioids in your body (such as heroin or pain pills).
    b. When you take Suboxone under the tongue it stops withdrawal for at least 24 hours

5. Are there risks or side effects from taking buprenorphine (Suboxone)?
    a. Because Suboxone contains an opioid (buprenorphine), a person becomes physically dependent on it if they take it every day. In other words, if you take buprenorphine every day and then stop suddenly, you will withdraw ("kick").
    b. Normally people do not stop breathing if they overdose on buprenorphine. However, if you also take benzodiazepines (Zanax, Ativan, Valium, etc) in large doses, or drink large amounts of alcohol, then you could overdose (stop breathing and die) from taking buprenorphine
    c. Side effects are rare, but they can include constipation, headache, trouble sleeping, ankle swelling, trouble urinating; and rarely, liver irritation.
    d. Pregnant women should not take Suboxone. Instead if they are opioid addicted they should take methadone or take a different form of buprenorphine, called Subutex.
    e. Small children and babies should never take buprenorphine, since it can cause them to stop breathing and die. It is very important to keep all buprenorphine away from babies and small children, and call 911 if they accidently taste or swallow some.

6. When people take buprenorphine every day, aren't they just substituting one addiction for another one? No. When people are addicted to a drug they crave it, want larger and larger quantities, can't stop, and often do terrible things in order to get it. They also feel high when they take it. None of these is true with buprenorphine. Buprenorphine is a medicine that makes you physically dependent on it, but does not make you addicted.

7. How can a person get Suboxone treatment?
    a. The big problems with getting Suboxone treatment are a) the cost and b) finding a doctor who has a special license to prescribe it + has room to take on new patients
    b. Suboxone costs about $420 per month
    c. Medicaid/Salud pays for it, and so does UNM Cares (with a $60 copay).
    d. Several Albuquerque physicians also treat patients with Suboxone, and so do several methadone treatment programs (Opioid Treatment Programs, or OTPs).

8. How long can a person stay on Suboxone? There is no limit to how long someone can take Suboxone.

If a person feels ready to try to stop Suboxone, s/he should make sure that their life is pretty stable (eg source of income, housing, and has dealt with major emotional and physical problems) before they try to taper off of the medication.

9. What is involved in getting buprenorphine treatment through this program/clinic?
    a. (Hand out the treatment agreement; Review the treatment agreement in detail)
    b. You will have a meeting with a healthcare provider for a history and physical exam. We will test a urine sample to look at what drugs are in your system. You will get a blood test. You will start attending groups, and we will start you on buprenorphine. You will attend a recovery support group here AT LEAST once a week. You will come to our pharmacy here to get your medication (buprenorphine) for the week. You will meet with a healthcare provider once a week. We will test your urine frequently to make sure you are taking your buprenorphine and not taking other drugs.
    c. It is important that you know that you should not start taking buprenorphine while you are still high from another opioid. If you do, the buprenorphine can bind to the opioid receptors in the brain very tightly; it will come in and kick off the other opioids from the brain receptors. This will make you withdraw, because the buprenorphine activates the receptor part way, but other opioids activate it all the way. In order to feel ok when you start buprenorphine, it is important to be withdrawing ("kicking"), so that there is not much opioid in your body. We will help you figure out when is the right time to start buprenorphine.

10. What will the program do for me?

11. Provide Suboxone treatment and psycho-social support from the medical, nursing, and counseling staff.

12. What will the program expect from me?
    a. (Ask group members to list the items from the treatment agreement that they will be agreeing to if they enter the Program)

13. What now?
    a. If you want to enroll in the Outpatient Addiction Recovery Program, sign the treatment agreement, provide a urine sample, and make an appointment for your first visit with a doctor in our program. Start attending weekly recovery support groups.

14. Questions?

Appendix 6: Billing information for New Mexico Medicaid

Robert Buser

Procedure for Suboxone (Buprenorphine) Services for Consumers on New Mexico Medicaid:

Assessment Phase:

During the Assessment phase, providers are encouraged to use appropriate Evaluation and Management (E & M) codes identified on their fee schedules. Providers must document their time and activity in the consumer's chart. All E & M codes will be paid at the Medicaid Fee Schedule rate for HSD/MAD FFS or MC, the BHSD fee schedule rate or the CYFD fee schedule rate.

