

# Management of substance misuse problems in the general hospital

**Sarah Welch** DPhil MRCPsych, Consultant Psychiatrist, South London and Maudsley NHS Trust; Honorary Senior Lecturer, Institute of Psychiatry, King's College London

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## Detection and brief interventions

Doctors often feel they have little to offer people with drug or alcohol problems with whom they have only brief contact in the general hospital setting. However, even brief contacts offer opportunities for interventions to reduce harm. Examples of possible interventions are given in Table 1.

## Overdose

### Alcohol and benzodiazepines

Management is generally supportive. Flumazenil binds to central nervous system benzodiazepine receptors, competitively blocking the action of benzodiazepines at inhibitory GABAergic synapses, and can be useful in overdoses in which benzodiazepines are involved.

### Opiates

Opiate overdose produces pinpoint pupils and varying degrees of respiratory depression and impairment of consciousness. If there is coma or bradypnoea, the opiate antagonist naloxone should be given intravenously. If the patient has taken a long-acting opioid

such as methadone, a naloxone infusion should be considered<sup>1</sup>. After the administration of naloxone, opiate-dependent patients will experience acute withdrawal symptoms. This can be a difficult period as the patient may need further doses of naloxone, but is driven to leave the clinic to seek more drugs. An additional dose of naloxone given intramuscularly may offer some protection for patients who insist on leaving.

### Stimulant and hallucinogenic drugs

Cocaine and other stimulants such as ecstasy and amphetamines can induce euphoria or anxiety, and sometimes paranoid ideation, aggressive behaviour and hallucinations. Management involves reassuring the patient and keeping him or her safe until the effects wear off. Occasionally, a benzodiazepine may be needed to help calm the patient; where psychotic symptoms persist, antipsychotic medication such as low dose of haloperidol may be needed. Rarely, cocaine overdose can result in cardiovascular complications including arrhythmia, hypertension and cardiac ischaemia. Seizures and hyperpyrexia can also occur. In such cases, treatment is supportive – there are no specific drugs to reverse the effect of cocaine.

## Overdose prevention

Certain factors are thought to put drug and alcohol users at higher risk of overdose, including:

- polydrug use (including alcohol)
- use of unfamiliar supplies of drugs
- intravenous drug use, and
- drug use after a period of abstinence or reduced use (as in residential treatment facilities or prison)<sup>2,3</sup>.

Patients can be advised accordingly. In particular, opiate users who have been abstinent during a period of hospital admission should be advised on discharge about the risks of accidental overdose due to reduced tolerance.

## Withdrawal syndromes

Withdrawal syndromes present a number of problems in the general hospital setting:

- Some withdrawal syndromes carry significant risks.
- Withdrawal syndromes complicate the assessment of other presenting physical and psychiatric complaints.
- The discomfort of withdrawal may lead patients to be antagonistic towards staff, poorly compliant with treatment, and more likely to leave hospital against medical advice.

Competent detection, management and, where possible, prevention of withdrawal syndromes are all part of good medical care.

## Alcohol

The key symptoms of alcohol withdrawal are:

- tremor
- nausea
- sweating
- mood disturbance (anxiety and depression).

*Delirium tremens*. Coexisting hepatic failure, infection and head injury may precipitate the severe withdrawal state of delirium tremens. It is a medical emergency and carries a significant mortality. The diagnostic features are:

**Table 1. Harm reduction interventions in the general hospital setting.**

Detection and communication with the patient and general practitioner	
<b>Advice:</b>	on recommended safe limits of alcohol consumption on how to obtain clean injecting equipment on safer sexual behaviour on risk factors for accidental overdose on dangers to children of prescribed and non-prescribed drugs
<b>Feedback</b>	on physical findings and laboratory test results
<b>Intervention</b>	hepatitis B immunisation for non-immune individuals

- delirium
  - hallucinations (classically visual, but also occur in other sensory modalities)
  - tremor.
- Other features include:
- extreme fear
  - paranoid delusions
  - physical disturbances (sweating, fever, hypertension, tachycardia).

*Treatment of alcohol withdrawal.* The aims of treating alcohol withdrawal are to prevent dangerous complications (seizures and delirium tremens) and to relieve distress<sup>4</sup>. Benzodiazepines are the drugs of choice for managing withdrawal. All are effective, so the choice is determined by the duration of action of the drug. Short-acting drugs such as lorazepam are unsuitable because frequent dosing would be needed, while drugs with longer duration such as diazepam can result in oversedation from accumulated doses. Chlordiazepoxide is commonly used because of its intermediate duration of action, suiting 4–6 hourly dosing. Flexible dosing regimes titrated to symptoms are preferable, but often impractical in the general hospital setting. The dose should be reduced over a period of about five days – longer treatment is rarely necessary or helpful. Antipsychotic medication lowers the seizure threshold and should not be needed if adequate doses of a benzodiazepine are given. Thiamine supplements (oral or preferably parenteral) should be given to prevent Wernicke's encephalopathy.

