



# Drug Misuse Management in the Acute Hospital Setting – Guidelines

This procedural document supersedes: PAT/T 21 v.3 – Drug Misuse Management in the Acute Hospital Setting – Guidelines



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# Amendment Form

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Version 4 Version 3	November 2022 June 2017	<ul> <li>Updated Methadone flow chart</li> <li>Updated guidance on Methadone prescribing for patients admitted to hospital</li> <li>Transferred to new trust format</li> <li>Restructuring of contents to improve accessibility</li> <li>Methadone flowchart included in line with intranet "Clinical Guidelines" replacing 2012 Appendix 8</li> </ul>	S Bartle S Peagram
Version 2	November 2007	<ul> <li>General restructuring of contents to improve access and flow of subject material</li> <li>Contents presented to reflect National Drug Policy focus on Recovery (DOG 2010)</li> <li>Clinical Governance framework incorporating NICE QS23 (2012)</li> <li>New content – General guidance on prescribing by substance of misuse</li> <li>New content – Equity and diversity issues for Assessment</li> <li>New content – inclusion of contact details for Trust child Protection Nurses and Doncaster nad Bassetlaw Social Services Departments</li> <li>New content – Methadone Pharmacology</li> <li>New content – Buprenorphine Pharmacology</li> <li>New content – Patients own supplies, linked to PAT/MM 1B v.4</li> <li>New content – Discharge of planning, to reflect need for TTA doses of OST at weekends and holidays</li> <li>New content - Appendix 13 ICD 10 Dependency diagnosis (WHO 1992)</li> <li>Revised content – Summary card – amended to reflect updated discharge planning arrangements</li> </ul>	S Peagram

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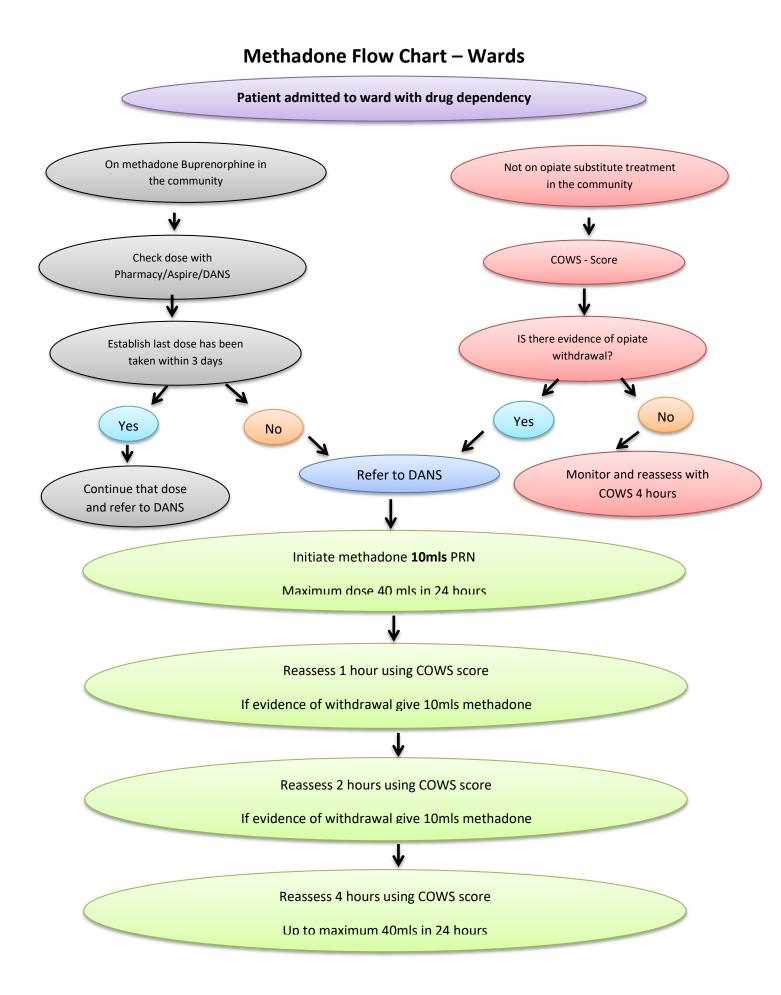
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# **METHADONE FLOWCHART - WARDS**



# **1** INTRODUCTION

These guidelines are intended for both medical and nursing staff to act as a resource in the management of patients with drug misuse issues.

The main source of evidence used within these guidelines is taken form the 'Drug Misuse and Dependence – UK Guidelines on Clinical Management, (2017)' and should be read in conjunction with, Guidance on Methadone and Buprenorphine for the Management of Opioid Dependence (NICE 2016); Drug Misuse: Opioid Detoxification (NICE); Guidance for the use of Substitute Prescribing in the Treatment of Opioid Dependence in Primary Care (RCGP 2011): "Medications in Recovery – Re-orientating Drug Dependence Treatment" (NTA 2012).

# 2 PURPOSE

The purpose of these guidelines is to offer a resource on how to deal with common problems that arise and how to signpost / refer to community treatment providers. Working within the context of the National Drug Strategy 2010's overarching aims to:

- Reduce illicit and other harmful drug use: and
- Increase the numbers recovering from their dependence

#### "Our ultimate goal is to enable individuals to become free from their dependence"

[DOH 2010].

# **3 DUTIES AND RESPONSIBILITIES**

#### **3.1** Doctor's Responsibilities

It is acknowledged that drug misusers have the same entitlement as other patients to the services provided by the National Health Service and it is the responsibility of all Doctors to provide care for both general health needs and drug-related problems, whether or not the patient is ready to withdraw from drugs. [DOH, 1999].

All doctors must provide medical care to a standard, which could be reasonably, expected of a clinician in their position. The focus for the clinician treating a drug misuser is on the patients themselves. However, the impact of their drug misuse on other individuals – especially dependent children – and on communities should be taken into consideration. [DOH, 2007].

#### **3.2** Non Medical Prescriber's Responsibilities

It is the Non Medical prescribers' responsibility to prescribe within current National and Local policy guidelines, only prescribing within their level of competence.

The Non-Medical prescriber must ensure that an adequate assessment has been carried out prior to prescribing. [SEC 5].

The Non-Medical prescriber must adhere to relevant DBTH Medicines Management Policies. (PAT T/MM 1)

All Non-Medical prescribes must adhere to the DBTH policy on non-medical prescribing. (PAT T/MM 11 v1)

#### 3.3 Nurses' Responsibilities

It is the responsibility of nursing staff to ensure the safe administration of medicines as per PAT/MM 1.

#### 3.4 Patient's Responsibilities

It is the patients' responsibility to provide details of current community drug treatment and hand over any medications for safe storage.

Patients are expected to abstain from illicit drug use while in hospital.

#### 3.5 Drug Alcohol Nurse Specialist (DANS) Responsibilities

The Drug and Alcohol Nurse Specialist (DANS) will take referrals from medical, nursing and associated healthcare professionals.

DANS Referrals can be made by written, telephone, email and bleep.

DANS will see patients admitted to wards, and where availability allows attend the Emergency Department.

DANS will provide triage and comprehensive assessment depending on workload.

DANS will liaise with community teams to ensure continuity of treatment.

DANS will offer screening, brief intervention and advice, and referral to the hospital misuse liaison team.

DANS will ensure prescribed interventions for detox/substitutions are delivered safely and effectively.

# 4 GENERAL GUIDANCE

#### 4.1 Overview

Problematic drug users experience increased rates of morbidity and mortality due to their substance misuse, and although drug misuse exists in every sector of society, it is most prevalent in areas of social deprivation where individuals are more likely to experience poorer health outcomes, independent of substance misuse. (RCGP 2011).

Generally, there is a greater prevalence of certain illnesses amongst the drug-misusing population, including viral hepatitis, bacterial endocarditis, HIV, tuberculosis, septicemia, pneumonia, deep vein thrombosis, pulmonary emboli, abscesses and dental disease. (DOH 1999).

#### 4.2 Rationale

Heroin users are the largest single group in treatment and use an especially tenacious, habit forming drug in the most dangerous ways. (NTA 2012).

For many people, prescribed treatment is an important part of their recovery journey. It is one component of a broader recovery-orientated system of health and social care.

Treatment choices fall broadly in to three categories Substitution Therapies, Detoxification and Relapse Prevention.

**Opiate Substitution Therapies** (OST) such as Methadone or Buprenorphine can significantly improve outcomes for most opioid dependent people. Treatment can reduce symptoms of dependence, and being in treatment can help to reduce associated difficulties.

OST allows people the time, space and platform to make meaningful choices. OST:

- Prevents people dropping out of treatment.
- Suppresses illicit use of heroin.
- Reduces crime.
- Reduces the risk of BBV transmission.
- Reduces risk of death.

Coming off OST can lead to greater risk of relapse, BBVs and overdose; and that treatment orientated to rapid abstinence produces worse outcomes than treatment initially orientated to maintenance. (Drug Strategy 2010).

Opioid substitution therapy would be the first choice when offering treatment for opiate dependency.

Detoxification as a "stand alone" treatment is associated with poor outcomes and can

trigger renewed episodes of drug use and increased risk of death from overdose. Detoxification usually takes place following a reduction of substitution therapies and as part of a wider structured plan incorporating psychosocial and cognitive behavioral therapies.

Detoxification should only be considered in the acute hospital setting where there is a clinical need that prevents the use of opioid substitution therapy or the patient makes a specific choice.

