

Chapter 9 – Medical management of drug dependence: reducing secondary health harms

9.1 Provision of healthcare and identification of drug use as a health issue

This chapter considers the scope of medical practitioners' involvement in the reduction of drug-related harm, through the provision of healthcare to people using drugs, and the identification of users, provision of information, and monitoring where drug use is a risk factor for health problems.

Some people who use drugs report experiencing disapproval and frustration in their interaction with healthcare services,¹ and this can be a significant barrier to accessing healthcare. As discussed in **Chapter 8**, health professionals who adopt a non-judgemental, non-stigmatising empathic stance are most likely to be effective in delivering healthcare for these patients.

There is consistent evidence that in primary care settings, in hospitals, and in mental health settings, doctors frequently do not address alcohol and drug use.²⁻⁵ A history of alcohol or drug use is seldom documented, even where presenting symptoms or signs provide an index of suspicion that alcohol or drugs may be involved.^{2,3} There has been difficulty engaging doctors in the treatment of problems with addiction in Australia,⁴ and reports of similar problems in the UK.⁵ Possible explanations for the reluctance to explore alcohol and drug use include some doctors' sense of pessimism about being able to do anything, avoidance of antagonising patients, and, possibly, reluctance to work with stigmatised patients (see **Section 8.2**).

The medical frame of reference is a useful one in which to approach drug use – non-judgemental, factual, professional, accurate diagnosis and provision of information and referral, monitoring the response. Contrary to pessimism and reluctance to address drug use as a health issue, there is evidence that, in relation to the legal drugs alcohol and tobacco, medical management can have significant impact,⁶⁻⁹ but it is unclear how far this can be extrapolated to illicit drugs. Opportunistic identification of drug use, and provision of brief health advice, may be useful in triggering individuals to reflect on, and sometimes to modify, their use of drugs.

If a doctor finds a patient is using illicit drugs, the response should be to undertake an assessment of the extent to which this use is impacting on the person's health and their life and the lives of others around them, while acknowledging the importance of patient autonomy and choice. The appropriate response may involve provision of information about health risks and harms, or referral for management. Referral to a specialist service is not always indicated. Screening and brief advice from physicians can affect the motivation for change among patients, including those with substance dependence.^{10,11}

It is important to identify whether the patient perceives that their health, or other aspects of their life or that of those around them is negatively impacted by their drug use, whether their family members perceive this to be so, and whether the doctor, on the basis of the patient's symptoms and presentation, has identified negative effects of their drug use on the person's life. The doctor must also consider the impact the drug use may be having on children and young people. Guidance published by the General Medical Council (GMC) in 2012 on *Protecting children and young people* makes it clear that, while the adult patient must be the doctor's first concern, the doctor also has a responsibility to consider whether the patient poses a risk to children or young people.¹² The new guidance also stresses that, when responding to requests for information for child protection purposes, the doctor should:

*'include information about the child or young person, their parents and any other relevant people in contact with the child or young person. Relevant information will include family risk factors, such as drug and alcohol misuse, or previous instances of abuse or neglect, but you should not usually share complete records.'*¹²

9.2 Opportunistic brief intervention

In the medical response to addictive disorders, prevention is probably better than treatment – ie opportunistic interventions with people identified as using drugs in ways that place them at risk. Strategies to prevent drug use are discussed in detail in **Chapter 7**. This section looks at strategies to reduce use in those who are already using drugs.

9.2.1 Young people and drug use

A review of randomised trials that evaluated an intervention targeting drug use by young people under 25 years of age, delivered in a non-school setting, noted that overall there is a lack of evidence in this area, so further research is still needed to determine which interventions can be recommended and which are cost effective.¹³ Some larger studies show promising results, suggesting that, for medical professionals (and other healthcare workers), brief interventions using motivational

interviewing provide an important means of reducing drug use in young people, including in those who are most vulnerable or most at risk. Some authors have shown positive impact of brief interventions for use of individual drugs in young people,^{9,14} while one UK study showed these benefits simultaneously derived across a number of different drugs,¹⁵ which may also have useful implications for the busy primary care or emergency department setting.

