18 - Opioid substitution treatment (OST)

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500 The Maudsley® Prescribing Guidelines in Psychiatry CHAPTER 4 Opioid substitution treatment (OST) The mainstay of pharmacological management of opioid dependence is OST. OST can be prescribed for detoxification, that is, at a dose to control withdrawal symptoms followed by progressive reduction and discontinuation. Alternatively, OST can be prescribed as ‘maintenance’, which refers to a longer period of months to years on a stable dose of OST. The goals of OST are: ■ ■To reduce or prevent withdrawal symptoms. ■ ■To reduce or eliminate non-prescribed drug use. ■ ■To stabilise drug intake and lifestyle. ■ ■To reduce drug-related harm (particularly injecting drug use). ■ ■To engage and provide an opportunity to work with the patient. Treatment will depend upon: ■ ■What pharmacotherapies and/or other interventions are available. ■ ■Patient’s previous history of drug use and response to treatment. ■ ■Patient’s current drug use and circumstances. ■ ■Physical comorbidity. ■ ■Location/service where treatment is initiated. Most OST prescribing for people with mental health problems should be initiated by specialist addiction services alongside appropriate psychiatric care from mental health services.8,11 Some people with opioid dependence will be admitted to psychiatric or general in-patient wards, and general or liaison psychiatrists will need to take over or initiate prescribing in the immediate term8 (see later in this chapter). Clinicians should take care to ensure that patients are physiologically dependent on opioids before initiating OST. There should be clear clinical evidence of opioid withdrawal and, if possible, a positive urine drug screen and documented recent on-going opioid substitution treatment (e.g. information from drug service or dispensing pharmacy, recently dated and named methadone bottles). Assessment should involve the following: ■ ■Which opioids the person is taking, and in what amounts. ■ ■What other drugs are used, including alcohol and other depressants (e.g. gabapentinoids, benzodiazepines). ■ ■Frequency, quantity and route of administration of all substances used. ■ ■Time of last use. ■ ■Physical comorbidity that may affect prescribing decisions such as chronic obstructive pulmonary disease (COPD) and cardiac conditions. ■ ■Prescribed medication, which can interact with OST – such as respiratory depressants and those that prolong QT interval. ■ ■Previous experience of treatment. ■ ■Previous overdoses and whether these were intentional or accidental. ■ ■Whether or not they have take-home naloxone.

Addictions and substance misuse CHAPTER 4 ■ ■Whether or not there are objective signs of opioid withdrawal using a validated scale such as OOWS or COWS (see below). ■ ■Examination of injection sites if they inject. ■ ■Collateral information from addiction services and/or pharmacy in respect to usual dose of OST and most recently dispensed dose. Timecourse of withdrawal symptoms Withdrawal is dependent on duration of use, degree of dependence and type of opioid used (Table 4.9). Buprenorphine-related withdrawal symptoms tend to be milder than those from full agonist opioids, even when high-dose buprenorphine is abruptly discontinued.12,13 Tapering over 4 weeks before complete discontinuation is associated with considerably less withdrawal than more rapid tapers.14 Early indications are that buprenorphine long-acting injection is not associated with clinically significant withdrawal symptoms.15 Specific opioid withdrawal scales are freely available, such as the Clinical Opiate Withdrawal Scale (COWS)16 or Objective Opiate Withdrawal Scale (OOWS)17 which can be used to help assess withdrawal (Table 4.10). Prescribing OST safely ■ ■Use licensed medications for treatment of heroin dependence (i.e. methadone and buprenorphine). ■ ■Ensure that the patient is dependent on opioids. ■ ■Give a safe initial dose (see later in this chapter) and titrate cautiously. ■ ■Use daily supervised consumption in those patients with a higher risk of overdose during dose initiation. Induction and stabilisation of OST maintenance medication Methadone and buprenorphine are the OST medications recommended by NICE in the UK for maintenance substitute prescribing and are effective in treating withdrawal symptoms and decreasing use of illicit opioids.18 Methadone and buprenorphine are Controlled Drugs with high dependency potential. Methadone in particular has a low lethal dose. For these reasons, there are special documentation requirements, including specifying the patient’s name, date of birth and address on prescriptions and writing the daily dose amount and total amount prescribed in both numbers and words. Instructions such as the requirement for consumption to be supervised should also be specified, for example ‘daily supervised consumption’.8 Table 4.9 Timing of withdrawal symptoms of different opioids. Drug Onset Peak End Heroin 4–6 hours 32–72 hours 5 days Methadone 12–24 hours 4–6 days Up to 40 days19 Buprenorphine (sublingual) 24–48 hours 3–5 days 8–10 days13,20