**Relapse Prevention** prescribing using opiate antagonist medication such as Naltrexone has become less common among community drug teams but can be a useful stepping stone towards recovery as part of a structured program incorporating psychosocial and cognitive behavioral interventions.

# PRIOR TO ANY PRESCRIBED INTERVENTION ADEQUATE PATIENT ASSESSMENT IS REQUIRED SEC[5].

# 5 ASSESSMENT

#### 5.1 Overview

Good assessment is essential to the continuing care of the patient.

Assessment should balance the needs of the patient with those of the medical practitioner. The prescriber must ensure that an adequate assessment has been made before prescribing.

No doctor should feel pressurized into prescribing until they feel an appropriate assessment has been completed. (DOH 2007).

#### 5.2 Equity and Diversity

All assessments should be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. People who need a comprehensive assessment should have access to an interpreter or advocate if needed.

#### 5.3 Triage Assessment

A triage assessment aims to identify the immediate risks/medical complications that might arise from the intoxicating effects of drug use, the risk of further drug use and the risk of acute withdrawal.

• Drug type

- Frequency of use
- Amount used
- Route of administration
- Time of last use
- Physical complications
- BBV status
- Evidence of Intoxication SEC [12.3]
- Evidence of Withdrawal APPENDIX 6
- Community Treatment SEC [6.1]

Triage assessment can be sufficient to initiate prescribing where a full assessment is not possible or appropriate.

Where it is not possible to obtain a history directly from the patient collateral history from the community drug team, partners, family can aid the decision making process.

#### 5.4 Comprehensive Assessment

Comprehensive assessment aims to deliver an informed understanding of the person's wishes, substance use, and the severity and complexity of clinical and other problems: and it needs to identify their strengths and key obstacles to their recovery. (NTA 2012).

A comprehensive assessment should consider both drug use and resources for recovery and include:

- treating the emergency or acute problem
- assessing the degree of dependence APPENDIX 4
- assessing physical and mental health complications
- identifying social assets, including housing, employment, education and support networks
- assessing risk behavior including domestic violence and offending
- child protection APPENDIX 8
- determining the person's expectations of treatment and desire to change
- determining the need for substitute medication

#### 5.5 Urine Screening

Urine analysis should be regarded as an adjunct to the history and examination, it should be obtained at the outset of prescribing and randomly throughout treatment.

Results should always be interpreted in the light of clinical findings, as false negatives and positives can occur.

Drug detection times can vary see APPENDIX 5.

#### 5.6 Opiate Withdrawal Syndrome

The onset of physical withdrawal symptoms is a key characteristic of opiate dependency and their presence is required to establish a diagnosis.

Typically starting 6 - 8 hours following cessation, peaking at 24 - 36 hours and lasting 5 - 7 days the opiate withdrawal syndrome is often accompanied by increased levels of anxiety. APPENDIX 6.

The use of certain medications, naloxone, buprenorphine can precipitate withdrawal symptoms in otherwise stable patients receiving opiate substitution therapies.

Unlike alcohol withdrawal acute opiate withdrawal is not associated with life threatening seizures.

#### 5.7 Drug Using Parents

A third of drug misusers in treatment have child care responsibilities. NTA (2009).

The risk of harm to a child or young person can come directly through exposure to substances, the effect of intoxication or withdrawal on the parent, exposure to and normalization of criminal activity to fund drug use. APPENDIX 8 for more guidance.

Referral to Social Services in DONCASTER – 01302 736636

Referral to Social Services in Bassetlaw – 01777 716161

For more information or advice about Child Protection Policies and Procedures within DBTH contact Safeguarding Team, Named Nurse for Children on ext 642437.

PAT/PS 10 - Safeguarding Children Policy.

#### 5.8 Cardiac Assessment

#### **Methadone and QT Prolongation**

The Medicines and Health Care Product Regulatory Agency [MHRA] recommended in 2006.

"that patients with the following risk factors to QT interval prolongation are carefully monitored whilst taking Methadone: heart or liver disease, electrolyte abnormalities, concomitant treatment with CVP 3A4 inhibitors, or medicines to cause QT interval prolongation.

In addition any patient requiring any more than 100mg of methadone per day should be closely monitored. Further information is included in the product information."

Clinicians must make a balanced judgement for each patient according to the MHRA guidance [and any later expansion or revision] Monitoring, will usually include checking other medications, general monitoring of cardiovascular disease, liver function tests and urea and electrolytes. As the risk factors for the QT interval prolongation increase, e.g. high methadone dose or multiple risk; clinicians will need to consider ECGs. The MHRA recommendation, suggests that an ECG might be considered before induction onto methadone, or before increases in methadone dose and subsequently after stabilization – at least with doses over 100 mg per day and in those with substantial risk.

See APPENDIX 3.

# 6 EXISTING COMMUNITY PATIENT – METHADONE/BUPRENORPHINE (SUBTEX/SUBOXONE)

Established community Methadone/Buprenorphine prescribing should be continued without interruption or dose alteration during inpatient admissions.

Good communication between the hospital, community drug team and community pharmacy is essential to ensure continuity of treatment and maintain patient safety.

#### DANS input strongly advised.

#### 6.1 Dose Confirmation

The following information should be confirmed with either the community drug team, or the patient's community pharmacy and documented prior to prescribing.

Check	Variable	
Drug Type	Methadone Mixture SF 1mg/1ml Buprenoprhine (Subutex/Suboxone)	
Daily Dose	Mg	
Pick up frequency	Daily / 2 x weekly / 3 x weekly / weekly	
Pharmacy	Name , Telephone number	
Date of last dose	Day / Time	
Missed Doses	Potential loss of tolerance [7.2]	
Patients own supplies	Risk of double dosing , Risk to others	

Out of hours, weekends and Bank Holidays see SEC [6.3] below.

#### 6.2 Safe Administration

Prior to dose administration Nursing staff are prompted by Wellsky to consider Pre administration safety/intoxication response.

#### 6.3 Out of Hours

There are times such Bank Holidays, Weekends and evenings when it is not possible to confirm patient dose with the community pharmacy or community drug team.

**<u>CAUTION IS ADVISED</u>** the patient may have already taken a dose.

Where the patient can produce proof of ongoing prescribing such as a current prescription or appropriately labelled bottle this is sufficient evidence with which to prescribe. Ensure to check the name, and dispensing date on the bottle.

# Where the patient cannot produce proof and there is evidence of acute opioid withdrawal syndrome APPENDIX 6 offer – PRN – Methadone Mixture SF 1mg/1ml-10mg, 2-4 hourly, Max 40mg/24hrs

Continue until dose confirmation can be obtained, then prescribe normal community dose.

#### 6.4 Missed Doses

Where patients have missed Methadone doses a change of tolerance or increased drug use may occur. The following steps should be taken:

Number of days missed	Action to be taken
One day	No change to dose
Two days	No change to dose.
Three days	No change to dose.
Four days	Follow "Starting Treatment" pathway

#### 6.5 Patients Own Supplies

Patients should routinely be asked if they have any of their own Methadone/Buprenorphine in their possession.

Patients own supplies should be removed for safe storage.

Patients should normally only receive doses from ward stock.

Take home doses to be issued following liaison with the community drug team to prevent shortfall or accumulation of Methadone.

# PAT/MM 18 – SAFE AND SECRURE HANDLING OF MEDICINES POLICY – PART B – CONTROLLED DRUGS

#### 6.6 Take Home Supply

Take home doses should be kept to a minimum i.e to cover weekends, maintain prescription continuity.

DANS liaison with community drug team essential.

See SEC [14] DISCHARGE PLANNING.

#### DANS input strongly advised.

# 7 METHADONE – STARTING TREATMENT

There is robust evidence showing that OST (Methadone) can significantly improve outcomes for most opioid dependent people.

OST (Methadone) has a substantial role in reducing harm and preventing deterioration.

Orientating OST (Methadone) to maintenance allows people the time, space and freedom to make meaningful choices.

Admission to hospital provides a gateway into treatment and an opportunity to begin OST (Methadone).

Patients offered OST (Methadone) are less likely to use illicit drugs and more likely to engage with the medical/surgical plan.

OST (Methadone) should be offered to patients with a history of heroin use alongside a referral to DANS to arrange for follow up prescribing by the community drug teams.

#### 7.1 Indication

A Schedule 2 Controlled Drug. **Methadone Mixture SF 1mg/1ml** is a full opioid agonist, it can be substituted for opioid drugs such as diamorphine (Heroin) to preventing the onset of physical withdrawal symptoms; it is itself addictive and should only be prescribed for those who are physically dependent on opioids.

#### 7.2 Precautions

- Poly drug use alcohol, benzodiazepines
- Respiratory insufficiency

- Severe Hepatic dysfunction
- Renal impairment
- Opiate naive

QT elongation APPENDIX 3

#### 7.3 Contraindications

- Acute respiratory depression
- Raised intracranial pressure
- Comatose patient

#### 7.4 Investigations

- Establish dependence, history, examination APPENDIX 4
- Establish onset withdrawal APPENDIX 6
- Urine Screen Drugs of Abuse APPENDIX 5

#### 7.5 Dosing

# METHADONE MIXTURE 1mg/1ml 10mg PRN 2-4hrly Max 40mg / 24hrs. Please note full dose accumulation takes 72hrs. Titration should be done without guidance from DANS.