## Benzodiazepines

Withdrawal can be a serious and difficult undertaking for patients who have been treated with benzodiazepines for long periods<sup>5</sup>. It may be unwise to embark on this during a short hospital admission, and a longer-term withdrawal plan should be made with the general practitioner or specialist service. A more rapid reduction regimen can be undertaken when there are pressing reasons for stopping, but complications of too rapid withdrawal include severe anxiety, per-

## Key Points

**Even brief contacts in the general hospital setting present opportunities to reduce harm from alcohol or drug misuse**

**The alcohol withdrawal syndrome carries significant risk of morbidity and mortality. It must be detected and managed safely**

**Abrupt cessation of benzodiazepine drugs in patients with a long history of dependence can result in a severe withdrawal syndrome**

**Substitute prescribing of opioid drugs such as methadone should be started cautiously as there is a risk of overdose for patients without a clear history of opiate dependence**

**Most patients on stable methadone maintenance treatment will need additional appropriate analgesia when in pain, while keeping the methadone dose stable**

**KEY WORDS:** methadone, alcohol withdrawal, drug dependence, overdose

ceptual disturbances, confusion and seizures. It is generally recommended that patients dependent on short-acting benzodiazepines such as lorazepam, should be transferred to a longer-acting drug such as diazepam for a smoother reduction. It is difficult to decide on a management plan for patients who do not have a verifiable record of benzodiazepine treatment but report use of illicitly obtained benzodiazepines. Such patients often do not use benzodiazepines in a dependent fashion and it may be better to observe them for signs of impending withdrawal before deciding on prescribing.

## Stimulant and hallucinogenic drugs

Although patients who regularly use stimulant or hallucinogenic drugs may experience significant sleep and mood disturbance during periods of abstinence, there is no well-established role for substitute prescribing, and management is mainly supportive. Short-term use of a sedative such as a benzodiazepine may help if there is agitation.

## Opioid drugs

The management of opioid users in the general hospital setting is complex. In some cases, withdrawal from opioid drugs is inappropriate (eg in those on established methadone maintenance treatment). However, many people use

opioid drugs intermittently without having developed significant tolerance. *Substitute prescribing of opioid drugs to non-dependent opioid misusers can result in overdose.* Careful assessment and a systematic approach to prescribing are therefore needed<sup>6</sup>. The withdrawal syndrome is markedly unpleasant but rarely dangerous, so treatment aims to prevent or control symptoms without putting the patient at significant risk.

Specialist assessment covers many areas of drug use, associated risk behaviour and complications, but the key elements to establish for initial prescribing decisions in the general hospital setting are:

- whether the patient has features of a dependence syndrome (eg daily use and typical withdrawal symptoms on stopping or reducing use), and
- whether the patient is currently in treatment for opioid dependence.

*Use of non-opioid drugs.* Non-opioid drugs aimed at specific symptoms of the withdrawal syndrome can be quite effective and are useful when either a little time is needed to establish whether it is appropriate to prescribe methadone or methadone has been prescribed, but safe starting doses (see below) initially prove inadequate to control symptoms. Medications to control associated nausea, vomiting and diarrhoea, as well as a mild analgesic such as paracetamol, will bring some relief.

*Patients currently prescribed methadone.* For these patients, it is safe to prescribe their usual dose, provided that the prescriber has been contacted to ascertain:

- the current dose
- whether methadone is given under direct supervision, and
- when the last dose was given.

Even if the dose has been confirmed, there may be other areas of concern, especially if the dose is high:

- If methadone is not usually given under direct supervision, the patient may not take the full dose but sell or share some. For high doses, it is better to start with divided doses, to avoid overdosing the patient. If the patient has a regular supervised dose, there can be confidence that the confirmed dose is usually well-tolerated.
- Information about doses cannot be relied upon if it is not recent because tolerance to opioid drugs can alter within three days. If the patient has recently dropped out of treatment, it is safer to reassess the dose again.
- The patient's clinical condition or other drugs prescribed may alter response to methadone.

If the patient appears intoxicated, the dose should be reduced and the clinical state and treatment regimen reviewed.

*Patients not currently prescribed methadone.* For these patients or those who need reassessment because of the above safety concerns, methadone should be started with caution. Starting doses of 10–30 mg can be used, with close observation for signs of intoxication or withdrawal. A dose of 50 mg methadone can be fatal in a person without significant tolerance to opioid drugs.

*Drugs other than methadone.* Other drugs are sometimes used for substitute prescribing, for example buprenorphine (a partial agonist at opiate receptors). Dihydrocodeine has no clear advantages over methadone. It is wise to follow the same precautions as with methadone before continuing these drugs. Prescribing diamorphine for treating

opioid dependence requires a special licence from the Home Office, and is limited to a small number of specialists.

In addition to drugs prescribed as 'substitutes', some non-opioid pharmacotherapies such as lofexidine help to alleviate noradrenergic symptoms of withdrawal. However, detoxification may be inappropriate for patients on established methadone maintenance treatment.

### Pain relief

The control of pain can be difficult and confusing. Patients on stable doses of methadone for management of dependence will need analgesia for painful conditions. Tolerance to methadone will make their usual dose ineffective as an analgesic. In these circumstances, the methadone dose should be kept stable and analgesia given in addition. Clearly, a choice of non-opiate analgesia is preferable but opiates cannot always be avoided. In these circumstances, a plan should be drawn up for reduction and cessation of the analgesic medication.

### Iatrogenic opiate dependence

Iatrogenic opiate dependence is sometimes encountered in patients treated with opiate drugs for chronic or relapsing painful conditions such as sickle-cell anaemia or arthritic conditions. In this situation, a partnership approach with the patient is helpful, with clear acknowledgement that tolerance and dependence are adverse consequences of some of the drugs used for pain relief. Doctor and patient can work together towards limiting opiate use in the interests of preserving the effectiveness of these drugs when the pain is at its worst. Measures such as frequent dispensing schedules for outpatients can be helpful in keeping their use well-controlled. Occasionally, stabilisation on a long-acting opioid such as methadone can be helpful, with additional use of other analgesics only when pain emerges.

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