502 The Maudsley® Prescribing Guidelines in Psychiatry Table 4.10 Clinical Opiate Withdrawal Scale (COWS). Resting pulse rate: _____beats/min Measured after patient is sitting or lying for 1 minute: 0 – pulse rate 80 or below 1 – pulse rate 81–100 2 – pulse rate 101–120 4 – pulse rate greater than 120 Sweating Over past 30 minutes 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 Restlessness Observation during assessment: 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 CHAPTER 4 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 Bone or joint aches If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored: 0 – not present 1 – mild diffuse discomfort 2 – patient reports severe diffuse aching of joints/muscles 4 – patient is rubbing joints or muscles and is unable to sit still because of discomfort 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 Scores 5–12: mild withdrawal 13–24: moderate withdrawal 25–36: moderately severe withdrawal More than 36: severe withdrawal GI upset Over last 30 minutes: 0 – no GI symptoms 1 –

stomach cramps 2 – nausea or loose stool 3 – vomiting or diarrhoea 5 – multiple episodes of diarrhoea or vomiting 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 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 Anxiety or irritability 0 – none 1 – patient reports increasing irritability or anxiousness 2 – patient obviously irritable or anxious 4 – patient so irritable or anxious that participation in the assessment is difficult Gooseflesh skin: 0 – skin is smooth 3 – piloerection of skin can be felt or hairs standing up on arms 5 – prominent piloerection Total score: _____ (The total score is the sum of all 11 items)

Addictions and substance misuse CHAPTER 4 The pharmacology of methadone and buprenorphine differs. Methadone is a full agonist at mu opioid receptors while buprenorphine is a partial agonist. This difference in pharmacology dictates the advantages and disadvantages of each drug (Table 4.11). The therapeutic dose (i.e. the dose at which treatment is associated with cessation of heroin use) for methadone is usually 60–100mg per day. The therapeutic dose for buprenorphine is between 12 and 24mg per day. Table 4.11 Choosing between buprenorphine and methadone. Methadone Sublingual buprenorphine Safety Associated with a reduced risk of mortality relative to being out of treatment21 but with increased mortality during induction22 Possible increased methadone-related mortality in those over 4521 Increased risk of drug-related deaths in those with cardiovascular or respiratory comorbidity21 Increased methadone-related death when directly supervised consumption (DSC) is replaced with take-home dosing23 No increased risk during induction22 No increased mortality with age21 Lower drug-related mortality than methadone in cardiovascular or respiratory comorbidity21 No increase in buprenorphine-related deaths above expected trends when DSC replaced with take-home dosing23 Withdrawal syndrome Appears to be more marked and prolonged Has a milder withdrawal syndrome19 Titration Associated with increased mortality during the titration phase22 hence the need for gradual titration over a few weeks to reach therapeutic range (usually 60–100mg a day) Able to reach therapeutic dose (12–16mg a day) within 2–3 days Risk of precipitated withdrawal if patients are not already in withdrawal when buprenorphine is initiated although this is infrequent (<1%)24 and can be mitigated (see below) Differences in retention Greater retention in treatment than buprenorphine25 Associated with greater drop-out from treatment than methadone (applies to both high-dose and low-dose buprenorphine) Differences in adverse effects Risk of QT prolongation26 Less sedating than methadone (can be seen as undesirable by patients)8 Drug interactions Methadone is largely metabolised by CYP3A4 and thus is affected by drugs that inhibit (e.g. cannabis27,28) or induce CYP3A4.29 As for methadone Pregnancy Widely used in pregnancy Buprenorphine is associated with less severe neonatal withdrawal symptoms30 and lower incidence of congenital abnormalities.30 However, buprenorphine should not be initiated in pregnancy even if switching from methadone because of the risk of inducing withdrawal in the fetus. Diversion Patients at greater risk of diversion of medication (e.g. past history of this; treatment in a prison setting)31 may be better served with methadone treatment (although buprenorphine long-acting injection has a low risk of buprenorphine diversion). Sublingual buprenorphine tablets can be more easily diverted with the risk of tablets being injected.32

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