DAY	DRUG	DOSING	TOTAL DAILY MAX
Day 1	Methadone Mixture SF 1mg/1ml	10mg PRN 2 - 4 hourly	40mg

#### 7.6 Risk Factors

- Over 20% of all methadone deaths take place within two weeks of starting treatment.
- Risk of overdose is increased by low opioid tolerance, too high an initial dose, too rapid increases and concurrent use of other drugs, particularly alcohol, benzodiazepines and antidepressants.
- Methadone patients should be informed of the 'increasing effects' until a steady state is achieved, so that they do not excessively 'top up' with street drugs.
- A number of factors can alter methadone plasma levels, including gastric emptying, pregnancy and liver metabolism, which can increase risk of overdose.

#### 7.7 Safe Administration

Prior to dose administration Nursing staff are prompted by Wellsky to consider Pre administration safety/intoxication response.

#### 7.8 Take Home Supply

Take home doses should be kept to a minimum i.e. to cover weekends or maintain prescription continuity.

DANS liaison with community drug team essential.

See SEC [14] DISCHARGE PLANNING.

#### DANS input strongly advised.

#### SEE METHADONE FLOWCHART

# 8 **BUPRENORPHINE (SUBUTEX/SUBOXONE) – NEW STARTER**

There is robust evidence showing that OST (Buprenorphine) can significantly improve outcomes for most opioid dependent people.

OST (Buprenorphine) has a substantial role in reducing harm and preventing deterioration.

Orientating OST (Buprenorphine) to maintenance allows people the time, space and freedom to make meaningful choices.

Admission to hospital provides a gateway into treatment and an opportunity to begin OST. Patients offered OST are less likely to use illicit drugs and more likely to engage with the medical/surgical plan.

OST should be offered to patients with a history of heroin use alongside a referral to DANS to arrange for follow up prescribing by the community drug teams.

#### METHADONE IS THE PREFERRED CHOICE OF OST AND SHOULD BE OFFERED AS THE FIRST LINE OF TREATMENT – BUPRENORPHINE CAN BE CONSIDERED WHERE THERE IS A SPECIFIC CLINICAL NEED OR SPECIFIC PATIENT CHOICE.

#### 8.1 Indication

Buprenorphine is a sublingual tablet licensed for the treatment of opioid dependence in individuals over the age of 16 years of age.

It is available in the following doses – 0.4 mg, 2 mg, and 8 mg.

Status - Schedule 3 Controlled Drug.

Branded products SUBUTEX and SUBOXONE (a combination of Buprenorphine and

Naloxone) are widely reported by patients, during inpatient stays generic Buprenorphine is prescribed.

#### 8.2 Precautions

- Poly-drug use especially benzodiazepines
- Chronic pain
- Severe psychiatric illness
- Methadone maintenance at doses higher than 40 mgs

#### 8.3 Contraindications

- Pregnancy
- Breast feeding
- Severe hepatic/respiratory disease

#### 8.4 Investigations

- Establish opioid dependency
- Liver function test
- Pregnancy test

#### 8.5 Dosing

Before the commencement of buprenorphine, a full explanation should be given to the patient covering the properties of the drug, it effects, the induction period and the possible side effects. Understanding that the first 3 days are usually the worst is very helpful to the patient, especially when explaining precipitated withdrawal and the need for compliance to the treatment program. (RCGP, 2004).

DAY	MORNING	EVENING
DAY 1	4 mgs	4 mgs
DAY 2	8 mgs	
DAY 3	16 mgs	
Subsequent days	Continue as above	

#### Table 8 – Suggested buprenorphine induction regime for the ward setting

#### 8.6 Risk Factors for Overdose

- Low opioid tolerance,
- Use of CNS depressant drugs, including alcohol,

There is also a risk of increased precipitating withdrawal, if insufficient time is left

before administering buprenorphine in patients who have:

- Recently used heroin, particularly at higher doses,
- Recently consumed long-acting opioids such as methadone.

#### 8.7 Take Home Supply

Take home doses should be kept to a minimum i.e. to cover weekends, maintain prescription continuity, liaison with community drug team essential.

See SEC [14] DISCHARGE PLANNING.

#### DANS input strongly advised

# 9 OPIOD DETOXIFICATION

#### 9.1 Overview

Detoxification should be a readily available treatment option for people who are opioid dependent and have rejected an offer of OST (Methadone/Buprenorphine) opioid dependent and have rejected an offer of OST (Methadone/Buprenorphine) in favour of becoming opioid abstinent.

Detoxification can be simple/symptomatic or complex/medically assisted.

#### 9.2 Simple/Symptomatic Detoxification

Symptomatic relief using a range of PRN based medication to tackle specific symptoms of withdrawal if and when they occur.

- Diarrhoea **loperamide** 4 mg immediately followed by 2 mg after each loose stool for up to five days; usual dose 6-8 mg daily, maximum 16 mg daily.
- Nausea, vomiting, may also be useful for stomach cramps metoclopramide 10 mg eight hourly or prochlorperazine 5 mg three times a day or 12.5 mg intramuscularly 12-hourly.
- Stomach cramps **buscopan** 20mgs qds.
- Agitation and anxiety, sleeplessness diazepam (oral) up to 5-10 mg three times daily when required (or zopiclone 7.5 mg at bedtime for patients who have been dependent on benzodiazepines). In severe cases of anxiety and agitation, obtain suitable psychiatric advice from an addiction psychiatrist or the on-call duty psychiatrist.
- Muscular pains and headaches **paracetamol**, **aspirin** and other **non-steroidal antiinflammatory** drugs. Topical rubefacients can be helpful for relieving muscle pain associated with methadone withdrawal.

#### DANS input strongly advised.

#### 9.3 Clonidine

Clonidine should not be used routinely for opioid detoxification.

#### 9.4 Dihydrocodeine

Dihydocodeine should not be used routinely for opioid detoxification.

#### 9.5 Loss of Tolerance

The patient should be warned of the risk of drug overdose on leaving hospital, due to loss of tolerance.

Accidental overdose is often due to reduction in tolerance after period of abstinence (e.g. release from prison, discharge from rehabilitation or hospital). [ACMD, 2000].

Appropriate written support information should be given to the patient to refer to on discharge, alongside a good, effective explanation of the literature to ensure understanding and informed choice.

#### See DRUG RELATED DEATHS [sec 12.1] [sec 12.2]

#### **10 GENERAL MANAGEMENT**

Substance misuse patients can be a particularly challenging group of patients, however, it is unfair to assume that all patients with substance misuse issues will be challenging.

Like most patients they will have anxiety, discomfort and pain caused by the presenting condition. Unlike most patients they belong to one of the most stigmatized and disadvantaged groups in society.

Patients with substance misuse issues may have had previous negative experiences or health care systems.

#### **10.1** Ward Management

- Referral DANS.
- Reassurance that any existing community treatment will be continued on admission.
- A risk assessment to should be completed to determine the risks to patient, staff, public and the environment.

- Consideration should be given to placing the patient's bed close to the nursing station to facilitate observation.
- To avoid illicit drug use on the ward: ingestion of medication should be observed;
- Patients should be encouraged to remain on the ward.
- Visitors should be limited.
- Urine samples should be taken.
- Some opioid users misuse other drugs/alcohol consider steps to manage concurrent withdrawal.
- Pain Team Review.

#### 10.2 Insomnia

Insomnia through opioid withdrawal can be a trigger for illicit drug or alcohol use.

The short term use of hypnotic medication may be of benefit whilst an inpatient.

Hypnotic medication should only be prescribed on a PRN basis.

Hypnotic medication should not be issued to take home.

#### 10.3 Pregnancy

The number of women misusing drugs has increased considerably in the past 30 years, and many are of childbearing age. [DOH, 1999].

Any patient found to be pregnant and misusing drugs will require a sensitive approach and every opportunity taken to encourage them into mainstream service.

- Sudden withdrawal of opioids should not be encouraged during pregnancy because of the risks to the mother and baby.
- Advised take the lowest amount of drug needed to avoid withdrawal, in the safest way [e.g. smoke rather than inject].
- Offer urgent referral to drug services/specialist midwife.
- Where appropriate initiate methadone prescribing SEC[7].
- SUBOXONE is not suitable for treatment during pregnancy.

#### DANS input strongly advised.

#### OBSTETERIC REFERRAL REQUIRED

#### **10.4** Mental Capacity/Mental Health Act

A history of illicit drug misuse is not in itself evidence of reduced capacity.

However acute intoxication or delirium, brought about through acute withdrawal, may result in temporary impairment of capacity to an extent that it prevents the patient from to make informed decisions.

- For patients with impaired Mental Capacity refer to the trust policy (PAT/PA 19). Or
- Consider detention under the Mental Health Act for further assessment.

#### PATIENTS LACKING CAPACITY

Sometimes it will be necessary to provide care and treatment to patients who lack the capacity to make decisions related to the content of this policy. In these instances staff must treat the patient in accordance with the Mental Capacity Act 2005 (MCA 2005).

- A person lacking capacity should not be treated in a manner which can be seen as discriminatory.
- Any act done for, or any decision made on behalf of a patient who lacks capacity must be done, or made, in the persons Best Interest.
- Further information can be found in the MCA policy, and the Code of Practice, both available on the Extranet.

**There is no single definition of Best Interest**. Best Interest is determined on an individual basis. All factors relevant to the decision must be taken into account, family and friends should be consulted, and the decision should be in the Best interest of the individual. Please see S5 of the MCA code of practice for further information.

#### 10.5 AE/Outpatients

Where patients receive care in outpatient or emergency departments and do not require full admission to hospital, it is inappropriate to initiate new treatment.