McCambridge and Strang tested brief interventions in young people,¹⁶ and found that a single session of motivational interviewing (including discussing illicit drug use) led successfully to reduction in use of these drugs among young people. The intervention took place across 10 further education colleges across inner London, with 200 young people aged 16-20 years who were currently using illegal drugs. Those randomised to motivational interviewing reduced their use of cannabis (and cigarettes and alcohol). Those most at risk benefited the most: for cannabis, the effect was greater among heavier users. The effect of reduction in cannabis use was also greater among youth usually considered vulnerable or high risk according to other criteria – for example young male individuals who smoked cannabis the most frequently, were in receipt of benefits, and had a prior history of selling drugs.

9.2.2 Cannabis

Relapse prevention CBT (see **Section 9.5.2**) appears to be effective for cannabis dependence, compared with a control group awaiting treatment. It appears that individual therapy may be more effective than group therapy.¹⁷

9.2.3 Stimulant use

Contingency management (see **Section 9.5.2**) is associated with much longer continuous periods of abstinence for cocaine compared with control groups, in both prize and voucher reinforcement studies.¹⁸ This intervention has not been widely used in the UK, possibly due to training needs.¹⁸ Couples-based interventions have also been found to be effective.¹⁸

9.2.4 Use of opioid drugs

Individuals with opioid dependence who are in close contact with a non-drug-using partner have been found to benefit from behavioural couples therapy, both during treatment and at follow-up.¹⁹

In order to reduce relapse and the associated increased risk of fatal overdose, services providing residential opioid detoxification should prepare people for admission, strive to retain them in treatment for the full admission period, and actively support their entry into planned aftercare, in order to improve outcome.²⁰

9.2.5 Intravenous drug use and associated risks

Opportunistic brief interventions in intravenous drug users have also been shown to have significant impact. A randomised trial across 15 cities and 4,000 participants examined the effect of three sessions of motivation interviewing for intravenous drug users attending healthcare services for other purposes (HIV testing) compared to HIV testing alone. The study found that those who received additional counselling had better outcomes than those randomly assigned to receive just HIV testing. In the group that received additional counselling, there was half the rate of drug injection at 6-month follow-up, four times the likelihood of abstinence (confirmed by urinalysis), and significantly lower arrest rates.^{10,11}

9.3 Safe prescribing

Management of illicit drug users is multifaceted. It requires medical management of the drug use and its sequelae, but also includes referring to other disciplines, such as social services, that can help with the wider aspects of improving quality of life. Medical management of dependent drug use focuses directly on treating physical and mental health issues and may involve prescribing. This section presents some of the safety issues that are important in this context. It considers the appropriate and safe prescribing of drugs of dependence and ways to minimise the risks of diversion, misuse and iatrogenic dependence.

Misuse of, and dependence on, prescribed drugs (in particular opioids and benzodiazepines) is a rapidly growing public health problem in many jurisdictions internationally.^{21,22} There have been well-documented periods in the past when diversion and misuse of pharmaceuticals was the primary source of street drugs in some UK cities.²³ Caution in prescribing, particularly in patients with histories of drug dependence and misuse, is an essential part of minimising diversion and delivering safe and effective medical management. The most effective deterrent to diversion and misuse is supervised consumption.²² There is clear evidence from the UK that increasing the level of supervision in patients receiving methadone has been associated with a marked reduction in deaths due to diverted methadone.²⁴

In assessing patients seeking analgesics and/or hypnotosedatives, it is appropriate to seek a history and family history of drug use, and to examine for any objective signs of use of injected drugs (such as scarred veins), with the patient's consent. Urine toxicology is also useful, to enhance the accuracy of self-report. In addition to minimising misuse, diversion and iatrogenic dependence, the medical professional must consider the physical safety of the prescribed drugs, as is the case in all prescribing. The impact of injudicious prescribing is illustrated in a study from Melbourne, Australia, where researchers investigated the medical attendances of young people who had died of opioid overdoses.²⁵ In the months leading to their deaths, these young people exhibited a pattern of increasing presentations to doctors, obtaining escalating prescriptions for

opioids and benzodiazepines – the drug combination that led to their deaths. In a UK-wide 17-year GP dataset of patients also prescribed OST, over one-third of prescriptions for benzodiazepines exceeded 8 weeks (twice the maximum timeframe recommended by the NICE guidelines).²⁶ In other cases, some patients who may initially be prescribed a short-term z-drug or benzodiazepine prescription for sleep problems or an episode of anxiety, but whose symptoms continue, may be at risk of developing dependence.^{27,28} It is important for medical professionals to conduct regular reviews and consider the broader care plan options, including a stepped care approach and psychological interventions.²⁶

