Guidelines for the Management of

Adult Patients with an Opioid Dependence

University Hospitals of Leicester NHS
NHS Trust

Trust Ref Number B67/2019

Contents

CONTACT AND REVIEW DETAILS	
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Details of Changes made during review:	

1. Introduction

1.1 This document sets out the University Hospitals of Leicester (UHL) NHS Trust's Guidelines for patients who are admitted with opioid dependence. This includes patients on treatment plans agreed with local practitioners, specialist providers and patients who are not on agreed treatment plans.

1.2 Drug addiction statistic

Drug use related hospital admissions (England) In

2019/20 there were:

- 7,027 hospital admissions with a primary diagnosis of drug-related mental health and behavioural disorders.
- 16,994 hospital admissions with a primary diagnosis of poisoning by illicit drugs.

Deaths related to drug misuse (England and Wales)

In 2023 there were 5,448 registered deaths related to drug use. The highest level since comparable records began in 1993.

Drug use among adults (England and Wales)

In 2019/20, around 1 in 11 (9.4%) adults aged 16 to 59 had taken an illicit drug in the last year.

Information from NHS England (2020) Statistics on drugs misuse. England. (1)

2. Scope

2.1 These guidelines apply to:

Staff group(s)

• The Named Consultant in charge of the patients overall care

• The Registered Nurses/Nurse Associates

• The hospital pharmacy team

• The Drug & Alcohol Liaison Team (Turning Point)

Clinical area(s)

• All clinical areas across UHL to where a patient with opioid dependence is admitted.

Patients group(s)

• Adult patients (above the age of 18 years) within all adult clinical areas across UHL, with the exception of patients under the care of obstetrics service (maternity services) at UHL.

• All patients either under the care of obstetrics, or breastfeeding, should be referred to: Angela Geraghty – Specialist Midwife, Substance Misuse. angela.m.geraghty@xuhl-tr.nhs.uk

Tel: 07966 558286

• Patients under the age of 18 are not encompassed within the scope of these guidelines.

2.2 Roles and responsibilities in managing opioid dependence.

2.2.1 Management of opioid dependence requires a multidisciplinary approach and expert

management.

2.2.2 The responsibility of the overall management of the patients sits with the consultant medical or surgical team in charge of the overall care.

2.2.3 The medical or surgical team holds the responsibility for:

- Confirming the patient's past medical history
- Liaising with the regular prescriber and key worker if known
- Contacting the regular community pharmacy (if known) to confirm dose and quantity of the last dispensing.
- Confirming the patient medication history with regards to substance(s) misused, quantity of use, duration of use, method of administration, date and time of last consumption/administration.
- Initiating assessment for new presentation of dependence in liaison with substance misuse team.
- This all needs to be documented in the patient's clinical notes.

2.2.4 The Registered Nurses/Nurse Associates will

- Assist in the monitoring of the patient.
- Administer the medication only when the dose has been independently confirmed and documented in the patient's main clinical notes with:
  - The regular community prescriber (Turning Point, General Practitioner or HM Prison Services) and/or
  - Regular community pharmacy and/or
  - Presentation of the patient own medication with the patient's name, medication name, dose etc. clearly documented and not tampered with (this must be within 14 days from the date of dispensing).

2.2.5 The pharmacy team will ensure that necessary medications are supplied in accordance to an appropriate prescription (electronic or paper) only when:

a) The dose has been confirmed and documented as part of the medicine reconciliation process for patients on Opioid Substitution Treatment (OST) or

b) Checked against the substitute prescribing schedule in appendix 2 and an appropriate Clinical Opiate Withdrawal Scale (COWS) score of 13 or above documented in appendix 3

3. Definitions

3.1 Addiction – substance addiction is defined as a chronic relapsing disorder characterized by:

1) Compulsion to seek and take the substance,
2) Loss of control in limiting substance intake and
3) The emergence of a negative emotional state (e.g. dysphoria, anxiety, irritability) reflecting a motivational withdrawal syndrome when access to the substance is prevented

3.2 **Withdrawal** – the physiological or acquired discomfort experienced upon the abrupt termination of the substance

3.3 **Tolerance** – tolerance is seen as a need to engage in substance use at a relatively greater level in order to achieve the same desired effects

3.4 **Craving** - the intense urge to engage in a specific act.

Definitions from Addiction by Nutt 2013 (3)

3.5 **A note on Nomenclature**

"Opioid" versus "Opiate"

"Opiate" traditionally refers to natural alkaloids derived from the opium poppy, such as morphine and codeine. "Opioid" encompasses both natural opiates and synthetic/semi-synthetic compounds that interact with opioid receptors in the brain, such as fentanyl, oxycodone, tramadol, methadone, and buprenorphine.

All opiates are opioids, but not all opioids are opiates.

These guidelines use the term "opioid" to reflect a more comprehensive understanding of these substances, acknowledging the diversity of compounds that affect opioid receptors. Additionally, the term "opioid" helps differentiate between the naturally occurring opiates and the broader class of substances that include both prescription medications and illicit drugs.

"Substance Use" versus "Substance Misuse/Abuse"

The preference for the term "substance use" over "substance misuse" reflects a shift toward more neutral and inclusive language in discussions about substance-related behaviours. "Substance use" is a broader, more descriptive term that encompasses both casual or medicinal use of substances as well as patterns of harmful or problematic use. It avoids the potentially judgmental or stigmatising connotations associated with "misuse," which implies intentional harm or deviation from appropriate use. "Substance use" allows for a more nuanced approach, acknowledging that individuals may engage in these behaviours for a variety of reasons. By using "substance use," there is also an implicit recognition that behaviours associated with substances exist on a spectrum, which can help reduce stigma and encourage more open, empathetic conversations about prevention and treatment.

"Drug User" versus "Drug Addict"

"Drug addict" carries significant negative connotations and can dehumanise individuals by reducing them to their condition, often perpetuating stereotypes of moral failing or criminality. "Drug user" is a more neutral term that simply describes someone who consumes drugs, without implying a fixed or negative identity. "Drug user" aligns with the growing recognition of addiction as a complex, multifaceted medical condition, rather than a character flaw or personal failing.

Drug users have the same entitlement as other patients to the services provided by the National Health Service and it is the responsibility of all NHS staff to provide care for both general health needs and drug-related problems of the same high standard as that provided to non-drug users, whether or not the patient is ready to cease using drugs (2).

Patients may present to the hospital for a range of conditions either directly as a result of their opioid dependence or indirectly following acute or chronic illness. It is essential that they be treated in a professional way.

Many drug users will require pharmacological interventions to prevent drug withdrawal. The presence of withdrawal symptoms will often hinder clinical work, as most drug users will be more concerned with impending withdrawal symptoms than any other condition they may face.

The Drug & Alcohol Liaison Team (Turning Point), if available, should be the first point

of call for all situations where a drug user is admitted to a ward.

4. Admission and Opioid Substitution Treatment (OST)

4.1 Admission

4.1.1 Every patient who is known to have a substance use problem should be referred to Turning Point, the commissioned substance use service for Leicestershire and Rutland. This includes in hours and out of hours. Turning Point run the Drug & Alcohol Liaison Team within UHL, and this team should be the first point of referral. They can be contacted on these numbers: 0116 258 7285, 07734694857, or 07535658329. The team can be emailed at TurningPointReferral@uhl-tr.nhs.uk or referred to on ICE under Service Provider "Substance Misuse". The team operates 7-days a week 8am-6pm.

4.1.2 Where possible the Drug & Alcohol Liaison Team will offer appropriate advice on treatment of the patient's drug problem and provide support to the patient and the medical/surgical team.

4.1.3 Patients may also be under the care of local prison services who can be contacted for advice as needed.

4.1.4 If a patient is not under a specialist service and a patient presents out of hours when the Drug & Alcohol Liaison Team or Turning Point itself is closed, then the admitting doctor will have to assess the patient's drug addiction problem.

4.1.5 A retrospective contact with the Drug & Alcohol Liaison Team or Turning Point itself should be made at the earliest possible opportunity.

4.1.6 Good liaison with the specialist team will help establish suitable continuation of care for the drug problem after the patient has discharged.

4.1.7 Contact details for local service providers are included in appendix 4**.**

4.2 Opioid Substitution Treatment

4.2.1 The principle behind Opioid Substitution Treatment (OST) is to reduce the harm that drug use inflicts on drug users.

4.2.2 Within this are the aspects of reducing the level of illicit drugs the drug user must use to keep opioid withdrawals at bay, to reduce the frequency of injecting and all of the inherent risks associated with that and to enable patients to break the drug-using life cycle many chronic users fall into.

4.2.3 The theory is to swap the illicit drug for a pharmaceutically pure opioid.

> **Note:** opioid substitution is essentially replacing one opioid with another that has fewer risks, but none the less still carries some of the significant risks associated with the opioid drug group.

4.3 Methadone

4.3.1 The first line treatment for OST is methadone.

4.3.2 Methadone has the following benefits:

- Long acting enabling once daily dosage (daily doses can be split into two doses if

necessary, good practice in the in-patient hospital setting); its half-life is 13 to 50 hours with chronic administration.