There is a risk that the patient may have already taken/been given their daily dose, so giving OST treatment in ED is not advised. It also requires additional steps for the patient to regain OST treatment in the community if a dose of OST is given in ED, as the community treatment will be stopped, increasing the risk of patients falling out of treatment and resorting to further illicit drug use.

Attendance at A&E may present a window of opportunity to put drug misusers in touch with other services and consider their drug misuse. (DOH 2007) Referral to the Substance misuse Hospital Liaison team should be made to allow patients the opportunity to engage in support for substance misuse, including over the counter medications, and prescribed medications.

On discharge, the following information should be given as a minimum:

- General health promotion advice,
- Contacts for further help (such as needle exchange services, drug treatment

services or self- help groups),

- Advice on preventing overdose,
- Advice on reducing the risk of blood-borne virus infection and its consequences (including support for hepatitis B vaccination). This information is available from local drug treatment services.

# **11 PATIENT SAFETY**

#### **11.1** Drug Related Deaths

Drug-related deaths among UK drug misusers are among the highest in Europe.

Mortality rates amongst Opiate users are 12 x higher than none opiate using peers, and rise to22 x higher for Intravenous drug users.

Drug-related deaths are especially high in the first weeks following release from prison. (Farrell and Marsden, 2005). And in the first two weeks of Methadone treatment (Cornish et al 2010)

Drug-related overdose deaths are most commonly caused by opioid drugs but often they will involve the use of other depressant drugs such as alcohol, benzodiazepines and more recently Pregabalin.

#### **11.2** Reducing Drug Related Deaths

The 2007 Clinical Guidelines suggest that clinicians can help to reduce drug-related deaths in their patients by:

- Identifying and assessing patients at greatest risk of drug-related death.
- Providing education and training to drug misusers and their families on the risks of overdose and how to respond effectively advising drug misusers of the dangers of combining drugs, especially alcohol and benzodiazepines.
- Educating drug misusers that the use of methadone, outside its medical purpose, is extremely dangerous.
- Educating new patients starting on methadone and buprenorphine on the risks of loss of tolerance.
- Using supervised consumption, especially in the early stages of methadone and buprenorphine treatment.
  - Adjusting dispensing frequency according to risks.
  - Requiring that patients moving on to take home methadone and buprenorphine provide details of satisfactory home storage arrangements and recording these in the patient's notes, especially when children are in the home.
  - Conducting or arranging for mental health assessments in patients who present a suicide risk.
  - Making use of local specialist support and referral in complex cases, such as

cases of polypharmacy requiring specialist review.

• Contributing to effective care pathways between hospital and community services.

#### **11.3** Opiate Intoxication

The ability to identify and respond to acute opiate intoxication is key to maintaining patient safety. (DOH 2007).

#### Table 4 - Opioid Intoxication.

SIGNS	SYMPTOMS
<ul> <li>Euphoria/Relaxation</li> <li>Constricted pupils (pinned)</li> <li>Drowsiness</li> <li>Slurred speech</li> <li>Unsteady gait</li> <li>Smell (alcohol)</li> </ul>	<ul> <li>Feelings of well-being</li> <li>Poor attention/concentration</li> <li>Slurred speech</li> </ul>

- Prior to OST dose administration JAC prompts the nursing staff to consider intoxication.
- Patients who appear intoxicated with CNS depressant drugs should not be given their usual dose of methadone.
- If intoxication is mild the dose may be delayed and given once intoxication wears off.
- If intoxication is severe the dose may be omitted. Seek medical advice. Carry out basic nursing observations.

#### **11.4 Opiate Overdose**

- Respiration rate <8 + conscious level P or U
- Administer 100% oxygen
- Call 2222
- Naloxone 0-4 2.0mg (IV / IM / SC)
- Repeat 2 3 minutes
- Max dose 10mg
- Basic Life support Measures

At 60 minutes the half-life of Naloxone is much shorter than the effects of most opioid drugs / medications.

Once Naloxone wears off the patient may be at risk of further opiate sedation and associated respiratory depression which could be life threatening.

Patients may attempt to leave hospital while experiencing Naloxone precipitated withdrawal symptoms. They should be discouraged from doing so and the risk of reemrging overdose explained.

#### 11.5 Illicit Drug Use

Patients who are dependent on illicit drugs may continue to use illicit drugs throughout their hospital admission either to prevent physical withdrawal, relief of psychological distress or simply for pleasure.

Steps should be taken to assist patients in abstaining from illicit drugs during their stay.

- Referral to DANS.
- Adequate assessment.
- Maintaining Community Substitution Therapies. SEC [6].
- Initiating Substitution Therapy SEC [7] SEC [8].
- Dose Titration.
- Offering detoxification SEC [9].
- Appropriate analgesia SEC [13].
- Treatment of insomnia SEC [11.2].

# **12 PAIN MANAGEMENT**

#### 12.1 Overview

Pain is subjective and person defined; it is always unpleasant.

Pain in people who use drugs is common, complex and often forgotten and poorly treated. Up to 25% of people who use opioids say they started using opiates because of pain.

Chronic pain affects between 10 - 15% of the general population rising to between 30 and 50% of substance misusers.

Under-treatment is common and is often based on misconceptions.

# There are a number of reasons why individuals who are drug dependent may have greater than expected needs regarding pain relief:

- The presence of a drug misuse syndrome seems to worsen the experience of pain hyperalgesia.
- Drug misusers have a low tolerance of non-pharmacological interventions to achieve pain control.
- By nature of their condition, drug misusers have frequent episodes of intoxication, and withdrawal, which may alter the intensity of the pain experience.
- Virtually all forms of addiction are associated with sleep disturbance and this is a well known exacerbating factor in chronic pain.

- Depression and anxiety are common features in addiction and these have an important influence on the pain experience.
- Drug misusers are more likely to suffer from accidental and non-accidental injury, and medical complications related to their drug use. This places them at high risk from physical problems that may require analgesia.

#### 12.2 Methadone and Pain

Methadone is a full opiate Agonist drug and is the most common substitution therapy for treatment of opiate dependency.

- Give the usual methadone maintenance dose.
- Prescribe opioid analgesia where the condition warrants.
- Morphine is the preferred opioid agonist.
- It is not necessary to "rationalise" the patients entire opioid requirements to one drug.
- Increased sensitivity to pain or cross tolerance will often necessitate higher or more frequent doses.
- Avoid partial agonist/antagonist drugs for patients receiving methadone as withdrawal may be precipitated.

#### DANS/Acute Pain Team input strongly advised.

#### **12.3** Buprenorphine (Subtex/Suboxone) and Pain

Buprenorphine is a partial Agonist partial Agonist drug used in the treatment of opiate dependency.

Patients taking Buprenorphine may xperience opiate blockade effects.

Management steps.

- 1. Try NSAIDs and paracetamol.
- 2. Try continued buprenorphine and titrating a short acting opioid agonist, however, higher doses may be required to overcome Buprenorphines partial blockade effect.
- Try Dividing the daily dose of buprenorphine to reduce the blockade effect (i.e. 12mg OD given as 4mg TDS) and titrate opiate analgesia.
- 4. Less desirable Discontinue buprenorphine and treat both dependence and pain with a short acting opioid analgesia. Converting back to buprenorphine once opiate analgesia is discontinued.
- 5. Least desirable Stop Buprenorphine and offer methadone and opiate analgesia. The person may be changed back to buprenorphine before discharge.

Advice should be sought from the Acute Pain Team on bleep 1449 (at DRI) or 3107 (at BDGH) or the on-call anaesthetist outside office hours.

#### DANS/Acute Pain Team input strongly advised.

#### 12.4 Peri Operative Pain

Methadone may be given as per the patient's usual requirements within 2 hours before surgery. PAT/T 24.

The anesthetist will need informing of the amount and time of the last methadone dose given.

It may be necessary to omit or delay Buprenorphine dosing to prevent either opioid blockade or precipitated withdrawal effects.

#### **13 DISCHARGE PLANNING**

Weekends and Public holidays are times when community pharmacies may be closed and take home doses are required to maintain continuity of treatment.

Take home supplies of Methadone or Buprenorphine should be kept to a minimum.

It is essential to liaise closely with the Community Drug Team as part of discharge planning to prevent either gaps in treatment or duplication of prescribing.

#### DANS input strongly advised.

#### 13.1 TTO Doses

Most patients under the Community Drug Team are on Daily supervised prescriptions BUT routinely receive take home doses of medication at weekends or public holidays.

Dose Daily supervised Mon - Friday, taking home (Sat/Sun).

Collecting 3 x weekly (Mon/Wed/Fri), taking home (Tue/Thur/Sat/Sun). Collecting 2 x weekly (Mon/Thur) taking home (Tue/Wed/Fri/Sat/Sun). Collecting 1 x weekly taking home 7 daily doses.

In order to manage the safe transition from inpatient to community care the following needs to be agreed with and communicated to the Community Drug Team.

- Current drug and dose
- Date and time last taken
- Reason for giving TTO
- Amount of take home medication supplied
- Date of next required community dose

#### DANS input strongly advised.

#### 13.2 Caution

The JAC default for TTA medication is 28 days. Ensure you have amended JAC according to the patient's individual plan.

A handwritten INTERIM DISCHARGE NOTIFICATION for (HMR 2a) needs completing in addition to the JAC TTA request.