9.4 Management of withdrawal

It is not unusual for patients to present to emergency departments, or sometimes to primary care, in acute drug withdrawal. Occasionally withdrawal from drugs that activate the GABA (gamma-amino butyric acid) system – alcohol, barbiturates and GHB/GBL can present with very severe and potentially life-threatening seizures. Such withdrawal is characterised by autonomic overactivity (tachycardia, hypertension, tremor and sweating), cognitive changes (confusion, agitation, sometimes psychosis) and perceptual disturbances (formication – a tactile hallucination of insects crawling on or in the skin, illusions, visual hallucinations). Fits may also occur. One role of therapeutic detoxification from illicit drugs is management of a clinical emergency, stabilising the individual and slowing the rate of change to allow their physiology to adapt. A second role is to decrease the distressing or uncomfortable symptoms of withdrawal, and, through this, a third role is to enhance engagement and increase the likelihood of continued abstinence. It is also essential that the medical professional promotes continued engagement and continues to provide support after the detoxification process is complete. Relapse prevention is discussed in **Section 9.5**.

9.4.1 Benzodiazepine withdrawal

Fits or a paranoid psychosis may also occur on abrupt withdrawal of benzodiazepines. This is relevant in considering illicit drug use, as it is usual for people who become dependent on illicit drugs to misuse a range of drugs, including alcohol and benzodiazepines. Where withdrawal from most illicit drugs is not associated with severe morbidity, withdrawal from benzodiazepines often poses a greater risk. It is more difficult to recognise, as the onset of withdrawal is often delayed. Withdrawal symptoms come on within two to three half-lives of the particular benzodiazepine (eg 2-3 days after short- and medium-acting compounds and 7-10 days after long-acting compounds) and usually subside within a few weeks.^{28,29} Some patients report symptoms that have persisted for months or indefinitely.³⁰ This has been described as a '*post-withdrawal syndrome*',³¹ and may complicate management of withdrawal from illicit drugs.

9.4.2 GBL withdrawal

As with benzodiazepine withdrawal, those with chronic heavy GHB or GBL use can experience severe withdrawal,³² including delirium and the need for urgent inpatient care or, in some cases, transfer to an intensive therapy unit. Others can be managed by specialists, with high-dose diazepam and baclofen, titrated against withdrawal severity in ambulatory settings, but this needs to be backed up with access to inpatient treatment if required, because of the possible severity of the withdrawal symptoms.³³

9.4.3 Opioid withdrawal

The distressing symptoms of opioid withdrawal can include dysphoric mood, nausea or vomiting, muscle aches, lacrimation, rhinorrhoea, sweating, diarrhoea and insomnia.³⁴ In those patients who wish to detoxify from all opioids, withdrawal symptoms are minimised by the process of opioid detoxification, using the same drug or another opioid in decreasing doses. This is discussed in more detail in **Chapter 8**. Methadone or buprenorphine are offered as the first-line treatment in opioid detoxification.³⁴ As with other withdrawal syndromes, adjunctive medications at low doses may also be considered where clinically indicated (for example, to treat diarrhoea), and where the medication does not interact with the other medications prescribed.

Following successful opioid detoxification, patients should be offered and engaged in continued support and monitoring designed to maintain abstinence.¹⁹ This important topic is covered in **Section 9.5**.

The medical professional must also educate the patient regarding the loss of opioid tolerance following detoxification, and the ensuing increased risk of overdose and death if opioids are used again during this period. This is addressed in greater detail in **Sections 8.4.5** and **8.6.1**.

9.4.4 Stimulant withdrawal

When chronic heavy users abruptly discontinue amphetamine or cocaine use, a withdrawal syndrome occurring within hours to days of their last dose is commonly reported. While the two syndromes are distinct, they share symptoms, including dysphoric mood, fatigue, vivid or unpleasant dreams, insomnia or hypersomnia, increased appetite and psychomotor agitation or retardation.³³ The degree of severity is a relapse predictor in some individuals.³⁵ This is a distressing experience, and there are reports of suicidal ideation in some during this period.³⁶⁻³⁸

Research on pharmacotherapies for amphetamine detoxification^{36,39} and cocaine detoxification^{35,40,41} are currently ongoing but, as yet, no medications are licensed for detoxification in stimulant withdrawal. The medical professional's current focus should be on assessment; engagement; safe means of alleviating distressing symptoms, such as adjunctive medications where appropriate; relapse prevention strategies (discussed in

Section 9.5); and monitoring for the use of other potentially harmful substances the patient may be using to self-medicate.

