Clinical Protocols for Detoxification

General Practice and Community Settings

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AUTHORSHIP AND ACKNOWLEDGEMENTS

This manual, "Clinical Protocols for Detoxification for General Practice and Community Settings" has been prepared by John B. Saunders, Junie Yang and Michael Jenner, staff of the Alcohol and Drug Services of the Royal Brisbane Hospital, The Prince Charles Hospital Health Service Districts, and the Alcohol, Tobacco and Other Drug Service of Cairns Health Service District. The development of this manual has been funded by Queensland Health.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

1.1 BACKGROUND AND RATIONALE

This manual provides guidelines and clinical protocols for the management of persons undergoing detoxification from alcohol and/or other drugs in community settings. They are designed specifically for general practitioners, Alcohol and Other Drug Services (ATODS) medical and nursing staff, and other primary health care practitioners. A companion volume "*Clinical Protocols for Detoxification in Hospitals and Detoxification Facilities"* (See References) provides guidelines and protocols that are designed for medical, nursing and allied health clinicians that are working in hospitals or specialist residential detoxification facilities.

The protocols contained in this publication have been developed on the basis of current literature, the knowledge of experts on alcohol and drug related disorders, and on protocols used by ATODS staff of the Royal Brisbane and the Prince Charles Hospitals. The protocols are suitable for a person undergoing home or ambulatory detoxification. However, included in the manual are guidelines describing the clinical features of a person who may require specialist inpatient detoxification, or whose clinical presentation deteriorates in the context of home or ambulatory detoxification and requires transfer to hospital to safely complete the withdrawal.

People who are alcohol and or other drug dependent have become neuroadapted to continuous or repeated exposure to a psychoactive substance. A manifestation of neuroadaptation is that a physical withdrawal syndrome may manifest when substance use ceases. The primary objective of detoxification is completion of the withdrawal process with safety and comfort. This ensures that the person can cease alcohol or other drug use without experiencing an uncomfortable and potentially dangerous withdrawal syndrome.

Secondary objectives include screening for illnesses, particularly communicable diseases and mental health disorders, and treatment of intercurrent conditions. In the later stages of detoxification opportunity is taken to provide instruction on harm reduction procedures and to initiate referral for ongoing treatment, relapse prevention and rehabilitation.

This manual provides an overview of alcohol and other drug use in Australia; describes the Alcohol and Drugs policy framework; and outlines the concepts of Thorley's model and the Stages of Change model as they relate to substance use and readiness to change respectively. It then provides an overview of each individual drug class, the typical withdrawal picture associated with that drug, assessment instruments, and specific protocols for withdrawal management of that drug when applicable.

The drug classes dealt with in this manual are:

1. alcohol
2. benzodiazepines
3. opioids
4. psychostimulants
5. inhalants
6. cannabis
7. steroids

A ready reckoner or 'decision tree' has been included for most drug classes to ensure important information can be accessed at a glance in a busy clinical setting.

A brief overview of comorbid substance use and mental health disorders is included due to the frequency with which general practitioners and other primary health clinicians have to care for these persons.

The medico-legal aspects of treating drug dependent persons are also briefly covered in this manual. The final section contains information on the alcohol and drug services available that general practitioners and other primary health clinicians can access for further information and support.

Drug information and drug dosages were correct at the time of publication. The clinician or health professional must check treatment recommendations and their applicability, as well as the potential for adverse reactions by the drugs used.

2 CONCEPTS AND DEFINITIONS

2.1 THE SPECTRUM OF SUBSTANCE USE

There are many substances that cause intoxication, induce dependence and can result in withdrawal states on cessation of use. These protocols deal with seven major classes: alcohol, benzodiazepines (the principal sedative-hypnotic used in Australia), opioids, psychostimulants, volatile substances, cannabis and steroids. The overall impact of these substances will be reviewed briefly.

ALCOHOL

Alcohol is the most commonly used drug in Australia. The Australian Institute of Health and Welfare (2001) reports 90.4% lifetime use of alcohol, 82.4% recent use (last 12 months) and a mean age of initiation to alcohol use of 17.1 years. The National Survey of Mental Health and Wellbeing (NSMHWB, Hall et al., 1998) found that 83.1% of males and 63.5% of females had consumed at least 12 drinks of alcohol in the preceding year. The overall prevalence of alcohol use disorders (including harmful use and dependence) was higher among males (9.4%) than among females (3.7%). Alcohol use disorders were highest among 18-34 year olds (10.6%), lowest amongst those over age 55 (4.4%) and intermediate amongst those aged 35-54 (6.1%).

Indigenous Australians are more likely than non-Indigenous people to abstain from alcohol. However, of those indigenous Australians who do consume alcohol, they are more likely than the non-Indigenous to consume alcohol at hazardous or harmful levels. In 1994, nearly two thirds (62%) of Indigenous males and almost half (45%) of Indigenous females who consumed alcohol at high levels did so weekly or more often (Commonwealth Department of Health and Family Services, 1997).

The Australian Institute of Health and Welfare (1999) estimated that there were almost 4,000 alcohol-related deaths and just fewer than 100,000 hospital episodes during 1997. Principal among alcohol-related causes of deaths and hospital episodes were cirrhosis of the liver, strokes and motor vehicle accidents. Psychosocial ill effects are also considerable: 40% of divorces are associated with alcohol misuse, as is much domestic and other violence. Longitudinal studies conducted in North America and Europe demonstrated a mortality rate among persons with alcohol misuse that is 1.6 - 4.7 times higher than that of the general population.

BENZODIAZEPINES

A large number of proprietary and traditional drugs have sedative, anti-anxiety and hypnotic properties. Prescription of barbiturates, responsible for widespread morbidity due to their high dependence potential and mortality from overdose, has

been supplanted by benzodiazepines, which are safer in overdose, and have little intrinsic tissue toxicity. However, there is considerable dependence risk even at therapeutic doses (Saunders, Sitharthan et al., 2001; Saunders, Dore et al., 2001).

In 1998 there was a lifetime use of benzodiazepines of 6.2%, recent use (last 12 months) of 3.0% and a mean age of initiation of 23.4 years (Australian Institute of Health and Welfare, 1999). The NSMHWB (Hall et al., 1998) found that 1.9% of males and 2.3% of females reported having used benzodiazepines in the past year with 0.4% of males and females using them at a dependent level. The Progress of the National Drug Strategy: Key National Indicators (Commonwealth Department of Health and Family Services, 1997) reported that 82.6% males and 85.7% females who had been prescribed benzodiazepines in 1995 used them for six months or longer. In the 65 years or older age group the figure was 92% males and 91.2% females.

Withdrawal symptoms may occur in 45% of individuals who have been using benzodiazepines for three months or more, and also less frequently in others whose use may have been limited to one to two weeks. Symptoms occur most frequently in individuals who have been taking doses higher than that prescribed, and less frequently at therapeutic levels. Alcohol dependent individuals often become dependent on benzodiazepines (cross-tolerance).

OPIOIDS

In 1998, lifetime use of heroin was reported to be 1.6% among the general population, recent use (last 12 months) was reported to be 0.2% and the mean age of initiation was 20.7 years. Males (1%) were twice as likely as females (0.5%) to be recent users. The age group with the highest proportions of persons using heroin was the 20-39 years whilst the highest proportions of recent heroin users were in the 20-29 age group.

Lifetime use for teenagers aged 14 -19 years was 0.9% and those who had recently used was 0.4%. Significantly, 5.2% of males 20-29 years reported using heroin at least once in their lifetime use (Australian Institute of Health and Welfare, 2001). The NSMHWB (Hall et al., 1998) found that males (1.3%) and females (1.0%) had used opioids in the past year with 0.2% males and females using them at a dependent level.

The majority of deaths (through overdose, suicide, homicide, infectious diseases, or toxic reactions to drug or adulterants) due to illicit drug use are opioid related. Darke and Zador (1996) reported that the average number of lifetime overdoses is three, and that 68% of their sample of 329 heroin users were likely to have overdosed, gender differences were apparent.

In 1999 there were 958 opioid overdose deaths in people aged 15-44 years throughout Australia (the majority of whom were male)

(http://www.med.unsw.edu.au/ndarc/questions). This number represented a 30% increase on the number of opioid overdose deaths in 1998. Darke and Zador also identified three independent factors associated with having overdosed: longer heroin using careers; greater heroin dependence, and higher levels of alcohol consumption.

While heroin use is relatively rare in the general population, it is associated with disproportionate costs in terms of drug-related problems and deaths. In New Zealand heroin use is less common, with most opioid dependent persons using "homebake" preparations and morphine.

PSYCHOSTIMULANTS

Three groups of psychostimulants are commonly used - amphetamine and its derivatives, cocaine, and prescribed stimulants. Amphetamines were marketed at the beginning of the 20th Century as anti-depressants and appetite suppressants. They have been used by troops in wartime, by long distance drivers, and students, but increasingly are used recreationally by youth. Although death from amphetamine use is rare, it occurs in the context of acute toxicity characterised by cerebral haemorrhage, heart failure and/or hyperthermia.

In 2001 nearly nine percent of Australians reported using amphetamines at least once in their lifetime. Lifetime use of cocaine was 1.3%, and ecstasy 6.1%. Recent use (last 12 months) of amphetamines was 3.4%, cocaine 4.4% and ecstasy 2.9%. The mean age of initiation into amphetamine use was 20.4 years, cocaine 22.6 years and ecstasy 21.9 years (Australian Institute of Health and Welfare, 2001). The NSMHWB (Hall et al., 1998) found that 1.4% of males and 0.6% of females had used amphetamines in the past year with 0.2% males and 0.1% females using them at a dependent level.

Amphetamines were the drug class with the highest proportion of recent injectors (68.2%), followed by heroin (53.5%) and cocaine (13.4%), (Australian Institute of Health and Welfare, 2000).

Ecstasy (methylenedioxy methyl-amphetamine or MDMA) is one of several amphetamine derivatives popularised in the "rave" or dance party scene. It has become increasingly popular among young people and 20% of 20-29 yr olds had tried ecstasy in 2000 & 10% admitted to recent use (AIHW, 2001). It has reinforcing properties due to the relatively pleasant hallucinatory experience as well as the stimulant effect obtained. Ecstasy is obtained most frequently in tablet form and tends to be ingested orally.

The indigenous peoples of South America have used cocaine for centuries. In Europe it was widely used in the early 20th Century in proprietary tonics and medicines. In the 1960s there was a wave of intravenous cocaine use, and in the late 1970s free-base, volatile forms (able to be smoked) such as "crack" became

available. Its use spread in the USA especially from the elite to the economically disadvantaged and ethnic minority populations in inner city areas, due to its low cost and ready availability. The number of people in the USA who ever used cocaine increased from 5 to 25 million between 1975 and 1985, by which time three million Americans were considered to be cocaine dependent.

Prescription stimulants are misused predominantly by young women often in a quest to maintain low body weight. These include diethylpropion (Tenuate) and methylphenidate (Ritalin) and stimulants such as caffeine or related compounds are contained in many brands of compound analgesic. Chronic abuse of Ritalin can lead to marked tolerance and dependence with varying degrees of abnormal behaviour. Frank psychotic episodes can occur, especially with intravenous use.

VOLATILE SUBSTANCES

Volatile substances are a range of products that give off vapours or fumes at room temperature, and when inhaled cause the user to rapidly feel intoxicated. Volatile substance abuse (VSA) describes the intentional inhalation of these substances and differentiates deliberate from unintentional inhalation (eg. occupational or accidental exposure).

Volatile substances can be grouped into three broad categories:

1) semi-solids (glues)
2) liquids (petrol, paint thinners, paint, cleaning fluids and industrial solvents)
3) gases (aerosols gas fuels, anaesthetic gases) (Rose, 2001).

Volatile substances can be used in various ways including nasal inhalation, inhaling fumes from an inhalant-soaked cloth placed in the mouth, breathing fumes from a plastic bag, or spraying the substance directly into the mouth and larynx. In Australia, the term “chroming” relates to the deliberate inhalation of chrome-based paints that have been sprayed into a bag and held tightly over the mouth.

Although use of volatile substances is not widespread in the general community, there is concern that young people and Aboriginal and Torres Strait Islander people are at particular risk of VSA-related harms. There are however subgroups of adults who use volatile substances. These include gay men who use nitrites to enhance sexual experiences, and those who abuse anaesthetic agents such as nitrous oxide (May & Del Vecchio, 1997).

Like all other categories of drugs, use of volatile substances can be opportunistic, recreational, regular or chronic (Rose, 2001). Dependence on volatile substances can occur. However despite subjective withdrawal symptoms being reported among regular high-level users, a discrete withdrawal syndrome has yet to be identified.

In 1998, 3.9% of Australians surveyed reported lifetime use of volatile substances and recent use was 0.8%. The mean age of initiation to VS use was 17.5 years (Australian Institute of Health and Welfare, 1999).

Problematic VSA has been associated with impoverished or isolated backgrounds, limited formal education, delinquency, and polysubstance abuse (Howard & Jenson, 1999). In this context the highly neurotoxic and anoxic effects of ongoing use can be particularly debilitating (Saunders, Dore et al., 2001).

CANNABIS

This is the most widely used illicit drug in developed countries. Its use increased during the 1960s, and although this has declined in some countries, the majority of young people would have some experience with it. Frequent use is less common, the dependence potential of cannabis being relatively low, and in developed countries only about 3% aged 18-40 are daily users. Reflecting the sporadic nature of its use among the majority, physical sequelae are comparatively uncommon. More potent forms of cannabis, with higher concentrations of the most active cannabinoid, Δ-9-tetrahydrocannabinol (THC), are more available. Cannabis-related psychosis appears to be increasing in prevalence as a result (Saunders, Sitharthan et al., 2001; Saunders, Dore et al., 2001).

The Australian Institute of Health and Welfare (2001) reported that one in every three Australians aged 14 years or older had used marijuana/cannabis at some time in their lives. Recent use was 12.9% and the mean age of initiation to cannabis use was 18.5 years. Males (44%) were more likely than females (35%) to have ever used cannabis. The Institute also estimated that in 1998 there were over 2 million Australians aged 14 years or older who were recent cannabis users. During that period there were over 400,000 teenagers (14-19 years) who used cannabis. However, the prevalence of cannabis use is highest for those aged 20-29, with over 820,000 recent users.

STEROIDS

Anabolic steroids, more precisely defined as anabolic androgenic steroids (AAS), include testosterone, the main androgenic hormone (male sex hormone) in males and all synthetic derivatives of testosterone. These drugs have both anabolic (tissue building) and androgenic (masculinising) effects.

Although weight lifters and others first used anabolic steroids in pursuit of strength and muscle definition, there are now five identified groups of users: competitive athletes, body builders, occupational users, those who want to improve their body image, and adolescents. The severe psychogenic side-effects of high doses of steroids include aggressive and violent behaviour. Dependence syndromes have been described in up to two thirds of long-term users (Copeland, Peters, Dillon;

2000). However despite reports of subjective withdrawal symptoms by some dependent users, a discrete withdrawal syndrome has yet to be described.

The Australian Institute of Health and Welfare (2001) reported lifetime use of steroids for non-medical purposes at 0.3% among a representative sample of Australians, recent use (last 12 months) was 0.2% and the mean age of initiation to steroid use was 22.5 years. Use of steroids is primarily a male pursuit. Less than half a percent of females have ever tried steroids. The prevalence of steroid use is highest for males aged 20-29 (2.6%) (http://www.aic.gov.au/research/drugs/stats/lifeuse/lifeuse-steroids98.html).

HALLUCINOGENS

Thousands of natural hallucinogens have been identified, particularly in mushrooms, nuts and Datura plants. Synthetic drugs such as lysergic acid diethylamide (LSD) and Bromo-DMA (4-bromo-2, 5-dimethoxyamphetamine) are currently available in Australia. Overseas, a much wider variety of hallucinogens have been encountered, including MDA (methylenedioxyamphetamine), STP (DOM) (2,5 dimethoxy 4-methylamphetamine), PCP and others. In pure form, almost all synthetic hallucinogens are white powders and many are without a distinctive taste. Therefore, it is impossible to properly identify such drugs by sight or taste alone.

Hallucinogens became popular in the 1960s and there appears to have been increased use in the late 1990s. The Australian Institute of Health and Welfare (2001) reported lifetime use of hallucinogens at 7.6%, recent use at 1.1% and the mean age of initiation into hallucinogen use was 19.1 years.

A “bad trip” sometimes may be re-experienced as a flashback. Hallucinogenic flashbacks apparently do not occur because of a residual quantity of drug in the user’s body. Rather, flashbacks apparently are vivid recollections of a portion of a previous hallucinogenic experience. Essentially, flashbacks are very intense and very frightening daydreams.

It is unlikely that hallucinogens are directly life threatening. However, overdoses have often indirectly resulted in death. The extreme panic and agitation of a “bad trip” have been known to lead to suicide, or to accidental deaths as users have tried to flee from their hallucinations. The most common danger of a hallucinogen overdose is an intense “bad trip”, which can result in psychotic episodes in some individuals. There is no identified withdrawal syndrome from hallucinogens therefore protocols are not included in this manual.

2.2 INTOXICATION WITH SUBSTANCES

Acute intoxication is the result of the pharmacological effects of alcohol or another drug. To become intoxicated the amount of substance taken must exceed the individual’s tolerance to produce behavioural and physiological abnormalities (Commonwealth Department of Human Services and Health, 1994).

Intoxication is seen in naive alcohol and drug users, in regular users, and in those who have become dependent. The amount needed to produce a state of intoxication differs considerably in these three groups because of their differing levels of tolerance.

Severe intoxication can pose a threat to life through alteration of physical functions such as depression of respiration, hypothermia, and/or alteration in mental functions, such as panic or paranoia, resulting in accidental injuries or self-destructive behaviour (Novak, 1989).

Recovery from acute intoxication usually follows clearance of the substance from the body. However, recovery may be delayed if the episode of intoxication has induced a delirium or psychosis. If it has been accompanied by a complication such as hypoxia, there may be permanent damage to the individual.

It is important to note that intoxication can mimic or mask serious illness and injury, and that intoxicated persons may respond or react to their perceptions, which they may view as hostile, threatening or inappropriately safe. This is especially relevant for Indigenous populations where comorbidity is common.

There is an inherent risk with combining psychoactive drugs due to their potentiating effect, and this can produce mixed symptomatology.

2.3 SUBSTANCE ABUSE

The term 'abuse' can be briefly described as the repeated use of substances despite the occurrence of problems associated with such use. The Diagnostic and Statistical Manual (Version 4, DSM-IV) describes abuse as:

> *A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring at any time in the same twelve month period:*

- recurrent substance use resulting in a failure to fulfil major obligations at work, school, or home (eg. repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household)
- recurrent substance use in situations in which it is physically hazardous (eg. driving a motor vehicle or operating a machine when impaired by substance use)
- recurrent substance-related legal problems (eg. arrests for substance-related disorderly conduct)
- continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance

- the symptoms have never met the criteria for substance dependence for this class of substance.

2.4 SUBSTANCE DEPENDENCE

Alcohol and drug dependence is a syndrome that develops after repeated use (over months or years) of a psychoactive substance. It is manifested by a behaviour change in which the use of a given psychoactive drug is allocated a much higher priority than other behaviours that once had higher value. Life becomes more and more focussed on alcohol and drug use. Tolerance typically develops as a neuroadaptive response, and many persons experience withdrawal symptoms when alcohol or drug use is reduced or stopped.

Dependence involves a cluster of cognitive, behavioural and physiological changes. It exists in various degrees of severity, and is not an "all-or-nothing" phenomenon. In general, a diagnosis of dependence can be made if **three or more** of the following criteria are evident in a period of 12 months (WHO ICD-10, 1993):

- a strong sense of compulsion to take the substance
- difficulties in controlling intake once started
- presence of withdrawal symptoms and use of substance to control symptoms
- evidence of tolerance, increasing dose to achieve the original effect
- increasing importance of the substance use in priorities of life
- persistent or continued use of substance in spite of evidence of harmful consequences.

DSM-IV criteria are outlined in Appendix 3.

In many cases alcohol or drug use is relatively stereotyped. Persons who have become dependent on a psychoactive substance typically start rapid reinstatement of the syndrome if they resume use after a period of abstinence.

It is useful to have a checklist of features of dependence when taking a history. A simple checklist, which allows grading of severity, is presented in Table 1.