#### 13.3 TTO – New Starters

Extra safeguards are required when discharging patients who are "New Starters" as mortality in the first few weeks of OST is significantly elevated (Cornish et al 2010).

Every effort should be taken to minimise the need for take home dosing, and additional steps should be considered to prevent discharge at weekends or public holidays.

Arrangements for continued prescribing from the Community Drug Team should be in place and the patient made aware of where to go/who to contact upon discharge.

#### DANS input strongly advised.

#### **14 OTHER DRUGS**

It is impossible to provide guidance on every substance or scenario that might arise. Here you will find general guidance on some of the more common substances of abuse.

#### 14.1 Over the Counter Opiates

The use/abuse of over the counter medications containing opiates such as codeine has become increasing widespread.

Patients regularly taking OTC codeine may display symptoms of opiate dependency i.e. increased tolerance, physical withdrawal.

Patients may be unaware that they are dependent/withdrawing. A detailed history including the use of OTC medication is advised.

In most cases, where pain is the trigger, continued prescribing, gradual withdrawal and analgesic review is sufficient.

For a few patients, where the mood altering effects of opioids is attractive, specialist help

from the community drug team may be required.

#### DANS/Acute Pain Team input strongly advised.

#### 14.2 Benzodiazepines

Where patients receive regular community prescriptions for benzodiazepines these should be maintained. Confirmation of dose and prescription frequency by ward based pharmacist.

The decision to initiate prescribing of regular/repeat benzodiazepines for dependence should not routinely but undertaken in the acute hospital setting.

Where there is clear evidence of acute benzodiazepine withdrawal short term prescribing on a PRN basis may be considered.

Prescribing options – Diazepam [BNF].

The decision to prescribe routinely should only be taken following close liaison with the community drug team or community mental health team and there is a clear plan in place agreeing future treatment.

It is common to consolidate Benzodiazepine use to a single preparation i.e. Diazepam and prescribe at the lowest possible dose.

The use of Benzodiazepines with other depressants drugs such as Alcohol, Heroin, Methadone, Pregabalin increases the risk of overdose deaths.

Take home prescribing of benzodiazepines should be minimised to 7 days.

#### DANS input strongly advised.

#### 14.3 Alcohol

Acute alcohol withdrawal syndrome is a medical emergency and requires timely and appropriate intervention to prevent potentially life threatening complex symptoms.

Prescribing options – Chlordiazepoxide, Lorazepam, Diazepam, Midazolam.

#### For guidance on alcohol withdrawal management refer to PAT/T 25.

#### 14.4 Amphetamine/Cocaine

There are no licensed pharmacological treatments to eliminate the symptoms of withdrawal from stimulants.

There is limited evidence supporting the use of Dexamphetamine in the treatment of habitual amphetamine use. Treatment should only be considered by experienced practitioners within specialist drug treatment settings.

In the acute hospital setting short term symptomatic relief of agitation with Anxiolytics may be considered i.e. Diazepam/Lorazepam. [BNF].

For psychosis short term management with Antipsychotics i.e. Haloperidol. [BNF].

#### DANS input strongly advised.

#### 14.5 Cannabis

There are no licensed pharmacological treatments to eliminate the symptoms of withdrawal from cannabis.

Short term symptomatic relief of agitation or insomnia with Anxiolytics may be considered i.e. Diazepam. [BNF].

#### 14.6 New/Novel Psychoactive Substances

New/Novel psychoactive substances (NPS) so called "designer drugs", "research chemicals" or "legal highs" fall broadly into two categories - stimulant type compounds mimicking the effects of drugs like ecstasy or amphetamine "MCAT" and synthetic cannabinoids often referred to as "SPICE".

Despite the introduction of the Psychoactive Substances Bill in 2016, which made manufacture, importation and supply illegal. Possession of NPS for personal use is not illegal and their use remains widespread particularly amongst the prison population.

Heavy intoxication can trigger seizures and result in overdose. The effects are increased when taken with other depressant drugs such as alcohol.

Close monitoring and frequent physical observation is advisable with intoxicated patients.

There are some anecdotal reports of withdrawal symptoms associated with habitual use of synthetic cannabinoids, however, there are no substitute medications.

Consider symptomatic relief of agitation PRN Diazepam [BNF].

#### 14.7 Pregabalin/Gabapentin

Licensed for the treatment of epilepsy, neuropathic pain and general anxiety disorder Pregabalin and Gabapentin prescribing has become increasingly common.

Pregabalin and Gabapentin misuse is common with users reporting euphoria, sociability,

relaxation and calming effects.

Pregabalin and Gabapentin also have CNS depressant effects causing drowsiness, sedation and respiratory depression.

Taken in combination with other CNS depressants such as opiates, benzodiazepines or alcohol the depressant effects are additive and overdose may result.

The National Program on Substance Abuse Deaths reports the numbers of deaths where Pregabalin and Gabapentin are directly linked has increased from 13 deaths in 2011, 36 in 2012 and 41 in 2013.

Between 2012 – 2014 there were 32 Drug Related Deaths in Doncaster of which there were 9 cases were Pregabalin and/or Gabapentin was prescribed to or present in toxicology reports. (Doncaster DSU).

The emergence of these trends has prompted PHE to publish *Advice for prescribers on the risk of the misuse of Pregabalin and gabapentin (2014).* 

# **15 TRAINING/SUPPORT**

Role specific education will be delivered by the service lead.

The Drug and Alcohol Liaison Nurse Specialist services at Doncaster Royal Infirmary and Bassetlaw District General Hospital provide "in house" training support via Specific Study Days, ward based sessions or on a 1:1 case specific supervision basis.

Please note: The training requirements of staff will be identified through a learning needs analysis (LNA). Role specific education will be co-ordinated/ delivered by the topic lead. Alternatively, training may be accessed via an approved e-learning platform where available.

# 16 MONITORING COMPLIANCE WITH THE PROCEDURAL DOCUMENT

What is being Monitored	Who will carry out the Monitoring	How often	How Reviewed/ Where Reported to
Were pre prescribing checks carried out and documented	DANS (with support from pharmacy/ward managers, where requested)	Annual	4143/2014/TRUST/JC Head of Nursing Emergency Services Care Group
Were Methadone Pre administration checklists used	DANS (with support from ward managers, where requested)	Annual	4143/2014/TRUST/JC Head of Nursing Emergency Services Care Group

Were Methadone Safety care Plans used	DANS (with support from ward managers, where requested)	Annual	4143/2014/TRUST/JC Head of Nursing Emergency Services Care Group
Were Safer injecting care plans used	DANS (with support from ward managers, where requested)	Annual	4143/2014/TRUST/JC Head of Nursing Emergency Services Care Group
Were discharge / TTO plans explicit	DANS (with support from pharmacy/ward managers, where requested)	Annual	4143/2014/TRUST/JC Head of Nursing Emergency Services Care Group

### **17 DEFINITIONS**

ACMD – Advisory Council on the Misuse of Drugs DBTH – Doncaster and Bassetlaw Teaching Hospital BDGH – Bassetlaw District General Hospital **BNF** – British National Formulary DANS – Drug and Alcohol liaison Nurse Specialist DOH – Department of Health DRI – Doncaster Royal Infirmary **OST** – Opioid Substitution Therapy ECG – Electro Cardio Gram NICE - National Institute for Clinical Excellence NMP – Non Medical Prescriber NTA – National treatment Agency PRN – Pro Re Nata (Latin "as the occasion arises") RCGP – Royal College General Practitioners TTA – To Take Away WHO – World Health Organization

# **18 EQUALITY IMPACT ASSESSMENT**

The Trust aims to design and implement services, policies and measures that meet the diverse needs of our service, population and workforce, ensuring that none are disadvantaged over others. Our objectives and responsibilities relating to equality and diversity are outlined within our equality schemes. When considering the needs and

assessing the impact of a procedural document any discriminatory factors must be identified.

An Equality Impact Assessment (EIA) has been conducted on this procedural document in line with the principles of the Equality Analysis Policy (CORP/EMP 27) and the Fair Treatment For All Policy (CORP/EMP 4).

The purpose of the EIA is to minimise and if possible remove any disproportionate impact on employees on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified. (See Appendix 11)

# **19 ASSOCIATED TRUST PROCEDURAL DOCUMENTS**

PAT/T 25 – Alcohol Issues in the Acute General Hospital Setting (Guidelines and Management). PAT/MM 1B - Safe and Secure Handling of Medicines Policy – Part B – Controlled Drugs.
PAT/MM 1A - Safe and Secure Handling of Medicines Policy – Part A.
PAT/PA 19 - Mental Capacity Act 2005 - Policy and Guidance. Including Deprivation of Liberty Safeguards (DoLS).
PAT/PA 28 – Privacy and Dignity Policy

PAT/PS 10 - Safeguarding Children Policy.

### **20 DATA PROTECTION**

Any personal data processing associated with this policy will be carried out under 'Current data protection legislation' as in the Data Protection Act 2018 and the UK General Data Protection Regulation (GDPR) 2021.

For further information on data processing carried out by the trust, please refer to our Privacy Notices and other information which you can find on the trust website: <u>https://www.dbth.nhs.uk/about-us/our-publications/information-governance/</u>

# **21 REFERENCES**

- 1. Advisory Council on the Misuse of Drugs (2000) Reducing Drug Related Deaths. A Report by the Advisory Council on the Misuse of Drugs. HMSO London.
- 2. Armstrong, D., Phillips T.(2003) Management of Patients with Opiate Dependency on Medical

/Surgical Wards – Guidelines, Hull& East Riding Community Mental Health NHS Trust.