- Orally active, so drug users do not have to inject drugs.
- A full opioid receptor agonist and will have the same pharmacological profile as heroin (diamorphine), i.e. it will treat the opioid withdrawal syndrome.
- The best evidence base of all therapies available.

4.3.3 Methadone does have some risks and should not be regarded as a completely safe alternative. These risks include:

- Toxic in overdose – like heroin – causing respiratory depression and death.
- Long duration of action means that the effect of the overdose will last a lot longer. Naloxone, the opioid receptor antagonist used to treat overdose has a short duration of action hence it needs to be given as a continuous infusion when used in methadone overdose, unlike in the heroin overdose situation.
- Cumulative pharmacokinetics. Methadone partitions into the fat tissue and only when this is saturated do you see a steady blood concentration of methadone, this process can takeup to five days. In practice this means that if doses are escalated too quickly then it is possibleto overdose. For example, if a patient were given 40mg on day one then 80 mg on day two and 120 mg on day three, then the blood level of methadone on day three would be higher than the level expected from that day's dose. Therefore, the patient would be at risk of overdose.

4.3.4 Considering these risks, it is vital that methadone is prescribed responsibly and safely.

4.4 Buprenorphine & Buvidal®

4.4.1 The other drug commonly used for opioid substitution is Buprenorphine, either in the form of oral lyophilisate (Espranor/Subutex) or Buvidal® slow-release injection.

4.4.2 A combination of Buprenorphine and Naloxone (Suboxone) is also used in some patients in the community but is not held as stock at UHL.

4.4.3 Buvidal® is a prolonged-release injection of buprenorphine used in opioid dependence. It comes in weekly and monthly injections allowing for flexible dosing

4.4.4 Temgesic is not licensed for use in Opioid Substitution Treatment, unlike Espranor/Subutex and has different strengths of buprenorphine compared to Espranor/Subutex.

5. Assessment of Opioid Dependence

Initial assessment is vital upon admission to determine current opioid use and dependency.

OST is only indicated in patients who are dependent on opioids. People using cocaine, crack cocaine, cannabis, alcohol, amphetamines or any other non-opioid drug of abuse **on its own** should **not** be given OST.

Methadone/Buprenorphine would be indicated if the patient was using a mixture of drugs **including** an opioid **and** were dependent on the opioid.

5.1 Taking an Illicit Drug History

As part of the admission assessment determine the following:

- What the patient is 'using'.
- The amount of opioid they use and how often they use it.
- How they are using the opioid, e.g. by injection, smoking, inhaling or another route. If they are injecting, where are they injecting, the formulation of the injected product (liquid/powder) and if they are using a filter
- When they started using the drug and how long they have used the drug.
- The patient's experience of withdrawal symptoms. The patient should be able to describe what they go through when withdrawing from opioids with minimal prompting.
- Also enquire about other substances used; it may be necessary to prescribe medication to deal with other substance use issues such as alcohol, benzodiazepines and gabapentinoids. Again, these other substances must be used in a dependent manner in order to warrant a pharmacological intervention.
- Patients may use the street names of drugs. An up-to-date list of these drugs of abuse can be found at www.talktofrank.com in the section "The A-Z of drugs". The full list has not been included in this document as the list is vast and new names join the list frequently.

5.2 Physical Examination

Examine the state of any injection sites bearing in mind some may be in private areas of the body.

Look for evidence of drug use such as needle marks, track marks (thrombosed veins). If they are injecting examine injection sites. If they are currently injecting these will appear red and sore and they should be able to describe exactly where they last injected.

Common ailments secondary to intravenous drug use include abscesses, ulcers, deep vein thrombosis.

5.3 Blood Borne Virus Screening

- All patients should be asked about their blood borne virus (BBV) status (Hepatitis B & C and HIV)
- Patients should be asked when they were last tested and the result of the test.
- Patients should be screened for BBV, especially if they haven't been tested in the last four months and social activities or patient circumstances preclude increased risk.
- Patients who are known to be positive or found to be positive as an inpatient should be referred to the infectious disease team.
- There is an imperative to identify BBV+ patients who use substances, to aid in the elimination of these viruses in the community.

5.4 Signs of Opioid Withdrawal

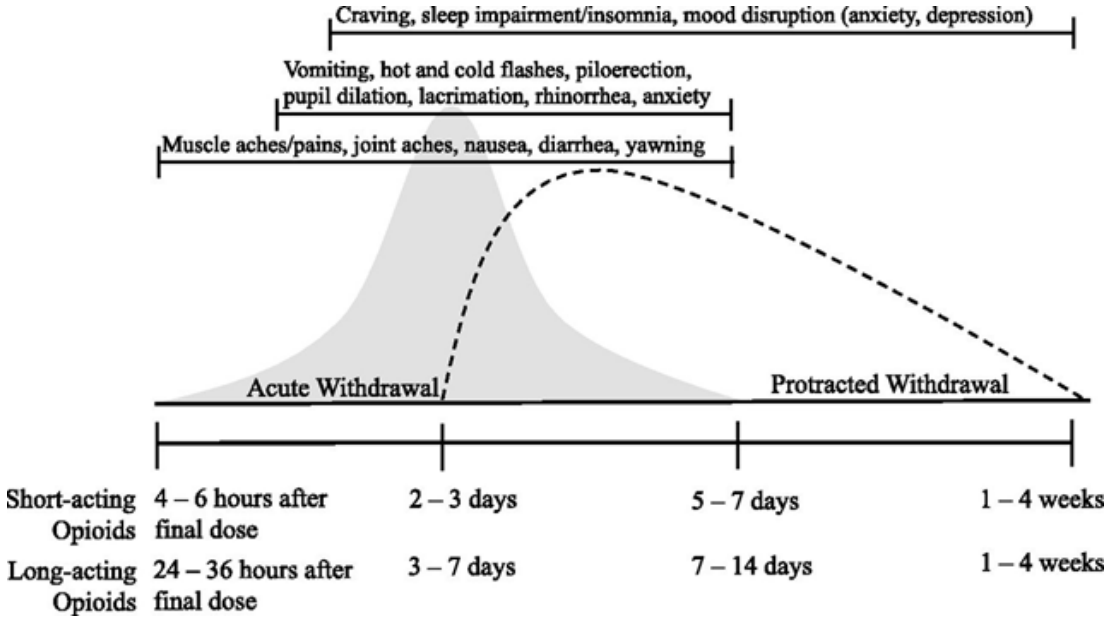
Look for signs of opioid withdrawal (Table 1), however it may be necessary to initiate methadone before the patient starts withdrawal symptoms.

A dependent patient should be able to describe past experiences of withdrawal from opioids.

Early Signs	Restlessness, anxiety, agitation, discomfort, drug seeking behaviour / craving
Intermediate Signs	Yawning, sweats*, runny nose, runny eyes, hot / cold flushes, dilated pupils*, irritability, loss of appetite
Late Signs	Restlessness in legs whilst in bed, insomnia, abdominal cramps, low grade fever, nausea and vomiting, increased pulse rate, diarrhoea*, trembling, pale clammy skin with goose bumps (piloerection)*, deep aching pain in bones / muscles, raised blood pressure*.

Table 1 Signs of Opioid Withdrawal (* = Objective signs)

- The withdrawal syndrome associated with heroin can start to appear 4 to 6 hours after the last use.
- By 12 to 15 hours post dose the drug user will be feeling uncomfortable.
- By 18 to 24 hours, they will be very unwell with restlessness, difficulties sleeping sweating, runny nose, and runny eyes.
- 24 to 72 hours post dose the symptoms reach their peak with aches and pain in the bones, muscles and joints, stomach cramps, vomiting and diarrhoea.
- Thereafter symptoms gradually fade away, but it may be 7 to 10 days before the drug user begins to feel well.



The withdrawal syndrome following cessation of methadone dosing has the same features except it takes longer. Symptoms would begin 1 to 2 days post dose and peak after 4 to 6 days. Symptoms can persist for 10 to 14 days, and it may be several days

before the drug user starts to feel well again.

The withdrawal syndrome associated with buprenorphine is qualitatively less intense than those associated with methadone and heroin. Symptoms may not appear for 1 to 2 days post dose.

Note: the opioid withdrawal syndrome is very unpleasant but not life threatening. If it is not managed adequately its presence will greatly hamper any other interventions aimed at the patient and may cause the patient to self-discharge against medical advice. However inappropriate use of medications such as methadone, benzodiazepines and dihydrocodeine is potentially more dangerous.

There is a psychological aspect to the withdrawal syndrome, which includes symptoms like craving and responding to cues. This aspect can last for unpredictable periods of time ranging from days to years.

The Clinical Opioid Withdrawal Scale (COWS) is a validated scoring system that enables clinicians to objectively grade the severity of the main withdrawal symptoms that patients are experiencing (see appendix 3).

5.5 Signs of Opioid intoxication

Look for signs of opioid intoxication (see below). **Do not administer doses of methadone/buprenorphine against signs of intoxication**

Signs and symptoms include

- Difficulty keeping the eyes open
- Head falling to one side
- Drowsiness
- Reduced breathing rate / shallow breathing
- Constricted pupils (this symptom is always present in regular opioid users and only goes during withdrawal)

5.6 Signs of Opioid overdose

In cases of overdose the following may be seen

- Nausea and vomiting
- Constricted pupils (pinpoint pupils),
- Unconsciousness (drowsiness)
- Respiratory depression (<8 breaths per minute),
- Cold to touch/blue lips as a result of reduced heart rate, reduced systolic blood pressure and reduced body temperature.