TABLE 1 WHO Criteria for Dependence

CRITERIA FOR DEPENDENCE	**COMMENTS (mild+,moderate++,severe+++)**
Compulsion to use	
Impaired control over drug use Priority of drug use	
Increased tolerance	
Withdrawal symptoms	
Continued use despite harmful effects	

2.5 WITHDRAWAL STATES

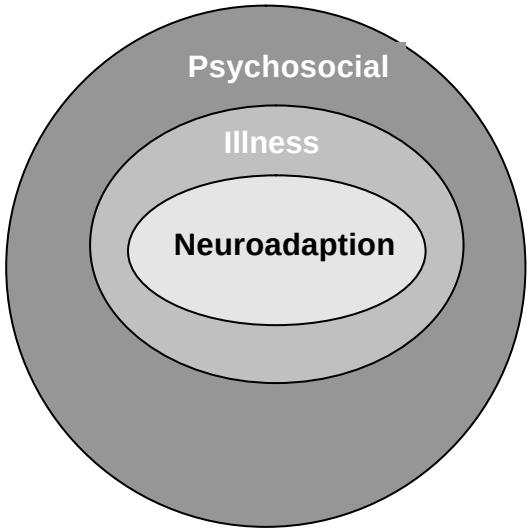
Alcohol and drug withdrawal occurs following the cessation or reduction in use of alcohol or a drug that has been used consistently and heavily, and to which typically the person has become dependent. The course of withdrawal depends on:

- the severity of dependence, which dictates the extent to which neuroadaptation needs to be reversed
- illness such as physical or psychiatric disorders
- psychosocial factors such as physical environment, fears and expectations.

This multi-dimensional view of drug withdrawal is based on the World Health Organisation model of dependence. Treatment of withdrawal requires supportive care, and often pharmacotherapy and other medical treatment for neuroadaptation reversal, depending on the severity of withdrawal. Thus, the features of drug withdrawal can be related to the three dimensions as illustrated in Figure 1 (Frank & Pead, 1995).

The clinical features of the withdrawal syndrome from alcohol and each of the major drug classes addressed by this manual are shown in Section **2.6** and described in Sections **4** to **11.**

FIGURE 1: Dimensions of Drug Withdrawal



2.6 RELATIONSHIP BETWEEN INTOXICATION AND WITHDRAWAL

Persons presenting intoxicated from alcohol or other drugs may subsequently develop a withdrawal state. This is to be expected if they have a history of dependence, but it is not invariable. Persons with no such history are likely to recover uneventfully, not develop withdrawal, and therefore not require a formal detoxification.

The salient clinical features of intoxication and the associated withdrawal syndrome for alcohol, benzodiazepines, opioids and psychostimulants are presented in Tables 2 through to 5. Volatile substances, cannabis and steroids are discussed in their relevant sections.

TABLE 2: Alcohol Intoxication and Withdrawal Syndrome

Alcohol Intoxication	*Alcohol Withdrawal*
• poor motor coordination • slurred/incoherent speech • poor concentration • mood instability • impulsivity • impaired judgement • sedation • insomnia • blackouts • stupor and coma may occur with very high doses	***Simple Withdrawal*** • tremor • tachycardia • increased temperature • perspiration • hypertension • anxiety • depressed mood - malaise • agitation / irritability • nausea / vomiting • insomnia ***Complicated Withdrawal*** • grand mal tonic-clonic fits • delirium tremens, characterised by: o severe hyperactivity o severe tremor and agitation o clouding of consciousness o disorientation o hallucinations

TABLE 3: Benzodiazepine Intoxication and Withdrawal Syndrome

Benzodiazepine Intoxication	***Benzodiazepine Withdrawal***
• impaired coordination • slurred/incoherent speech • impaired thinking • lability of mood • sluggish pupils • aggressive behaviour • stupor • anterograde amnesia • coma may occur with high doses	***Simple Withdrawal*** ***Somatic symptoms*** • tremor, muscle twitching • aches and pains, muscle stiffness • dizziness, dilated and brisk pupils • headaches, visual disturbance • nausea/vomiting/diarrhoea ***Psychological symptoms*** • agitation, anxiety, panic attacks • depression, irritability • insomnia, perceptual disturbances ***Complicated Withdrawal*** • grand mal tonic-clonic seizures • delirium, clouding of consciousness • paranoid ideations/delusions • visual and auditory hallucinations • suicidal thoughts

TABLE 4: Opioid Intoxication and Withdrawal Syndrome

Opioid Intoxication	***Opioid Withdrawal***
• drowsiness/sedation ('nodding off') • impaired thinking • impaired behaviour • dulled responses • pin-point and non-reactive pupils • nausea/vomiting • hypotension, bradycardia • hypothermia • shallow/slow breathing • coma and respiratory depression may occur and death may ensue with very high doses	***Early Features*** (6-12 hours after last use of heroin) • dilated pupils • lacrimation • yawning • hot and cold flushes • perspiration • drug seeking behaviour ***Intermediate Phase*** (18-24 hrs after last use) • rhinorrhoea • piloerection ***The Fully Developed Syndrome*** • increasing restlessness • anxiety • irritability • nausea/vomiting • abdominal and muscle cramps • backache • diarrhoea • insomnia • craving Methadone withdrawal is similar but develops more slowly and is more protracted.

TABLE 5: Psychostimulant Intoxication and Withdrawal Syndrome

Amphetamine Intoxication	*Amphetamine Withdrawal*
• increased sympathetic activity • increased confidence • increased energy • insomnia • elevated blood pressure, • increased heart rate • dilated pupils • restlessness • pressure of speech • perspiration, hyperthermia • jaw clenching • reduced appetite ***Severe Intoxication*** • hallucinations • extreme hyperactivity • apprehensiveness • paranoid ideation • panic • convulsions, delirium, coma • psychosis	***Features of Withdrawal Day 1-3 ('crash')*** • exhaustion • hypersomnia • decreased appetite • restlessness • paranoia • irritability • anxiety • hallucinations and delusions • depression (may lead to suicide) ***Following Day 3*** • lethargy • anxiety • erratic sleep • irritability • poor concentration • extreme mood swings • aches and pains • increased appetite • strong cravings to use the drug

Cocaine Intoxication	*Cocaine Withdrawal*
• hyperactivity • excitability • tremor • perspiration • tachycardia • arrhythmia • hypertension • facial ticks • convulsive jerks • convulsions and coma may occur with very high doses • psychosis	***Phase 1 : "Crash" (9 hours - 4 days)*** • hypersomnia • fatigue • agitation • depression • anorexia • no cravings for the drug ***Phase 2 : Withdrawal (1 - 10 weeks)*** • depression • lethargy • anxiety • sudden angry outburst • increased appetite • strong cravings to use the drug ***Phase 3 : Extinction (indefinite duration)*** • episodic cravings often in response to conditioned cues

2.7 HARM MINIMISATION AS THE CENTREPIECE OF ALCOHOL AND DRUGS POLICY

Australia adopts a harm reduction approach as the cornerstone of its alcohol and drugs policy. Other arms of the approach are supply reduction and demand reduction. The aim is to reduce the adverse health, social and economic consequences of alcohol and other drugs by limiting the harms and hazards of drug use for both the community and the individual without necessarily eliminating use.

The principle of harm reduction recognises that there is a broad spectrum of levels of use, acute and chronic, and of associated risks of physical and social harm. It includes preventing anticipated harm and reducing actual harm. Harm reduction demands realistic strategies focused on preventing and reducing harm to individual drug users, their families, workplaces and the wider community. It accepts that interventions that reduce risks of harm connected with drug use, without necessarily eliminating use, can also have important benefits for both the individual user and the wider community (National Drug Strategic Plan, 1993-1997). Examples of harm reduction strategies include:

- Increased use of low-alcohol beverages
- Responsible serving practices
- Methadone and Buprenorphine maintenance programs
- Needle and syringe availability programs (NSP)
- Injecting drug user education such as safer injecting and disposal practices, vein care, vaccinations and safer sexual practices
- Education on the risks of alcohol and drug use in pregnancy
- Education on the hazards of concomitant use of other drugs
- Relapse prevention programs
- Providing a variety of treatment options, eg. rapid opioid detoxification, detoxification using Buprenorphine and induction into Naltrexone; Acamprosate and Naltrexone for alcohol relapse prevention.

The provision of NSP services also provides the opportunity for opportunistic brief interventions or referral to treatment services and can serve as a gateway to formalised treatment in the long-term.

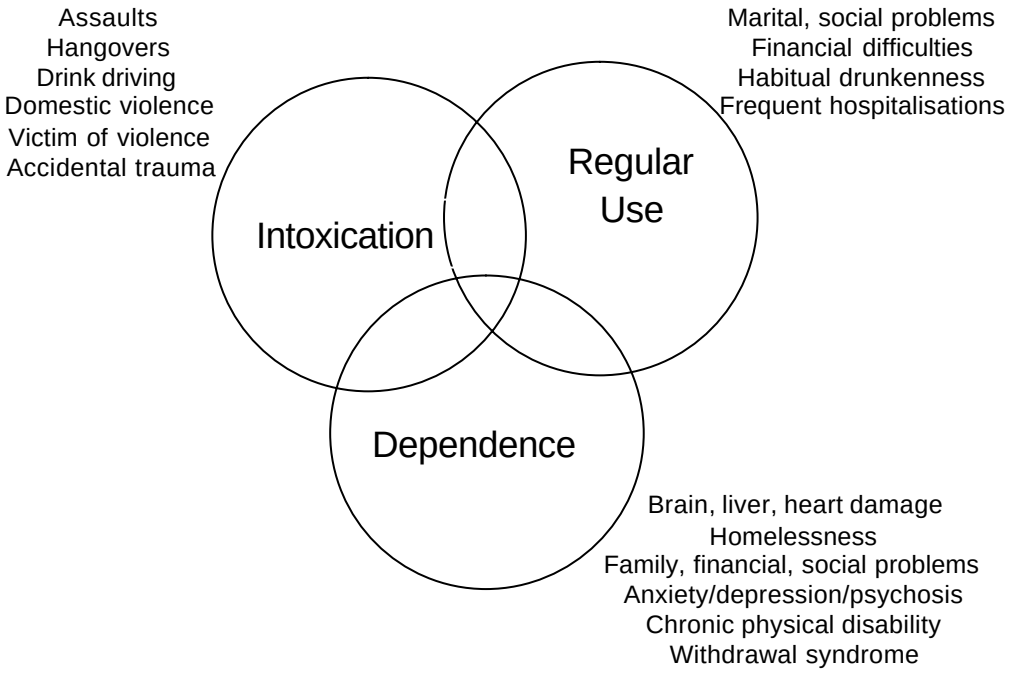
2.8 THORLEY'S MODEL

Thorley (1980) argues that it is no longer useful to consider alcoholism as a single disease entity with a well-defined prognosis. It is more effective to develop a less constrained concept of problem drinking (including the alcohol dependence syndrome) as this can be easily used by multidisciplinary and non-medical treatment and rehabilitation services. Thorley suggests that various problems (medical, social and legal) can be related to three elements of drinking behaviour: **ntoxication**, **regular use** and **dependence** as shown in Figure 2. In other words, Thorley

suggests that it is important not just to look at the amount people use, but also their *style* of alcohol use. This concept can be easily applied to use of any other substance.

Alcohol problems may be triggered or exacerbated by antecedent factors (eg. illness, social factors) and in its turn may worsen these problems or create new ones. Thus, abstinence alone will not necessarily 'cure' the person. The purpose of assessment is thus to examine all the factors involved. Thorley points out that the essence of any consultation when dealing with the problem drinker is to accept the person as a person with problems, as any suggestion of disapproval may hinder the development of a person's trust and motivation.

FIGURE 2: Thorley's Model (1980)



The circles are drawn so they overlap, indicating that people can have problems in one or more areas. The three elements of drinking behaviour, which may generate alcohol problems, are discussed in Table 6.

TABLE 6: ELEMENTS OF DRINKING BEHAVIOUR

Intoxication

Problems associated with intoxication include motor vehicle accidents, violence, unwanted sexual activity, criminal acts and drink driving. These problems can occur on any occasion where people are intoxicated. This style of drinking is often seen in young people. In relation to alcohol, it is seen in the northern European countries where people drink to get drunk. In Australia about 63% of the population drink at a social level.

Regular Use

Regular use refers to that style of use where people have a bit more than they ought, ie. drinking and drug use at hazardous levels. People who use at this level will often not appear to be intoxicated because they have high tolerance to the drug. They are likely to exhibit early signs of health or memory problems or, financial problems. In relation to alcohol, older adults and people in southern European countries often employ this style of drinking. An estimated 3% of the Australian population drink at a harmful level (Hall et al., 1998).

Dependence

Dependence is characterised by two main areas: a preoccupation with the drug, where people will continue with the drug related behaviour in spite of evidence that it is causing harm; and, with some drugs, neuroadaptation. Increased tolerance to the drug (higher dose is needed to get the subjective effect once achieved by a lower dose) and withdrawal on cessation of the drug are the hallmarks of neuroadaptation. An estimated 3.5% of the Australian population drink at a dependent level (Hall et al., 1998).

Problems associated with dependence can include brain damage, cirrhosis of the liver, pancreatitis, depression, suicide, phobia, and severe social dysfunction.

2.9 STAGES OF CHANGE MODEL

The process of change was first described by Prochaska and DiClemente in 1982 and was called the Stages of Change Model. Although the model was developed for the addictive behaviours, it is applicable in a wide range of therapeutic areas. As people attempt to change behaviours they move through a number of states and

stages. This model is sometimes portrayed as a cycle as in Figure 3 or as a linear version in Figure 4 or as in the latest spiral version in Figure 5.

FIGURE 3: The Stages of Change
Prochaska & DiClemente (1986)

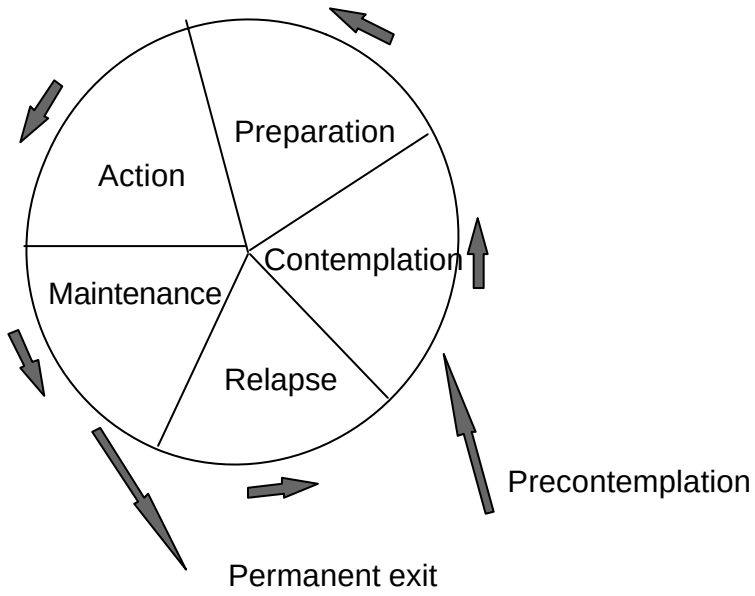


FIGURE 4: The Stages of Change
Prochaska & DiClemente (1986)

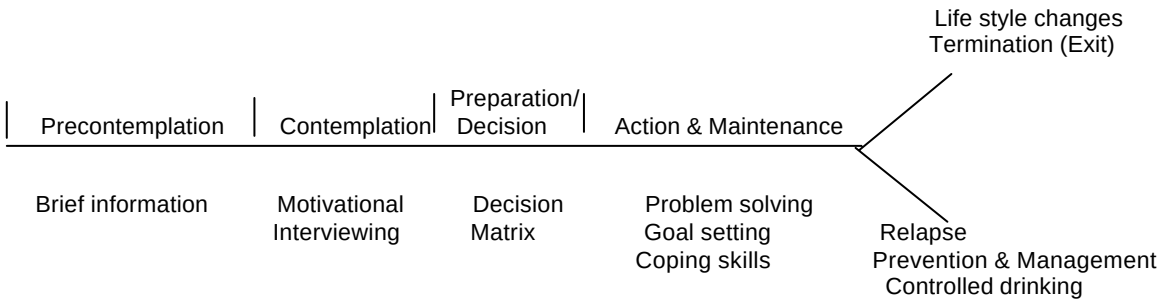
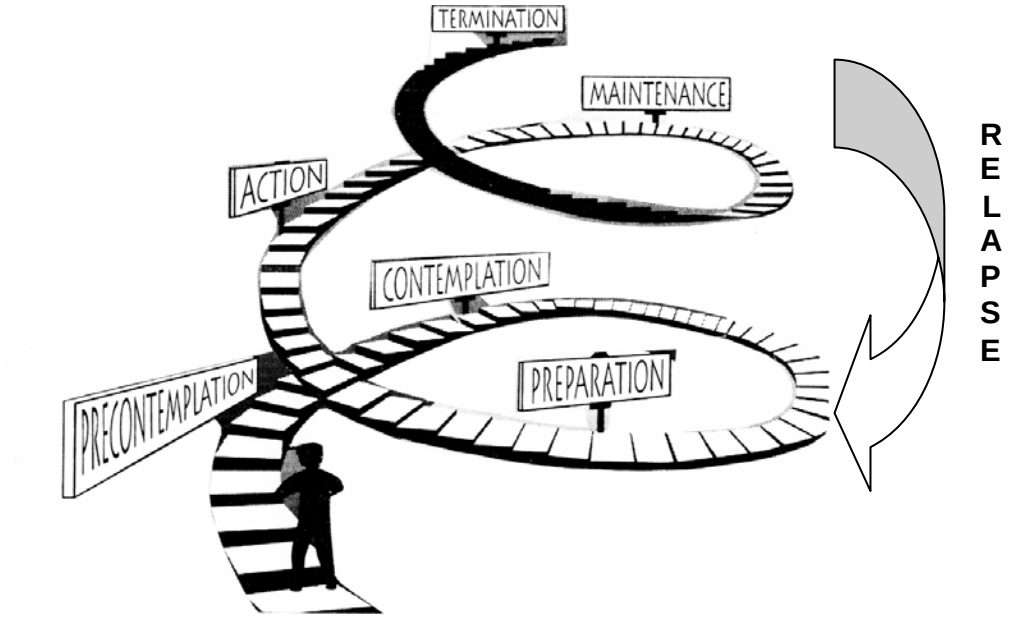


FIGURE 5: The Spiral of Change
Prochaska, Norcross & DiClemente (1994)



The model proposes that people move through the stages of Precontemplation, Contemplation, Decision/Preparation, Action, Maintenance, and frequently Relapse before they reach Termination or life style change. Most persons are probably in the Contemplation stage when they present for help, and many will be precontemplators. It is easy for health care practitioners (and families) to lose sight of this and expect the person to be ready for action and be totally committed to the change process.

It is recommended that practitioners acknowledge the person's particular stage of change regarding their drinking or drug use and tailor their advice to match the person's readiness for change (see Figure 4). This approach results in allowing the client a choice from the full menu of available interventions, from a brief motivational interview by a primary health care practitioner, to referral to specialist alcohol and drug treatment.

Critical to change is optimism about change. It is important to communicate a sense of hope and enhance a person's self-efficacy by assisting with realistic goal setting and review as they attempt to cease or modify their drinking or drug use. Persons who abandon their goals and return to harmful drinking or drug use can be reminded that relapse is common, and that those who succeed often try several times before their goal is realised (Commonwealth Department of Health and Aged Care, 2000). Unfortunately some persons never get free of their addictive behaviours and get stuck in particular stages of change (Prochaska and DiClemente, 1986).

3 DETOXIFICATION

3.1 OVERVIEW OF DETOXIFICATION

Detoxification is the process by which an alcohol or drug dependent person ceases the use of a psychoactive substance in a supervised manner such that withdrawal symptoms and the attendant risks are minimised. Detoxification does not just mean recovery from an episode of intoxication, for which the terms "recovery" or "sobering-up" are appropriate. Detoxification implies that the person has become neuroadapted by repeated exposure to alcohol or a drug and needs treatment to prevent or minimise withdrawal symptoms while the neuroadaptive changes gradually reverse. Many people who present to general practitioners or the Alcohol, Tobacco and Other Drug (ATOD) Services for detoxification do not exhibit any signs or a recent history of intoxication. The tolerance that is consequent on neruroadaptation means that the intoxicating effects of alcohol or the drug are, typically blunted. Some persons may present when already in a withdrawal state, others without signs of intoxication or withdrawal.

Detoxification takes from 24-48 hours to 2-3 weeks, depending on the predominant substance used and the severity of dependence. It may be undertaken at home, on an ambulatory care (outpatient) basis, in a community residential detoxification unit, in a hospital ward or in a specialist detoxification unit. The severity of dependence and the person's medical condition determine the appropriate setting. This manual addresses the context of community or outpatient detoxification.