Notification of Intent to Treat:

If the provider accepts the consumer for opioid addiction treatment using Suboxone or Subutex, the provider must send notification via facsimile or secure e-mail to the MCO to OHNM's utilization management department prior to the induction phase. *Claims will not be paid for inductions performed without prior notification.*

https://www.optumhealthnewmexico.com/provider/processSearch.jsp?q=Notification+Prior

Note: Laboratory tests are billed separately.

Typical Diagnoses (ICD-9-CM)

304.0 Opioid type dependence

304.7 Combination of opioid abuse with other drug dependence

Prior Approval for Authorization of Suboxone or Subutex

The Salud! MCOs and OptumHealth NM have developed Common Criteria for Medicaid Coverage Determinations for the use of Suboxone and Subutex. The provider is required to submit to the MCOs or OHNM a request for Suboxone or Subutex using a Medication Prior Authorization Form. The Prior Authorization for Suboxone or Subutex serves as a quality control measure to ensure adherence to best practices and to minimize the risk of potential adverse outcomes that are known to be associated with certain combinations of buprenorphine products with various sedative hypnotics.

Procedure Codes:

Evaluation and Management Codes: These are coded to the appropriate level of service and time spent during the office visit. Documentation must include start/end time spent and the subject of counseling if this is more than 50% of the total visit length. At present, there is no limit on the number of follow-up visits that may be billed.

Induction Phase Code: HCPCS code H0033

Induction Phase:

HCPCS code H0033 is to be used for the induction. This code will not be reimbursed for other diagnoses or treatment.

Follow-Up/Maintenance Phase:

Each additional visit should be billed using an E & M code appropriate to the visit as noted above. For behavioral health practitioners the may include CPT 90805 or 90862 or comparable HCPCS codes. At the present time, there are no limits on the number for additional follow-up visits that may be billed.

Common form for buprenorphine prior authorization requests for the New Mexico Salud programs and Optum Health NM:
http://www.phs.org/idc/groups/public/@phs/@php/documents/phscontent/pel_00138497.pdf

Appendix 7: Prior Authorization Request Form for Buprenorphine, for Use with All New Mexico Medicaid Managed Care Orgaizations (Salud programs) and with Optum Health NM

This form is available at the following link
http://www.phs.org/idc/groups/public/@phs/@php/documents/phscontent/pel_00138497.pdf)

New Mexico Medicaid Prior Authorization Form for Suboxone (buprenorphine/naloxone) or Subutex (buprenorphine)

(Approval does not ensure eligibility. Please verify eligibility before completing this form.)

Suboxone: Tablets Film: 2mg/0.5mg 8mg/2mg Buprenorphinetablets: 2mg 8mg Dosing/SIG:_____
_____ Diagnosis:_____

Total Daily Dosage Requested:_____mg Duration:_____

First request after 14 day induction prescription – All of the following must be submitted:

1. Current (up to 7 days prior to request submission date) urine drug screen, which includes buprenorphine, results and certify that the New Mexico Board of Pharmacy Prescription Monitoring Program (NM BOP PMP) report was pulled and does not contain opiates, tramadol, benzodiazepines, sedative-hypnotic agents, carisoprodol, or meprobamate. Any relapses by the patient, indicated by a urine drug screen positive for opiates, must be addressed by the provider. The provider must decide if the patient remains a good candidate for continued treatment. A urine drug test negative for buprenorphine also alerts the provider to possible diversion of buprenorphine and steps such as discontinuance of buprenorphine prescriptions can be considered.

2.If applicable, submit medical records or chart notes that include medical justification and a signed informed consent documenting the risks for combined use of Suboxone or buprenorphine and benzodiazepines, sedative/hypnotics carisoprodol, meprobamate, or alcohol.

3. Indicate what psychosocial program the consumer is participating in. Possible options include, but are not limited to, Narcotics Anonymous (NA), Alcoholics Anonymous (AA), therapy with a counselor, or counseling by the treating physician.

4. A treatment plan, agreed to by the consumer and signed by the consumer, must be submitted by the requesting provider with the request.

Each renewal request requires submission of:

Current (up to 4 weeks prior to request submission date) urine drug screen, which includes buprenorphine, results and certify that the New Mexico Board of Pharmacy Prescription Monitoring Program (NM BOP PMP) report was pulled and does not contain opiates, tramadol, benzodiazepines, sedative-hypnotic agents, carisoprodol, or meprobamate.