9.4.5 Cannabis withdrawal

In managing cannabis withdrawal, the medical professional should be aware of the frequency and presentation of withdrawal symptoms, which are newly listed in the forthcoming *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)*, scheduled for publication in 2013. The medical professional should also be aware of the possible responses of patients aiming to reduce their withdrawal symptoms, including relapsing⁴² and self-medication with other substances.^{42,43}

Symptoms of cannabis withdrawal in those who are dependent include anxiety, irritability, appetite changes, restlessness, sleeping difficulties, tension, thoughts and cravings for cannabis, and twitches and shakes, in both adults^{42,44} and adolescents,⁴⁵ and commencing typically within hours to days of ceasing cannabis use. From a US general population study, of a sample of 2,613 individuals using cannabis on three or more days per week, 57.7 per cent (and 59.4% among the subset who did not use other substances) experienced at least one symptom of cannabis withdrawal on cessation, with feeling weak or tired, hypersomnia, anxiety, psychomotor retardation and depressed mood being the commonest symptoms. There was a strong, significant correlation between distress experienced during withdrawals and the use of other substances to relieve the distress.⁴³

Research on pharmacotherapies for the management of cannabis detoxification is also ongoing.^{46,47} In terms of management of withdrawals, the medical professional should monitor patients for withdrawal; address ways to alleviate significant symptoms to help avoid relapse and self-medication;⁴² and engage the patient in other relapse prevention strategies (see **Section 9.5**).

9.5 Relapse prevention

Drug dependence, in particular in users of heroin, other opioids and cocaine, often presents as a chronic condition with periods of relapse and remission.⁴⁸ In the case of dependence on opioid drugs, relapse after a period of abstinence is associated with an increased risk of death from overdose due to decreased tolerance (see **Section 8.6**).^{49,50} The medical professional has a key role in educating the opioid user⁵¹ and their carers⁵² about these risks and how to respond to them. The medical professional must also address relapse prevention strategies with those undergoing detoxification.⁵¹

9.5.1 The role of medication in relapse prevention

The use of naltrexone for relapse prevention after opioid detoxification is described in **Section 8.4.6**. Its use requires significant motivation for compliance and thus its use as an effective therapeutic strategy is limited.⁵³

Prescribed OST (described in detail in **Chapter 8**) is used as treatment in opioid dependence, to maintain abstinence from illicit opioid use.

A Cochrane review addressing the use of psychostimulants to maintain abstinence from cocaine use found studies in this area to be currently inconclusive.⁵⁴

9.5.2 The role of psychosocial interventions in relapse prevention

Relapse prevention CBT focuses on helping drug users to develop skills to identify situations or states where they are most vulnerable to drug use, to avoid high-risk situations, and to use a range of cognitive and behavioural strategies to cope more effectively with these situations.^{18,55}

Relapse prevention CBT appears to be effective for cannabis dependence, with individual relapse prevention CBT lasting between four and nine sessions associated with greater levels of abstinence and reductions in drug use for people who use cannabis.^{18,55}

In a meta-analysis, contingency management (CM), in the form of voucher-based reinforcement in the treatment of use and dependence on licit and illicit drugs, has been shown to significantly improve treatment outcomes for all substance use disorders apart from for alcohol.⁵⁶

Contingency management has not yet been widely used in the UK,¹⁸ but has been shown to increase the likelihood of abstinence in cocaine dependence, using either prize- or voucher-based reinforcement,^{57,58} while relapse prevention CBT and standard CBT have not been shown to be effective for the treatment of cocaine dependence.¹⁸ As Stulza et al highlight,⁵⁹ cocaine users are a heterogeneous group, so studying the impact of psychological therapies on this population as though they are psychologically uniform is likely to underestimate the effect size of therapies, which could be more effective when tailored to individual cases or if subgroups with shared characteristics are studied together instead of whole populations.