If the dose is large enough and the patient is left untreated this could lead to respiratory arrest and death. Urgent contact with the Oncall Resuscitation team must be made via the hospital switchboard via 2222 and using the NEWS escalation procedure for suspected acute overdose during any stage of the patient's hospital stay.

5.7 Body Fluid Analysis

As directed by the Drug Misuse and Dependence: UK Guidelines on Clinical Management (2), Illicit prescribed drugs and medication can be detected in a variety of biological samples using different testing methods. Drug testing can be used for:

- Initial assessment and confirmation of drug use (although testing does not confirm dependence
- or tolerance and should be used alongside other methods of assessment)
- Confirming treatment compliance – that a patient is taking prescribed medication
- Monitoring illicit drug use, including as a drug-specific treatment goal (for example, as part of a psychosocial intervention).

All patients who have a history of or a new presentation of dependence to illicit substances should be tested using either

- Urine toxicology screening through pathology (ideally).
- Instant urine screens by the Drug & Alcohol Liaison Team (Turning Point)

5.7.1 <u>Urine toxicology laboratory test results from pathology.</u>

All new patients who are not on a methadone/buprenorphine programme must have a formal urine toxicology test processed by the pathology department at UHL using a standard universal container.

A full pathology test can detect illicit substances

A positive result to any appropriate opioid in the formal pathology test can be used to instigate therapy

Where a patient has been admitted for a prolonged period of time, pathology urine tests should be undertaken weekly to determine continued illicit use, which may inform treatment choice.

5.7.2 <u>Instant Urine Screens</u>

The Drug & Alcohol Liaison Team / Turning Point can undertake bedside instant urine toxicology screens. However, stock of the test kits is limited and held only by the team, so this option should only be used for complex/urgent cases when indicated and is dependent on the availability of the Drug & Alcohol Liaison Team.

The instant urine toxicology screening kits test for: amphetamines, buprenorphine, cocaine, opiates, cannabinoids (THC), and EDDP (methadone metabolite). They are primarily used to confirm presence of opiates and OST (buprenorphine and methadone) to corroborate dependence.

5.7.3 <u>Points to note regarding urine tests:</u>

- The current turnaround time for laboratory urine tests within UHL is 3 to 5 working days and can detect the following substances as detailed in table 2. **The result from this test can be reviewed by Turning Point, even if the patient has been discharged.**

Drug / drug metabolite		
4-MEC	Fentanyl	Morphine
6-MAM	Gabapentin	Nitrazepam
Amitriptyline	Lorazepam	Norbuprenorphine
Amphetamine	MDA	Nordiazepam
Benzoylecgonine	MDEA	Oxazepam
Buprenorphine	MDMA	Oxycodone
Clonazepam	Mephedrone	Pregabalin
Cocaethylene	Methadone	Quetiapine
Cocaine	Methamphetamine	Temazepam
Codeine	Methylecgonine	THCCOO-glucuronide
Diazepam	Midazolam	Venlafaxine
Dihydrocodeine	Mirtazapine	Zopiclone
EDDP		

Table 2: Drug and Drug metabolites tested by UHL pathology services

- Dilute samples of urine can give false negative results. Lab tests will usually give the amount of creatinine in the sample, and this will be a guide of how dilute the sample is.
- If the patient drinks a large volume of liquid before they do the test this will produce low concentration urine.
- The best sample is the first sample of urine passed in the morning.
- Some people give contaminated or substituted samples. A sample just produced by the patient should be at body temperature and have a normal colour. If it unusually cold or has an odd colour it may have been tampered with.
- Many tests have a cut-off point. This is the concentration below which the test will disregard any of the metabolite it is testing for and show a negative result.

A positive result for an opioid urine test will mean that opioids have been taken recently. Bear in mind the instant urine screens cannot differentiate between different opiates. If the patient takes codeine, dihydrocodeine, morphineor diamorphine (heroin) these tests will register positive. Some of these opiates are found in over the counter preparations like Co-Codamol, Paramol, Nurofen Plus and Kaolin and Morphine mixture. Multiple brands and manufacturers of medication are available in the pharmaceutical market, if further assistance is required to ascertain the contents of a medication, please contact a member of the UHL pharmacy team or the medicine information department via the hospital switchboard.

- Opiate tests generally look for the presence of morphine and its metabolites. These can be detected in the urine for up to 48 hours after the last dose.
- A positive result on a methadone urine test will mean that the patient has used methadone recently. Note methadone taken regularly in a maintenance program could be detected in the urine up to 9 days after the last dose.

- Urinalysis cannot give an indication of how much drug was taken.
- A negative result merely means the test did not detect any opiate or methadone metabolites. It would be interpreted that the patient has not used opiates or methadone recently.
- However, there are plausible reasons why false negatives may occur: The patient may be pregnant. During pregnancy hormones are released which speed up the metabolism of methadone. The urine may be dilute – see earlier.

Considering these facts urinalysis must be viewed in conjunction with the rest of the assessment in particular the onset of withdrawal symptoms and cannot be relied upon in isolation.

Table 3 gives a guide to how long drugs of abuse can be detected in the urine once the user has stopped using the drug.

Substance Drug or its metabolite(s)	**Duration of detectability**
Amphetamines / amfetamines, including methylamphetamine and MDMA	2 days
Benzodiazepines: Ultra-short-acting (half-life 2h) (e.g.midazolam) Short-acting (half-life 2–6h) (e.g. triazolam) Intermediate-acting (half-life 6–24h) (e.g. temazepam, chlordiazepoxide) Long-acting (half-life 24h) (e.g. diazepam, nitrazepam)	 12 hours 24 hours 2–5 days 7 days or more
Buprenorphine and metabolites	8 days
Cocaine metabolite	2–3 days
Methadone (maintenance dosing) Methadone metabolite: EDDP	7–9 days (approximate)
Codeine, dihydrocodeine, morphine, propoxyphene (heroin is detected in urine as the metabolite morphine)	48 hours
Cannabinoids: • Single use • Moderate use (three times a week) • Heavy use (daily) • Chronic heavy use (more than three times a day)	 3–4 days 5–6 days 20 days Up to 45 days

Table 3: Time frame for detection of drugs of abuse in urine samples. (4)

5.8 Alcohol withdrawal

Treatment for patients who are found to be misusing and/or undergoing withdrawal with alcohol must be treated following the UHL Policy for alcohol withdrawal B30/2014. Caution should be taken with the use of benzodiazepine in this patient group due to the additive effect of CNS depression and respiratory depression

5.9 Other Drugs of Abuse

In general, if a patient is found to be misusing other non-opioid substances the first point of reference for ward staff should be the Drug & Alcohol Liaison Team (Turning Point).

Other drugs commonly encountered include crack cocaine, alcohol, cannabis, benzodiazepines, amphetamines, ketamine, gabapentinoids (gabapentin or pregabalin) and synthetic cannabinoid receptor agonists. There are many more, and common street drugs change with international, national and regional trends.

Opioid Substitution Treatment is not indicated in the treatment of addiction to any of these substances.

6 Confirmation and prescribing of Opioid Substitution Treatment (OST)

6.1 Confirmation of prescribed medication (OST) used prior to admission

Many patients will be under the care of a prescriber for the treatment of their addiction in the community.

This will usually be the community drug team (Turning Point) in association with the patient's GP. A handful of Shared Care practices in Leicester, Leicestershire & Rutland can also prescribe methadone.

In general, if the patient is an injector or uses several distinct types of drug or has a psychiatric diagnosis as well then it is likely that if they have a community prescriber and also a community pharmacy.

It is vital that the community prescriber and the community pharmacist are informed of their patient's admission to hospital for several reasons:

The community prescriber (or the Drug & Alcohol Liaison Team if the community prescriber is Turning Point – the most likely scenario) can confirm the dose of methadone or buprenorphine prescribed in the community without the need for a full assessment being done. The Drug & Alcohol Liaison Team at the LRI can access patient records at Turning Point.

- The prescriber will know not to issue further prescriptions until the patient has been discharged.
- The community pharmacy should also be contacted, who can confirm the last administered/dispensed dose and help establish if there is a Three-day gap in therapy. This will be more pertinent if the community prescriber is not available.
- The community pharmacist will cancel any current prescriptions they have until the patient has been discharged and this has been confirmed by the prescriber.
- If the community-based clinicians are not contacted patients may go and still collect prescriptions, in effect get a double dosage, which presents a risk of overdose.
- The ward must be able to establish when the item was last dispensed or consumed if on supervised therapy. If more than three days has passed and the patient has not used any opioids in that time then restarting methadone at the same dose may not be safe, due to reduced tolerance. The decision depends on what the patient wants, how they present and the hospital prescriber's clinical judgement.

6.2 Prescribing OST in hospital

The three licensed medications for Opioid Substitution Treatment available are

methadone, buprenorphine oral lyophilisates (Espranor®) and Buvidal® (prolonged release buprenorphine).

Methadone has the larger research evidence base, but buprenorphine has a better safety profile.