If applicable, please submit medical records or chart notes that indicate medical necessity for continued use of Suboxone or Buprenorphine in the context of the following clinical concerns:

Doses exceeding 16 mg per day of Suboxone or Buprenorphine

Concurrent use of Suboxone or buprenorphine with benzodiazepines or other sedative hypnotic agents that increase the risks of respiratory depression
Buprenorphine requests only: Estimated pregnancy due date:_____. Submit chart notes for breastfeeding.

Approved Denied PA Number:_____

RPh Review:_____

Date:_____ Medical Director:_____

Date:_____

Duration of Approval: 1 month 3 months 6 months Other_____

Approval Start Date: _____ Approval End Date:_____

Comments:
_____
_____
_____
_____
_____
_____
_____

http://www.phs.org/idc/groups/public/@phs/@php/documents/phscontent/pel_00138497.pdf

Appendix 8: Sample Patient Teatment Form

Miriam Komaromy

Name _____

Birth Date _____

Today's date _____

BUPRENORPHINE (SUBOXONE) TREATMENT AGREEMENT

As a participant in buprenorphine (Suboxone) treatment for opioid addiction, I agree to the following:

1. To keep all my scheduled appointments or change the appointment in advance, except in case of emergency.
2. I agree not to sell, share, or give any of my medication to another person.
3. I agree not to deal or buy drugs at the office, or in its parking lots or property.
4. If I will be going to an outside pharmacy, I agree not to deal or buy drugs at that facility or in its neighborhood.
5. I agree that my medication/prescription will only be given to me at the regular office visits. A missed visit may result in my not being able to get my medication/prescription until the next scheduled visit.
6. I agree that the medication I receive is my responsibility and I agree to keep it safe and secure. I agree that lost medication will not be replaced regardless of why it was lost.
7. I agree not to obtain buprenorphine (Suboxone), other opioids, or benzodiazepines (for example, Valium, Klonopin, or Xanax) from any other healthcare providers, pharmacies, or other sources without telling my treating physician.
8. I understand that mixing buprenorphine with other medications, especially benzodiazepines (for example, Valium, Klonopin, or Xanax) can be dangerous. I understand that several deaths have occurred among persons mixing buprenorphine (Suboxone) and benzodiazepines. There is also a risk of overdose death from mixing buprenorphine (Suboxone) with large quantities of alcohol or other types of sedatives, such as barbiturates.
9. I understand that buprenorphine (Suboxone) by itself is not sufficient treatment for my addiction, and I agree to participate in support groups at least weekly, as discussed and agreed upon with my healthcare provider. I understand that if my attendance at these groups is not confirmed then I will not be able to continue to receive buprenorphine (Suboxone).
10. I agree to provide random urine samples for drug testing and have my healthcare provider test my blood alcohol level whenever I am asked to do so.
11. I agree that my goal is to stop using addictive drugs, and that I will work to stop using all addictive and illegal drugs during my treatment with buprenorphine (Suboxone).
12. I agree that violating this agreement may result in my no longer receiving treatment with buprenorphine (Suboxone).

13. I understand that if I decrease my use of opioids (stop using heroin, pain pills, or substitute buprenorphine for these drugs) I have a higher risk of dying from an overdose if I relapse. I understand that if I relapse, I need to use small doses of opioids until I learn what my body can tolerate.
14. I understand that if I relapse when I have been taking buprenorphine, at first I may not get high from the other opioids because buprenorphine blocks their effect. I understand that if I keep using larger and larger amounts to try to get high, I could stop breathing and die.
15. I understand that buprenorphine (Suboxone) is extremely dangerous for infants and children. They can stop breathing and die after taking in tiny quantities of this medication. I agree to keep my supply of this medication locked securely away from others, especially infants and children.

I consent to the above terms and to begin treatment with buprenorphine (Suboxone).

Patient signature _____ Date _____

Healthcare Provider signature _____ Date _____

Appendix 9: Opioid Overdose Prevention Training

Jeanne Block

I. OVERDOSE PREVENTION

- Don't use alone.
- Don't mix drugs.
- Be careful and use smaller amounts if:
  - o You haven't used the drug before
  - o You haven't used for a while (i.e., if you just got out of jail or rehab)
  - o You have been sick or recently lost a lot of weight.
- Check taste, smell and look of any drugs from new dealers or new batches. Do a test shot (smaller amount) first to test strength.
- Make OD plans with friends. Learn how to do rescue breathing and how to use Narcan. Talk about calling 911 in case of OD.