- 3. Arizona Centre for Education and Research on Therapeutics. *Drugs that Prolong the Qt Interval and/or Induce Torsades de Pointes Ventricular Arrhythmia*. www.torsades.org.
- 4. Australian Government (2003) National Strategy. Clinical Guidelines for Procedures for the

use of Methadone Maintenance Treatment of Opioid Dependency. Australia.

- 5. Botstein P (1993) Is QT Interval Prolongation Harmful. A Regulatory Perspective. *Amer J Cardiology 1993*; 72 (6): 50B-52B.
- 6. Capelhorn J and Drummer OH (1999) Mortality Associated with New South Wales Methadone.
- 7. Cornish et al (2010) Risk of death during and after opiate substitution treatment in primary care: prospective observational study in UK General Practice Research Database. BMJ 341: c5475. doi: 10.1136.
- 8. Programs in (1994): lives lost and saved. *Medical Journal of Australia* 170, 104–109.
- 9. UK health departments (1999) Drug Misuse and Dependence Guidelines on Clinical Management. London: The Stationery Office
- 10. Department of Constitutional Affairs Mental Capacity Act (2005): Code of Practice, 2007 <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachme</u> <u>nt\_data/file/497253/Mental-capacity-act-code-of-practice.pdf</u>
- 11. Department of Health, (1999b) National Service Frameworks for Mental Health: Modern Standards and Service Models. Department of Health.
- 12. Department Of Health, [2005].*National Treatment Agency for Substance Misuse Models of Care for Drug Misuse*. London, HMSO.
- 13. Department of Health. (2007) Drug Misuse and Dependence Guidelines on Clinical Management. London: The Stationery Office.

14. Drug Strategy (2010) Reducing demand, restricting supply, building recovery: supporting people to live a drug free life.

15. EAEMP (2001) Public Statement on the Recommendation to Suspend the Marketing Authorisation for ORLAAM (Levacetylmethadol) in the European Union. London: European Agency for the Evaluation of Medicinal Products.

16. Farrell M and Marsden J (2005) Drug-related Mortality among Newly Released Offenders 1998-2000. London: Home Office, on-line report 40/05.

17. Haigney MC, Alam S, Tebo S, Marhefka G, Elkashef A, Kahn R, Chiang CN, Vocci F and Cantilena L (2006) Intravenous Cocaine and QT Variability. *J Cardiovasc Electrophysiol*. 17(6):610-6.

18. Ghodse, A.H. (2002) Drugs and addictive behaviour: A guide to treatment. 3rd edition. Blackwell Science. Oxford.

19. Lipski J, Stimmel B and Donoso E (1973) The Effect of Heroin and Multiple Drug Abuse on

the Electrocardiogram. Am Heart J 1973;86 (5);663-668.

- 20. MHRA (2006) *Current Problems in Pharmacovigilance*, vol 31 May 2006. London: Medicines and Healthcare products Regulatory Agency.
- 21. NTA (2012) Medications in recovery re orientating drug dependence treatment.

22. NICE (2007a) *Methadone and Buprenorphine for the Management of Opioid Dependence.* Technology appraisal 114. London: National Institute for Health and Clinical Excellence.

- 23. NICE (2007b) *Drug Misuse: Opiate Detoxification.* NICE clinical guideline 52. London: National Institute for Health and Clinical Excellence.
- 24. NICE (2007c) *Naltrexone for the Management of Opioid Dependence*. NICE technology appraisal guidance 115. London: National Institute for Health and Clinical Excellence.
- 25. NICE (2012) Quality Standards for Drug Use Disorders. QS23. National Institute for Clinical Excellence.
- 26. Royal College of General Practitioners, (2004). Guidance for the use of buprenorphine for the treatment of opioid dependence in primary care.
- 27. Royal College of General Practitioners, (2011). Guidance for the use of substitute prescribing in the treatment of opioid dependence in primary care.
- 28. Rawson, RA et al. (1997) Naltrexone and Behaviour Therapy for Heroin Addiction. National Institute for Drug Abuse Research Monograph Series p26-43.
- 29. Schmittner J, Schroeder JR, Epstein DH and Preston KL (2004) QT Interval Increased After Single Dose of Lofexidine. *BMJ* 329: 1075.
- 30. Zador D & Sunjic S (2000) Deaths in Methadone Maintenance Treatment in New South Wales, Australia, 1990-1995. *Addiction* 95:77-84.
- 31. National Treatment Agency Media Release (2009) Moves to provide greater protection to children living with drug addicts.
- 32. World Health Organisation. (1992). ICD-10 Classifications of Mental and Behavioural Disorder: Clinical Descriptions and Diagnostic Guidelines. Geneva. World Health Organisation.
- **33**. Joint Formulary Committee (2007). British National Formulary. London: British Medical Association and Royal Pharmaceutical Society of Great Britain.
- 34. Public Health England and NHS England (2014) Advice for prescribers on the risk of the misuse of pregabalin and gabapentin.

# APPENDIX 1 – CLINICAL GOVERNANCE

- Clinicians working with drug misusers must be appropriately competent, trained and supervised.
- Effective, safe and responsive services for drug misusers will usually involve clinicians working together and with others in teams in primary care, in secondary care or both.
- The setting in which health professionals work in treating drug misuse will affect the clinical governance mechanisms that needs to be in place. Those working in relative isolation must ensure they have an opportunity to discuss and review their work with colleagues in the field, to remain good and up-to-date practice.
- Service should be provided consistent with national guidance and principles, and in line with the evidence base.
- The expansion of non-medical prescribing has implications for drug misuse treatment and care and clinical governance.
- A timely and regular audit and review should be in place.
- Patients must be involved in their own treatment.
- Carers of adults can be involved in patients' treatment, usually with the patients, consent. Taken from Drug misuse and Dependence UK Guidelines on Clinical management (2007).

# APPENDIX 2 – NICE QUALITY STANDARDS (QS23) – DRUG MISUSE AND DEPENDENCE

<u>Statement 1</u>. People who inject drugs have access to needle and syringe exchange in accordance with NICE guidance.

**<u>Statement 2</u>**. People in drug treatment are offered a comprehensive assessment.

<u>Statement 3</u>. Families and carers of people with drug use disorders are offered an assessment of their needs.

<u>Statement 4</u>. People accessing drug treatment services are offered testing and referral for treatment for hepatitis B, hepatitis C and HIV and vaccination for hepatitis B.

**Statement 5**. People in drug treatment are given information and advice about the following treatment options: harm-reduction, maintenance, detoxification and abstinence.

<u>Statement 6</u>. People in drug treatment are offered appropriate psychosocial interventions by their keyworker.

**Statement 7.** People in drug treatment are offered support to access services that promote recovery and reintegration including housing, education, employment, personal finance, healthcare and mutual aid.

<u>Statement 8</u>. People in drug treatment are offered appropriate formal psychosocial interventions and/or psychological treatments.

<u>Statement 9</u>. People who have achieved abstinence are offered continued treatment or support for at least 6 months.

NICE (2012)

# APPENDIX 3 – CARDIAC ASSESSMENT AND MONITORING FOR METHADONE PRESCRIBING

[2007 Clinical Guidelines, p98]

#### 3.1 Drug-induced prolongation of the QT interval

The QT interval is measured on an ECG\* from the beginning of the QRS complex (caused by contraction of the ventricular mass) until the end of the T wave (caused by the return of the ventricular mass to the resting state). The QT corrected (QTc) interval is the QT interval (in milliseconds) corrected for heart rate using a standard formula (for example, Bazett's formula: QTc (ms) = QT (ms) / RR½ – QT divided by the square root of the R-R interval). QTc calculators are available on the internet.

The QTc interval is a useful indicator of risk of polymorphic ventricular tachycardias, or torsade de pointes which can be fatal. QTc interval prolongation beyond normal limits (440 ms for men and 470 ms for women) is associated with increased risk of cardiac arrhythmias and sudden death, especially above 500 ms (Botstein, 1993). Various psychotropic medications have recently been identified as causing QT prolongation and sudden death. In the past decade, this has become the most common reason for a drug to be withdrawn from the market. In the drug treatment field, this was the reason for levacetylmethadol (LAAM or ORLAAM) being withdrawn (EAEMP, 2001).

#### **3.2 Methadone and risk of QT prolongation**

Methadone may prolong the QTc interval and induce torsade de pointes (Lipski *et al.,* 1973). However increases in QTc interval following methadone induction may not exceed specified thresholds (440 ms in adult males and 470 ms adult females). Findings in relation to the effect of methadone dose have been varied but recently there have been a number of case reports of patients on high-dose methadone experiencing QT prolongation and torsade de pointes.

Reducing or stopping methadone was followed by reduction in the QT interval.

Cocaine has been shown to increase QT intervals acutely (Haigney *et al.,* 2006). Other confounding factors may be the use of antipsychotic and tricyclic antidepressants (www.torsades.org; Schmittmer *et al.,* 2004).

In summary, the evidence, as currently available, points towards methadone as a risk factor for QT prolongation and torsade de pointes, with a possible dose-dependent action.