There are studies evaluating the use of buprenorphine in substance use and it is well recognised as an effective treatment.

However, methadone is still considered the first line treatment because buprenorphine initiation is more complex than methadone initiation.

6.2.1 Methadone prescribing

All clinical prescribing advice derives from the National Treatment Agency Drug misuse and dependence: UK guidelines on clinical management – link in Section 12 below.

6.2.1.1 Confirmed methadone prescription

If the patient is prescribed methadone in the community and the dose has been confirmed with the community prescriber or community pharmacist and there has been no break in methadone dosing, then the community dose can be prescribed if it is clinically appropriate to do so. NB the patient's medical condition may prevent this.

Once dose has been confirmed, extant script in community pharmacy should be voided.

In-possession methadone

If a patient is stable in the community, they may be on weekly take-home in-possession methadone. They may therefore attend hospital with a stock of their own methadone or have some still at home. This methadone must be accounted for, and a determination be made as to whether the patient should be administered methadone from their own stock, or whether this stock should be returned to them at discharge. This should be discussed with the Drug & Alcohol Liaison Team (Turning Point).

On NerveCentre, the Supply source of all OST should be set to either Hospital Stock or Patient's Own.

A break of more than 3 days will require reduced dosages and reinitiating therapy. This will be advised by Turning Point. In the event that Turning Point has not been used as a source or contact to confirm the dose and they are not available, this patient group will need to be re titrated using the schedule described in the unconfirmed methadone prescription (section 6.2.1.2)

Patients should be reassured that acute withdrawal from methadone should not occur due to the long half-life of methadone (24 to 48 hours)

There are several methadone formulations available. The only one patients will be prescribed within UHL is methadone oral mixture 1mg/1ml and prescribed as milligrams. The concentrated version, injections and tablets are not to be prescribed for OST, even if these were prescribed pre-admission. The evidence suggests that the indications for tablets and injectable methadone are limited.

6.2.1.2 Unconfirmed methadone prescription

Prescribing of OST in this group of patients should only occur when

1. Confirmation of a patient's regular prescription cannot be ascertained.

Or

2. Contact with the Drug & Alcohol Liaison Team (Turning Point) cannot be

established.

Or

3. The patient has been admitted to the ward having missed three continuous days of therapy, if confirmed with the patient's community pharmacist.

Or

4. The patient is not on a plan, Turning Point is unavailable, the patient is actively using an opioid to dependent levels and is in severe withdrawal

It is important to explain as clearly as possible to the patient the titration process, the need for continued monitoring and the reasons for it. This explanation should be repeated as often as is necessary to help allay the patient's concerns regarding treatment for their drug use.

Patients commencing methadone must consent to engage with community follow-up from Turning Point. OST is only indicated alongside psychosocial interventions offered which, in combination, increase the chances of the patient overcoming their drug dependence.

The full treatment plan can be found in appendix 2

The underlying theme of questioning during the dose assessment is whether the prescribed dose of methadone is preventing withdrawals symptoms for at least 24 hours. Doses of methadone should be titrated against this measure.

Use the COWS to get a better idea of the severity of withdrawal symptoms. Try to correlate the dose and the time it was taken with the time it took for withdrawal symptoms appear.

An adequate dose of methadone will "hold" (i.e. prevent withdrawal symptoms) for at least 24 hours. This is the aim of methadone prescribing. Doses should always be titrated against signs of withdrawal and how long the patient is comfortable on the current daily dose.

Never titrate doses against signs of opioid intoxication; this puts the patient at risk of methadone overdose. Doses should only be titrated against withdrawal symptoms.

The MHRA has advised that doses of methadone above 100mg could be associated with cardiovascular irregularities causing an increase in QT intervals. Current advice is that all Patients with the following risk factors for QT-interval prolongation should be carefully monitored while taking methadone: heart or liver disease, electrolyte abnormalities, or concomitant treatment with drugs that can prolong QT interval; patients requiring more than 100 mg daily should also be monitored. Appendix 5 has a list of medications know to increase QT intervals.

Methadone is cumulative so doses cannot be escalated rapidly. Hold doses for a couple of days to allow the methadone to distribute throughout the body.

Patients on doses above 100mg should be discussed with the clinician at Turning Point. Patients on all other doses do not need to be reviewed by the clinicians at Turning point. Contact numbers can be found in appendix 4.

Contact a specialist in substance use, or the Drug & Alcohol Liaison Team to review all opioid dependent patients at the earliest opportunity.

6.2.2 Buprenorphine and Buvidal® prescribing

Buprenorphine typically comes in the form of oral lyophilisates – usually Espranor® - whereas Buvidal® is a prolonged release buprenorphine injection. Confirm which formulation is required before prescribing.

6.2.2.1 Confirmed buprenorphine oral lyophilisate (Espranor®) prescription

Once the dose has been confirmed by the community prescriber and community pharmacy it can be prescribed as in the community.

It should be prescribed as a single daily dose.

Buprenorphine is a partial agonist with a high affinity for the opioid receptors in the brain, higher than morphine and diamorphine (heroin). Hence it may antagonise opioid pain relief administered during the patient's stay in hospital. This could impact on any surgical procedures that are required.

If large doses of buprenorphine are needed, it may be possible to split the daily dose into a twice daily regimen to allow adequate pain control. The decision to do this must be discussed with Turning Point and documented in the patient's notes.

6.2.2.2 Unconfirmed buprenorphine prescription

Buprenorphine will **not** be initiated whilst patients are in hospital. Initiation of buprenorphine is not easy and requires the patient to be in withdrawal and is best left to specialists in addiction. If the assessment confirms the patient to have opioid dependence, then they should be started on methadone as above. Patients who cannot have methadone should have supportive treatment until contact with Turning Point has been made.

6.2.2.3 Buvidal® prescribing

Buvidal ® is a prolonged-release injection of buprenorphine used in opioid dependence. Buprenorphine is an opioid partial agonist/antagonist which binds to the mu and kappa opioid receptors in the brain. Its activity in opioid maintenance treatment is attributed to its slowly reversible properties with the mu opioid receptors which, over time, might minimise the need for illicit opioids for people with opioid dependence.

Buvidal® comes in weekly and monthly injections allowing for flexible dosing.

Buvidal® has a marketing authorisation for treating opioid dependence within a framework of medical, social and psychological treatment in adults and young people aged 16 years and over.

Buvidal® should not be commenced within UHL. However, patients may be on an existing Buvidal® programme under Turning Point.

Dosing information should be obtained from Turning Point/community prescriber. This will include frequency (weekly/monthly), dosage in mg, and date of last administration.

Buvidial® is not stocked by UHL. If a patient is on a Buvidal® regime, then Turning Point should be informed of admission as early as possible. The usual response will be to substitute for sublingual lyophilisate (Espranor®) at the equivalent dose following case discussion.

There is a “grace period” of 2 days before and after weekly due date, and 7 days before and after monthly due date, so there should be no urgency if Turning Point cannot be immediately contacted (e.g. over a weekend).

Buvidal® must not be prescribed/administered to patients who have any of the following:

- Hypersensitivity to the active substance or to any excipients listed in the SPC
- Severe respiratory insufficiency
- Severe hepatic impairment
- Acute alcoholism or delirium tremens (EMC, 2019a and 2019b)
- Pregnant or breastfeeding patients

LFTs and Blood Borne Virus testing on admission is required. Regular LFTs throughout admission as buprenorphine can cause an increase in transaminases.

6.3 OST in specific patient groups

6.3.1 Acute pain control

Acute pain management of OST patients can be difficult due to patient experiences and tolerance to analgesia seen in common practice.

Where possible regular paracetamol and non-steroidal anti-inflammatory medications such as ibuprofen /naproxen should be prescribed according to the patient's allergy status, interactions, licensed recommendations and considering current/past medication histories.

The WHO standard of keeping to one opioid for chronic and acute pain isn’t achievable in the setting of OST. Titrating acute pain with the opioid used for OST can complicate long term therapy.

The use of OST with methadone or buprenorphine does not necessitate the avoidance of short acting opioids, epidurals and/or patient-controlled analgesia (PCA) in the post-operative phase.

Patients should be offered the most appropriate analgesia according to their acute medical condition, with the addition of non-opioid analgesics such as nerve infiltration, nerve block etc. according to the anaesthetist post-surgery.

Patients can still be given their regular methadone/buprenorphine, however usage of epidural and PCAs may be higher by the patient and the necessity to monitor for opioid intoxication should be considered by medical and nursing staff.

Patients on methadone who require additional analgesia may have their methadone dose split in half and given as a twice-daily dose, even if they had it as a single daily dose in the community. For example, a patient on 50mg of methadone could be prescribed 25mg twice daily. Split dose methadone is not indicated for opioid dependence alone.

If a patient is on a large dose of buprenorphine, it may be possible to split the daily dose into a twice daily regimen to allow adequate pain control. The decision to do this must be discussed with Turning Point and documented in the patient’s notes. Reestablishment of a once daily regimen would be reinitiated back in the community.

Cyclizine should not be prescribed due to its potential for increasing euphoria states and must not be given on discharge. Where possible, metoclopramide or prochlorperazine should be prescribed for the relief of nausea and vomiting.

Ondansetron may be prescribed as an alternative for patients known to be allergic to other antiemetics.