II. SIGNS OF OVERDOSE

- **Pale, bluish-tinged lips**, face and fingertips (from lack of oxygen)
- Slow, shallow or raspy breathing
- Heavy nod not responsive to stimulation

III. OVERDOSE DO'S AND DON'T'S

Overdose is a life and death situation. You must act quickly.

What NOT to do if someone Overdoses

- **Don't** inject them with **anything** (other than Narcan). Injecting them with milk, water, or speed will not help, and it may do more harm.
- **Don't** put them in a cold bath or shower. This could put them into shock or they could drown.
- **Don't** give them anything to drink ® they could choke.
- **Don't** leave them alone. **If you must leave to call 911, put them in the recovery position.**

What to DO if someone Overdoses

- **Check to see if the person is conscious.**
- **Shake them** and call their name.
- If they do respond, talk to them and **get them up and walking**, even if you have to hold them up.
- If they don't respond, try getting a response by **rubbing your knuckles over their sternum (breast-bone) really hard.**
- **If they still don't respond, start rescue breathing and/or give Narcan and call 911.**

IV. RESCUE BREATHING

Rescue breathing means you are **breathing for someone unable to breathe** on his or her own. If someone is not breathing, you must start rescue breathing **immediately. Brain cells begin to die after 3-4 minutes without oxygen.**

Steps in Rescue Breathing - With the person's head tilted back, chin lifted, nose pinched shut:

Give 1 slow breath every 5 seconds (count: 1-1000, 2-1000, 3-1,000, 4-1,000. Take a breath after 4-1,000 and breathe into the person's mouth on 5-1,000).

Continue for 12 breaths (about 1 minute), and then **recheck pulse** and **breathing.**

If no pulse, start CPR (if someone knows it) and **call 911.**

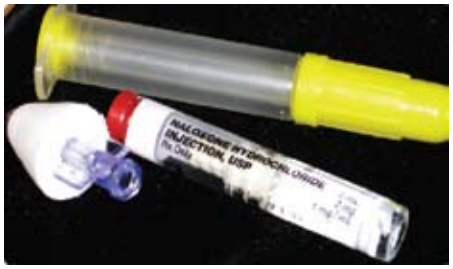
If there is a pulse but no breathing, give Narcan and **continue rescue breathing** until the person is breathing on their own or until EMS arrives.

V. RECOVERY POSITION

The **recovery position** is used if a person is unconscious, vomiting, or in danger of choking on vomit or saliva. Place the person on their side, with legs bent, and head resting on the arm on the floor The recovery position lets fluid drain from the person's mouth so they do not choke. **Place the person in the recovery position whenever you are not doing rescue breathing.**

VI. WHAT IS NARCAN?

Narcan is a prescription drug that reverses the effects of opioid overdose by blocking the opioid's action on the brain and restoring breathing. Narcan's only purpose is to reverse overdose; it is not a "recreational" drug and does not cause a "high". The use of Narcan, in combination with rescue breathing, can save a life.



VII. NARCAN ADMINISTRATION

1. Pull off the long yellow top of syringe.
2. Open the white spray top and screw it slowly onto the top of the syringe.
3. Pop-off the red or purple cap on the medicine vial and the yellow cap on the base of the syringe and gently screw the glass vial into the plastic syringe until you feel slight resistance (about 3 turns). Narcan will start to spray out of the syringe - STOP!
4. Place the spray top in the first nostril of the overdosing person.
5. Push quickly on the glass vial (pushing slowly will prevent the liquid from misting correctly) and squirt half (up to the number "1" printed on the side of the vial) of the liquid up the person's nose.
6. Place the spray top in the second nostril and push quickly again on the glass vial and squirt what's left in the vial up the person's nose.
7. If the person doesn't respond, do another 2 minutes of rescue breathing.
8. Repeat the steps with the second box of Narcan.
9. **Narcan may only last for 30-60 minutes.** When it wears off they may overdose again from the drug still in their system. Stay with them - you may have to give more Narcan.
10. Although the low dose suggested here usually will not cause severe withdrawal symptoms, they are possible, and may include **sweating, nausea/vomiting, shaking, and agitation.**

VII. CALLING 911

Calling 911 may be the only way to save the person's life. Here are some tips to remember:

- Stay calm and tell the 911 operator that your friend is not breathing.
- Make sure you give good directions so EMS can find you, especially if you feel you need to leave before they arrive. Send someone out to the street to wait for EMS if possible.
- Remove and hide works, cookers, etc. before EMS arrives.
- When EMS arrives, give them as much information as possible. Tell them that you gave Narcan (if you did).
- If you do need to leave before EMS arrives, place the person in the **recovery position** and leave the empty box(es) of Narcan near them.