Detoxification can sometimes be undertaken without any medication to assist the process ("non-medicated detoxification"), but it is often necessary to prescribe sedative or substitute drugs. Typically these have similar actions to the substance(s) on which dependence has developed. This form of detoxification is called "medicated detoxification".

As a stand-alone treatment, detoxification is considered by some to be of little long-term value and relapse rates after detoxification alone are high. However, detoxification improves the overall health and wellbeing of many substance dependent individuals. It is also invaluable as a gateway to more extensive services and interventions (National Campaign Against Drug Abuse, 1992). Thus, the role of any general practitioner or ATOD Service is to provide a person with alcohol and/or drug problems initial assistance with a home or an ambulatory detoxification (if suitable), or refer him/her to a community residential facility, or a hospital or a specialist detoxification unit for an inpatient detoxification if a complicated withdrawal is suspected. The ATOD Service can also provide people with on-going counselling or referral to a residential rehabilitation program if required. Detoxification may be followed by pharmacotherapy such as acamprosate or naltrexone to reduce the risk of relapse.

Although detoxification represents the first step in an abstinence-oriented management plan, non-abstinence goals may have a place. For example, people with opioid dependence may explore alternatives such as methadone or buprenorphine maintenance and for many this is an appropriate and satisfactory outcome. Some persons may seek only short-term cessation of substance use and for them harm reduction strategies will be relevant (examples include long-term prescription of multivitamins for alcohol dependent persons and advice on avoiding risky injecting practices for heroin users).

Any person whose alcohol or drug dependence is complicated by a psychiatric disorder, typically referred to as comorbidity, should have a simultaneous comprehensive mental health assessment undertaken to ensure appropriate interventions are initiated. Engagement and retention of comorbid persons is essential for optimum outcomes. Some psychiatric conditions (eg. anxiety and depression) settle without further treatment following abstinence from the substances.

3.2 ASSESSMENT FOR DETOXIFICATION

Assessment is the first step in the management of alcohol and or other drug detoxification. **The key elements in assessment comprise taking the person's alcohol and drug history, assessing the severity of dependence, undertaking a physical and mental state assessment, and making a psychosocial assessment**. The aim of detoxification assessment is to:

- establish a diagnosis of alcohol or drug dependence
- detect those at significant risk of developing a withdrawal syndrome
- determine if a person can be managed in a particular setting (in terms of their safety, medical needs and the likelihood of completion of detoxification), with particular reference to suitability for a community detoxification in this manual.

Persons will be less defensive and more receptive to inquiries about their alcohol and drug use if they are made to feel at ease with the environment and the interviewer. The right atmosphere can be created by:

- maintaining a non-judgmental, non-confrontational approach
- presenting yourself in a friendly and courteous manner
- maintaining a commitment and integrity during the interview
- ensuring privacy and confidentiality.

The assessment process provides the opportunity for the health care practitioner to build rapport with the person and establish a therapeutic relationship for further interventions and treatment. The practitioner needs to explain each element of the assessment process to the person and to seek the active involvement of the person in planning treatment.

During the assessment the person's history will reveal factors predictive of the likely course of withdrawal. These include:

- level of use of alcohol and other drugs
- severity of dependence on the primary (and secondary) substance
- past experience of withdrawal
- seizures, delirium or psychosis resulting from withdrawal
- concomitant use of other substances
- fears and expectations about withdrawal and its treatment.

CURRENT AND PAST PHYSICAL HEALTH

Key issues in physical assessment and examination include:

- Signs of intoxication or physical withdrawal (see Tables 2 to 5 for details of intoxication versus withdrawal for each of the individual drug classes).

- Intravenous drug use may be identified by fresh needle marks, needle tracks, fresh bruising at injection sites or evidence of cellulitis, phlebitis or abscesses.

- Current Hepatitis B or C and HIV status (if unknown, testing to determine their status should be offered where a history of sharing needles exists; if pathology testing is to be done, pre- and post-test counselling should be undertaken).

- Determine current medication the person is taking for concurrent illness.

- Assessment in a medical setting should include a full physical examination, while in a non-medical setting should record and evaluate the following observations: temperature, pulse, respiration and blood pressure, and level of consciousness.

CURRENT AND PAST MENTAL HEALTH

It is important to include a brief mental state examination (MSE) as part of the overall assessment as many psychoactive drugs affect mood, cognition, perception and orientation. The assessment interview also provides a good opportunity for observation of the person's mental state and to determine the person's capacity for informed consent and active participation in treatment planning, and to identify concomitant conditions that require treatment. The domains explored by a MSE include (MacKinnon & Yudofsky, 1991):

- Consciousness (alertness and wakefulness)
- Orientation – to time, place and person
- Appearance, attitude, and behaviour during the interview

- Thought processes and content (eg. delusions, obsessions, ideas of reference)
- Suicidal ideation and risk of harm to self and others
- Perceptions (eg. hallucinations, feelings of depersonalisation)
- Mood, affect, and emotional regulation (is the mood stable or is the person anxious, depressed, elated or the mood labile?)
- Memory – ability to recall remote and recent experiences
- Impulse control and frustration tolerance
- Intelligence and language comprehension (eg. understanding of verbal instructions)
- Judgment (are the person's responses rational, and do his/her ideas make sense?)
- Insight (does the person understand his/her own condition, situation, and reason for being in hospital?)

Any of these features that raise concern for the person and the interviewer may require further assessment and referral to a mental health service. This is particularly important if the person presents with suicidal ideation or psychosis in the context of their alcohol or drug dependence. The presence of mental health symptoms that may negatively impact on the course of a community detoxification may preclude the person from detoxification in the community and alert the assessing clinician to the need for referral to an inpatient setting.

SUICIDAL BEHAVIOUR

All suicidal behaviour, from threats to attempts, must be taken seriously and assessed immediately to determine the type of intervention needed. Special attention must be given to:

- previous attempts and their seriousness
- whether the attempt was intended or accidental
- the relation of previous suicidal behaviour to psychiatric symptoms
- previous intervention strategies
- current psychiatric symptoms.

All suicidal behaviour should provoke the following questions (Assessment and treatment of persons with co-existing mental illness and alcohol and other drug abuse, 2000):

- How specific is the plan?

- What method will be used?
- When will it happen?
- How available are materials (drugs, weapons, ropes)?

A mental health professional or general practitioner should be contacted promptly if the client presents with suicidal behaviour.

PSYCHOSOCIAL ASSESSMENT

Psychosocial assessment is intended to identify the person's preferences and capacity for treatment, and the likely success of treatment. The person's choice and views will help in developing an agreed treatment plan. Active client participation in decision-making improves compliance with treatment and increases the chances of successful detoxification (NSW Health Department, 1999).

Information from the assessment is used to make decisions about the appropriate setting for detoxification and the most effective treatment plan to support a person through detoxification. The criteria and settings for detoxification are discussed in Section **3.3**.

3.3 THE SETTINGS FOR DETOXIFICATION

The protocols presented in this manual are principally concerned with procedures for detoxification and the management of withdrawal states in the community. As mentioned above, detoxification can be provided in a variety of settings, which range from low supervision to intensive supervision and vary in their capacity to provide sedation regimes, medical treatment and supportive care. Thus, the choice of setting is influenced by the assessment of the severity of the person's alcohol or drug dependence and the likely course of the person's withdrawal syndrome, as well as person's needs and likely outcomes. Detoxification settings are classified as (1) home, (2) ambulatory, (3) community residential and (4) hospital or specialist detoxification facility.

HOME

Home detoxification is undertaken in the person's home under the supervision of a health professional and with the support of a carer. Where medication is to be prescribed, the person's general practitioner is usually involved, sometimes medical staff from the local Alcohol, Tobacco and Other Drug (ATOD) Service provides the medical supervision. It is preferable for a daily visit to be made by a registered nurse to monitor the process. This setting is suitable when an uncomplicated detoxification is anticipated, and where no more than moderate levels of sedation are planned. Home detoxification can offer a limited amount of

medical care, pharmacotherapy and some supportive care. Where sedative drugs are used, these are dispensed on a daily basis. If there is no reduction in the withdrawal symptoms, arrangements need to be made for the person to be admitted to a hospital or a specialist detoxification facility for an inpatient detoxification.

AMBULATORY

Ambulatory detoxification is undertaken on an outpatient basis, typically through the local ATOD Service, or through a local hospital or general practice. The main difference between ambulatory and home detoxification is that the person needs to be sufficiently mobile and self-caring to be able to attend the clinic or hospital on a daily (sometimes second-daily) basis. An ambulatory detoxification setting can offer a limited amount of sedative medication, medical care and some supportive care. If there is no reduction in the withdrawal symptoms, arrangements need to be made for the person to be admitted to the hospital or a specialist detoxification facility for an inpatient detoxification.

Assessing Suitability for Home / Ambulatory Detoxification

- ✓ not severely dependent
- ✓ no previous complicated withdrawal
- ✓ no concomitant illness, injury or recent surgery that could aggravate withdrawal
- ✓ no significant use of other psychotropic drugs
- ✓ the person is motivated to achieve abstinence
- ✓ a reliable carer is available
- ✓ the person has a stable home environment

COMMUNITY RESIDENTIAL SETTING

Detoxification is undertaken in a residential facility, which is not part of a hospital. Staffing in these facilities varies and may include health or personal care workers (who do not have a tertiary qualification in a health discipline) or nursing staff, or a combination of these. Typically there is no resident medical staff but a general practitioner may be on call for the unit. This setting is suitable for persons who are likely to have only moderate withdrawal symptoms and to require minimal medical intervention during treatment. This setting can offer a high level of supportive care.

Assessing Suitability for Community Residential Setting Detoxification

- ✓ unlikely to have severe withdrawal symptoms
- ✓ likely to require only minimal medical intervention
- ✓ the person has no stable home environment or is homeless
- ✓ has no access to a carer or supervision

GENERAL AND PSYCHIATRIC HOSPITALS

Detoxification which, properly, is an elective procedure, and withdrawal syndrome management (which is incidental) is often undertaken in a general or psychiatric hospital. Typically, patients have been admitted for treatment of a surgical, medical or psychiatric condition and are known or are discovered to have concurrent alcohol or other drug dependence. Advice on the management of these patients may be available from the hospital's alcohol and drug service. If not, the general ward staff would need to manage the withdrawal process. Early detection of withdrawal syndromes and prevention of the risks associated with withdrawal are very important as withdrawals may retard recovery from the presenting disorder and increase the expected length of stay in hospital.

Inpatient admission specifically for detoxification is indicated for those individuals who request detoxification and whose dependence or current symptomatology are so severe or social circumstances so unfavourable that alternative settings for detoxification are unsuitable. Explicit criteria for inpatient admission are provided for the four main drug classes in this document. Persons in this category should preferably be admitted to a specialist detoxification unit. However, where one is not available, detoxification can be carried out safely in a medical ward unless there are psychiatric complications necessitating admission to the psychiatric unit. This setting can provide a high level of medical care, a range of medicated detoxification schedules and a varying degree of supportive care.

Assessing Suitability for Elective Inpatient Detoxification

- ✓ moderate to severe dependence
- ✓ previous complicated withdrawal
- ✓ person may have signs of withdrawal as judged clinically and/or supported by a rating scale , (eg. AWS > 3 or CIWA-Ar > 10)
- ✓ concomitant illness, injury or recent surgery
- ✓ significant use of other psychotropic drugs
- ✓ may have had repeated unsuccessful attempts to detoxify at home

SPECIALIST DETOXIFICATION UNIT

Withdrawal is undertaken in a specialised alcohol and drug detoxification unit and is supervised by trained alcohol and drug medical and nursing staff. This setting is suitable for persons who are likely to experience moderate to severe withdrawal symptoms or whose withdrawals may be complicated by intercurrent physical or psychiatric problems. This setting can provide a high level of medical and supportive care, a range of medicated detoxification schedules and pharmaco-therapy.

Assessing Suitability for Inpatient Specialist Unit Detoxification

- ✓ moderately to severely dependent
- ✓ previous complicated withdrawal
- ✓ person may have signs of withdrawal as judged clinically and/or supported by a rating scale (eg. AWS > 3 or CIWA-Ar > 10)
- ✓ intercurrent physical or psychiatric illness
- ✓ significant use of other psychotropic drugs
- ✓ alcohol or drug use in pregnancy or in mothers with babies who have no supportive environment
- ✓ no reliable carer is available
- ✓ has no stable home environment or is homeless
- ✓ may have had repeated unsuccessful attempts to detoxify at home

PERSONS WHO ARE NOT SUITABLE FOR DETOXIFICATION

Pregnant opiate-using women should not usually be offered detoxification because of the foetal distress that detoxification produces and the likelihood of spontaneous abortion. Instead, admission for stabilisation on methadone is the preferred management.

Other persons presenting for detoxification are sometimes best advised to accept alternative treatments. For example, many opiate dependent persons including those with chronic pain problems may not complete the withdrawal or find it difficult to achieve abstinence after detoxification. Relapse is very common. These persons often achieve greater stability on a methadone maintenance or buprenorphine program.

3.4 PRINCIPLES OF CLINICAL MANAGEMENT OF WITHDRAWAL

There are four important aspects of the clinical management of individuals undergoing detoxification. They are summarised as the **four S's:**

1. Sedation (or substitution)
2. Symptomatic relief
3. Supplements
4. Supportive environment

Whether the person presents for elective detoxification or is already in a withdrawal state, the principle of pharmacological management is the same. It is to

combat acute withdrawal symptoms without over sedating the person. The essential principle is that the dose of sedation is titrated against the severity of the person's withdrawal syndrome. **Drugs should not be given to people who are still intoxicated, and there are few indications for prophylactic sedation**. Only in exceptional circumstances should sedatives be continued after two weeks because of the high risk of dependence developing (Saunders, 1995).

SEDATION (OR SUBSTITUTION)

Sedation is prescribed to treat the central nervous system (CNS) hyperactivity of withdrawal, which is consequent on neuroadaptation to alcohol and an array of CNS depressant drugs. Substances that are CNS depressants have a withdrawal syndrome characterised by tremor, anxiety, and autonomic hyperactivity, including hypertension and gut symptoms such as nausea and diarrhoea.

Diazepam is the usual drug prescribed for sedation. It shows cross-tolerance with alcohol, other benzodiazepines, and to some extent other sedative-hypnotics and the opiates. Thus, controlled sedation (in effect, a controlled intoxication) with diazepam can substitute effectively for an uncontrolled intoxication with alcohol and/or benzodiazepines, and is helpful in other types of withdrawal syndromes. Appropriate sedation can prevent, abort or alleviate withdrawal to a large extent.

Clonidine is prescribed for hospitalised patients undergoing opioid withdrawal. It too shows some degree of cross-tolerance with opioids, and although not a classical sedative, relieves many of the features of the withdrawal syndrome. *Great care should be used when prescribing clonidine to individuals in an outpatient setting however, due to the possibility of postural hypotension*.

Substitute drugs are now prescribed in many cases of opioid withdrawal. These drugs are opioids themselves; examples are buprenorphine and methadone.

SYMPTOMATIC RELIEF

In addition to sedation, symptomatic relief is necessary for many withdrawal syndromes, particularly when gut symptoms are prominent. The symptoms often reflect CNS hyperactivity, but as they are many and varied, no single form of treatment will cover all eventualities. They should be treated on an as required basis, according to the particular symptom complex.

- Metoclopramide is prescribed orally or IM at a dose of 10mg every 8 hours as required for nausea and/or vomiting.
- An antacid (eg. Mylanta or Gastrogel) 15-20ml orally is given every 6 hours as required for heartburn or indigestion.
- Propantheline 15mg is given every 8 hours as required for abdominal cramps (common in the middle phase of opioid withdrawal).

- Kaolin mixture 15-20ml orally is given every 6 hours as required for diarrhoea (opiate derivatives such as Lomotil are not recommended for persons detoxifying from opioids).
- Quinine sulphate 300mg orally is given twice daily as required for muscle cramps (common in opioid withdrawal). **CAUTION** - excess quinine sulphate is toxic to the heart.
- Paracetamol 1g orally is given every 4-6 hours as required for headaches and other minor pains. More severe aches and pains can be treated with non-steroidal anti-inflammatory drugs (NSAIDS) such as ibuprofen 400mg orally every 8 hours as required provided there is no history of ulcers, gastritis or asthma. A cox-2 inhibitor such as celecoxib is an appropriate alternative where there is a contra-indication for non-specific NSAIDS.

SUPPLEMENTS

Supplements are necessary in a high proportion of individuals undergoing alcohol detoxification, and in a somewhat lower proportion of those undergoing detoxification from other substances. By supplements we mean nutrients, vitamins, and electrolytes. People with alcohol and drug problems are frequently malnourished, especially those with severe dependencies. They also commonly have vitamin deficiencies, and sub-normal electrolyte levels.

Certain vitamin deficiencies are so common and the effects of the deficiency syndrome so severe that supplementation is provided as a routine, ie. before results of laboratory tests are available. An example is vitamin B_1 (Thiamine). This should be given in particular before any carbohydrate (eg. as food or as dextrose solution) is given, to avoid potentiating a Wernicke's encephalopathy. A multivitamin preparation is given to cover possible deficiencies in other B group vitamins and vitamin C. In people with severe alcohol dependence, potassium supplements are given pending receipt of plasma electrolyte results from the laboratory. However, if a severe withdrawal is anticipated, these people should be supervised in a medical setting as stated.

Otherwise, supplements are prescribed on an as required basis. Persons who are dehydrated (salt and water depleted) will require oral fluids, and possibly IV fluids (again, in a hospital setting). Other deficiency states regularly seen are magnesium deficiency, folate deficiency, and less commonly zinc deficiency, and deficiency of the fat-soluble vitamins A, D and E.

SUPPORTIVE CARE AND ENVIRONMENT

Noisy, uncomfortable, over-stimulating and/or threatening environments aggravate withdrawal states. Correspondingly, withdrawal can be alleviated by a calm, well-lit, predictable, non-threatening environment, and by carers employing behavioural management techniques designed to soothe and allay fear.

When detoxification is undertaken on a home or outpatient basis, ideally there would be at least one non substance-using friend or relative available at all times to provide reassurance, monitor medications or any signs of withdrawal and who would facilitate a non-scheduled or additional medical review if required.

Individuals will benefit from a coordinated team approach. Care planning and case conferencing can be utilised by General Practitioners to ensure that persons are suitably supported during detoxification and all primary health practitioners involved in the person's care are informed of the plan for detoxification and how they can best assist the person during this time. Some General Practitioners have also found that involving counsellors, psychologists or social workers from the first day of detoxification has assisted patients to successfully complete the detoxification process. In General Practice, families are also involved with supporting the person through detoxification.

In adopting a coordinated team approach, trusting relationships can be fostered and early warning signs regarding problems with detoxification may be detected, and early intervention procedures implemented.

It is also important to consider a person's support network including family, friends, other professionals and even their work environment. Strengthening supportive ties will not only aid the person during the detoxification, but will assist them into the post-detoxification phase during which continued motivation for abstinence can be fostered.

Issues regarding after-care have been included throughout this manual, but it is important to consider detoxification as only **the first step** to assisting a person to maintain a drug free lifestyle.

3.5 ISSUES IN WITHDRAWAL MANAGEMENT

ROUTINE PRESCRIPTION OF ANTI-CONVULSANTS

Anti-convulsants such as phenytoin are sometimes prescribed routinely in detoxification; however there is no evidence that the frequency of seizures during detoxification is reduced when they are used prophylactically or after the first episode of convulsions. The use of a benzodiazepine with anti-convulsant properties (eg. diazepam) usually suffices.

USE OF MAJOR TRANQUILLISERS (ANTIPSYCHOTICS)

These drugs may be required in severe alcohol and/or sedative withdrawal states to control hallucinosis, severe paranoid states, and agitation not responding to benzodiazepines, but should not be prescribed routinely, and **should not be**

required by individuals previously assessed as suitable for a community or home detoxification. They may be prescribed as a supplement to diazepam (or other benzodiazepine) if deemed necessary throughout the course of withdrawal however, in this case the person will probably require admission to a medical setting to complete the withdrawal. It is important to take care with anti-psychotic medication due to their potential to lower the seizure threshold, and to cause extra-pyramidal side-effects such as dystonia.

ALTERNATIVE DRUGS FOR SEDATION

Although diazepam or another benzodiazepine is the preferred sedative for detoxification, other sedative drugs may be used as indicated. For example, chlormethiazole is acceptable, and is indicated when persons report allergy or intolerance to benzodiazepines, or when persons have to demonstrate abstinence from benzodiazepines through urine testing as a precondition for entering a rehabilitation program. However, the greater potency of chlormethiazole in suppressing the gag and cough reflexes compared with benzodiazepines argues against its routine use.