Tramadol should not be prescribed due to its potential for addiction, its side effect profile and interactions with medication such as antidepressants and antipsychotics which are commonly prescribed patients undergoing OST.

Avoid gabapentin and pregabalin as there is potential for abuse with these medications. Only prescribe for licensed indications where clinically appropriate.

6.3.2. OST during palliative therapy

Patients on OST with pain resulting from terminal illness should be co-managed by palliative care services within UHL (i.e LOROS) with advice from specialists in addiction (e.g. Turning point). Multidisciplinary assessment and care management is essential, patients should be discussed and therapies individualised.

Patients receiving OST will need to continue their prescription, but it is advisable to split the daily dose of methadone or buprenorphine and administer doses 8-12 hourly in addition to the analgesic regimen, which will commonly involve immediate-acting opioids but can include a combination of slow-release and immediate-acting drugs.

The prescribed dose or type of opioid in OST or its route of administration may need to be changed as, for example, when renal function deteriorates or the oral route of administration is no longer an option.

Methadone can be used as a CSCI; however, it is known to cause localised inflammatory responses and may need to be co-administered with a small dose of dexamethasone. The CSCI methadone dose should be 50% of usual oral dose. Also, with converting oral to the subcutaneous route, there may need to be a delay from the last oral dose to starting the CSCI (approx. 8 to 12 hours). This might be alleviated by splitting the patient's usual oral dose into two, thus preventing adverse drug reactions and overdoses.

When using opioids for palliative care, fast acting preparations such as buccal fentanyl should be avoided and this also applies to those dependent on opioids, unless agreed recommended by the palliative team.

If there are any concerns in these circumstances, contact the palliative care team via switchboard or Turning point.

7. Overdose Guidance

7.1 Opioid Overdose

Opioids taken to excess can trigger an overdose, which can be fatal. Opioids are Central Nervous System depressants, and the danger is that in overdose, breathing and heartrate can slow down to a stop.

Signs and symptoms of a potential opioid overdose (may not all be present)

- Slow, shallow breathing / respiratory arrest
- Gurgling or choking sounds
- Hard to detect or weak pulse
- Low GCS/unresponsive/extreme drowsiness

- Pinpoint pupils (although not always present)
- Cyanosis / Pale or clammy skin
- Skin feels cold to the touch
- Presence of drug paraphernalia

7.2 Naloxone

The treatment for opioid overdose is the antagonist Naloxone.

An NHS England Patient Safety Alert in November 2014 (6) highlighted risks associated with inappropriate naloxone use:

Naloxone must be given with great caution to patients who have received longer- term opioid treatment for pain control or who are physically dependent on opioids. Use of naloxone in patients where it is not indicated, or in larger than recommended doses, can cause a rapid reversal of the physiological effects for pain control, leading to intense pain and distress, and an increase in sympathetic nervous stimulation and cytokine release precipitating an acute withdrawal syndrome. Hypertension, cardiac arrhythmias, pulmonary oedema, and cardiac arrest may result from inappropriate doses of naloxone being used for these types of patients

Naloxone is a short acting drug with a half-life of approximately 4 hours.

The short half-life means that repeated injections are needed following opioid overdose, for example heroin.

The recommended dose range to reverse acute opioid overdose in adults within a hospital can be undertaken with the following

- An injection of naloxone of 400 micrograms stat
- Followed by 800 micrograms up to 2 doses at 1-minute intervals if no response to the preceding dose
- Then increased to 2mg for 1 dose if still no response
- 4mg dose may be required in seriously poisoned patients
- Aim for reversal of respiratory depression, not full reversal of consciousness
- Then review diagnosis; further doses may be required if respiratory function deteriorates Naloxone is given by the intravenous route. If that route is not accessible then it can be given via the subcutaneous or intramuscular route, but the clinical effect is delayed (7, 8).

In August 2021 a further Patent safety alert (NatPSA/2021/007/PHE) was issued warning about the adulteration of heroin with potent synthetic opioids such as isotonitazene. It's potency and toxicity are uncertain but perhaps similar to or more than fentanyl, approximately 100x morphine. There is good evidence that naloxone works in these cases but delivering it rapidly and completely is even more critical, as progression to respiratory arrest, and recurrence of respiratory arrest, are more likely.

Intravenous infusions of naloxone are useful when repeated doses are likely to be required.

- Start with an hourly infusion equal to 60% of the doses required to adequately reverse respiratory depression.
- For example, if 800 micrograms was required (either as single dose or two 400microgram doses) then start the infusion at 500micrograms per hour. The infusion will require titrating to the desired clinical effect.
- For adults
- 10mg (25 x 400microgram in 1ml ampoules) made up to a final volume of 50ml with glucose 5% will produce a 200microgram/ml solution to be administered via an IV pump.

Ref : Toxbase

The half-life of methadone is significantly longer, and effects of an overdose can last as long as 72 hours. Hence these patients will need to be observed for at least 72 hours.

In treating methadone overdose it will be necessary to administer a continuous intravenous infusion.

Bear in mind once Naloxone starts to take effect the patient will be in severe withdrawal symptoms and may try to leave the ward prematurely.

Naloxone cannot displace buprenorphine from opioid receptors as buprenorphine has a higher affinity. Hence Naloxone will at best only partly reverse the effects of buprenorphine. However, buprenorphine overdose is rare if taken alone, if another opioid is used it will act as an antagonist or block the effect of the second opioid. If it is taken with another depressant like alcohol or benzodiazepine the safety profile is compromised. General supportive measures would be taken.

All ward staff should know what procedure to follow if there is a drug overdose on the ward and where to obtain the required antidotes.

Following discharge, an opioid-dependent patient may have a lower dependence/tolerance threshold than on admission and is therefore at an increased risk of overdose. Naloxone is a potentially life-saving medicine when used in settings associated with opioid misuse and overdose.

7.2.1 Take-home Naloxone kits

Systematic reviews conclude that pre-provision of naloxone to heroin users can be helpful in reversing heroin overdoses. The Drug & Alcohol Liaison Team (Turning Point) can supply Prenoxad® - a take-home Naloxone kit - without a prescription, which can be taken home by the patient, family or friends for use in an emergency. The naloxone supplied will be in prefilled syringes only. See Appendix 6.

These kits are also available in Red Majors and EDU

7.3 Overdose with other substances

Treatment of these overdoses should be aimed at the presenting symptoms and may include management of unconsciousness and management of acute psychosis. There may not be any specific antidotes for overdoses caused by the other drugs of abuse.

Information for specific overdoses and/or poisons can be obtained through:

- The National Poisons Information Service and Toxbase.
- Access to Toxbase is restricted and access can be made through contact via the A&E department if required Benzodiazepines. The antidote for benzodiazepine overdose is flumazenil but this should only be used on expert advice (an anaesthetist), as its use is hazardous.

8. Detoxification

The decision to detoxify a patient from opioids should be a patient led decision. The patient will require support from Turning Point and have counselling on the risks, benefits and types of programmes available, referral to treatment and aftercare packages.

The key issue relating to detoxification is the risk to the patient that should they relapse; they are at a greater risk of overdose and death. Many opioid overdoses and deaths arise in cases where a patient has relapsed and uses pre-detoxification doses of opioids to which they no longer have tolerance.

Patients do better in treatment than out of treatment. There is a greater risk of drug related morbidity and mortality in drug users out of treatment. If patients have been detoxed, are out of treatment and without adequate follow up and aftercare there is a strong likelihood of relapse due to the psychological aspects of dependence (such as craving) that will not have been addressed.

Evidence suggests that pharmacological detoxification with additional psychosocial therapy is more effective than pharmacological detoxification alone in terms of treatment completion; compliance and results at follow up. The decision to detoxify from opioids should not be taken by the clinician unilaterally.

9. Discharge

The inpatient discharge team must co-ordinate the continuing treatment of the patient's opioid dependence. A community prescriber will continue treatment but only if a referral has been made and enough notice has been given to carry out this task; ideally prior to 3pm on the day of discharge.

Final dosage, date and time of administration of OST (methadone or buprenorphine) should be noted in the discharge letter.

In all cases, please liaise fully with the Drug & Alcohol Liaison Team (Turning Point). At discharge, Turning Point (if they are the community prescriber) will require evidence of the patient's final dose and time of administration. This is so continuation script can be generated by Turning Point starting the first day post-discharge. A screenshot of the patient's Meds chart on NerveCentre (filtered by Strong Opioids), or the discharge letter if the information is there, will suffice. These should be forwarded to the Drug & Alcohol Liaison Team (Turning Point) either by email to TurningPointReferral@uhl-tr.nhs.uk or the Liaison Team Recovery Worker with whom you have been liaising directly. If discharge is not properly planned with the Drug & Alcohol Liaison Team (Turning Point) there is a risk that a community prescription will not be available for the patient on discharge. This may result in further drug related harm, e.g. withdrawal, relapse or overdose, and probable re- admission to the ward with similar complications.

Patient's own stock.

Patients stable on OST in the community may be prescribed a week's worth (7-day) methadone in-possession for weekly

If the patient did not bring this stock into hospital on admission, it should be calculated how many doses they have at home. If this is enough to cover a weekend, then the patient can be discharged Saturday-Sunday. This should still be done in liaison with the Drug & Alcohol Liaison Team (Turning Point).