Appendix 10: Sample of an Addiction-focused History and Physical Form

Miriam Komaromy

Outpatient Addiction Treatment (OAT) Clinic History and Physical Form

Date:			Time:			Referred from/by:					
Brief description											
HPI (time course of drug use, substances and patterns of use, consequences of use, associated problems eg crime, prostitution, violence)											
PCP:			Insurance:			Pregnant Y / N LMP _____ G __ P __					
ROS	Unable to obtain	All others negative				Psych hx					
Constitutional			GI								
Eyes			GU								
ENT			Musc/ Skel								
Resp			Skin								
CV			Neuro								
Heme/Lymph			Psych								
Trauma			Other								
PMH	Unable to obtain	All others negative							Allergies	Meds	
Diabetes		COPD/ asthma		Ab-scess-es		Suicidality:					
Cardiac		Hep C		Brain inj.		Past					
HTN		Cirrhosis		Trau-ma		GI bleed					
Stroke		DVT/PE		Pan-creati-tis		o					
Seizures		Renal dis.		Endo-cardi-tis							
Details of ROS/PMH:										Family History	
										Or: None pertinent	

Drugs/alcohol: type, route, quantity				Prior/current addiction treatment	Social/Living Situation		
	Opioid pills		Inhalants	Current/pending legal charges?			
	Heroin		Hallucinogens				
	Methamphetamine		Alcohol				
	Cocaine		Withdrawal seizures				
	Marijuana		Blackouts				
	Tobacco		Hallucinations		Other:		
	Benzos		Hosp. for withdrawal				
	Methadone		Any h/o IDU ?				
	Suboxone		Sharing needles?				

Exams										Labs/data
T		HR		BP		RR				
General							NAD			
							Appears intoxicated			
							tremulous			
							NC/AT			
HEENT										
PERRL					O/P WNL		Dent. WNL			
Neck							Supple			
							Thyroid WNL			Assessment
Chest							CTA & P			
							No distress			
CV							RRR			
							No M/R/G			
							No edema			
GI							Soft/NT			
							Nondistended			
							No HSM			
GU/Pelvic							Ext Genitals WNL			
Lymph							No LAN			
Skin							W/D/NL color			
							No Rash			
							No track marks			
Back							No CVAT			
							No spinal tenderness			

Neuro			Moves all ext.		
			Atraumatic	**Plan**	
			ROM WNL		
			CN 2-12 intact		
			Sens/monor WNL	**Initial education/treatment agreement:** completed scheduled:	
			DTRs WNL	**Induction:** completed scheduled:	
			Toes downgoing Bilat	**Testing: Tox bup HCG CMP hepatitis HIV RPR GC/chlam other:**	
			Neg Romberg		
			Normal gait		
Psych			Oriented x 3	**Vaccines:**	
			Mood/ Affect WNL	**Contraception:**	
			Coherent		
			Memory Intact	**Other:**	
			Not respndng to internal stimuli		

Axis I/II	Axis III
1.	1.
2.	2.
3.	3.

Medical Provider (print)	Medical Provider Signature	Date:	Schedule follow-up:

Appendix 11, Symptoms and Signs of Opioid Withdrawal

Typical symptoms of opioid withdrawal

- Dysphoria (feeling uncomfortable, unhappy)
- Anxiety
- Temperature dysregulation (hot and cold flashes)
- Nausea, and later vomiting
- Anorexia (loss of appetite)
- Rhinorrhea (runny nose)
- Lacrimation (tearing eyes)
- Piloerection (goose bumps; leading to the term "cold turkey")
- Diaphoresis (sweating)Pupillary dilation (enlargement)
- Restlessness
- Myoclonic jerks (sudden kicking of the legs or arms; leading to the term "kicking the habit"}

Appendix 12: Clinical Opioid Withdrawal Scale (COWS)

Clinical Opiate Withdrawal Scale

For each item, circle the number that best describes the patient's signs or symptom. Rate on just the apparent relationship to opiate withdrawal. For example, if heart rate is increased because the patient was jogging just prior to assessment, the increase pulse rate would not add to the score.