ADJUNCTS TO SEDATION

Various medications have been found to alleviate withdrawal syndromes and have been used as alternatives to diazepam and the other sedatives described above. They include beta-adrenergic blocking drugs, calcium channel blockers and anti-convulsants. Although they may to some extent substitute for sedative drugs or serve as adjuncts, in general they are not as effective in treating withdrawal syndromes, particularly symptoms of anxiety and craving. Their routine use is not recommended.

CONTINUATION OF TREATMENT FOR CO-EXISTING CONDITIONS

Medical treatment of existing conditions should generally be continued. In addition, treatment may need to be instituted for an intercurrent illness diagnosed during detoxification. The principle is that detoxification should not interrupt the person's usual or intended care. Sometimes it will be apparent that the person's usual medication is inappropriate for the condition or because the person has an alcohol or drug problem (which may not have been recognised by the prescribing doctor). In this case a general practitioner, ATOD medical officer or hospital medical staff should be asked to review the medication, make any necessary adjustments, and liaise with the person's usual medical practitioner, as necessary. Such medication could include anti-convulsants, anti-depressants, anti-psychotic drugs, anti-hypertensives, cardiac drugs, peptic ulcer treatment, antibiotics, benzodiazepines, opioids and other medication for pain relief.

3.6 SCHEME FOR IDENTIFYING DETOXIFICATION PROTOCOLS

Various sedation protocols are presented in this manual that are the recommended protocols for use in a community setting. They are grouped and labelled according to the substance for which the person is undergoing detoxification (eg. ALCOHOL 1; BENZO 1; OPIATE 2). The number signifies the intensity of sedation, and by proxy the severity of the withdrawal syndrome. In general, number 1 represents a light sedative regime and 2, a more intense one. The symbol + after the number signifies an *expanded* sedative regime, including anti-psychotic medication. Higher dependency protocols typically requiring intensive hospital care **are not** described in this manual. Refer to "*Clinical Protocols for Detoxification in Hospitals and Detoxification Facilities"* . (See reference Saunders and Yang).

4 ALCOHOL PROTOCOLS

4.1 OVERVIEW OF ALCOHOL DETOXIFICATION

Detoxification is the first step towards the treatment and rehabilitation of alcohol dependent persons. It is also desired by many alcohol dependent persons, even if they do not wish to proceed to further treatment. The objectives of treatment are prevention or relief of an alcohol withdrawal syndrome, prevention of complications and, as far as possible a smooth transition into a long-term rehabilitation program or community follow-up (Ozdemir et al., 1993).

The principle of pharmacological management is to combat acute withdrawal symptoms without over-sedating the person. Benzodiazepines, because of their cross-tolerance with alcohol, and wide margin of safety are very effective and are the drugs of choice for the treatment of the alcohol withdrawal syndrome (Ozdemir et al., 1993; Mayo-Smith, 1997). Although there is a potential for physical dependence, the rate is low if they are used in the short term, as is recommended in these protocols.

A decision tree for the management of alcohol detoxification is provided in Section **4.9**

4.2 MANAGING ALCOHOL WITHDRAWAL

Determining the appropriate management of persons with an alcohol problem involves:

- diagnosis of alcohol dependence (including severity of dependence)
- detecting those at risk of developing a withdrawal syndrome
- determining if a dependent person at risk of withdrawal can be safely managed in the community.

DIAGNOSIS OF ALCOHOL DEPENDENCE

Alcohol dependence develops over several years and comprises a range of behaviours and physiological changes associated with the consumption of alcohol. Central to dependence are the phenomena of preoccupation with drinking, impaired control over drinking, tolerance and withdrawal states (due to neuroadaptation), and continued use despite harmful effects. Alcohol dependence represents the more severe end of a spectrum of alcohol use disorders, which may range from hazardous or risky drinking, high risk or harmful drinking, to dependence. Alcohol dependence itself is not an all-or-nothing condition: it exists in various grades of severity from just perceptible to extremely severe. A

withdrawal syndrome is evidence of neuroadaptation but neuroadaptation is neither necessary nor sufficient for dependence to occur.

The criteria for dependence were presented in detail on page 2-8. In summary, a diagnosis of alcohol dependence can be made according to ICD-10 criteria if **three or more** of the following criteria are evident in a period of 12 months (WHO ICD-10, 1993):

CRITERIA FOR DEPENDENCE	**COMMENTS (**mild+, moderate++, severe+++**)**
Compulsion to use	
Impaired control over alcohol use	
Priority of drinking	
Increased tolerance	
Withdrawal symptoms	
Continued use despite harmful effects	

DETECTING THE PERSON AT RISK OF WITHDRAWAL

The main risk factors for alcohol withdrawal are:

1) *the severity of dependence on alcohol*
2) *history of previous withdrawal*
3) *the amount of alcohol consumed recently* (see guide below)
4) *concurrent medical disorders.*

The levels of alcohol consumption associated with withdrawal are as follows:

Males
- ✓ >8 standard drinks (ie. 80g alcohol daily) for 10 – 20 years OR recent excessive intake of 16 standard drinks or more (160g alcohol or >)

Females
- ✓ >6 standard drinks (ie. 60g alcohol daily) for 5-10 years, or recent intake of 12 standard drinks or more (120g alcohol or >)

Adolescents
- ✓ lower levels of alcohol consumption than adults may result in alcohol withdrawal in youth, though a withdrawal state is uncommon in this age group

Elderly
- ✓ as little as two standard drinks daily. Elderly people have less lean body mass and body water than do younger people. They are also more susceptible to alcohol withdrawal and to confusion and disorientation that may result from withdrawal.

Note: The greater the amount of alcohol consumed and the longer the duration, the greater the likelihood of a complicated withdrawal.
The NHMRC Australian Drinking Guidelines (NHMRC, 2001) for classifying risk levels of alcohol use according to standard drinks consumed are detailed below. Note that these consumption levels denote the risk of acute and chronic physical and other complications, not the risk of dependence or withdrawal.

Scale of risk[1]		Low	Moderate risk	High risk
Daily	Male	< 4	5 - 6	> 6
	Female	< 2	3 - 4	> 4
Weekly	Male	< 28	29 - 42	> 42
	Female	< 14	15 - 28	> 28

[1] Standard Drinks NB: Other individual, drug and environmental factors may increase a person's alcohol-related risk.

ASSESSMENT FOR SUITABILITY FOR HOME / AMBULATORY DETOXIFICATION

Once a person has been found to be dependent on alcohol and at risk of withdrawal, then suitability for home or ambulatory detoxification must be determined.

The first task is to determine the potential severity of the anticipated withdrawal. In some cases a person will be exhibiting signs of withdrawal at the time of presentation. In others the person may be too intoxicated for an appraisal to be made. In these situations, and also when there is significant confusion, cognitive impairment or psychosis, the detailed assessment must be deferred, and the initial appraisal confined to clinical signs of intoxication, withdrawal, confusion or psychosis, and concurrent medical disease. Otherwise, relevant and appropriate client instruction, assessment, evaluation and documentation must be completed prior to commencing detoxification. The main areas to concentrate upon are:

- average daily intake (using the "top high" technique by prompting with a higher figure may encourage a more accurate response)
- frequency of alcohol intake
- duration of use or recent binge
- behavioural features of dependence (compulsion to drink, impaired control, priority of drinking in person's life, continued use despite harmful effects)
- physiological features of dependence (increased tolerance, morning drinking)

→ Severity of dependence

- history of withdrawals
- history of seizures
- history of delirium tremens (DTs)
- type and frequency of other drug use

→ Severity of anticipated withdrawal

- time and amount of last drink

→ Expected onset of withdrawal

- concomitant use of other substances
- comorbid physical illness
- comorbid psychiatric illness
- suicidal ideation

→ Suitability for home or

- home environment / carer ambulatory detoxification

In summary, a person is suitable for home or ambulatory detoxification from alcohol if he/she meets the criteria shown in the box below (also see decision tree).

Assessing Suitability for Home / Ambulatory Detoxification

- ✓ not severely dependent
- ✓ no previous complicated withdrawal
- ✓ no concomitant illness, injury or recent surgery
- ✓ no significant use of other psychotropic drugs that could aggravate withdrawal
- ✓ the person is motivated to achieve abstinence
- ✓ a reliable carer is available*
- ✓ the person has a stable home environment*

* for home detoxification

4.3 FEATURES OF THE ALCOHOL WITHDRAWAL SYNDROME

FEATURES OF SIMPLE ALCOHOL WITHDRAWAL

The alcohol withdrawal syndrome can be divided into simple and complex withdrawal.

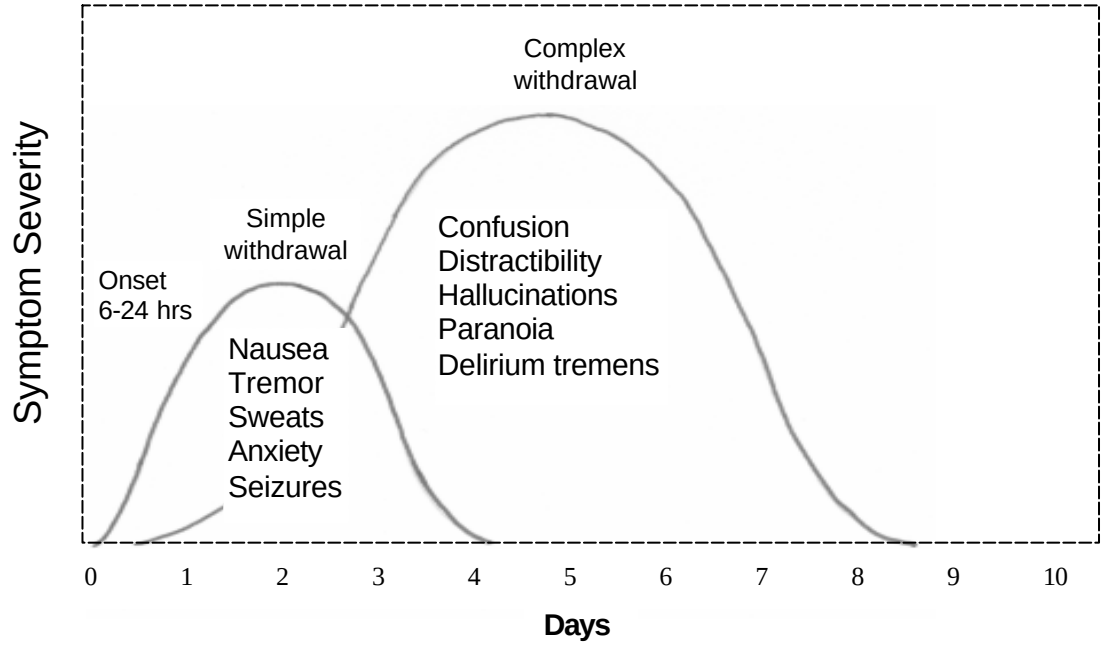
The simple alcohol withdrawal syndrome is the most easily managed by general practitioners or ATOD medical officers in a community setting. Tremulousness, anxiety and agitation are present in the simple withdrawal state. Delirium tremens (seizures, disorientation, confusion and hallucinations) occurs in complex withdrawal states. Seizures associated with an alcohol withdrawal syndrome usually, but not invariably occur in the context of other withdrawal symptoms. Other conditions should be considered particularly if seizures occur in isolation from other withdrawal symptoms. **Early recognition and correct management of the initial milder stages of withdrawal is crucial in prevention of its progression into severe and life-threatening stages** (Novak, 1989; Foy, 1997). In summary, the features of simple alcohol withdrawal include:

- ✓ tremulousness
- ✓ perspiration
- ✓ increased pulse
- ✓ increased blood pressure
- ✓ increased temperature
- ✓ altered respiratory rate
- ✓ transient hallucinations
- ✓ nausea, vomiting and diarrhoea
- ✓ restlessness, agitation
- ✓ anxiety
- ✓ insomnia, sleep disturbance
- ✓ nightmares
- ✓ fear
- ✓ depression
- ✓ headaches
- ✓ facial flushing

ONSET AND DURATION

The time-course, major features, onset and duration of alcohol withdrawal is illustrated in Figure 6 and described below.

FIGURE 6: Time-course and features of Simple and Complex Alcohol Withdrawal



(adapted from Frank & Pead, 1995)

The onset of alcohol withdrawal usually occurs between **6 to 24 hours** after the last drink. In some persons the withdrawal syndrome is short-lived and inconsequential, in others it increases in severity over the first **48-72** hours of abstinence and some persons progress to DTs. Relatively uncomplicated withdrawal usually lasts between **one to four days** and more severe cases will last from five to seven days. If DTs arises, the course of recovery is often variable and continues for three to four more days. DT's is the most serious life threatening complication of alcohol withdrawal. If other sedatives have been ingested withdrawal may be delayed.

If the general practitioner or the Alcohol, Tobacco and Other Drug (ATOD) medical officer is satisfied that the person does not require admission to a community residential facility or a hospital or a specialist detoxification unit, then the process for a home or ambulatory detoxification can be implemented.

4.4 HOME OR AMBULATORY DETOXIFICATION MONITORED BY PRIMARY HEALTH CARE STAFF

MONITORING

An initial assessment would include a full physical investigation with investigations. The person must be medically reviewed daily by the general practitioner or clinician in the surgery or by the medical officer in the ATOD Service or in the hospital (in some areas) until detoxification is completed. After hours contact should be available or a plan established in case of problems (such as attendance at A&E). While there are several withdrawal assessments available, the Alcohol Withdrawal Scale (AWS) is the most generally available scale. The AWS and the guides to using them are shown in Sections **4.8**. A suggested interpretation of the AWS score is as follows (Frank & Pead, 1995):

Severity	AWS Score
Mild	1-4
Moderate/Severe	5-14
Very Severe	15+

PROCEDURE

The person should be assessed utilising the AWS. If the person exhibits no signs of withdrawal at this stage, monitoring should continue daily for several days to ensure that withdrawal symptoms do not develop.

If the person does exhibit withdrawal symptoms according to the AWS, the Alcohol 1 (A1) Protocol can be used if supervised home detoxification is available. The diazepam dose is adjusted according to the AWS score. If no regular supervision is available, the Alcohol 2 (A2) Protocol should be implemented. The diazepam dose is dispensed daily at each review and the person is advised to take them regularly according to the A2 Protocol. The person should also be advised to ensure an adequate diet of fresh fruits and vegetables. Symptomatic relief and supplements are given according to need as per the A1 and A2 Protocols.

4.5 ALCOHOL 1 (A1) PROTOCOL

This is an “as required” diazepam regime. The scores on the Alcohol Withdrawal Scale taken second or fourth hourly determine whether diazepam is required, and at what dosage. This regime is designed for use when supervised home detoxification is available. It assumes regular monitoring of the withdrawal syndrome using an approved rating scale such as the Alcohol Withdrawal Scale (AWS). It also assumes that the domiciliary nurse has appropriate experience in the monitoring and management of alcohol withdrawal syndromes. The regime is set out in Table 7.

TABLE 7
ALCOHOL 1 (A1) PROTOCOL – DIAZEPAM "AS REQUIRED"

Sedation	
AWS SCORE	**DIAZEPAM DOSE**
0	Nil
1-4	Nil
5-9	5-10mg
10-14	10mg or switch to A3
15+	Switch to A3
Symptomatic Relief: Metoclopramide 10mg 8/24 PRN; an antacid (eg. Gastrogel 15-20ml 6/24 PRN); Kaolin mixture 15-20ml 6/24 PRN; Quinine Sulphate 300mg bd PRN; Paracetamol 1g 4-6/24 PRN **Supplements:** Thiamine (100mg tds for one week orally or 100mg daily imi for three days), Magnesium, Phosphate, Folate, Zinc, Vitamins A, D, E, C & B group **Supportive Environment:** Stable home, supportive carer, domiciliary nurse visits, education about alcohol withdrawal and sleep hygiene by domiciliary nurse/GP/ MO	

It is up to the domiciliary nurse in consultation with the medical practitioner to modify the dosage according to the person's body size, previous history of withdrawals and initial response to therapy. If the **AWS score reaches 10** or if it has increased by **4 or more** in the previous two times, the person should be switched to the Alcohol 3 (A3) protocol by the GP/MO in order to gain more rapid control of the withdrawal state. Admit to a hospital or specialist detoxification unit if possible to ensure safety, otherwise closely monitor at home by the domiciliary nurse. Typically sedation is given using the Alcohol 1 protocol for 2-5 days.

4.6 ALCOHOL 2 (A2) PROTOCOL

This is a regular diazepam regime, which is designed for home and ambulatory detoxification, hospital wards (general or psychiatric), and other inpatient settings where there are no specialised alcohol and drug service nursing staff. It is appropriate for the management of existing alcohol withdrawal syndromes of moderate severity, or where prophylactic sedation is considered necessary in someone at high risk of withdrawal, or where sedation commences when persons experience the onset of withdrawal. The regime is set out in Table 12.

Typically the Alcohol 2 protocol starts when the decision is made that the withdrawal state needs medication. This is usually when the AWS score reaches 5, or (where rating scales are not being used) when the person has persistent tremor, sweating, and anxiety. Regular dosing with diazepam is then commenced.

TABLE 8
ALCOHOL 2 (A2) PROTOCOL – REGULAR DIAZEPAM

Sedation				
	6 am	**12 md**	**6 pm**	**12 mn**
Day 1	10mg*	10mg	10mg	10mg
Day 2	10mg	10mg	10mg	10mg
Day 3	5mg	5mg	5mg	10mg
Day 4	5mg	5mg	5mg	10mg
Day 5	Nil	5mg	Nil	5mg

Symptomatic Relief: Metoclopramide 10mg 8/24 PRN; an antacid (eg. Gastrogel 15-20ml 6/24 PRN); Kaolin mixture 15-20ml 6/24 PRN; Quinine Sulphate 300mg bd PRN; Paracetamol 1g 4-6/24 PRN

Supplements: Thiamine (100mg tds for one week orally or 100mg daily imi for three days), Magnesium, Phosphate, Folate, Zinc, Vitamins A, D, E, C & B group

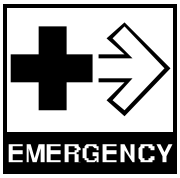
Supportive Environment: Stable home, supportive carer, education about alcohol withdrawal and sleep hygiene by GP/MO

*** NOTE:** ***An additional dose of 10mg diazepam can be given if needed mid-way between the first two regular doses.***

PROGRESS OF WITHDRAWAL

The person should feel reasonably comfortable after the first three doses of the diazepam (ie. within 12 hours). If the person responds to the regime at this point, continue with the A1 or A2 Protocol. Symptoms of withdrawal should resolve by day 3-4.

AWS scores 5-10 indicate moderate to severe withdrawal and the person should be monitored 2nd hourly. An AWS score of >10 indicates severe withdrawal and the person requires constant supervision (Frank & Pead, 1995).



If the person does not respond to the regime, feels increasingly unsettled with escalating AWS scores, or develops seizures or DT's) then admission to hospital is highly recommended and a protocol to address a more severe withdrawal should be implemented. *It may become necessary to admit the person to hospital at any point during the detoxification process.*

Alcohol 3 (A3) and Alcohol 4 (A4) protocols for managing more severe withdrawals in hospitals or specialist detoxification units are not covered in this manual. The reader is referred to the companion volume "Clinical Protocols for Detoxification in Hospitals and Detoxification Facilities".

Note: Withdrawal scales may be misleading in the treatment of complicated withdrawal. The general practitioner, domiciliary nurse, or ATOD medical and nursing staff should not rely on withdrawal scale scores alone to monitor withdrawal, but must also use clinical judgement and other observations. The withdrawal score on its own may not be enough to indicate a progression to a serious illness.

4.7 AFTER-CARE

Plans for after-care need to be considered even during the early stages of detoxification so that a treatment plan is in place to reduce the likelihood of relapse. Such plans could include referral to the local ATOD Service for a relapse prevention program, cognitive behaviour therapy, supportive counselling, pharmacotherapy, residential rehabilitation programs, or Alcoholics Anonymous. As previously stated, case conferencing or care planning are beneficial to ensure a supportive after-care network is in place for people who have undergone a detoxification process. ADIS can advise as well as provide support and counselling.

The following pharmacotherapies are available on authority from the HIC for the treatment of alcohol dependence if the patient has a goal of abstinence and is part of a "comprehensive treatment program". This is not specified but includes a combination of after care strategies.

NALTREXONE

Naltrexone (Revia) is one of two anti-craving drugs that have been shown to increase the likelihood of maintaining abstinence and reducing relapse following detoxification. (Naltrexone and Alcoholism Treatment, 1998). Naltrexone has been reported to:

- reduce craving for alcohol
- increase time to first drink or 'lapse'
- reduce volume and frequency of alcohol consumed
- improve abstinence rates as compared to controls.