Patients must not be given take-away methadone on discharge because of the risk of a), diversion into the illicit drug market, or b) overdose.

Patients should not be discharged over a weekend as Turning Point cannot generate continuation methadone prescriptions Saturday-Sunday. Patients can only be discharged over a weekend if already planned with Turning Point prior to the preceding Friday before 3pm.

If methadone take-away doses are prescribed the pharmacy department must not dispense them.

For patients going on overnight leave doses of methadone can be administered before they depart.

Patients should not be discharged with codeine, dihydrocodeine, combination analgesics containing opioids such as co-codamol or co-dydramol, benzodiazepines, zopiclone or zolpidem unless indicated and following discussion with the clinicians based at Turning Point, (as opposed to the UHL Drug & Alcohol Liaison Team). If advised by the clinician in substance use no more than 3/7 of these agents can be supplied. Dose of these items should not exceed that recommended.

10. Education and training

A comprehensive training package will be provided by the Drug & Alcohol Liaison Team (Turning Point) on the medical and other wards within UHL where patients with opioid dependence are frequently admitted.

Training is available for other areas upon request, e.g. substance-specific training, poly-drug use, alcohol misuse, etc. To request training contact the Drug & Alcohol Liaison Team (Turning Point) on x17285, 07734694857 or 07535658329 or email: TurningPointReferral@uhl-tr.nhs.uk

11. Monitoring and Audit Criteria

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Incidents related to inappropriate use of methadone	Datix incidents	Medication safety pharmacist	Monthly	Medicines Optimisation Committee

12. Equality Analysis Assessment

12.1 The Trust recognises the diversity of the staff and local community it serves. Our aim therefore is to provide a safe environment free from discrimination, harassment and victimisation and treat all individuals fairly with dignity and respect and, as far as is reasonably possible, according to their needs.

12.2 As part of its development, an Equality Analysis on this guideline have been undertaken and its impact on equality have been reviewed and no detriment was identified.

OR if 12.2 above does not apply seek wording from The Head of Equality on equality@uhl-tr.nhs.uk

EDI Statement

We are fully committed to being an inclusive employer and oppose all forms of unlawful or unfair discrimination, bullying, harassment and victimisation.

It is our legal and moral duty to provide equity in employment and service delivery to all and to prevent and act upon any forms of discrimination to all people of protected characteristic: Age, Disability (physical, mental and long-term health conditions), Sex, Gender reassignment, Marriage and Civil Partnership, Sexual orientation, Pregnancy and Maternity, Race (including nationality, ethnicity and colour), Religion or Belief, and beyond.

We are also committed to the principles in respect of social deprivation and health inequalities.

Our aim is to create an environment where all staff are able to contribute, develop and progress based on their ability, competence and performance. We recognise that some staff may require specific initiatives and/or assistance to progress and develop within the organisation.

We are also committed to delivering services that ensure our patients are cared for, comfortable and as far as possible meet their individual needs.

13. Key Words

Methadone, Buprenorphine, Buvidal, Heroin, Opioid addiction, Opioid dependence, addiction, psychoactive substances, OST

14. Further information / References

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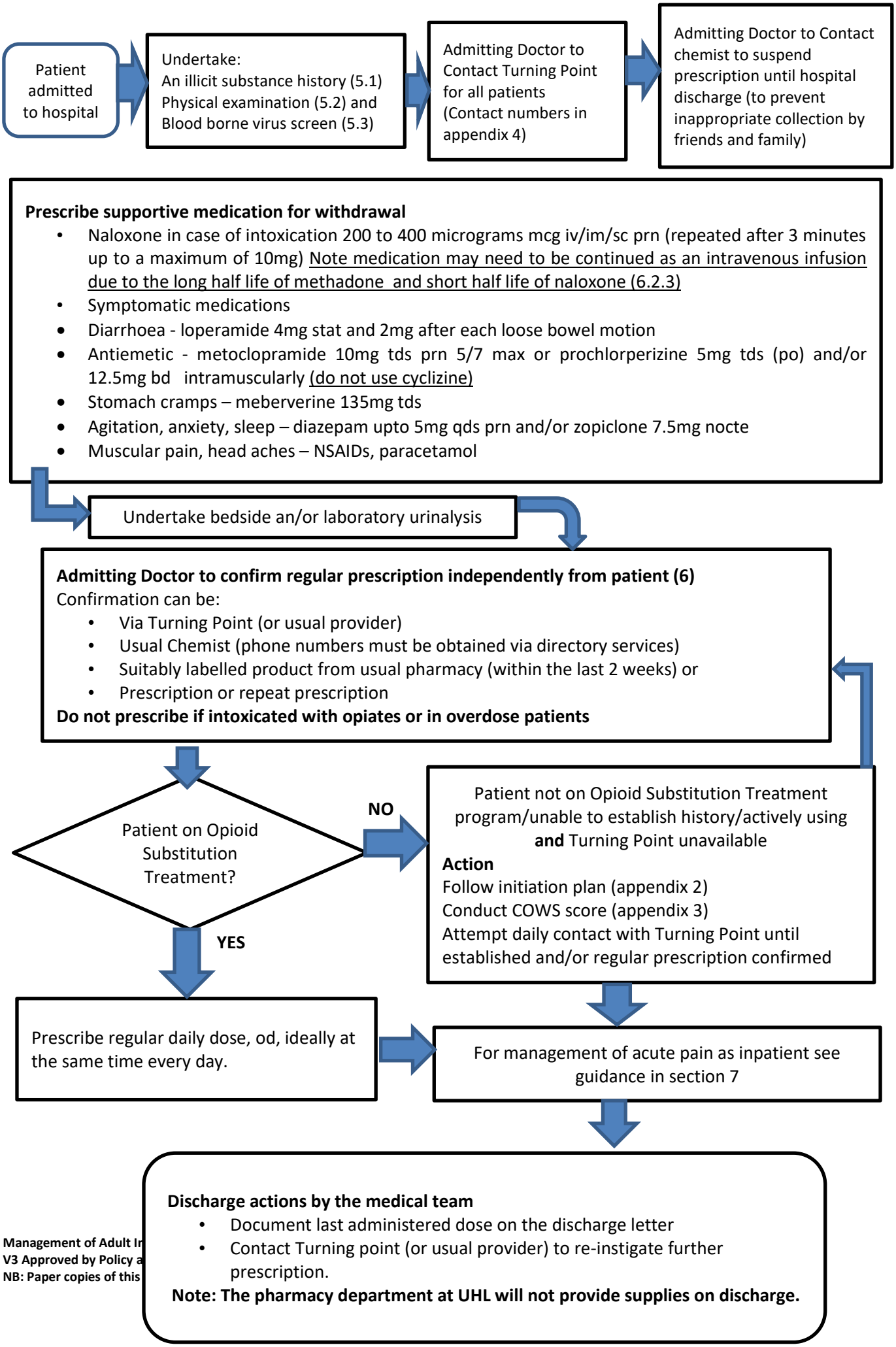
15. Acknowledgements.

- This guideline has been adapted from the 2011, Guidelines for inpatient management of opiate addiction. East London NHS foundation Trust
- This guideline has been written in partnership with the local Drug & Alcohol Liaison Team for Leicester, Leicestershire and Rutland – Turning Point

APPENDIX 1: PROCEDURE ON EMERGENCY ADMISSON FOR OPIOID DEPENDENT PATIENTS –MULTIDISCIPLINARY GUIDANCE (PAGE 1 OF 2)



APPENDIX 1: PROCEDURE ON EMERGENCY ADMISSON FOR OPIOID DEPENDENT PATIENTS –MULTIDISCIPLINARY GUIDANCE (PAGE 2 OF 2)

Safety Notes

Do not give into pressure to prescribe
• Poly- drug and alcohol misusers may develop multiple withdrawal symptoms, which methadone may mask
• Care should be undertaken in head injury, liver disease and respiratory depression
• Care should be taken with medications know to
  ○ Induce and inhibit metabolism of medications
  ○ Medications which are known to enhance sedation and
  ○ Those known to cause QTc prolongation

See appendix 5 for further information

Objective signs of withdrawal		
• Yawning	• Coughing	• Sneezing
• Runny nose	• Lachrymation	• Raise blood pressure
• Raise pulse	• Dilated pupils	• Cool clammy skin
• Diarrhoea	• Nausea	• Fine muscle tremor
Do not use subjective signs of withdrawal to treat patient E.g. depression, drug craving, abdominal cramps, sleep disorders		
See COWS scores for further guidance (Appendix 3)		

APPENDIX 2: SUBSTITUTE PRESCRIBING – METHADONE INITIATION PLAN FOR PATIENT NOT ON OPIOID SUBSTITUTION THERAPY.

First 24 hours of admission

In the first 24 hours after admission OST therapy should not be administered/prescribed and the patient should be managed with symptomatic treatment options

Contact should be made with the Drug & Alcohol Liaison Team where possible.

Patients must have a urine test conducted.