Patient's Name:_____

Date and Time _____/_____/_____:_____

Reason for this assessment: _____

Resting Pulse Rate: _____beats/minute *Measured after patient is sitting or lying for one minute* 0 pulse rate 80 or below 1 pulse rate 81-100 2 pulse rate 101-120 4 pulse rate greater than 120	**GI Upset**: *over last ½ hour* 0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhea 5 Multiple episodes of diarrhea or vomiting
Sweating: *over past ½ hour not accounted for by room temperature or patient activity.* 0 no report of chills or flushing 1 subjective report of chills or flushing 2 flushed or observable moistness on face 3 beads of sweat on brow or face 4 sweat streaming off face	**Tremor** *observation of outstretched hands* 0 No tremor 1 tremor can be felt, but not observed 2 slight tremor observable 4 gross tremor or muscle twitching
Restlessness *Observation during assessmen*t 0 able to sit still 1 reports difficulty sitting still, but is able to do so 3 frequent shifting or extraneous movements of legs/arms 5 Unable to sit still for more than a few seconds	**Yawning** *Observation during assessment* 0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times/minute

Pupil size 0 pupils pinned or normal size for room light 1 pupils possibly larger than normal for room light 2 pupils moderately dilated 5 pupils so dilated that only the rim of the iris is visible	**Anxiety or Irritability** 0 none 1 patient reports increasing irritability or anxiousness 2 patient obviously irritable anxious 4 patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 not present 1 mild diffuse discomfort 2 patient reports severe diffuse aching of joints/ muscles 4 patient is rubbing joints or muscles and is unable to sit still because of discomfort	**Gooseflesh skin** 0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection
Runny nose or tearing *Not accounted for by cold symptoms or allergies* 0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks	Total Score _____ The total score is the sum of all 11 items Initials of person completing Assessment: _____

Score: 5-12 = mild; 13-24 = moderate; 25-36 = moderately severe; more than 36 = severe withdrawal
From: Wesson DR, Ling W J Psychoactive Drugs 2003 Apr-June; 35(2): 253-9

Appendix 13 : Rapid Induction (and taper) Protocol Used in the Bernalillo County Medical Observation and Treatment Unit (MOTU)

Miriam Komaromy

(Note: This protocol has been used with several thousand patients presenting in acute opioid withdrawal at the MOTU over the past 2 years. Most patients stay in the Bernalillo County MATS facility for several days after buprenorphine induction, and so we have an opportunity to observe them. We very rarely observe precipitated withdrawal (and in most cases the patient subsequently acknowledges recent methadone use, which they had previously denied). We have seen no cases of serious bad outcomes or deaths. Because we do not have the capacity to maintain patients on buprenorphine through an outpatient program, we perform this induction for the purpose of facilitating opioid withdrawal; the rapid taper protocol is also listed below. This same rapid induction protocol could be used for a patient who is starting maintenance treatment with buprenorphine.)

Rapid Induction protocol

Confirm with the patient (by history) that s/he has not taken methadone in the past 2 weeks and are not regularly taking benzodiazepines

If female, confirm that she is not pregnant (by urine HCG testing)

Once the COWS score is at least 10, give buprenorphine (Suboxone or Subutex) 4 mg SL.

30 minutes later, if the patient's symptoms of opioid withdrawal are **not worse**, give 12 mg buprenorphine SL.

Rapid taper protocol

Day 1: 16 mg induction protocol, as described above

Day 2: 12 mg SL in the morning

Day 3: 8 mg SL " "

Day 4: 4 mg SL " "

Day 5: 2 mg SL " "

Appendix 14: Instructions for Starting Buprenorphine (Suboxone) at Home

Miriam Komaromy

It is not safe to mix buprenorphine and benzodiazepines (the class of drugs that includes Valium, Klonopin, Xanax, Ativan, etc.). **Please do not start taking buprenorphine if you have used any of these drugs recently, or intend to do so in the future**.

You must wait to start buprenorphine until you are withdrawing (kicking) from opioids (heroin, pain pills, etc.). If you start buprenorphine while you are still high, the buprenorphine will make you sick. Wait to start taking buprenorphine until you are having withdrawal symptoms. Usually the most reliable sign of withdrawal is that your pupils start to get big—this means that the black area in the middle of your eye will get larger than normal.

Other common signs that you are ready to take buprenorphine are when you have **several** of the following symptoms:

- Anxiety, can't sit still
- Aches
- Nausea or upset stomach
- Chills or "goose-bumps"
- Heart going fast, or pounding

If you're not sure, wait awhile longer before you start the buprenorphine.