Naltrexone is an opioid antagonist and therefore is not suitable if the person is being prescribed opioids (eg. for chronic pain) or is a recreational user of opiates. If a person has an impaired liver function (eg. LFT's higher than three times normal range), care must be taken when prescribing naltrexone. It is advisable to repeat LFT's at seven days then as indicated. It should be avoided during pregnancy.

At least two days of abstinence from alcohol is recommended before initiating naltrexone. Usually, 25mg is administered as an initial dose, with 50mg administered on subsequent days as a single daily dose. Compliance with naltrexone is improved with education and supervision and a carer is encouraged to become involved with the naltrexone regime and after-care arrangements. The optimum duration of treatment is unclear, however most studies recommend a minimum of three months. For many persons treatment for 12 months is appropriate.

NOTE: ***Caution*** *is advised when prescribing Naltrexone for those who are severely depressed, are polydrug users, have a history of head injury or seizures, have severe liver impairment, are pregnant, have chronic pain or cardiac disease*.

ACAMPROSATE

Acamprosate (Campral) is an anti-craving drug that has similar beneficial effects to naltrexone but acts in a very different way to this drug. Acamprosate suppresses activity of the glutamate excitatory neurotransmitter system by inhibiting NMDA receptors. Acamprosate has been shown in several controlled trials to:

- increase abstinence rates when compared to controls at 12 months
- reduce relapse into heavy drinking
- reduce overall alcohol intake.

Acamprosate is reported to have no sedative properties and unlike naltrexone, has no interaction with opiates. Its most common side effects are diarrhoea, vomiting and pruritus. As the liver does not metabolise acamprosate, liver disease is not considered a contraindication for treatment with acamprosate. The only medical contraindication is end-stage renal failure.

The recommended dose of acamprosate is two tablets three times daily (TDS) for persons weighing in excess of 60kgs. For those who weigh less than 60kgs, four tablets divided into three daily doses are recommended. The recommended duration of treatment is one year, and as is the case with naltrexone, acamprosate may be best administered in conjunction with CBT or other supportive counselling.

COGNITIVE BEHAVIOURAL THERAPY

Cognitive Behavioural Therapy (CBT) is a relatively short term focused psychological therapy that concentrates on managing thoughts and perceptions that lead to emotional disturbance (such as craving, anxiety, depression, etc). It is often described as a 'doing' therapy, rather than a 'talking' therapy, and aims to teach long-term skills for managing thoughts, behaviour and emotions. Psychologists are the professional group most often associated with the delivery of CBT, but other professionals are also engaged in CBT practice. CBT complements the alcohol pharmacotherapies described above. The Australian Association for Cognitive Behaviour Therapy (AACBT) has a list of private practitioners in CBT (aacbt@psychiatry.uq.edu.au) or contact your local community or mental health centre if you wish to refer a patient for CBT. The reader is referred to "*A Manual of Mental Health Care in General Practice*" for more information on CBT (Davies, 2000).

4.8 GUIDELINES FOR MANAGING PERSONS WHO DEFAULT DURING ALCOHOL DETOXIFICATION

On some occasions, individuals will not complete the detoxification regime. Some people will relapse and reinstate drinking at the level at which they were drinking at the beginning of the detoxification process. Others may simply slip or lapse. If the person presents to the surgery and reports drinking the following issues should be addressed:

1. Was there a precipitating factor (eg. stressful event, alcohol available) to the persons drinking?
2. What was the person expecting the alcohol to do for them? Was this achieved?
3. Was the person taking the prescribed diazepam regime correctly?
4. Were the person's withdrawal symptoms well managed or did they feel very uncomfortable and fearful of the withdrawal process?
5. Is the person motivated to maintain abstinence?

6. How much alcohol did the person consume (eg. small amount, 'lapse' and stopped, or typical quantities for the person or 'relapse')?
7. When was the person's last drink consumed?
8. What are the person's current goals?

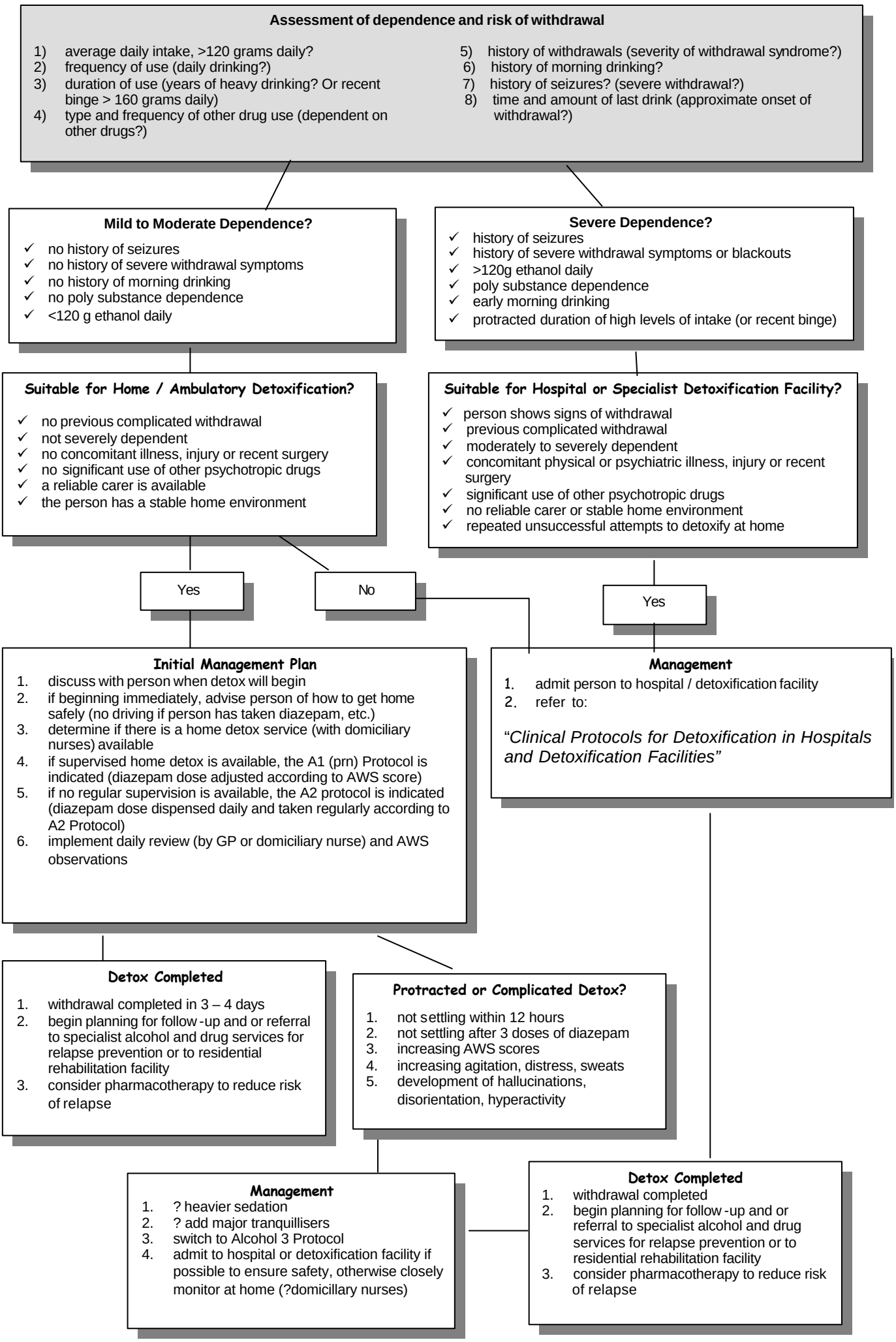
As a general rule of thumb, ambulatory detoxification can continue if:

- the person has ingested no more than approximately 5 standard drinks
- the person wants to continue with the detoxification
- the person understands why he/she 'lapsed', and is willing to put more intensive supports into place to ensure that a relapse does not occur (an intensive relapse prevention program can be useful at this point).

Some General Practitioners or Medical Officers find that the use of adjunctive alternative pharmacotherapies (eg. Acamprosate) can assist defaulting persons to recommence detoxification. However, if the person has relapsed to previous high levels of drinking or feels unable to continue home or ambulatory detoxification, then an inpatient withdrawal is recommended.

Emphasis should be placed on the opportunity for learning from a lapse or relapse and the specific circumstances should be addressed in the context of relapse prevention (the reader is referred to Marlatt & Gordon, 1985, for a detailed explanation of relapse prevention and management principles). In a general practice or community setting, family therapy is often useful.

4.9 *Decision Tree for the Management of Alcohol Detoxification*



4.10 GUIDE TO THE USE OF THE ALCOHOL WITHDRAWAL SCALE -

ITEM 1 : PERSPIRATION

0 No sweating
1 Palms moist only
2 Moist palms and localised beads of sweat, eg. on face, chest, etc.
3 Whole body moist from perspiration
4 Profuse maximal sweating, clothes, linen, etc. are wet

ITEM 2 : TREMOR

0 No tremor
1 Positional hand tremor only, eg. when reaching for something or holding something
2 Constant slight tremor of hands
3 Constant marked tremor of hands

ITEM 3 : ANXIETY

0 Calm, no anxiety
1 Uneasy
2 Apprehensive and easily startled
3 Anxious and fearful, difficult to calm
4 Uncontrollable anxiety including panic attacks

ITEM 4 : AGITATION

0 Normal activity, no agitation
1 Unsettled, fidgety
2 Restless, tossing and turning, difficult to maintain bed rest
3 Excitable, brisk and frequent movements, purposeless activity. Can be persuaded to sit or lie down for brief periods
4 Very excitable, unable to settle. Constant rapid movements

ITEM 5 : AXILLA TEMPERATURE

0 Temp of 37.0°C or less
1 Temp of 37.1°C to 37.5°C
2 Temp of 37.6°C to 38.0°C
3 Temp of 38.1°C to 38.5°C
4 Temp of above 38.5°C

ITEM 6 : HALLUCINATIONS

0 No hallucinations, lucid
1 Episodes of distortion of the existing objects in the surroundings. Aware that these are not real
2 Frank hallucinations occur though they are limited to only some objects or events and of a brief duration. Can be easily persuaded that these perceptions are imaginary. Retains a reasonable contact with reality
3 Limited, frank hallucinations as in the above point, but is resistant to reorientation to reality, difficult to persuade the perceptions are imaginary. Distressed by the hallucinations and able to maintain only a tenuous contact with reality
4 Hallucinations are generalised, there is no meaningful contact with reality. Person exists in an illusory world

ITEM 7 : ORIENTATION

0 Fully orientated
1 Orientated in person and place, but has problem with recollecting time
2 Orientated in person, patchy orientation in place and time
3 Patchy orientation in person, disoriented in place and time
4 Disoriented in person, place and time. Does not understand where he/she is, who the persons are around him/her are and what time it is

AWS TOTAL

1 – 4 = Mild withdrawal
5 – 9 = Moderate withdrawal
10–14 = Severe withdrawal
15 + = Very Severe withdrawal

Medical review required if AWS is >10

4.11

Royal Brisbane & Royal Women's Hospitals Health Service Districts

ALCOHOL AND DRUG SERVICE

ALCOHOL WITHDRAWAL SCALE

UR:……

NAME:……

ADDRESS:……

……

DOB:……/……/…….. M F

ALCOHOL WITHDRAWAL SCALE

Date & Time of last Alcohol Use: ……/……/…… ……..AM/PM	**DATE**										
	TIME										
	BAL										
Perspiration	0 No sweating 1 Moist palms only 2 Beads on face, chest 3 Whole body moist 4 Profuse, clothes wet										
Tremor	0 No tremor 1 Positional hand tremor 2 Constant slight tremor 3 Constant marked tremor										
Anxiety	0 Calm 1 Uneasy 2 Apprehensive 3 Fearful, slow to calm 4 Unable to calm / panic										
Agitation	0 Able to rest 1 Unsettled, fidgety 2 Restless, tossing, turning 3 Excitable, pacing 4 Constant movement										
Temperature	0 < 37.0C 1 37.1C -- 37.5C 2 37.6C – 38.0C 3 38.1C – 38.5C 4 > 38.5C										
Hallucinations Specify if:- V = Visual T = Tactile A = Auditory	0 No hallucinations 1 Infrequent, aware 2 Brief, persuadable 3 Frequent, distressed 4 No meaningful reality										
Orientation	0 Fully orientated 1 Unsure of time 2 Unsure time, place 3 Unsure time, place, person 4 Disorientated										
AWS Total											
Blood Pressure											
Pulse											
Temperature											
Respirations											
Conscious Level	1 Alert, obeys, oriented **2** Confused, responds to speech **3** Stuporous, responds to pain **4** Semi-comatose **5** Comatose										
Pupils + reacts -- no reaction B brisk S Sluggish	Size in mm										
	Reaction										
Medication Given											
Nurse Initials											

Scale (mm)

1 2 3 4 5 6 7 8

26/10/2001

4.12 Additional Medical Observations

Blood Alcohol Level (BAL)

1. Record the BAL, measured in grams of ethanol per 100 millilitres blood
2. Tolerance: BAL of 0.05 to 0.08 plus apparently normal behaviour = probably mild to moderate level of tolerance; BAL of 0.08 to 0.15 and apparently normal behaviour = probably moderate level of tolerance; BAL of 0.15 or above and apparently normal behaviour is diagnostic of a high level of tolerance.
3. Generally treatment begins after BAL = 0, but if significant withdrawal may begin if BAL < 0.15.

Estimate of Neuroadaptation

By using the BAL and other relevant subjective and objective data the nurse can infer the degree of neuroadaptation of the person and thus estimate what stage of the withdrawal continuum the person is likely to reach. As the persons degree of neuroadaptation increases so too does both their level of tolerance to alcohol and their risk of experiencing the alcohol withdrawal syndrome. The estimate of neuroadaptation is not charted on the AWS record but highlighted in the nurse's recorded report.

Respiration

1. Record the rate
2. People who are intoxicated or in moderate to severe withdrawal may display compromised respiration (eg. dyspnoea, hypernoea, shallow breathing or reduced rate)
3. If respiration becomes compromised:
   - ✓ administer oxygen at 40%, ie. 6 L/minute or if C.O.P.D. present 2L/minute
   - ✓ position in cardiac position
   - ✓ notify the medical officer
   - ✓ record respiratory rate ¼ hourly.

Consciousness

1 Alert, responds when spoken to, orientated and co-operative
2 Confused as to day, date and place, but responds when spoken to and obeys simple commands
3 Stuporose, no response to auditory stimuli, but responds to painful stimuli
4 Semi-comatose, no response to usual painful stimuli, responds to peripheral reflexes, ie. corneal, plantar, but gag reflex absent; incontinence of urine and faeces and some restlessness
5 Comatose, no response to external stimuli, no reflexes present, may progress to depressed respiration

Note: If consciousness level falls below 2, use Glasgow Coma Scale and notify the medical officer.

Pupils

1. Observe the size and reaction to light of the pupils
2. Record if the pupils are slow to react to light
3. Record whether or not the pupils are equal in size or not.

Blood Pressure

1. Take and record the measurement of the blood pressure in significant units, eg. 120/85 (not 118/82)
2. In most cases a rising blood pressure will broadly correlate with a rise in the rating scale
3. In some cases persons may suffer from hypertension unrelated to their withdrawal. This person group will not respond to routine withdrawal management interventions and will require further assessment and appropriate treatment.

5 BENZODIAZEPINE PROTOCOLS

5.1 OVERVIEW OF BENZODIAZEPINE DETOXIFICATION

Frank and Pead (1995) argue there are two main scenarios for benzodiazepine detoxification. The first is when a person on therapeutic or moderately supra-therapeutic doses expresses the wish to cease taking them, or during therapy commits to do so. In this situation, elective detoxification (sometimes known as "benzodiazepine weaning") can be undertaken on an ambulatory basis. Sometimes inpatient admission is needed when markedly supra-therapeutic doses have been taken (generally this would be > 50mg diazepam or equivalent), when it proves difficult for the person to cease the "final dose", or when a withdrawal syndrome supervenes.

The second scenario is when a person presents who is taking high doses, often in a chaotic way, typically obtained from the illicit market or by "doctor shopping", often mixed with other substances. In this situation inpatient admission is typically needed, and control of the withdrawal syndrome can be difficult. A consistent feature of benzodiazepine withdrawal is that its course can vary among individuals, and from day to day in the same person.

It is important to be aware at the outset however, that many persons may be too embarrassed to accurately report their current dose of benzodiazepines. It is essential that a non-judgemental, therapeutic relationship with the person be fostered from the outset as the process of benzodiazepine weaning is often lengthy and doses often need to be continually negotiated.

A decision tree for the management of benzodiazepine detoxification is provided in Section **5.9**

5.2 MANAGING BENZODIAZEPINE WITHDRAWAL

Determining the appropriate management of persons with benzodiazepine problems involves:

(1) diagnosis of benzodiazepine dependence (including severity of dependence)
(2) detecting those at risk of developing a withdrawal syndrome
(3) identifying whether a therapeutic alternative is needed
(4) determining if a dependent person at risk of withdrawal can be safely managed in a particular setting.

DIAGNOSIS OF BENZODIAZEPINE DEPENDENCE

Benzodiazepine dependence can occur in people who have been taking therapeutic or higher doses of benzodiazepines on a regular, daily basis for a period of a few weeks or more (Busto et al., 1986).

Like alcohol dependence, benzodiazepine dependence exists in various degrees of severity, from a condition that just fulfills the diagnostic criteria to an extremely severe dependence that dominates the person's life and renders them to a potentially life-threatening withdrawal syndrome.

The criteria for dependence were presented in detail on pages 2-5 to 2-6. In summary, a diagnosis of benzodiazepine dependence can be made if **three or more** of the following criteria are evident in a period of 12 months (WHO ICD-10, 1993):

CRITERIA FOR DEPENDENCE	**COMMENTS (**mild+, moderate++, severe+++**)**
Compulsion to use	
Impaired control over drug use	
Withdrawal symptoms	
Increased tolerance	
Priority of drug use	
Continued use despite harmful effects	

Some people taking long-term regular benzodiazepines do not realise that they are dependent until they stop a dose or try to cut down and experience withdrawal symptoms, such as feeling agitated, anxious, or unable to sleep. Some people with benzodiazepine dependence experiencing recurrent withdrawal lose their self-confidence and interpersonal skills. Often, they leave their job because they cannot manage, stop socialising and dread speaking on the telephone. Simple activities like doing the grocery shopping or making minor decisions become almost insurmountable tasks. Those affected often do not make the connection between the deterioration in their abilities and relationships with their long-term benzodiazepine use. They rely more than ever on their drugs to help them to cope and they will often take an extra tablet for a particularly stressful event (Ree, 1997).

Individuals who use benzodiazepines non-therapeutically and in high doses often exhibit drug-seeking behaviour. They may escalate the dose; obtain prescriptions from several doctors, ie. 'doctor shop', use several types of benzodiazepine, use these drugs intravenously (eg. temazepam) or use other classes of drugs (eg. methadone, heroin). These persons are younger, use higher daily doses and have higher lifetime exposure than the former group. About 70% of people taking over 60mg diazepam or equivalent per day are polydrug users. Their preferred benzodiazepine is one with rapid absorption and penetration through the blood-

brain barrier, such as diazepam or flunitrazepam. In assessment, consider the possibility that on withdrawal of benzodiazepines the person will substitute other drugs, or that withdrawal may be complicated by concurrent withdrawal from other drugs. Assess the person's life-style, psychosocial problems and current stability, and be prepared to postpone detoxification if these factors are unfavourable.

DETECTING THE PERSON AT RISK OF WITHDRAWAL

A person who is dependent on benzodiazepines is at risk of withdrawal when benzodiazepine use is reduced or ceases. Abrupt cessation after benzodiazepine treatment for only a few days may result in two or three days of "rebound" anxiety and insomnia. The onset time is related to the half-life of the drug (see Figure 7).

Among those taking therapeutic doses of benzodiazepines, withdrawal may have been experienced when a dose has been missed. Feeling agitated, anxious, sweaty or unable to sleep are characteristic features of benzodiazepine withdrawal. A history of such experiences clearly places a person at risk of withdrawal when benzodiazepine use is discontinued on a subsequent occasion.

In those taking supra-therapeutic doses, or when benzodiazepines have been obtained illicitly, a history of previous withdrawal symptoms and/or seizures when reducing or stopping, and the concomitant use of other substances are good predictors whether or not a person will be at risk of experiencing a benzodiazepine withdrawal syndrome. The areas to concentrate upon when assessing a person for the likelihood of benzodiazepine withdrawal are outlined on the following page.