Individuals with cocaine and/or opioid dependence and who are in close contact with a non-drug-using partner benefit from behavioural couples therapy, both during treatment and at follow-up.¹⁸

Narcotics Anonymous (NA) and Cocaine Anonymous (CA) are mutual-help groups that offer a recovery programme based on the 12-step approach that began with AA – ‘a non-profit fellowship or society of men and women for whom drugs had become a major problem’, which ‘encourages its members to abstain completely from all drugs’.⁶⁰ Although there are still only very few UK studies in this area,⁶¹ a longitudinal, prospective cohort study of 142 drug-dependent clients interviewed at intake to residential treatment in the UK, and again at 1-year, 2-year and 4-5-year follow-up, found that those who attended NA/AA, in particular those who attended at least weekly, were more likely to be abstinent of opioid drugs at all follow-up points than those who did not.¹⁵ This study showed reduced stimulant use at 1-year follow-up in those who attend NA/AA following residential treatment, but not at other follow-up points.⁶¹ Other studies have shown that active participation rather than just attendance, at 12-step groups was associated with reduced cocaine use.¹⁵ This is consistent with findings that the efficacy of certain psychosocial treatments, including 12-step programmes, is dependent on individual patient characteristics of cocaine-using populations, which can be subdivided based on personal characteristics, such as belief in the 12-step programme.⁵⁹ This emphasises the importance of the medical professional tailoring a treatment package to the individual patient in order to optimise outcomes.

9.6 Illicit drug use in pregnancy

Medical professionals have a responsibility to identify pregnant women who are using illicit drugs, and to engage them in treatment. The earlier members of this population are able to access treatment services, the better the outcome will be for their general physical health, the pregnancy and the neonate.

A sensitive, non-judgemental approach is essential in engaging this population and optimising treatment effectiveness. Medical professionals have a role to play not only in portraying this through their own clinical care and manner, but in leading their clinical teams to be approachable, non-judgemental and patient centred in this situation. This will include attention not only to physical healthcare and management of drug use, but sensitive attention to the coexistent psychological difficulties and social concerns that the patient may be experiencing. The medical professional and the full multidisciplinary team will need to address the woman’s fears about the involvement of children’s services; anxiety and guilt about the potential impact of their drug use on their baby;⁶² and concerns the patient may have about finances, support networks, and coping strategies during pregnancy and their forthcoming parenthood. The NICE guidelines on *Pregnancy and complex social factors*⁶² recommend that the first time a woman who uses substances discloses that she is pregnant, she should be offered referral to an appropriate substance use programme. They also recommend that a variety of methods (eg text messaging) should be used to maintain contact and engagement, and to remind women of upcoming and missed appointments.⁶²

The medical professional must ensure high-quality effective interagency communication. Multiagency team work is also essential, working with social care professionals and ensuring seamless communication between general practice and the specialist services involved in the patient's antenatal care, including obstetrics, specialist drug services and any other specialist healthcare services. Multiagency case conferences, with prospective parents invited as participating attendees, will facilitate good inter-team communication and optimise clinical care.⁶³

The following case study illustrates some of the additional issues to be considered in pregnancy.

Case study: Illicit drug use in pregnancy

Ms B is 23 years old. She is smoking about £30 of heroin and £10 of crack per day. She does not drink any alcohol. She has presented for treatment and is 14 weeks pregnant for the second time.

Ms B was brought up in a small isolated community and was one of six children. Her family were very strict and she was not allowed to have friends outside the community. Between the ages of 10 and 13 she was subjected to regular sexual abuse by an uncle who lived with the family. She once told her mother about the abuse but was told to keep it quiet and not tell anyone, as it would bring shame on the family. Her mother had been seriously depressed when she was a child.

She did well at school and started work in a local estate agent's office when she left school. She began to see Mr Y, who was the brother of one of her school friends. Mr Y was a heroin user and eventually she started smoking cigarettes that he gave her. She thought these were cannabis. After a few months, she noticed that she felt very unwell if she did not smoke and Mr Y told her that the cigarettes had heroin in them. She started rowing with her family and left home to live with Mr Y in a squat. Their drug habits were funded by Mr Y's shoplifting.