When you think it is time to start buprenorphine, here is what you should do:

- Break one (8 mg) tablet in half.
- Take everything out of your mouth (gum, etc.)
- Sit or stand, but don't lie down.
- Take a sip of water to wet your mouth and tongue, then swallow the water or spit it out.
- Put one half of the buprenorphine tablet under your tongue. Do not swallow it or suck on it.
- Even if it does not taste good, it is important that you let it sit under your tongue until it is completely dissolved. Try not to even swallow your saliva until the pill has dissolved completely. Any buprenorphine that you swallow (or spit out) will not make you feel better. Don't talk while the pill is dissolving, just sit still and wait.

You should start to feel some effect in about 20 minutes. Usually, you will feel a little better, or at least, no worse. If you feel worse, it means you started taking it too soon. Stop taking buprenorphine for a couple of hours, and then try again; or come to the clinic and we can help you get started on the medicine.

If you felt better or the same after the first pill, you can take another half of a pill in about 40 minutes, dissolving it the same way that you did before.

You can repeat this two more times (for a total of two whole pills, or 16 mg) if you need to in order to control your withdrawal symptoms during the first 24 hours after starting buprenorphine.

The next morning you can take the same amount you took on day 1, but take it all at once in the morning. You will usually only need to take buprenorphine once a day after the first day.

You should adjust your daily dose so that you are taking one and a half or two pills per day (12-16 mg per day). At this dose, all of the opioid receptors in your brain will be filled with buprenorphine, and this will really cut down on the craving, and help avoid withdrawal symptoms.

Remember that one of the most important parts of recovery from addiction is participating in groups or in counseling.

How about going to a recovery group such as Narcotics Anonymous today, or meeting with an addiction counselor?

Appendix 15: Urine Drug Screening

Leslie Hayes

Most laboratories follow fairly standard recommendations for cut-off levels for urine drug testing. The federal guidelines for drug testing cut offs for workplace drug testing are a reasonable guideline for cut offs. The following cut-off concentrations are used by certified laboratories to test urine specimens collected by federal agencies and by employers regulated by the Department of Transportation:

Initial Test Cut-off Concentration (nanograms/milliliter)

Marijuana metabolites 50
Cocaine metabolites 300
Opiate metabolites 2000
Phencyclidine 25
Amphetamines 1000

Confirmatory Test Cut-off Concentration (nanograms/milliliter)

Marijuana metabolite 15
Cocaine metabolite 150
Opiates:
Morphine 2000
Codeine 2000
6-Acetylmorphine 10
Phencyclidine 25
Amphetamines:
    Amphetamine 500
Methamphetamine 500

It is important to realize that even confirmatory tests may test for metabolites instead of the actual drug. The test for marijuana is usually for marijuana metabolites, Delta-9-tetrahydrocannabinol-9-carboxylic acid. Testing for cocaine is actually a test for benzoylecgonine. Testing for 6-AM (a metabolite of heroin) is done when morphine concentration exceeds 2000 nanograms/milliliter.

In 1998, the federal government increased the threshold defining a positive screen for urine morphine and codeine from 300 to 2000 ng/mL to reduce spurious reports of opiate-positive tests from poppy seed consumption. Currently, to test positive for opiates from poppy seeds, a patient would need to eat close to a pound of them.

Drugs often metabolize to other drugs, and because of this, a patient's urine may be positive for a drug he or she is not taking. Heroin shows up as morphine. Codeine shows up as codeine/morphine and a small amount of hydrocodone. Morphine shows up as morphine and a small amount of hydromorphone. Benzodiazepines often metabolize to other benzodiazepines. Cocaine shows up as cocaine, but the assay is actually for a cocaine metabolite, benzoylecgonine.

It is also important to realize how long drugs will show up in the urine. A lower cut off will mean that drugs are detected in the urine for a longer period of time.

Substance	Length of time detected
Alcohol	three–five days via Ethyl Gluconoride(EtG) metabolite or 10–12 hours via traditional method
Amphetamimes (except meth) Methamphetamines	one - two days two - four days
Benzos episodic use Chronic use	 three days four-six weeks
Marijuana light use Prolonged use	two – 7seven days one month
Cocaine	two – four days
Morphine	two days
Methadone	three days

What to do with the results of urine drug screening:

The first thing to do with the test results is to make sure that they are accurate. These are referred to as True Positives, False Positives, False Negatives, and True Negatives.