Patients should be prescribed

- Naloxone in case of intoxication
- Symptomatic medications
    - Diarrhoea - loperamide 4mg stat and 2mg after each loose bowel motion
    - Antiemetic - metoclopramide 10mg tds prn 5/7 max or prochlorperazine 5mg tds (po) and/or 12.5mg bd intramuscularly
    - Stomach cramps – meberverine 135mg tds
    - Agitation, anxiety, sleep – diazepam up to 5mg qds prn, zopiclone 7.5mg nocte
    - Muscular pain, head aches – NSAIDs, paracetamol.

Patients should be monitored for objectives signs of withdrawal using the COWS (appendix 3) this should be repeated every 4 hours.

COWS score

Score 5 to 12 = mild withdrawal

Score 13 to 24 = Moderate withdrawal

Score 25 to 36 = severe withdrawal.

24 to 48 hours of admission

- In the 24 to 48 post admission period, contact with the Drug & Alcohol Liaison Team (Turning Point) should be established if possible.
- If confirmation of a regular prescription can be made e.g. via the community pharmacy/GP or the Drug & Alcohol Liaison Team/Turning Point, treatment should be followed as described in section 6.2.1.1.
- If the patient reports no symptoms for 24 hours OR feeling able to wait for longer than 24 hours between doses then they are on an adequate dose.
- Withdrawal from opioids should be continued to be monitored using the COWS every 4 hours.
- Methadone should not be given unless the objective signs of opioid withdrawal are present.
- The COWS score that is used to decide on whether to prescribe methadone must be conducted by the prescriber
    - COWS = 12 or less do not prescribe
    - COWS >13 prescribe 10mg 1mg/ml methadone stat dose
- Prescribe 10mg of methadone oral mixture 1mg/1ml as a stat dose, if a patient has a COWS score of 13 or more.
- The patient should be monitored 1 to 2 hours post dose and the COWS repeated every 4 hours.
- If the patient is scoring 13 or more on the COWS, 8 hours after the initial stat

dose or later a second 10mg stat dose of methadone 1mg/ml can be prescribed. The decision to administer the second dose should only be undertaken if the COWS score is 13 or more and the COWS score at this scheduled time must be conducted by a doctor.

- It is important to clearly document the decision-making process especially when the decision is taken to increase or withhold the dose if showing signs of intoxication.
- No more than 20mg of methadone should be administered in the first 24 hours.
- No more than 20mg of 1mg/ml methadone can be ordered for patients at this stage of therapy through pharmacy

48 to 72 hours of admission

- Between the 48 and 72 hours of admission, contact with Drug & Alcohol Liaison Team/Turning point should be established if possible.
- If confirmation of a regular prescription can be made e.g. via the community pharmacy or Drug & Alcohol Liaison Team/Turning Point, treatment should be followed as described in section 6.2.1.1.
- If the patient reports no symptoms for 24 hours OR feeling able to wait for longer than 24 hours between doses then they are on an adequate dose.
- If contact with Drug & Alcohol Liaison Team/Turning Point cannot be established, the total daily dose of methadone administered in the 24-to-48-hour period should be prescribed as a single dose. The patient should be monitored 1 to 2 hours post dose. Withdrawal from opioids should be continued to be monitored using the COWS every 4 hours.
- It is important to clearly document the decision-making process especially when the decision is taken to increase or withhold the dose if showing signs of intoxication.
- Should the patient have a COWS score of 13 or more in the 48 to 72 hours post admission period, a further 10mg stat dose of methadone may be prescribed if required. This must not be less than 8 hours after the initial dose given during the day. The COWS score at this scheduled time must be conducted by a doctor.
- No more than 30mg of methadone should be administered within the third day of admission.
- No more than 30mg of 1mg/ml methadone can be ordered for patients at this stage of therapy through pharmacy

72 hours after admission

- If confirmation of a regular prescription can be made e.g. via the community pharmacy or Drug & Alcohol Liaison Team/Turning Point, treatment should be followed as described in section 6.2.1.1.
- If the patient reports no symptoms for 24 hours OR feeling able to wait for longer than 24 hours between doses then they are on an adequate dose.
- If contact with Drug & Alcohol Liaison Team/Turning Point cannot be established, the total daily dose of methadone administered in the 48-to-72-hour period should be prescribed as a single dose.
- Contact with Drug & Alcohol Liaison Team/Turning point should be established as, further dose increases should not occur without prior instruction by Turning point (or until the dose holds withdrawal symptoms at bay for 24 to 36 hours)
- No more than 30mg of 1mg/ml methadone can be ordered for patients at this stage of therapy through pharmacy

APPENDIX 3: CLINICAL OPIOID WITHDRAWAL SCALE (COWS) - LOG

CLINICAL OPIOID WITHDRAWAL SCALE Assessment form must be completed and signed before a dose can be administered				Addressograph
Ward		Site		

	Baseline	1	2	3	4	5	6	7	8	9	10
Date											
Time											
Resting pulse											
Sweating											
Restlessness											
Pupil size											
Bone or Joint aches											
Runny nose or tearing											
GI upset											
Tremor											
Yawning											
Anxiety or irritability											
Gooseflesh skin											
Total score											
Contact with Turning Point must be undertaken at the earliest opportunity											
Has contact with Turning Point been made?	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
Dose required? (COWS ≥ 13)	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
Assessed by: Signature											
Print name											
Profession											

APPENDIX 3: CLINICAL OPIOID WITHDRAWAL SCALE (COWS) – GRADING

A Doctor should observe the patient during a 5-minute observation period then indicate a score for each of the opioid withdrawal signs listed below on the reverse of this chart. Add the scores for each item to obtain the total score.

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 opioids 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 piloerection of skin can be felt or hairs standing up on arms 5 prominent piloerection
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	The COWS scale must be completed prior to each dose during the assessment period. Score: 5-12 = mild; 13-24 = moderate; 25-36 = moderately severe withdrawal. Scores of 13 and above are sufficient to warrant additional doses.

COWS scores can be undertaken to help establish withdrawal from Opioids and can be used in patient both ON or OFF a OST program.

COWS table has been adapted from Wesson (2003) The Clinical Opiate Withdrawal Scale (COWS)

APPENDIX 4: CONTACT NUMBERS AND OPENING TIME FOR LOCAL SERVICE PROVIDERS

For all inpatient referrals, the first point of contact should be the UHL Drug & Alcohol Liaison Team. Run by Turning Point, it is based at the Leicester Royal Infirmary. The team can be emailed at TurningPointReferral@uhl-tr.nhs.uk or referred to on ICE under Service Provider "Substance Misuse".

The office hours are 8-6pm, 7-days a week.

Drug & Alcohol Liaison Team (Turning Point)
Ground Floor, Knighton Street Outpatients Building
LRI
X17285, 07734694857, 07535658329

Drug and Alcohol Services in Leicester City and Leicestershire County and Rutland - Turning Point

Turning Point is the commissioned provider for Drug and Alcohol treatment in Leicester, Leicestershire and Rutland.
For all outpatient enquiries call 0330 303 6000.

Opening times	
Day	**Times**
Monday	09:00 to 17:00
Tuesday	09:00 to 17:00
Wednesday	09:00 to 20:00
Thursday	09:00 to 19:00
Friday	09:00 to 17:00
Saturday	09:00 to 13:00

Local Prison (Leicestershire)

HMP Glen Parva, Welford Road and Gartree. - Contact onsite medical team - Phone number available via hospital switchboard

Community Pharmacies –
Obtain numbers via directory services through hospital switchboard

Useful References

National Poisons Information Service - Phone number available from hospital switchboard or http://www.npis.org. Information available on Toxbase.

The street names of all drugs of abuse can be found at www.talktofrank.com in the section "The A-Z of drugs". Patients can ring Talk to Frank on 0800 776600

National helplines (patient self referral)

Narcotics Anonymous – Website: http://ukna.org. Telephone: 0300 999 1212

Alcoholics Anonymous - Website: http://www.alcoholics-anonymous.org.uk

Telephone: 0800 9177 650 Email: help@aamail.org

APPENDIX 5: IMPORTANT INTERACTIONS WITH METHADONE AND BUPRENORPHINE

Common interaction with methadone and buprenorphine are listed below. Further information regarding interactions can be obtained in the BNF, by contacting a member of the pharmacy team or by contacting the medicine information department.