IDENTIFYING WHETHER A THERAPEUTIC ALTERNATIVE IS NEEDED

Many long-term benzodiazepine users take their medication at therapeutic doses, having been prescribed the drug for an anxiety disorder, insomnia, agitation in the context of another psychiatric disorder or a medical disorder such as epilepsy. Thus, in assessment, consider the original therapeutic purpose for prescribing benzodiazepines: has the person been adequately treated for this condition, or will withdrawal of benzodiazepines precipitate a medical or psychological crisis?

Persons with a continuing psychiatric disorder will require a therapeutic alternative to benzodiazepines (often a psychotherapy, not a drug). The elderly and women predominate among those individuals prescribed benzodiazepines on an ongoing basis.

ASSESSING FOR THE LIKELIHOOD OF BENZODIAZEPINE WITHDRAWAL

- long duration of use
- supra-therapeutic doses
- concomitant use of other substances
- history of physical symptoms of withdrawal (headache, light sensitivity, nausea, poor appetite, tremors, sweats, anxiety or any symptoms significant to the person) on cessation or reduction in use (even missing a single dose)

5.3 ASSESSMENT TO DETERMINE THE SETTING FOR DETOXIFICATION

A great array of presenting features can be expected from persons requesting benzodiazepine detoxification. As previously mentioned, many persons are initially embarrassed about the amount of benzodiazepines that they are taking and it is common for them to underestimate their dose or frequency of use. A non-judgemental approach is essential to enable a trusting, honest, therapeutic relationship to develop between the clinician and the client.

However, once a person has been found to be dependent on benzodiazepines and at risk of withdrawal, then his/her suitability for a particular detoxification setting must be determined. The areas outlined in the following boxes will assist health care practitioners to decide which particular detoxification setting is more suitable for the person following assessment. The decision tree for the management of benzodiazepine detoxification (see Section **5.9**) also provides explicit guidelines as to where the person can be safely detoxified.

HOME/AMBULATORY

Home or ambulatory detoxification is the predominant approach to assisting a person on therapeutic doses or somewhat supra-therapeutic doses to cease use. This is done on a gradual basis over a period of weeks, sometimes months. Indeed the term “weaning” from benzodiazepines is preferred by many to “detoxification” to reflect more accurately the lengthy nature of the process.

A person who meets the criteria outlined in the box below can be offered this form of detoxification.

Assessing for Suitability for Home / Ambulatory Detoxification

- ✓ the person is not 'doctor shopping' to obtain the drug
- ✓ the person is not severely dependent
- ✓ the person is taking therapeutic (or slightly higher) doses only
- ✓ no history of seizures are reported
- ✓ no psychiatric or medical symptoms to complicate withdrawal are evident
- ✓ person has not previously failed to reduce or cease in the past
- ✓ person has a stable home environment and a carer
- ✓ person is not dependent on other substances
- ✓ person wants to detoxify and maintain abstinence

HOSPITAL/SPECIALIST DETOXIFICATION UNIT

A person who is likely to experience moderate to severe benzodiazepine withdrawal symptoms or whose withdrawals may be complicated by intercurrent medical or psychiatric problems will require an inpatient admission for detoxification. The person can be admitted to a hospital if there is no specialist detoxification unit available, or to a specialist detoxification unit, if he/she meets the criteria below.

Assessing for Suitability for Hospital or Specialist Unit Detoxification

- ✓ history of previous complicated withdrawal
- ✓ the person is moderately or severely dependent
- ✓ the person is taking non-therapeutic, high doses of benzodiazepines in a chaotic way
- ✓ significant use of other psychotropic drugs
- ✓ indication of concomitant illness, injury or surgery
- ✓ no reliable carer is available
- ✓ the person has no stable home environment or is homeless
- ✓ the person has access to, or is exposed to benzodiazepines in the home environment

5.4 FEATURES OF THE BENZODIAZEPINE WITHDRAWAL SYNDROME

COMMON FEATURES OF BENZODIAZEPINE WITHDRAWAL

There is a wide range of symptoms that can occur in people experiencing benzodiazepine withdrawal, and symptoms vary from one individual to another.

The most common of these are anxiety and insomnia. Other common symptoms are as listed below. Seizures, when they occur, are usually associated with high dose use and abrupt withdrawal (Frank & Pead, 1995).

Common symptoms include:

- anxiety and insomnia
- hypersensitivity to noise/light/touch
- perceptual disturbances
- hallucinations (visual or auditory)
- aches, pains, palpitations, numbness
- headache, diarrhoea, dizziness, constipation
- depression, suicidal thoughts
- agoraphobia, panic attacks
- feelings of unreality
- memory impairment

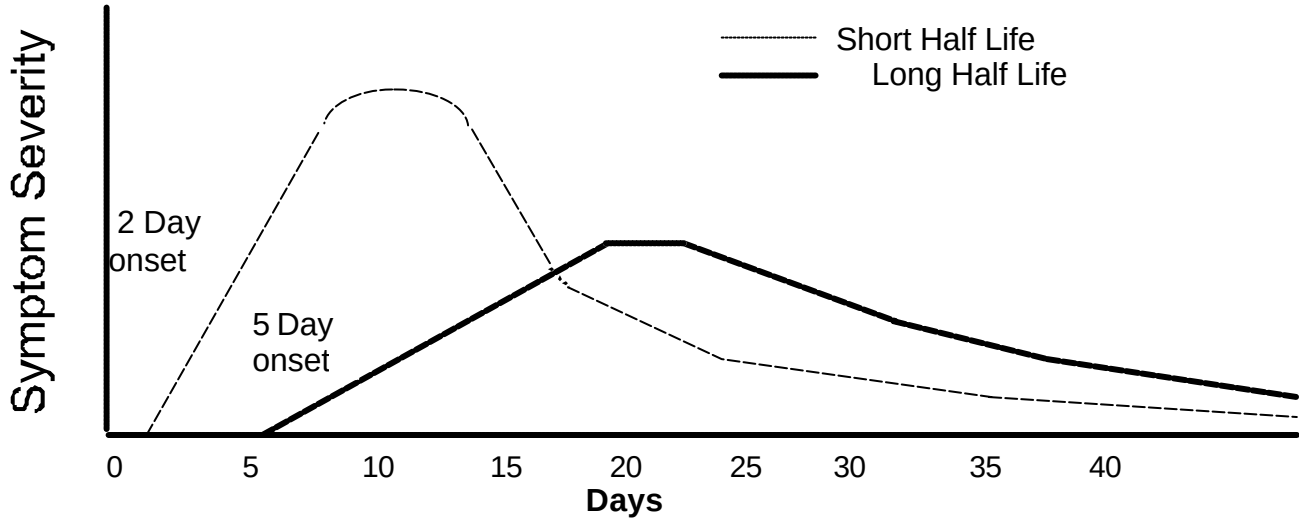
Other less common symptoms include:

- stiffness in the neck muscles
- metallic taste sensation in the mouth

ONSET AND DURATION

A description of the time-course and features of both short-acting and long-acting benzodiazepine withdrawal is described in Figure 7.

FIGURE 7: Time-course for short-acting and long-acting benzodiazepine withdrawal (adapted from Frank & Pead, 1995)



Withdrawal typically occurs **within two days after ceasing short-acting benzodiazepines**, and usually between **two and ten days after ceasing long-acting benzodiazepines**. However, the onset of benzodiazepine withdrawal may be as late as three weeks after cessation of long-acting drugs. Seizures and hallucinations at this stage are well described.

Withdrawal from short-acting benzodiazepine (eg. oxazepam, temazepam, alprazolam, lorazepam) typically produces a faster and more severe onset of symptoms than withdrawal from long-acting benzodiazepines (eg. diazepam, nitrazepam) and may be more difficult to complete. The half-lives of different benzodiazepines are detailed in Table 11. The severity of withdrawal is highly variable and is generally dependent on the elimination rate (half-life), the dose of the drug, duration of use, and the rapidity of cessation or reduction of use. Other important factors include physical illness, pre-existing anxiety or mood disorders and dependence on other psychoactive substances. A person's environment and support network will also influence perceptions of withdrawal severity.

Complicated withdrawal is characterised by an emergence of features such as seizures, delirium, psychosis, or panic, social phobia and generalised anxiety disorder (Barlow, 1988).

Protracted withdrawal is the term given to a syndrome in which persistent symptoms of benzodiazepine withdrawal at moderate severity (Higgitt et. al., 1990), occur over weeks or months. They include sleep disturbance, anxiety and irritability, which persist in spite of recognition, reassurance, education, and additional support. In

such cases the benzodiazepine regime should be maintained at a fixed dose until the person feels able to continue reduction.

TABLE 9
ABSORPTION RATES, HALF-LIFE, and EQUIVALENT DAILY DOSES of COMMON BENZODIAZEPINES

GENERIC NAME	® TRADE NAME	TIME TO PEAK CONCENTRATION	ELIMINATION HALF-LIFE**	EQUIVALENT DOSE***
Diazepam	Antenex Diazemuls Ducene Valium	30-90 min	Biphasic: rapid phase half-life 3 hours, elimination half-life 20-48 hours	5mg
Alprazolam	Kalma Ralozam Xanax	1 hour	6-25 hours	0.5 - 1mg
Clonazepam	Paxam Rivotril	2-3 hours	22-54 hours	0.5mg
Flunitrazepam	Hypnodorm Rohypnol	1-2 hours	20-30 hours	1 - 2mg
Lorazepam	Ativan	2 hours	12-16 hours	1mg
Nitrazepam	Alodorm Mogadon	2 hours	16-48 hours	2.5 - 5mg
Oxazepam	Alepam Murelax Serepax	2-3 hours	4-15 hours	15 - 30mg
Temazepam	Euhypnos Nocturne Nomapam Normison Temaze Temtabs	30-60 min after tablets, 2 hours after capsules	5-15 hours	10 - 20mg

(*adapted from the NSW Detoxification Clinical Practice Guidelines, NSW Health Department, 1999*)

* Based on manufacturer's product information
** Elimination half-life: time for the plasma drug concentration to decrease by 50%
*** Equivalent dose: dose equivalent to diazepam 5mg.

5.5 DETECTING AND MONITORING BENZODIAZEPINE WITHDRAWAL

There is a need to expect a diversity of presenting features when assessing the patient for the likelihood for withdrawal and managing the detoxification process.

As previously mentioned, many patients are initially embarrassed about the amount of benzodiazepines that they are taking and it is common for them to underestimate their dose or frequency of use. A non-judgemental approach is essential to enable a trusting, honest, therapeutic relationship to develop between the General Practitioner and the patient. It can be useful for the GP to choose a high dose as a starting point to estimate intake so the patient can feel more comfortable to accurately report their use.

Following assessment it is advisable to commence a Benzodiazepine Withdrawal Rating Scale (see Section **5.11**) if the history suggests a possibility that the person will experience benzodiazepine withdrawal. The rating scale monitors the person's vital signs and the presence of specific withdrawal symptoms. It should be commenced as soon as possible after the assessment and continues until the person is considered to be no longer at risk of withdrawal.

The general practitioner should closely supervise the patient during withdrawal and it is advisable for patients **to be seen at least weekly**, at which time a one-week supply of benzodiazepine is dispensed. Withdrawal symptoms in this phase are common and not all are due to the emergence of the withdrawal syndrome.

It must be acknowledged, however, that the value of using a rating scale for benzodiazepine withdrawal is unproven. The syndrome is highly variable from person to person, and from day to day in the same individual. Furthermore, unlike alcohol withdrawal rating scales, the scores on benzodiazepine withdrawal scales do not predict accurately the subsequent severity of the syndrome. Nonetheless, using a rating scale ensures regular observation of the person, and assessment of symptoms. As Benzodiazepine Withdrawal Rating Scales are subjective instruments, clinical judgement will be required during monitoring of withdrawal. The rating scale alone may not be enough to indicate progression of the syndrome or the presence of complications. Most symptoms can be dealt with by reassurance but it may become necessary to slow the rate of weaning. Patients should keep a daily record or diary to self-monitor the dose of sedative and also to indicate when particular symptoms arise and what psychosocial stressors they had experienced at the time. This will also facilitate the development and planning of effective supportive management.

5.6 PROCEDURE FOR AMBULATORY DETOXIFICATION

STEP-WISE BENZODIAZEPINE WITHDRAWAL

Benzodiazepine weaning is the preferred option for a home or ambulatory benzodiazepine detoxification. The person's general practitioner is usually in the best position to prescribe and oversee the weaning process. Where possible, staff from the local ATODS should provide support to the person. This regime comprises the following (Rickels et al., 1999; Saunders, 1995):

- Establish a good therapeutic relationship between the general practitioner and the person - the process of benzodiazepine weaning is often lengthy and benzodiazepine doses may need to be continually negotiated.

- Treat vigorously any clinically significant anxiety and depression with appropriate pharmacological or non-pharmacological methods such as reassurance. This is in order to decrease the levels of anxiety and depression while the person continues to receive his/her usual benzodiazepine dose. There will be limits to what can be achieved in some cases because the anxiety and depression symptoms may be a manifestation of benzodiazepine dependence.

- Prescribe a dose of diazepam equivalent to their usual regime and maintain this dose for one week. Greater than 50mg of diazepam equivalent suggests a more complicated withdrawal.

- The dose of diazepam can then be reduced by approximately **10-15% at weekly intervals** until withdrawal symptoms develop.

- If withdrawal symptoms develop smaller decrements and longer intervals between dose reductions may be necessary. Some persons may feel very uncomfortable with the reduction and often require an increase of their benzodiazepine dose until they feel 'comfortable' and reduction can be reinstated. Other persons may be unable to tolerate weekly reductions and may prefer to reduce fortnightly.

- It may be very difficult for persons to discontinue the final few milligrams. Although complete cessation is preferable, a single daily dose of 2mg diazepam is sometimes acceptable.

It is also important to establish if the complaints (such as anxiety, depression, insomnia or panic attacks) reported by the person are related to withdrawal from benzodiazepines or due to re-emergence of his/her pre-exisiting condition. In general, the complaints will disappear if treated with standard withdrawal management regimes and it is best to treat them as symptoms. Even if there is an underlying psychiatric disorder and the symptoms are not of withdrawal, the skills the person has learnt during withdrawal will usually help to alleviate them (Ree,

1997). In some cases the person may need to be reviewed by a psychiatrist and may require additional pharmacological and psychological treatment for the underlying disorder.

SUPPLEMENTS

Patients with benzodiazepine dependence have a much lower prevalence of nutritional, vitamin and electrolyte deficiency than those with alcohol dependence. However, it is sensible to prescribe a multivitamin preparation. Fluid and electrolyte abnormalities should be corrected as indicated by clinical parameters and laboratory results.

ADJUNCTIVE THERAPIES

During the withdrawal phase, adjunctive therapies such as cognitive behaviour therapy (CBT), relaxation therapy and training in stress management have proved to be moderately effective.

If depression emerges during the withdrawal phase, the patient should be closely monitored for suicidal ideation, and psychological interventions such as CBT should be implemented to address the cognitive symptoms of depression. Additionally, antidepressant therapy may be indicated at any time during the withdrawal process.

SUPPORTIVE ENVIRONMENT

As indicated in withdrawal from any substance, noisy, uncomfortable, over-stimulating and/or threatening environments aggravate withdrawal states. Correspondingly withdrawal symptoms can be alleviated by a calm, well-lit, predictable, non-threatening environment, and by the employment of behavioural management techniques designed to soothe and allay fear.

The general principles outlined earlier for managing patients detoxifying from alcohol are appropriate. In addition there is a need to pay particular attention to:

- immediate management of panic attacks, eg. using deep breathing exercises.
- management of anxiety, eg. assisting the patient to recognise anxiety and utilising relaxation techniques.
- educating the patient about what to expect, eg. talking to the patient about the withdrawal process, what might happen, and what can be done.

Benzodiazepine withdrawal has the potential to exacerbate over several days for short-acting drugs and up to six weeks for longer acting drugs. If the patient reports increasing severity or frequency of withdrawal symptoms, frequent recording of vital signs and withdrawal scale ratings would be required. The patient would benefit from admission to hospital for closer observation. The onset of seizures in the

context of benzodiazepine withdrawal can lead to status epilepticus and **immediate hospitalisation is indicated.**

AFTER-CARE

After completion of the detoxification, some persons may proceed on to a long-term residential rehabilitation program or some persons may find value in continuing the adjunctive therapies or obtaining support for relapse prevention from their District ATODS.

5.7 BENZODIAZEPINE DETOXIFICATION PROTOCOLS

In the case where a patient is taking therapeutic or moderately supra-therapeutic doses, with the drug being prescribed legitimately by a medical practitioner, the **Benzo 1 (B1**) protocol is appropriately utilised in an inpatient or outpatient setting and is included on the following pages.

For patients taking supra-therapeutic doses, often in an irregular way and mixed with other drugs, the **Benzo 2 (B2)** protocol is indicated in an inpatient setting.

For patients who present in overt benzodiazepine withdrawal, prompt control of the withdrawal syndrome is necessary, and a loading regime, **Benzo 3 (B3),** similar to that used for severe alcohol withdrawal, is indicated in an inpatient setting. The reader is referred to the companion volume *"Clinical Protocols for Detoxification in Hospitals and Detoxification Facilities". (See References)*

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5.8 BENZO 1 (B1) PROTOCOL

This regime is designed for persons undergoing elective detoxification from therapeutic or moderately supra-therapeutic doses of benzodiazepines in an out-patient setting. Persons undergoing benzodiazepine withdrawal management need to be in an environment that is quiet and calm and the carers need to assure the persons that the symptoms they are experiencing are withdrawal symptoms and will abate over a period of time. **Note** that most persons in this category can be weaned from benzodiazepines by a home or ambulatory detoxification program as previously described.

Convert the current dosage of the person's benzodiazepines to an equivalent dosage of diazepam (see Table 11). This is usually between 15 and 40mg daily. The daily dose of diazepam is then administered in four divided doses, along the lines of Table 12. Note that the starting dose will be determined by the diazepam equivalent dosage.

TABLE 10
BENZO 1 (B1) PROTOCOL- REGULAR DIAZEPAM FOR THERAPEUTIC DEPENDENCE

Sedation				
	6 am	**12 md**	**6 pm**	**12 mn**
Day 1	5-10mg	5-10mg	5-10mg	10mg
Day 2	5-10mg	5-10mg	5-10mg	10mg
Day 3	5mg	5mg	5mg	10mg
Day 4	5mg	5mg	5mg	10mg
Day 5	Nil	5mg	Nil	5mg
Day 6	Nil	5mg	Nil	5mg
Day 7	Nil	Nil	Nil	5mg

Symptomatic Relief: Metoclopramide 10mg 8/24 PRN; an antacid (eg. Gastrogel 15-20ml 6/24 PRN); Kaolin mixture 15-20ml 6/24 PRN; Quinine Sulphate 300mg bd PRN; Paracetamol 1g 4-6/24 PRN
Supplements: Thiamine, Magnesium, Phosphate, Folate, Zinc, Vitamins A, D, E, C & B group
Supportive Environment: Supportive counselling and reassurances by the carer; education about benzodiazepine withdrawal and sleep hygiene; behavioural management techniques; relaxation therapy.

After day 7 the benzodiazepines can usually be ceased and the person discharged. Ongoing monitoring and support can then be arranged. Adjustment of the reducing regime may be required if the person's withdrawal symptoms exacerbate.

CONTINUATION OF TREATMENT FOR EXISTING CONDITIONS

Medical treatment of existing conditions should generally be continued. In addition, treatment may need to be instituted for an intercurrent illness diagnosed during detoxification. The principle is that detoxification should not interrupt the person's usual or intended care. Sometimes it will be apparent that the person's usual medication is inappropriate for the condition or because the person has an alcohol or drug problem (which may not have been recognised by the prescribing doctor). Such medication could include anti-convulsants, anti-depressants, anti-psychotic drugs, anti-hypertensives, cardiac drugs, peptic ulcer treatment and antibiotics. In specific persons it could also include benzodiazepines (eg. clonazepam (rivotril) for epilepsy), opioids (eg. methadone in someone having a selective detoxification) and medication for pain relief.