#### 3.3 MHRA guidance 2006

In May 2006 the Medicines and Healthcare Products Regulatory Agency (MHRA) drew

attention to reports in Europe and elsewhere which "highlighted the risk of QT prolongation in patients taking methadone, especially at high doses". The MHRA recommended that: "patients with the following risk factors for QT interval prolongation are carefully monitored whilst taking methadone:

- heart or liver disease,
- electrolyte abnormalities,
- concomitant treatment with CYP 3A4 inhibitors,
- or medicines with the potential to cause QT interval prolongation
- in addition any patient requiring more than 100 mg of methadone per day should be closely monitored." (MHRA, 2006).

#### 3.4 Patient consent and information

The patient should be fully informed of the available evidence, the reasons for the clinical assessment and fully involved in the decision making process for their treatment. A patient information leaflet may be useful to inform the patient of the available evidence.

#### 3.5 Clinical assessment of patients on methadone maintenance

A standard physical health assessment and physical examination should be carried out on all patients entering methadone maintenance treatment. For patients already in methadone treatment, the clinical assessment should cover assessment of heart or liver disease, concomitant treatment with CYP 3A4 inhibitors, other drugs with the potential to cause QT interval prolongation and the presence of electrolyte abnormalities. Please also refer to the general section on clinical assessment for drug misuse patients before proceeding. [See section 1]

#### 3.6 Clinical assessment of patients when initiating methadone

At present, the decision to perform an ECG prior to commencing methadone treatment should be based on a risk-benefit analysis. A baseline ECG should be considered in patients with evidence of heart or liver disease, concomitant treatment with CYP 3A4 inhibitors, use of other QTc prolonging drugs or electrolyte abnormalities.

If QT prolongation is detected, alternatives to methadone should be considered, and other QTc risk factors (such as cocaine use) should be reassessed. It is important that the patient is fully informed and involved in the decision making process.

#### 3.7 Summary

- Methadone may be a risk factor for QT prolongation and torsade de pointes with a possible dose-dependent action.
- The MHRA recommends monitoring for patients on high dose methadone (>100 mg daily) and with other QT interval prolongation risk factors where appropriate.

- Patients should be fully informed of the reasons for the clinical assessment and involved in the decision making process for their treatment.
- Screening before commencing methadone treatment is not currently advocated but may be considered.
- Any QT prolongation needs full investigation, consideration of specialist referral, identification of options for QT risk factor modification as well as ongoing ECG monitoring.

### NOTE

Clinicians wanting to refresh their understanding of ECGs might start with Hampton JR (2003).

*The ECG Made Easy, 6th edition*. London: Churchill Livingstone.

## **APPENDIX 4 – ICD 10 DIAGNOSTIC GUIDELINES "DEPENDENCY"**

# ICD-10 Clinical Description

A cluster of physiological, behavioral, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviors that once had greater value. A central descriptive characteristic of the dependence syndrome is the desire (often strong, sometimes overpowering) to take psychoactive drugs (which may or may not have been medically prescribed), alcohol, or tobacco. There may be evidence that return to substance use after a period of abstinence leads to a more rapid reappearance of other features of the syndrome than occurs with nondependent individuals.

## **ICD-10 Diagnostic Guidelines**

A definite diagnosis of dependence should usually be made only if three or more of the following have been present together at some time during the previous year:

- A strong desire or sense of compulsion to take the substance;
- Difficulties in controlling substance-taking behavior in terms of its onset, termination, or levels of use;
- A physiological withdrawal state when substance use has ceased or have been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms;
- Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses (clear examples of this are found in alcohol- and opiate-dependent individuals who may take daily doses sufficient to incapacitate or kill nontolerant users);
- Progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects;
- Persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm

WHO (1992)

# **APPENDIX 5 – DRUG DETECTION TIMES**

Drug Or Its Metabolite(s)	Duration of		
	Delectability		
Amphetamine/amphetamines, including methyl amphetamine	2 days		
and MDMA			
Benzodiazepines			
<ul> <li>Ultra-short-acting[half-life 2h] [e.g. midazolam]</li> </ul>	12 hours		
<ul> <li>Short-acting [half-life 2-6h] [e.g. triazolam]</li> </ul>	24 hours		
• Intermediate-acting [half-life 6-24h] [e.g. temazepam,	2-5 days		
chlordiazepoxide]			
<ul> <li>Long-acting [half-life 24h] [e.g. diazepam, nitrazepam]</li> </ul>	7 or more		
Buprenorphine and metabolites	8 days		
Cocaine metabolite	2 – 3 days		
Methadone [maintenance dosing]	7 – 9 days		
Codeine, dihydrocodeine, morphine, propoxyphene	48 hours		
[heroin is detected in urine as the metabolite morphine]			
Cannabinoids			
Single use	3 – 4 days		
Moderate use [three times a week]	5 – 6 days		
Heavy use [daily]	20 days		
Chronic heavy use [more than three times a day]	up to 45 days		

Detection times are only approximate and highly dependent upon dose, frequency, route of administration and urine excretion and concentration.

# **APPENDIX 6 – OPIATE WITHDRAWAL SYNDROME**

# Table 2 – Opiate Withdrawal Syndrome

Signs and Symptoms	Heroin	Methadone
Drug craving, anxiety, drug – seeking	6 hours	-
Yawning, sweating, running nose, lacrimation	8 hours	34-48 hours
Increase in above signs and:	12 hours	48-72 hours
Dilated pupils, goose-flesh, tremors, hot/cold flushes, aching		
bones/muscles, loss of appetite, abdominal cramps and		
irritability		
Increase in intensity of above and:	18-24	24-36 hours
Insomnia, increased blood pressure, low grade fever,	hours	
increased respiration, increased pulse rate, restlessness,		
nausea and vomiting		
Increase in intensity of above and	36-	36-4days
Weight loss, diarrhoea, weakness, febrile, foetal position	4days	
(curled up on a surface), increased blood sugar		

# Table 3 – Opiate Withdrawal Syndrome

Objective signs of opiate withdrawal	Subjective signs of withdrawal		
<ul> <li>Yawning</li> <li>Coughing</li> <li>Sneezing</li> <li>Runny nose</li> </ul>	<ul> <li>Restlessness</li> <li>Irritability</li> <li>Anxiety</li> </ul>		
<ul> <li>Lacrimation</li> <li>Raised blood pressure</li> <li>Increased pulse</li> <li>Dilated pupils</li> <li>Cool, clammy skin</li> <li>Diarrhoea</li> <li>Nausea</li> <li>Fine muscle tremor</li> </ul>	<ul> <li>[The signs above may also be useful objective signs]</li> <li>Sleep disorders]depression</li> <li>Drug craving</li> <li>Abdominal; cramps</li> </ul>		

Source: Ghodse (1998)

# **APPENDIX 7 – CLINICAL OPIOID WITHDRAWAL SCORES (COWS)**

Appendix A - Clinical Opioid Withdrawal Score (COWS)

PATIENT NAME:	DATE OF ASSESSMENT:
PATIENT DATE OF BIRTH:	MEDICAL RECORD NUMBER:

## Clinical Opioid Withdrawal Score (COWS)

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

Enter scores at time zero, 30 minutes after f	irst dose, 2 hours after first dose, etc.	Time:	Time:	Time:	Time:
Resting Pulse Rate: Record beats per minute aft	er patient is sitting or lying down for one minute				
<ul> <li>0 - pulse rate 80 or below</li> <li>1 - pulse rate 81–100</li> </ul>	<ul> <li>2 - pulse rate 101–120</li> <li>4 - pulse rate greater than 120</li> </ul>				
Sweating: Over past 1/2 hour not accounted for b	y room temperature or activity				
<ul> <li>0 - no chills or flushing</li> <li>1 - subjective chills or flushing</li> <li>2 - flushed or observable moistness on face</li> </ul>	<ul> <li>3 - beads of sweat on brow or face</li> <li>4 - sweat streaming off face</li> </ul>				
Restlessness: Observation during assessment • 0 - able to sit still	• 3 - frequent shifting or extraneous movement of legs/arms				
• 1 - reports difficulty sitting still, but is able to do so	• 5 - unable to sit still for more than a few seconds				
Pupil size					
<ul> <li>0 - pupils pinned or normal size for light</li> <li>1 - pupils possibly larger than normal for light</li> </ul>	<ul> <li>2 - pupils moderately dilated</li> <li>5 - pupils dilated that only rim of the iris is visible</li> </ul>				
Bone or joint aches: If patient was having pain p attributed to opiate withdrawal is scored	reviously, only the additional component				
<ul> <li>0 - not present</li> <li>1 - mild/diffuse discomfort</li> <li>2 - patient reports severe diffuse aching of joints/muscles</li> </ul>	<ul> <li>4 - patient is rubbing joints or muscles and is unable to sit still because of discomfort</li> </ul>				
Runny nose or tearing: Not accounted for by col	d symptoms or allergy				
• 0 - none present • 1 - nasal stuffiness or unusually moist eyes	<ul> <li>2 - nose running or tearing</li> <li>4 - nose constantly running or tears streaming down cheeks</li> </ul>				
Gl upset: Over last ½ hour	• 2 - nausea or loose stool				
<ul> <li>0 - no GI symptoms</li> <li>1 - stomach cramps</li> </ul>	<ul> <li>3 - vomiting or diarrhea</li> <li>5 - multiple episodes of diarrhea or vomiting</li> </ul>				
Tremor: Observation of outstretched hands					
<ul> <li>0 - no tremor</li> <li>1 - tremor can be felt, but not observed</li> </ul>	<ul> <li>2 - slight tremor observable</li> <li>4 - gross tremor or muscle twitching</li> </ul>				
Yawning: Observation during assessment • 0 - no yawning	• 2 - yawning three or more times during assessment				
• 1 - yawning once or twice during assessment	• 4 - yawning several times/minute				
Anxiety or irritability	<ul> <li>2 - patient obviously irritable or anxious</li> </ul>				
<ul> <li>0 - none</li> <li>1 - patient reports increasing irritability or anxiousness</li> </ul>	<ul> <li>4 - patient so irritable or anxious that participation in the assessment is difficult</li> </ul>				
Gooseflesh skin	• 3 - piloerrection of skin can be felt or hairs standing up on arms				
• 0 - skin is smooth	<ul> <li>5 - prominent piloerrection</li> </ul>				
5—12 = mild;					
13—24 = moderate;	TOTAL				
25—36 = moderately severe;	OBSERVER INITIALS				
> 36 = severe withdrawal	Observer En INTIALS				

Journal of Psychoactive Drugs Volume 35 (2), April - June 2003Source: Wesson, D. R., & Ling, W. (2003). The Clinical Opiate Withdrawal Scale (COWS), J Psychoactive Drugs, 35(2), 253-9.