Interaction type	Which medicines or other substances?	How?	Effect?
CNS depressants and opioids including buprenorphine	• other opioids • hypnotics, anxiolytics, sedatives • benzodiazepines • many tricyclic antidepressants and MAOIs • many antipsychotics • older antihistamines • clonidine • anaesthetics • barbiturates • alcohol **For methadone:** • lofexidine	increased CNS depression	additive effect – potentiation of respiratory depression, hypotension
Medicines which increase methadone or buprenorphine levels	• cimetidine • ciprofloxacin • antimicrobials including: • macrolides: (erythromycin, clarithromycin, telithromycin), azoles: (ketoconazole, itraconazome, fluconazole, voriconazole) • antidepressants: fluvoxamine and possibly other SSRIs • some cardiovascular agents: amiodarone • some antiHIVagents **For buprenorphine:** other CYP3A4 inhibitors e.g. gestodene, protease inhibitors indinavir, saquinavir, nelfinavir, ritananovir, boceprivir **For methadone:** • disulfiram • grapefruit juice • delavirdine • quinidine • verapamil • dihydroergotamine	Increased blood levels of methadone or buprenorphine by inhibition of the enzyme CYP3A4, CYP2D6 or reduced protein binding	dose of methadone or buprenorphine may need to be decreased to prevent toxicity or overdose AND may need to be increased when the enzyme inhibitor is stopped to prevent withdrawal symptoms (sedation, confusion, respiratory depression)
Medicines which decrease methadone or buprenorphine level	• anticonvulsants e.g. barbiturates, carbamazepine, phenytoin, primidone, fosphenytoin • rifampicin • rifabutine • spironolactone • St. John's Wort **For methadone:** smoking (CYT1A2) fucidic acid (not	decreased blood levels of methadone or buprenorphine by induction of enzyme CYP3A4 or increased urinary excretion	dose of methadone or buprenorphine may need to be increased to prevent withdrawal symptoms AND decreased when the enzyme inducer is stopped to

	topical) Dexamethasone antiretrovirals: abacavir, amprenavir, lopinavir, efavirenz, nevirapine, nelfinavir, ritanovir, nevirapine, nelfinavir, ritanovir		prevent overdose
Buprenorphine and other opioid agonists	• methadone • diamorphine other full agonists e.g. fentanyl	buprenorphine is a partial agonist and displaces other opioids from receptor sites	can precipitate withdrawal symptoms - advise waiting until opioid is excreted (confirmed by presence of withdrawal symptoms) before taking buprenorphine
Opioid agonistsor partial agonists with opioid antagonists	naltrexone (active orally) naloxone (active intra-nasally and parenterally	naltrexone and naloxone are full antagonists and displace other opioids (including buprenorphine, pentazocine) from receptor sites	will precipitate withdrawal symptoms if taken when agonist or partial agonists have recently been taken
Methadone plus medicines affecting QTc interval	• antidepressants: tricyclics, SSRIs including sertindole, citalopram/escitalopram, fluoxetine • antipsychotic medicines including haloperidol • antimicrobials: pentamidine, macrolides (erythromycin, clarithromycin, azithromycin), quinolones (moxifloxacin, sparfloxacin), azoles (fluconazole, itraconazole, ketoconazole, voriconazole) • antiemetics: domperidone, droperidol, ondansetron • antiarrhythmic/cardiovascular drugs: digoxin, dronedarone, sotalol, quinidine, amiodarone, flecanide, procainamide, dofetilide disopyramide • some antimalarials • some cancer treatments • some HIV protease inhibitors e.g. atazanivir • cocaine and stimulants including atomoxetine, dexamfetamine, methylphenidate	prolongation of QTc interval can cause torsades de pointes	life threatening ventricular arrhythmias use cautiously with methadone

	• terodiline • antihistamines including: terfenadine, astemizole, loratidine possibly lithium and lofexidine		
Methadone plus medicines affecting cardiac conduction or which may affect electrolyte imbalance	• cytotoxics • rifampicin • atomoxetine • protease inhibitor crizotinib • antimalarials	precipitated ventricular arrhythmia	risk of cardiac eventsavoid concomitant use
Medicines affecting urine pH	• vitamin C • ammonium chloride • sodium bicarbonate (antacids)	affect excretion of methadone: − increased excretion in acidic urine (ammonium chloride) − decreased excretion in alkaline urine (sodium bicarbonate)	increased excretion may cause withdrawal decreased excretion may cause toxicity

Table 5: Common interaction with Methadone and Buprenorphine. From Drug misuse and dependence: UK guidelines on clinical management

APPENDIX 3: Patient leaflet for take-home Naloxone (Prenoxad ®)

Prenoxad® Injection

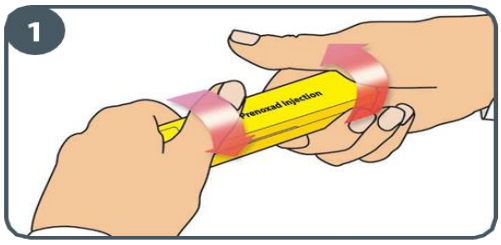
naloxone hydrochloride

Assembly and Administration Guide

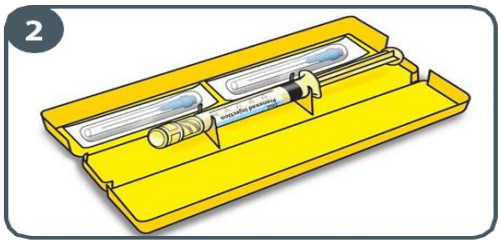
MARTINDALE PHARMA

Making lives better

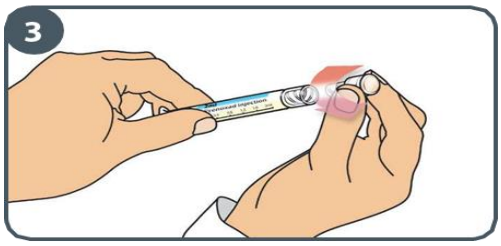
Only to be used as part of the Prenoxad Injection certificated training course.



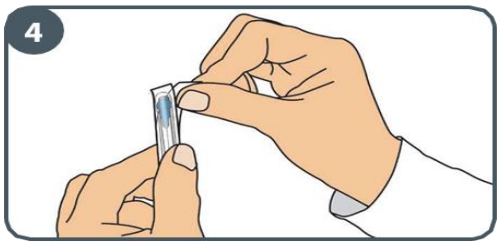
Remove the clear film wrapping by pulling the tear strip on the side of the box. Twist the outer plastic box as shown to break the tamper evident seals and open.

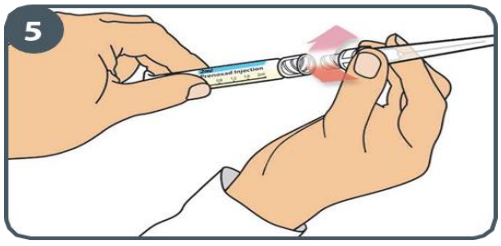


The box contains 1 syringe of Prenoxad Injection and two needles.

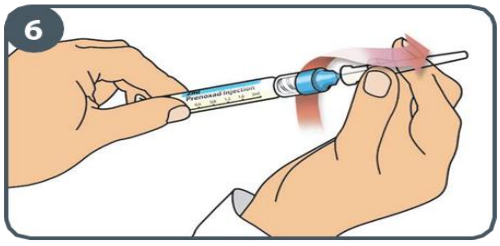


Unscrew the clear plastic top from the syringe.

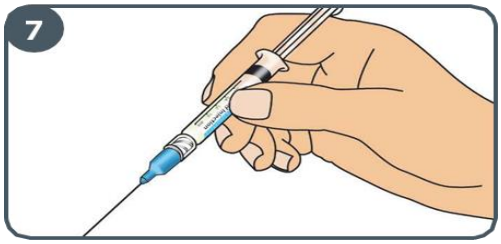




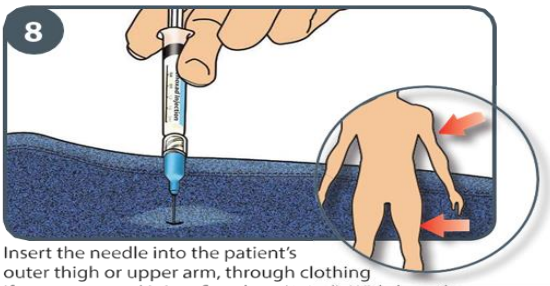
With the needle still in its sheath, screw the blue fitting on to the syringe.



Gently twist the needle sheath and remove it from the syringe.



To inject someone who has overdosed, hold the syringe like a pen



Insert the needle into the patient's outer thigh or upper arm, through clothing if necessary, and inject first dose (0.4ml). Withdraw the needle and syringe after each dose.

Action on finding a potential overdose

Person unconscious and unresponsive

DO

Shout for help and approach with care

Open airway:
Tilt head back gently and lift chin

NOT BREATHING

Call 999

30 chest compressions then 2 rescue breaths

Inject 0.4ml Prenoxad Injection (to first black line)

Repeat 3 cycles of 30 chest compressions then 2 rescue breaths if possible

BREATHING

Recovery position

Stay with person until ambulance arrives

DO NOT

- Inflict pain
- Put in bath or shower
- Walk them about
- Use other drugs such as stimulants
- Leave them alone

BREATHING

Recovery position

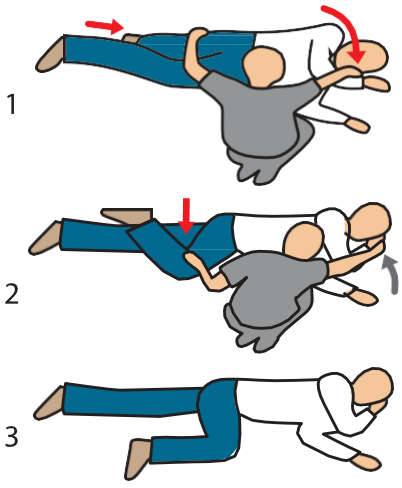
Inject 0.4ml Prenoxad Injection (to first black line)

Call 999

If no change after 2-3 minutes

Inject 0.4ml Prenoxad Injection (to next black line)

RECOVERY POSITION



Date of preparation: August 2013
Job Code: CRIT/04/2013/117

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