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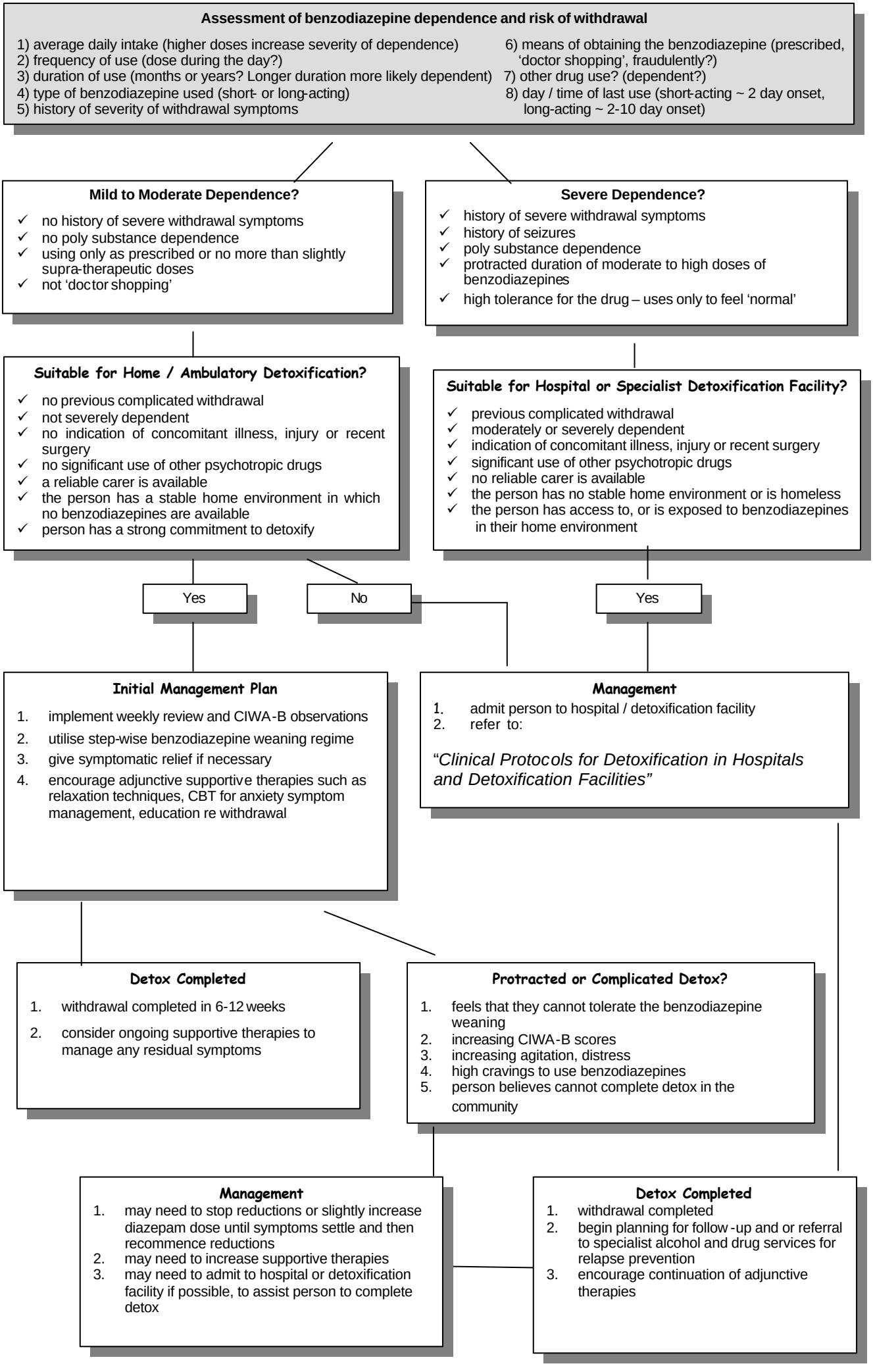
5.9 Decision Tree for the Management of Benzodiazepine Detoxification



5.10 GUIDE TO THE USE OF THE CLINICAL WITHDRAWAL ASSESSMENT SCALE FOR BENZODIAZEPINES (CIWA-B)

Person Report :

For each of the following items, circle the number that best describes how you feel.

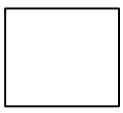
1. Do you feel irritable?	0 Not at all	1	2	3	4 Very much so
2. Do you feel fatigued?	0 Not at all	1	2	3	4 Unable to function
3. Do you feel tense?	0 Not at all	1	2	3	4 Very much so
4. Do you have difficulties concentrating?	0 Not at all	1	2	3	4 Unable to concentrate
5. Do you have any loss of appetite?	0 Not at all	1	2	3	4 No appetite, unable to eat
6. Have you any numbness or burning on your face, hands or feet?	0 No numbness	1	2	3	4 Intense burning/numbness
7. Do you feel your heart racing? (palpitations)	0 No disturbance	1	2	3	4 Constant racing
8. Does your head feel full or achy?	0 Not at all	1	2	3	4 Severe headache
9. Do you feel muscle aches or stiffness?	0 Not at all	1	2	3	4 Severe stiffness or pain
10. Do you feel anxious, nervous or jittery?	0 Not at all	1	2	3	4 Very much so
11. Do you feel upset?	0 Not at all	1	2	3	4 Very much so
12. How restful was your sleep last night?	0 Very restful	1	2	3	4 Not at all
13. Do you feel weak?	0 Not at all	1	2	3	4 Very much so
14. Do you think you didn't have enough sleep last night?	0 Very much so	1	2	3	4 Not at all
15. Do you have any visual disturbances? (sensitivity to light, blurred vision)	0 Not at all	1	2	3	4 Very sensitive to light, blurred vision
16. Are you fearful?	0 Not at all	1	2	3	4 Very much so
17. Have you been worrying about possible misfortunes lately?	0 Not at all	1	2	3	4 Very much so

Clinician Observations

18. Observe behaviour for sweating, restlessness and agitation	**19. Observe tremor**	**20. Observe feel palms**
0 None, normal activity	0 No tremor	0 No sweating visible
1	1 Not visible, can be felt in fingers	1 Barely perceptible sweating, palms moist
2 Restless	2 Visible but mild	2 Palms and forehead moist, reports armpit sweating
3	3 Moderate with arms extended	3 Beads of sweat on forehead
4 Paces back and forth, unable to sit still	4 Severe, with arms not extended	4 Severe drenching sweats

Total Score Items 1 – 20

1 – 20 = mild withdrawal
21 – 40 = moderate withdrawal
41 – 60 = severe withdrawal
61 – 80 = very severe withdrawal



Adapted from Busto, U.E., Sykora, K. & Sellers, E.M. (1989). A clinical scale to assess benzodiazepine withdrawal. *J. of Clinical Psychopharmacology*, 9 (6), 412-416.

5.11 Royal Brisbane & Royal Women's Hospitals Health Service Districts

ALCOHOL AND DRUG SERVICE

BENZODIAZEPINE WITHDRAWAL SCALE (CIWA-B)

UR:……

NAME:……

ADDRESS:……

……

DOB:……/……../…… M F

RATINGS: **0 NONE** **1 MILD** **2 MODERATE** **3 SEVERE** **4 VERY SEVERE** **RECORD YOUR SCORE FOR HOW YOU FEEL NOW**

	DATE										
	TIME										
	BAL										
Do you feel irritable?											
Do you feel fatigued (tired)?											
Do you feel tense?											
Are you having difficulties concentrating?											
Do you have loss of appetite?											
Is there numbness in your face & / or hands?											
Is your heart racing?											
Does your head feel full / achy?											
Are your muscles aching / cramping / stiff?											
Do you feel anxious?											
Do you feel upset?											
Do you feel that your sleep was not restful last night?											
Do you feel weak?											
Do you feel you did not have enough sleep last night?											
Are your eyes blurred / light sensitive?											
Are you fearful?											
Are you worrying about possible misfortunes?											

NURSE TO RECORD THIS SECTION (see reverse for physical observations)

PERSPIRATION	**0** No sweating **1** Palms moist **2** Palms & forehead moist **3** Beads of sweat on face **4** Severe drenching sweats									
TREMOR	**0** No tremor **1** Tremor can be felt in fingers **2** Visible tremor but mild **3** Moderate tremor, arms out **4** Severe, arms not extended									
RESTLESSNESS & AGITATION	**0** None, Normal activity **1** Uneasy **2** Restless **3** Excitable-Purposeless action **4** Pacing, unable to sit still									
TOTAL SCORE										

BENZODIAZEPINE WITHDRAWAL SCALE (CIWA-B)

17 / 09 / 2001

Royal Brisbane & Royal Women's Hospitals Health Service Districts

ALCOHOL AND DRUG SERVICE

BENZODIAZEPINE WITHDRAWAL SCALE (CIWA-B)

UR:……

NAME:……..

ADDRESS:……

……

DOB:……/……/…….. M F

Last Benzodiazepine use: Date:……../……../……..Time:……..AM / PM

Amount last 24 hours: Name……Dose:……

DATE										
TIME										
BLOOD PRESSURE										
PULSE										
TEMPERATURE per axilla										
RESPIRATIONS										
LEVEL OF CONSCIOUS-NESS	1 Alert,obeys,oriented 2 Confused, responds to speech 3 Stuporous, responds to pain 4 Semi-comatose 5 Comatose									
PUPILS **+** reacts -- no reaction B brisk S sluggish	SIZE (in mm)									
	REACTION									
MEDICATION **GIVEN?**										
NURSE INITIALS										

1 2 3 4 5 6 7 8 Scale in mm

17 / 09 / 2001

BENZODIAZEPINE WITHDRAWAL SCALE

6 OPIOID PROTOCOLS

6.1 OVERVIEW OF OPIOIDS

The most commonly used opioids* are heroin, codeine and methadone. Heroin is a short-acting illicit opiate#, the effects of which lasts approximately three hours. Common names for heroin include 'hammer', 'H', 'junk', 'scag', and 'smack'. It comes in a powder that can be white to brown in colour. It can be smoked/inhaled or snorted, but is most commonly injected. Except in the case of overdose, the drug itself is not physically harmful in and pure and sterile form, but tolerance and dependence can occur rapidly and street heroin is often mixed with other substances.

The lifetime prevalence rate for heroin use is about 1%, with about 0.4% of the population current users. Although the public perception is of a highly addictive drug in which any use inevitability leads to regular use, surveys have shown that a large proportion of current users are occasional, non-dependent, recreational users (Australian Institute of Health and Welfare, 1999).

Positive effects of heroin include an initial intense feeling of euphoria followed by extreme relaxation. Heroin also relieves pain, induces sleepiness and causes the pupils to constrict, hence the term 'pinned', which is used to describe intoxication. The negative effects of higher doses or prolonged intravenous use include vomiting, nausea, respiratory depression, dulled responses and poor concentration, loss of sex drive and impotence, miscarriage, constipation, anxiety attacks, depression, pulmonary oedema and overdose.

Codeine is a naturally occurring opiate obtained by refining opium. It is longer acting than heroin. It can be obtained by prescription or over-the-counter in the form of codeine-based analgesics. Other prescribed opiate analgesics are morphine and pethidine. Morphine has a half-life of two hours whilst pethidine has a half-life of 3-4 hours. Methadone, on the other hand, is a long-acting synthetic opioid with a half-life of about 15 - 40 hours and is usually prescribed in methadone clinics or by registered private prescribers as a maintenance treatment for opiate dependence.

6.2 OVERVIEW OF OPIOID DETOXIFICATION

Detoxification is appropriate for those individuals who have been heroin users for a shorter period of time. It is also appropriate for those individuals who have been

* This is a generic term applied to alkaloids from the opium poppy and their synthetic analogues.

This term refers to opioids that are derived from the opium poppy such as heroin and morphine, and excludes synthetic drugs such as pethidine.

using codeine, morphine or pethidine for pain relief, which is not of a long duration, and for which there are now no indicators for continued use. It is also an option for some individuals to cease methadone or buprenorphine after spending some time on an agonist maintenance program.

Some individuals request a supervised detoxification as a means of reducing their levels of heroin use, the severity of their dependence or some of its associated harms. It is therefore important that other options are discussed with the person as detoxification from opiates is not itself a therapy and is very difficult for most people to complete. The evidence suggests that persons who undertake detoxification from heroin with no after-care do poorly and relapse is extremely common. Alternative options to detoxification include maintenance with buprenorphine or methadone (the most effective contemporary treatment). Methadone maintenance is also the preferred option for long-term users of codeine, morphine or pethidine for chronic pain. Detoxification may be followed by treatment with naltrexone, an opioid antagonist, combined with supportive counselling.

The location in which detoxification takes place will depend on a number of factors including:

- supportive home environment
- problems associated with previous withdrawal attempts
- current medical status
- current level of use.

If the person's home environment is supportive and there is a guarantee that opiates are not available, it is possible to undertake detoxification on a home or ambulatory basis. Detoxification may proceed without the assistance of any medications. However, the process is smoother and the person is more likely to complete the detoxification if medication is given to alleviate the withdrawal symptoms.

The preferred regime for opioid detoxification is to use buprenorphine, a partial opioid agonist. This was approved for use as a detoxification agent (and also for maintenance) in 2001. Buprenorphine is a more effective detoxification agent than the previous standard regime of clonidine and diazepam. Completion of detoxification is achieved in a higher proportion of persons (Kelly, 2002). Buprenorphine detoxification also provides the person with an opportunity to consider continuation of treatment in a maintenance program.

Methadone is rarely needed as a detoxification agent. It has a limited place when buprenorphine is not available, when a person has been using high dose or long-acting forms of morphine or other synthetic opioids, in some medically ill persons where an opioid is inadvisable, or for cases where a clonidine-diazepam regime has been instituted but has been unsuccessful and buprenorphine is unavailable

or not preferred. Methadone is also indicated in pregnant opiate using women but as a maintenance drug rather than for detoxification.

Although the opioid withdrawal syndrome is rarely life threatening or associated with significant aberrations of mental state, completion of withdrawal is difficult for many people. Significant sources of difficulty for people withdrawing from opioids are fearful expectations of withdrawal, powerful cravings, poor impulse control and low frustration tolerance. The effectiveness of buprenorphine as a detoxification agent should be emphasised to reassure the person. The provision of information about the likely course of withdrawal can help to reduce the severity of the withdrawal syndrome (Frank & Pead, 1995).

One contra-indication for opiate detoxification is **pregnancy**. Opiate withdrawal is extremely stressful for the developing foetus, notwithstanding the risk of relapse, and it is strongly recommended that pregnant women dependent on **opiates do not undergo detoxification**. Instead, they should be stabilised on methadone, and continued on methadone maintenance for at least the duration of their pregnancy, and preferably beyond. If they are adamant about detoxification, then they should be admitted immediately to a hospital or a specialist detoxification facility.

Illicit and injecting drug use is associated with several major medical problems, such as hepatitis B and C, HIV and systemic infections (Frank & Pead, 1995: 81). Thus, screening for such conditions is advisable. The withdrawal period also provides a good opportunity to alert injecting drug users to the risks associated with these illnesses and to provide them with information about safer sexual or injecting behaviour. Appropriate information may include: the use of condoms; warning about the risks of needle sharing; needle and syringe cleaning techniques; and the availability of needle and syringe programs (NSP) in their area.

They should also be given information about the problems associated with reduced tolerance and the increased risk of overdose if they resume opioid use following withdrawal. Appropriate information and guidelines in the event of relapse may include: test dosing; not using by themselves; and not drinking alcohol or using other drugs at the same time.

A decision tree for the management of opioid detoxification is provided in Section **6.12**

6.3 MANAGING OPIOID WITHDRAWAL

Determining the appropriate management of persons with opioid problems involves:

(1) diagnosis of opioid dependence (including severity of dependence)
(2) detecting those at risk of developing a withdrawal syndrome
(3) determining if a dependent person at risk of withdrawal can be safely managed in a community setting

DIAGNOSIS OF OPIOID DEPENDENCE

Dependence on opiate drugs can develop rapidly. Furthermore, the proportion of people who start injecting heroin who become dependent (25-50%) is much higher than the proportion of people who use alcohol, sedative-hypnotics or psychostimulants who progress to dependence. The features of opiate dependence include very strong cravings for use (often using shared injecting equipment when no clean equipment is available), rapid development of tolerance, and progressive orientation of the person's life around using, committing crime to support their dependence, and unpleasant (although rarely life threatening) withdrawal symptoms.

The criteria for dependence were presented in detail on pages 2-5 to 2-6. In summary, a diagnosis of opioid dependence can be made if **three or more** of the following criteria are evident (WHO ICD-10, 1993)

CRITERIA FOR DEPENDENCE	**COMMENTS (**mild+, moderate++, severe+++**)**
Compulsion to use	
Impaired control over drug use	
Withdrawal symptoms	
Increased tolerance	
Priority of drug use	
Continued use despite harmful effects	

DETECTING THE PERSON AT RISK OF WITHDRAWAL

A person who is dependent on opioids is at risk of withdrawal when he/she ceases his/her drug use although the withdrawal symptoms are rarely life threatening or associated with significant aberrations of mental state. However, opioid withdrawal is unpleasant and commonly leads to resumption of drug use. Thus, on presentation it is important to fully assess the person for his/her level of opiate dependence and the likelihood of withdrawal. The areas to concentrate upon are outlined overleaf.

ASSESSING FOR THE LIKELIHOOD OF OPIOID WITHDRAWAL

- Amount of opiate used per day. (Because “street” heroin is adulterated or “cut” to a varying extent, it is impossible to gauge precisely the quantity of pure drug taken per dose. The illicit product varies between 20% and 80% of pure heroin. Probably the most workable measure of the severity of the drug habit is its cost in dollars per day. Presently one “weight” or “gram” costs $300 on average in Qld, but this varies considerably, depending on supply. High-grade heroin is about $600 per gram. Physical dependence is likely to have developed in a person spending $100 per day or more)
- The number of intravenous “shots” or "smokes" per day (Physically dependent persons usually use at least three times per day)
- The number of hours per day in which the person is intoxicated
- Duration of use
- Time and amount of the last dose
- Presence and severity of the dependence syndrome (including withdrawal)
- Experience of opiate-related physical and psychosocial complications (see Fig 8)

FIGURE 8: Complications of Opiate Use

Overdose

✓ Overdose is the most common cause of death among heroin users

Physical (*These complications are mainly related to injecting drug use*)

✓ Bacterial endocarditis
✓ Pneumonia
✓ Pulmonary abscesses
✓ Septicaemia
✓ Metastatic cutaneous or deep abscesses
✓ Fungal infections
✓ Hepatitis B
✓ Vasculitis
✓ Hepatitis C
✓ HIV/AIDS

Psychosocial

✓ Crime (especially burglary, larceny, extortion, fraud)
✓ Heroin and other drug dealing
✓ Prostitution
✓ Poor work performance
✓ Absenteeism
✓ Estrangement from family
✓ Unemployment
✓ Debt

6.4 ASSESSMENT TO DETERMINE THE SETTING FOR DETOXIFICATION

Presentations of opioid users vary considerably. Some present for elective detoxification and some injecting drug users present with physical complications such as pneumonia or endocarditis. Others present because of social complications such as detention by the police, criminal charges, homelessness or other crisis situations. There are also those who present in marked withdrawal following abrupt cessation of their heroin or methadone use.

Similar to other drug classes, once a person has been found to be dependent on opioids and at risk of withdrawal, then his/her suitability for a particular detoxification setting must be determined. The areas outlined in the boxes that follow will assist health care practitioners decide which particular detoxification setting is most appropriate for the person at hand after his/her assessment. The decision tree for the management of opioid detoxification (see Section **6.11**) also provides explicit guidelines as to where the person can be safely detoxified.

HOME/AMBULATORY

A person may be suitable for home or ambulatory detoxification if he/she meets the criteria below.

Assessing for Suitability for Home / Ambulatory Detoxification

- ✓ no previous complicated withdrawal
- ✓ not severely dependent
- ✓ no medical complications requiring close obs or treatment are evident
- ✓ no significant psychiatric complications
- ✓ no significant use of other psychotropic drugs
- ✓ has a non-opiate using carer or family member available for support
- ✓ has a drug-free and supportive home environment
- ✓ has not previously failed ambulatory detoxification
- ✓ is committed to detoxification

COMMUNITY RESIDENTIAL SETTING

A person can be referred for detoxification in a community residential setting if he/she meets the criteria below.

Assessing for Suitability for Community Residential Setting Detoxification

- ✓ unlikely to have significant withdrawal symptoms
- ✓ no medical complications requiring close observation or treatment are evident
- ✓ no significant psychiatric complications
- ✓ no reliable carer available
- ✓ has an unfavourable home environment or is homeless

HOSPITAL/SPECIALIST DETOXIFICATION UNIT

A person is likely to need admission to a hospital or a specialist detoxification facility if he/she meets the criteria outlined in the box below. Another reason for admission to a specialist detoxification unit is if the person is to undergo rapid or accelerated opiate detoxification. (These procedures are not covered in this manual).

A person requesting methadone detoxification has to be referred by his/her case manager from the methadone clinic or by his/her private prescriber. Usually the person has to reduce his/her methadone dose down to 30mg before admission to a specialist detoxification unit can be considered.