Patient	Positive Test Result	Negative Test Result
Patient using substance:	True Positive	False Negative
Patient not using substance:	False Positive	True Negative

A true positive is when the test is positive, and the patient is using the substance tested for. It usually means one of two things. If the test is positive for a drug that has been prescribed, in this case, buprenorphine, it will mean adherence with therapy for prescribed drugs. It can also mean drug abuse or addiction if the test is positive for non-prescribed drugs. A true negative means the test was negative, and the patient is not using the substance tested for.

False positives happen when the test is positive, but the patient is not actually using the substance. False positives can occur through technician or clerical error or cross-reactivity. False negatives occur when the patient is using the substance, but the test is negative. They can occur through adulteration/substitution of urine. They can also occur if the urine is too dilute or if the cut-off value is set too low. In addition, false negatives will occur if the test does not test for drug of interest. For instance, a test for opiates will not always pick up oxycodone or hydrocodone, and it will never pick up synthetic opiates such as methadone or fentanyl.

It is important to realize that even if a test is a true positive, there are limitations of true positives on urine drug testing. The test cannot tell the amount of drug ingested. The test cannot tell if the patient is taking one Suboxone tablet daily or two. The test cannot tell if the patient used cocaine one time three days ago or six times daily. The test cannot tell when it was ingested, other than it was ingested within the time limit of detection for the substance. It cannot tell how it was ingested (oral vs. snorted vs. injected). The test will not pick up a patient who is bingeing on a drug unless you test right after a binge. The test will not pick up alcohol unless you specifically screen for it. The test will not pick up binge drinking.

Most reports of false positives are based on case reports. There are very few controlled studies for this. Because of this, there are doubtless many medications and other substances causing false positives that we are unaware of. The practitioner can decrease the rate of false positives by doing GCMS confirmation of any positive test that cannot be confirmed by history, if cost is not a prohibitive barrier.

Some of the known causes of false positives are:

Amphetamines

Selegeline (case report)
Vicks Inhaler (several case reports and controlled-exposure studies)
Amantadine (Symmetrel)
Bupropion (Wellbutrin)
Chlorpromazine, thioridazine, promethazine (Phenergan)
Desipramine (Norpramin), fluoxetine (Prozac), trazodone (Desyrel)
Labetalol (Normodyne)
Methylphenidate (Ritalin)
Phentermine
Phenylephrine, phenylpropanolamine, pseudoephedrine
Ranitidine (Zantac)

Barbiturate

NSAIDS (ibuprofen, naproxen) (Controlled-exposure study) 0.4% false-positive rate[1]

Benzodiazepines

Oxaprozin (Controlled-exposure study) 100% false-positive rate[1]
Sertraline[2]

Cannabinoids

NSAIDs (ibuproven, naproxen) Controlled study 0.4% false positive rate[1,2]
Dronabinol (Marinol)[2]
Pantoprazole [Protonix][2]

PCP

Venlafaxine (one case report of overdose)[1,2]
Dextromethorphan (one case report of overdose)[1,2]
diphenhydramine,
Ibuprofen
Imipramine (Tofranil)
Ketamine (Ketalar)
Meperidine (Demerol)
Thioridazine
Tramadol (Ultram)

Opiate

Fluoroquinolone (Controlled-exposure and case series) Most levels were below 1998 threshold of 2000 ng/ml[1,2]

Rifampin (three case reports)[1,2]

Dextromethorphan[2]

diphenhydramine (Benadryl)[2]

Quinine[2]

Methadone

Verapamil[2]

Things that do not cause false positives include the following:

Poppy seeds (unless your lab's cut-off value is very low.)

Passively inhaled marijuana or cocaine unless extreme(In one study, six volunteers in an 8×8×7-ft enclosed room were exposed to 200 mg freebase cocaine vapor; none of their urine samples exceeded the federal GCMS threshold. In a similar study of three non-smokers exposed to eight marijuana smokers (smoking 32 joints) in a 10×10×8-ft enclosed room, no samples from the non-smokers exceeded the federal GC-MS threshold.)

Ingested products containing hemp or other common herbal preparations.

Distinguishing true negatives from false negatives is difficult and fraught with peril. There is more likelihood of getting a false negative in a dilute urine. Since the first thing we do when we have a patient who needs to give a urine sample is to have her or him start drinking lots of water, it is not uncommon to get a dilute urine.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