When she was 19 she found she was 28 weeks pregnant. She presented to a local GP, who prescribed her methadone and referred her for antenatal care. Social services were involved. She had very little antenatal care and avoided the appointments with the social worker, who she only met once. She continued to use heroin on top of her prescription. She went into labour at 36 weeks and had a baby boy. For a few weeks she went back, with her baby, to live with her parents (with the support of social services) and stopped using heroin but the rows with her mother were so bad she eventually left the baby with her mother and went to live with Mr Y in a big city.

For the next three years she lived in a series of squats with Mr Y and continued to use drugs. Ms B's son lived at home with her mother. She occasionally slept with men to get drugs. Mr Y started drinking alcohol and started hitting her when they argued.

She came into treatment when Mr Y was arrested for aggravated burglary and went to prison. He was sentenced to four years.

Ms B was engaged in treatment by the city's drug services. She registered with a GP. She was prescribed buprenorphine and managed in an antenatal liaison clinic, where she received antenatal care and drug treatment. Social services were involved from the beginning and found her a place in a local women's hostel.

Ms B was able to stop using heroin and begin to think about some of the problems she had with her abusive relationship and her history of sexual abuse. Her second baby, a little girl, was born at full term and was immediately subject to child protection proceedings and taken into foster care but Ms B had regular contact with the baby. She subsequently went, with the baby, to a mother and baby rehabilitation centre where her parenting could be assessed and she could reduce her buprenorphine. Ms B was clear she wanted to stop using all drugs, keep her daughter and re-establish a relationship with her son and her family.

Case study details provided by Dr Emily Finch, a consultant addiction psychiatrist.

9.6.1 Use of opioid drugs during pregnancy

For opiate use in pregnancy, the focus is on stability. It is safest to prescribe opiate substitution (see **Chapter 8**) '*at a dose that stops or minimises illicit use*'.⁶² Detoxification may be considered, if requested, during the second trimester, as long as this does not precipitate a relapse in illicit drug use; but it should be avoided during the first and third trimester because of the risk to the fetus.^{63,64}

Buprenorphine is not licensed for use with pregnant women, but research suggests no adverse effects on the pregnancy or neonatal outcomes.^{65,66} The UK guidelines on the clinical management of drug misuse and dependence⁶³ advise that if a pregnant woman is stable on buprenorphine and informed of the risks, it is reasonable to leave her on a prescribed dose of buprenorphine, rather than risk inducing withdrawal in the fetus or destabilising the patient's treatment by transferring to methadone, unless otherwise needed. The treatment focus again is on stability and maintaining engagement.

In all pregnant women using or prescribed opioid drugs, particular consideration will also need to be given to their birthing plan, including pain management and the risk of fetal distress at birth.^{64,65}

9.6.2 Cocaine use during pregnancy

As in the case of the non-pregnant woman, there is currently no substitution treatment for cocaine. In view of the potential harms to the fetus and to the mother's health, the pregnant woman should be given support to stop using cocaine during pregnancy. A non-judgemental, sensitive approach, with clear and effective multidisciplinary communication and team working are again essential, addressing the full spectrum of psychosocial and physical health needs. Psychological therapies, including family therapy where possible, may be offered.⁶³ Relapse prevention CBT should be offered, and marked efforts made to ensure continued engagement of the patient.

Summary

- Consistent evidence shows that doctors in primary and secondary care and in mental health settings frequently do not address alcohol and drug use.
- Caution should be exercised in prescribing drugs with potential for dependence, particularly for patients who are at high risk for dependence or diversion.
- Management of medical emergencies related to acute symptoms of withdrawal should be followed by longer-term medical management and support to reduce dependence.
- It is also important to address strategies for relapse prevention after detoxification.
- The use of naloxone for relapse prevention after opioid detoxification is of limited value.
- Psychosocial interventions that help users to identify high-risk situations and use coping strategies have been shown to be helpful in managing cannabis dependence.
- In US studies, contingency management in the form of voucher-based reinforcement has been found to significantly improve outcomes for all substance use disorders apart from alcohol. Couples-based therapy and support groups are also of value.
- Brief therapist interventions and motivational interviewing have been shown to reduce drug use among young people. Opportunistic interventions in patients attending for HIV testing has also been shown to increase the likelihood of abstinence and reduce arrest rates.
- Illicit drug use in pregnancy needs particular care with medical management, to avoid harm to both the mother and her baby.