# **APPENDIX 8 – CHILD PROTECTION CONSIDERATIONS**

#### Table 5 – Child Protection Considerations

The following should be taken into consideration:

- Effect of drug misuse on functioning, for example, intoxication, agitation
- Effect of drug seeking behavior, for example, leaving children unsupervised, contact with unsuitable characters.
- Impact of parent's physical and mental health on parenting
- How drug use is funded, for example, sex working, diversion of family income.
- Emotional availability to children
- Effects on family routines, for example, getting children to school on time
- Other support networks, for example, family support.
- Ability to access professional support
- Storage of illicit drugs, prescribed medication and drug-using paraphernalia

# **APPENDIX 9 – METHADONE PHARMACOLOGY**

#### METHADONE PHARMACOLOGY

#### 9.1 Peak Plasma Concentration

• Four hours after regular oral administration (Range two to six hours)

#### 9.2 Peak Clinical Effects

- Two to six hours post oral dose (two to four hours first dose)
- It takes four to five days for methadone tissue plasma levels to stabilise, though accumulation continues beyond this, finally reaching a steady state after ten days.
- Once a steady state is achieved, variations in blood concentrations are small.

#### 9.3 Duration of Action (Half Life)

- The length of time it lasts in the body varies.
- Single dose; shorter half life than maintenance dosing 12 18 hours means 15 hours.
- First few days between 13 and 112 hours mean 37 hours.
- Because of its cumulative effect until steady state is reached, methadone induction should be a cautious and gradual process.
- Elimination half life is normally 20 37 hours but can range up to 91 hours for some individuals; its rate of clearance from the body can vary by a factor of almost 100.
- Optimal doses are usually between 24 36 hours.

#### 9.4 Metabolism

- Well absorbed from the gastrointestinal tract into the blood stream
- Well distributed in body fats
- Metabolised through the liver via cytochrome P450 sub family of enzymes, thus susceptible to pharmacokinetic interactions with drugs that inhibit or induce liver enzymes.
- Binds well to plasma proteins and to lungs, liver and kidney tissues.
- Varies enormously in different people and widely different doses of methadone are needed to create the same serum methadone level.

#### 9.5 Excretion

• Excreted in the faeces and urine; urinalysis is useful only in confirming if being taken, but not establishing the dose.

#### 9.6 Dosing

- While research evidence suggests that optimal doses for most people lie between 60 and 120 mg some people will need more and some people will need less due to a range of individual factors such as size, gender, age, other health problems and metabolic clearance rates.
- Doses between 10 and 120mg may exert clinical effects for 24 to 36 hours; low doses exert clinical effects for only a few hours.

#### 9.7 Equivalence

- Direct equivalence to street heroin is difficult to estimate, as purity of street heroin can vary between20 and 90%). One gram of street heroin is usually very roughly equivalent to 50 to 80mg methadone.
- Direct equivalence of methadone and buprenorphine and vice versa is difficult to estimate, as the pharmacological properties of the two agents are not identical and it is not a linear relationship.
- When comparing the efficacy of maintenance doses, 50 to 80mg methadone is approximately as effective as 12 to 16mg buprenorphine in reducing heroin use and retaining patients in treatment.
- When comparing the equivalence of methadone to injectable pharmaceutical diamorphine, half lives must be taken into consideration. This is not a linear relationship, so equivalence can vary from a methadone: diamorphine relationship of 1:3 (or even 1:1 for very low doses) to around 1:5 for high doses of diamorphine (e.g. 120mg methadone is equivalent to between 360 and 600mg of injectable diamorphine).

#### 9.8 Tolerance

- Develops at different speed in different individuals, can change in individuals over time and develops differently for different effects.
- With long term use, and in response to continued exposure of the brain to opiates, neuro adaptation occurs and involves changes in nerve and receptor function.
- Level of heroin use is not the only factor in determining the final dose of substitution that will be required. Patients react differently: some will need more and some will need less than others using the same amount of heroin.

RCGP 2011 Guidance for the use of substitute prescribing in the treatment of opioid depence in primary care.

# **APPENDIX 10 – BUPRENORPHINE PHARMACOLOGY**

#### **BUPRENORPHINE PHARMACOLOGY**

#### **10.1** Peak Plasma Concentration

• 90 to 150 minutes after regular sublingual administration.

#### **10.2** Peak Clinical Effects

- One to four hours post sublingual dose.
- It takes three to four days for buprenorphine plasma levels to stabilise.

#### **10.3** Duration of Action (Half Life)

- Related to dose.
- Low dose (e.g. 2 to 4mg) may exert clinical effects for only a few hours, up to a maximum of 12 hours, because receptor occupancy will be minimal and plasma concentrations suboptimal.
- Higher doses (e.g. 16 to 32mg) can exert effects for up to 48 to 72 hours.
- Optimal doses are usually between 24 and 36 hours.
- Elimination half life is between 20 and 37 hours.

#### 10.4 Metabolism

- Principally in the liver via two hepatic pathways: glucuronide conjugation and N- DE alkylation by the cytochrome P450 enzyme system.
- The tablets are administered sublingually because it has poor bioavailability. It is inactivated by gastric acid and has a high first pass metabolism.

#### 10.5 Excretion

• Excreted in the faeces and urine; urinalysis is useful only in confirming if being taken, but not establishing the dose.

#### 10.6 Dosing

• Maintenance is between 8 and 32mg daily but the blockade dose (dose where the effects of additional opioids are markedly reduced) is maximal above 16mg daily.

#### 10.7 Equivalence

- Direct equivalence of methadone and buprenorphine and vice versa is difficult to estimate, as the pharmacological properties of the two agents are not identical and it is not a linear relationship.
- When comparing the efficacy of maintenance doses, 50 to 80mg methadone is approximately as effective as 12 to 16mg buprenorphine in reducing heroin use and retaining patients in treatment.

### 10.8 Tolerance

- Develops at different speed in different individuals, can change in individuals over time and develops differently for different effects.
- With long term use, and in response to continued exposure of the brain to opiates, neuro adaptation occurs and involves changes in nerve and receptor function.
- Level of heroin use is not the only factor in determining the final dose of substitution that will be required. Patients react differently: some will need more and some will need less than others using the same amount of heroin.

RCGP 2011 Guidance for the use of substitute prescribing in the treatment of opioid dependence in primary care.

	APPENDIX 11 - E	QUALITY IMPACT A	SSESSMENT PART 1	INITIAL SCREENING	
Service/Function,	/Policy/Project/Strategy	Division	Assessor (s)	New or Existing Service or Policy?	Date of Assessment
Dug Misusse Managen Setting – Guidelines –	nent in the Acute Hospital PAT/T 21 v.3	All	Sarah Bartle	Existing	
1) Who is responsible	le for this policy? Name of D	vision/Directorate: Sarah Bartl	le – Drug and Alcohol NLiaison	Nurse Specialist DRI	
• • •	oose of the service / function tal with substance misuse issued		Vho is it intended to benefit? V	Vhat are the intended outcomes? Safe m	anagement of patients
3) Are there any ass Clinical Manageme		n, targets national expectatior	n, standards: National drug Stra	ategy. DOH "Drug Misuse and Dependen	ce – UK Guidelines on
4) What factors cont	tribute or detract from achie	ving intended outcomes? – Sta	aff compliance with the policy.		
5) Does the policy har religion/belief? N		e, race, disability, gender, gend	der reassignment, sexual orier	ntation, marriage/civil partnership, mate	ernity/pregnancy and
6) Is there any scope	e for new measures which we	ould promote equality? [any a	ctions to be taken]		
7) Are any of the fol	lowing groups adversely affe	cted by the policy? No			
Protected Character	istics Affected	I? Impact			
a) Age	No				
b) Disability	No				
c) Gender	No				
d) Gender Reassign	iment No				
e) Marriage/Civil Pa	artnership No				
f) Maternity/Pregn	ancy No				
g) Race	No				
h) Religion/Belief	No				
i) Sexual Orientation	on No				
8) Provide the Equal	lity Rating of the service / fur	nction /policy / project / strate	egy–tick (✓) outcome box		
Outcome 1 ✓	Outcome 2	Outcome 3	Outcome 4		
27.		of 2, 3 or 4, it is necessary to co	arry out a detailed assessment	and complete a Detailed Equality Analys	sis form – see CORP/EMP
Date for next review:	February 2026				
Checked by: Kate	Carville		Date: 20 Fe	bruary 2023	