Assessing for Suitability for Hospital / Specialist Unit Detoxification

- ✓ previous complicated withdrawal
- ✓ moderately to severely dependent
- ✓ indication of concomitant illness, injury or recent surgery
- ✓ significant use of other psychotropic drugs
- ✓ no reliable carer is available
- ✓ the person has no stable home environment or is homeless
- ✓ has previously failed home/ambulatory detoxification
- ✓ the person is exposed to opioids in his/her environment
- ✓ the person has a partner who uses opiates

6.5 FEATURES OF THE OPIOID WITHDRAWAL SYNDROME

COMMON FEATURES OF OPIOID WITHDRAWAL

The pattern of symptoms is much the same for withdrawal from different types of opioids (eg. heroin, morphine, codeine, methadone) although the severity and duration of symptoms vary according to the type of opioids being used and the mode of reduction. Longer acting opioids (eg. codeine, methadone) are associated with more protracted withdrawal symptoms than short-acting opiates (eg. heroin). A sudden cessation of heroin use produces withdrawal symptoms of greater severity but shorter duration than withdrawal symptoms associated with a cessation of methadone.

The common signs and symptoms of opioid withdrawal are:

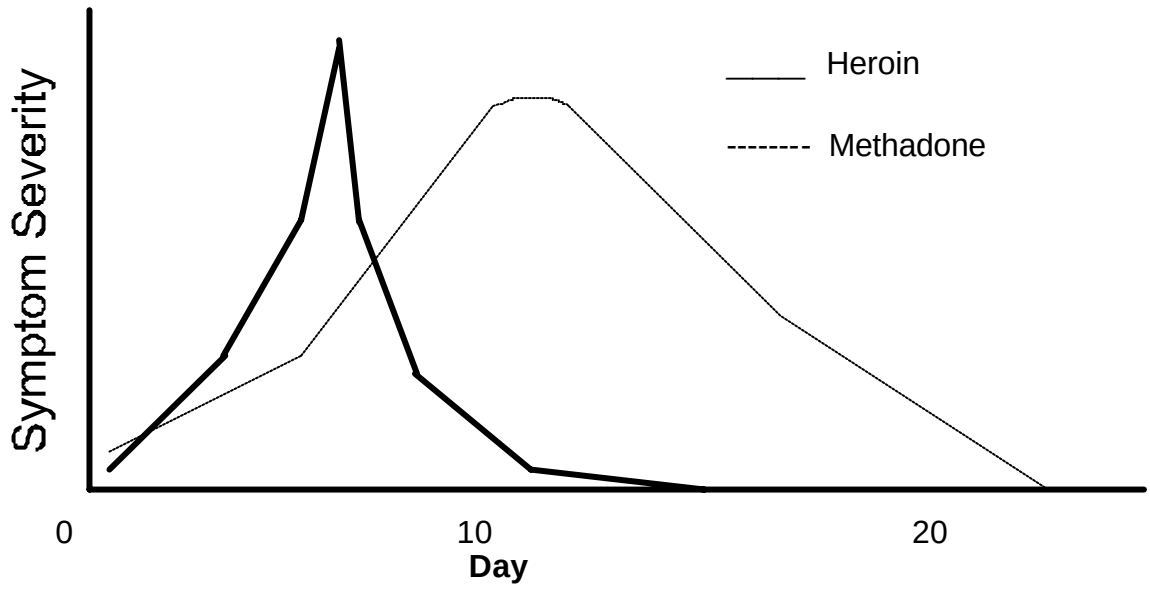
- lacrimation (running eyes)
- rhinorrhoea (running nose)
- perspiration
- mydriasis (dilated pupils)
- piloerection (gooseflesh)
- hot and cold flushes
- fatigue
- yawning
- restlessness
- insomnia
- muscle aches, leg cramps
- joint pain, particularly backache
- abdominal cramps, diarrhoea,
- nausea, vomiting, anorexia

Drug seeking behaviour becomes prominent, through requests for medication or attempts to self-medicate. The physical syndrome of opioid withdrawal resembles a severe bout of influenza.

ONSET AND DURATION

The time-course is illustrated in Figure 9 for withdrawal comparing heroin and methadone (Frank & Pead, 1995:83).

FIGURE 9: Time-course for opioid withdrawal



The onset of heroin withdrawal is between **8 and 12 hours** after the last dose with an expected duration of **5 to 7 days**.

The onset of methadone withdrawal (following methadone maintenance) is usually **24 to 48 hours** after the last dose, but it may not begin until the 3rd or 4th day. The duration of methadone withdrawal is longer, typically between **5 to 21 days,** but it may continue for up to two months.

6.6 DETECTING AND MONITORING OPIOID WITHDRAWAL

If the person's history or presentation suggests a possibility of opioid withdrawal, the person should be commenced on the Subjective Opioid Withdrawal Scale (SOWS) chart as shown in Section **6.13**. It is a 10 item checklist of symptoms with a four point scale (0 - 3) to rate the severity of the symptom. The person is asked to rate each symptom according to the severity of his/her withdrawal. This needs to be commenced as soon as possible after the assessment is obtained and continues until the withdrawal syndrome has abated.

PROCEDURE

The person should be reviewed by the general practitioner or other health worker on a daily basis. The patient should be asked to rate each withdrawal symptom according to the severity of his/her withdrawal during the preceding 24 hours (for most patients the 10 item SOWS will take less than one minute to complete). Medications can then be prescribed according to the most appropriate protocol (see page 11 in this section).

6.7 OPIOID DETOXIFICATION PROTOCOLS USING BUPRENORPHINE

The standard regime for opioid detoxification is based on the use of buprenorphine, which as stated earlier is a partial opioid agonist. However, in many cases pharmacotherapy such as this may not be necessary and there is still a place for non-drug assisted detoxification. Please note: **appropriate authorisation to prescribe buprenorphine must be obtained (via the Drugs of Dependence Unit).**

The severity of opioid withdrawal is very variable. As indicated in Section **6.4**, detoxification may be undertaken successfully in a home, ambulatory or community residential setting if the person is not expected to experience major withdrawal symptoms or have concomitant physical or psychiatric illness. It is also assumed that the person has a reliable carer or supportive home environment if a home or ambulatory detoxification is undertaken. However, if the withdrawal syndrome is expected to be severe or the person has concomitant physical or psychiatric illness, admission for a medicated detoxification is indicated.

The efficacy of buprenorphine in the management of heroin withdrawal has been compared to other withdrawal approaches in several randomised controlled trials conducted in inpatient and outpatient settings (Nigam et al., 1993; Cheskin et al 1994; O'Connor et al., 1997).

In general, these studies have demonstrated buprenorphine to be:

- more effective than symptomatic medications in reducing withdrawal symptoms
- more effective in retaining patients through the withdrawal episode and beyond into post-withdrawal treatment

Controlled trials comparing buprenorphine with other withdrawal medications for the management of heroin withdrawal **in medically-ill persons** have not been conducted. Uncontrolled studies have reported favourably on the use of buprenorphine in these circumstances. Furthermore, the sublingual preparation is well suited to individuals who cannot tolerate oral medications. Caution should be used in using buprenorphine or other opioids in individuals with certain medical conditions. The clonidine-diazepam regime may be preferred for such persons.

Contraindications to the use of buprenorphine include pregnancy, intolerance or allergy to buprenorphine or severe medical or psychiatric illness. Relative contraindications include respiratory deficiency, urethral obstruction, diabetes and poly drug use.

The aim of using buprenorphine in withdrawal is the reduction of withdrawal symptoms and cravings; it is *not* the complete removal of all symptoms or the intoxication of the person. The clinician should determine each person's expectations of the medication, and address any misconceptions.

The following principles regarding doses should be understood by the person prior to withdrawal:

- Buprenorphine doses that are too high can result in increased rebound withdrawal, prolonged duration of symptoms, increased side effects, and increased cost of the medication.
- Alternatively, use of doses that are too low can result in unnecessary withdrawal discomfort, continued heroin use and treatment drop-out.
- Continued heroin use or cravings may not be due to inadequate doses of medication. For example, persons who continue to associate with other heroin users, and are present when others are acquiring or using heroin, can expect to have cravings regardless of their dose of buprenorphine.

Buprenorphine is a partial opioid agonist. It can precipitate opioid withdrawal in someone who has recently used heroin (within the past 6 hours) or methadone (within 24 – 48 hours). Buprenorphine-precipitated withdrawal typically commences 1-4 hours after the first buprenorphine dose, is generally mild to moderate in severity, and lasts for up to 12 hours. Persons experiencing severe discomfort may benefit from symptomatic withdrawal medication (eg. clonidine 100mcg 3-4 hourly as required), and should be reviewed by the supervising medical practitioner.

Persons should not receive the first dose of buprenorphine if they are experiencing heroin effects. In practice, it is recommended that individuals wait at least 6 hours after their last use of heroin prior to receiving their first buprenorphine dose. It is preferable to withhold the first dose until the person is beginning to experience the early features of withdrawal. If there are doubts or concerns, the person should be asked to come back for dosing later in the day, or alternatively, a lower initial dose can be dispensed (eg. 2 or 4mg), as it is less likely to precipitate withdrawal than a high initial dose.

PREVENTING PRECIPITATED WITHDRAWAL ON COMMENCING BUPRENORPHINE

Buprenorphine can precipitate opioid withdrawal in someone who has recently used heroin, methadone or other opiates. In order to prevent precipitated withdrawal on commencing buprenorphine special precautions must be taken including:

- no **heroin** use for at least **6 hours** (severe discomfort may need palliation)
- no **methadone** or other opiate use (eg. morphine, pethidine) for at least **24 hours**
- no buprenorphine administration if the person presents with obvious heroin effects; wait for withdrawal signs, or ask the person to return the next day.

It is recommended that the person be monitored daily for at least 2-3 days from the time of the last buprenorphine dose.

6.8 OPIOID 2 (02) PROTOCOL

The Opioid 2 (02) protocol is used for **home or ambulatory heroin detoxification** using buprenorphine as a substitution pharmacotherapy. Buprenorphine is long-acting, and so is well suited for home or ambulatory detoxification settings, allowing for once-a-day supervision dosing. The Opioid 2 protocol is included in this publication for reference and for use in settings where once daily dosing is necessary.

The recommended duration of treatment with buprenorphine for the management of heroin withdrawal is 4 – 8 days. This short regime ensures the treatment covers the time when heroin withdrawal symptoms are most severe (typically up to 4 or 5 days), and then is promptly discontinued thereby minimising rebound withdrawal phenomena and limiting the duration of withdrawal discomfort.

TABLE 11
OPIOID 2 (O2) PROTOCOL FOR HOME / AMBULATORY HEROIN DETOXIFICATION USING BUPRENORPHINE

Buprenorphine S/L	*Proposed regime*	*Recommended lower and upper limits*
Day 1	6mg	4 to 8mg
Day 2	8mg	4 to 12mg
Day 3	10mg	4 to 16mg
Day 4	8mg	2 to 12mg
Day 5	4mg	0 to 8mg
Day 6		0 to 4mg
Day 7		0 to 2mg
Day 8		0 to 1mg
Total dose	*36mg*	

Some flexibility is allowable in doses to accommodate a range of factors, such as amount of heroin use and psychological condition, impacting on the person's individual dosing requirements and withdrawal severity.

Review by a trained health care professional is recommended on a daily basis during the first few days of the withdrawal regime. This is important so that doses can be adjusted, if necessary, and any difficulties with the medication can be addressed. It is also needed to ensure provision of appropriate supportive care and monitoring.

Flexible dosages. Doctors may choose to prescribe a fixed daily dose (eg. Day 1: 6mg, Day 2: 8mg, Day 3: 10mg, etc) or, alternatively, prescribe a flexible regime with upper or lower limits on any particular day and instructions for the pharmacist regarding DAILY dose titration (eg. Day 1: 6mg, Day 2: 6-10mg, Day 3: 8-12mg, etc).

Take-away doses are not recommended during the initial treatment period, and are subject to jurisdictional regulations.

SYMPTOMATIC RELIEF

Buprenorphine provides general relief of withdrawal symptoms, so that other symptomatic medications for opioid withdrawal are not routinely required. An exception to this rule is when persons experience difficulty sleeping during withdrawal, and may benefit from the limited use of benzodiazepines as a hypnotic. However, benzodiazepines **should not be used routinely** from the outset of the withdrawal episode, but rather should be added, as required, following clinical review of the person. Low doses of a hypnotic (eg. temazepam 10-20mg nocté, oxazepam 15-30mg nocté or nitrazepam 5-10mg nocté) are

recommended, with DAILY dispensing from the pharmacy (or supervised by a responsible carer). Under normal circumstances, benzodiazepines should not be continued beyond several days, with non-pharmacological approaches being encouraged (sleep hygiene strategies).

When specific withdrawal symptoms arise reflecting a state of CNS hyperactivity, they should be treated on an as required basis, according to the particular symptom complex. In 5-10% of persons undergoing opioid withdrawal, one or more symptoms associated with withdrawal are particularly prominent.

Medications to treat individual symptoms may include:

- ✓ Temazepam 10-20mg, oxazepam 15-30mg or nitrazepam 10mg at night for insomnia
- ✓ Metoclopramide is prescribed orally or IM at a dose of 10mg 8/24 hours as required for nausea and/or vomiting
- ✓ Gastrogel 15-20ml orally is given 6/24 hours as required for heartburn or indigestion
- ✓ Propantheline 15mg orally is given 8/24 hours as required for abdominal cramps (common in the middle phase of opioid withdrawal)
- ✓ Kaolin mixture 15-20ml orally is given 6/24 hours as required for diarrhoea (opiate derivatives such as Lomotil are not recommended for persons detoxifying from opioids)
- ✓ Quinine sulphate 300mg orally is given twice daily as required for muscle cramps (common in opioid withdrawal). **CAUTION** - excess quinine sulphate is cardio-toxic
- ✓ Paracetamol 1g orally is given every 4-6 hours as required for headaches and other minor pains. More severe aches and pains can be treated with non-steroidal anti-inflammatory drugs (NSAIDS) such as Ibuprofen 400mg orally 8/24 hours as required provided there is no history of ulcers, gastritis or asthma. A cox-2 inhibitor such as Celecoxib is an appropriate alternative where there is a contra-indication for non-specific NSAIDS.

SUPPLEMENTS

Supplements are necessary in a proportion of persons undergoing opioid detoxification. People with opioid problems are frequently malnourished, but overt vitamin deficiencies, and sub-normal electrolyte levels are less common than in the alcohol dependent population.

A multivitamin preparation is appropriate to cover possible deficiencies in B group vitamins and vitamin C. Otherwise, supplementation is prescribed on an as required basis.

SUPPORTIVE ENVIRONMENT

Noisy, uncomfortable, over-stimulating and/or threatening environments aggravate withdrawal states. Correspondingly they can be alleviated by a calm, well-lit,

predictable, non-threatening environment, and by carers employing behavioural management techniques designed to soothe and allay fear of the withdrawal process. As previously stated, it is often difficult for an opioid dependent person to complete withdrawal so a supportive environment is critical to a successful detoxification process.

Particular emphasis should be placed on the management of cravings during withdrawal, however cravings should be reduced by buprenorphine. Strategies to assist a person to cope with cravings include:

1) distraction – cravings are time-limited and utilising distraction until the intensity of the craving has passed can be useful. Distraction can include physical activity (eg. walking and talking with a support person) or any other activity that is adequately distracting.
2) delay – the person is encouraged to delay responding to the craving until it has passed (thinking in terms of minutes or half-hours can be helpful)
3) dislike – the person is encouraged to review all of their reasons for withdrawing from opioids in the first instance. A small card on which the negative consequences of their drug use have been written is useful for this exercise. Reviewing 'less good things' about opioid use may assist the person to maintain motivation to continue with the detoxification.

The person should be reassured that each time a craving is not rewarded with drug use, the intensity decreases and becomes more manageable and self-efficacy should increase correspondingly.

CONTINUATION OF TREATMENT FOR EXISTING CONDITIONS

The person's usual medical treatment of existing conditions should be continued. In addition, treatment may need to be instituted for an intercurrent illness diagnosed during detoxification. The principle is that detoxification should not interrupt the person's usual or intended care. Sometimes it will be apparent that the person's usual medication is inappropriate for the condition or because the person has an alcohol or drug problem (which may not have been recognised by the prescribing doctor). Such medication could include anti-convulsants, anti-depressants, anti-psychotic drugs, anti-hypertensives, cardiac drugs, peptic ulcer treatment and antibiotics.

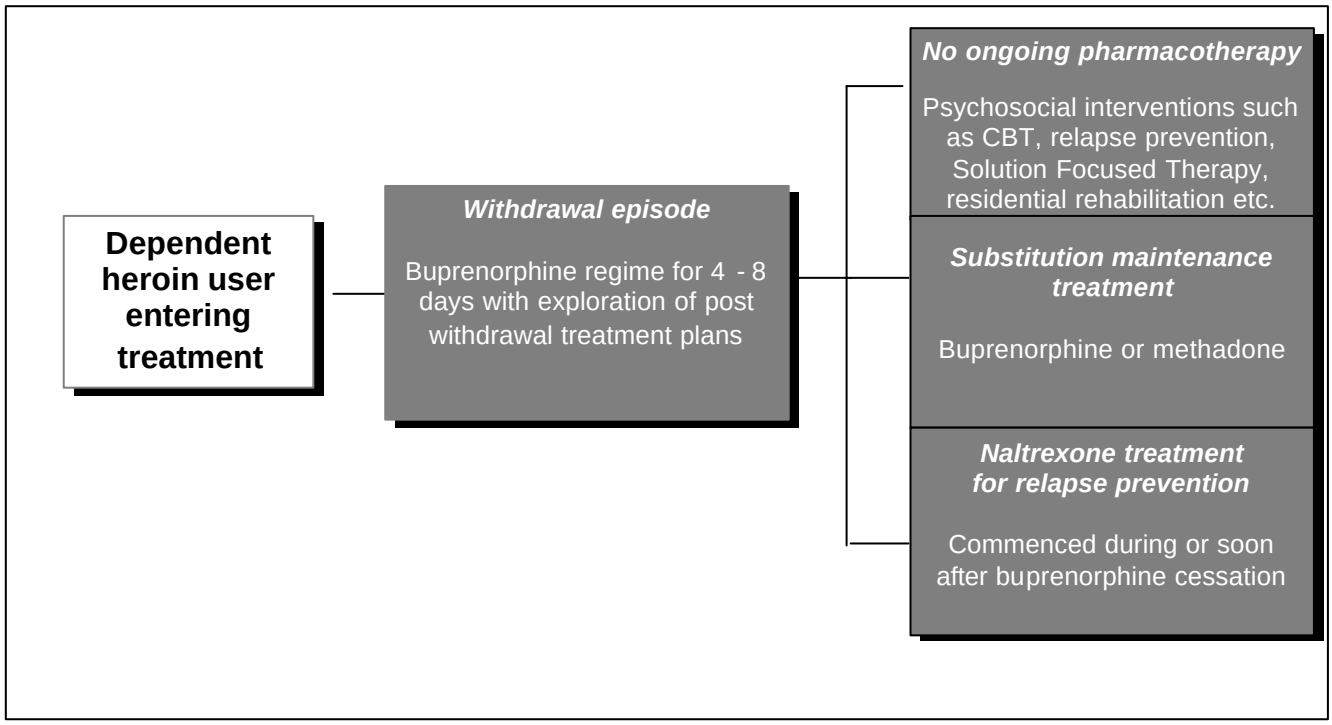
GATEWAY MODEL OF TREATMENT WITH BUPRENORPHINE

Buprenorphine is particularly useful in managing heroin withdrawal, in that it is not only effective during the withdrawal period, but also facilitates links to post-withdrawal treatment. Many persons entering withdrawal treatment do so without necessarily having considered all their treatment options, simply 'hoping' that an attempt at withdrawal will be sufficient to stop heroin use.

The use of buprenorphine for several days generally alleviates withdrawal symptoms without significant sedation, thereby allowing persons and clinicians to examine post-withdrawal issues relatively early on in the withdrawal episode. (On many other withdrawal medications, such as benzodiazepines or clonidine, people

are either so psychologically distressed or so heavily sedated that this would not be possible.) A formal review of treatment plans should be scheduled several days into the withdrawal episode, at which time treatment can be tailored accordingly. Those persons, who want to extend the duration of their withdrawal program, or have reconsidered the role of a maintenance treatment program, can continue buprenorphine treatment over a longer period of time. Care should be exercised in transferring persons with short histories of heroin dependence from short-term withdrawal programs on to long-term substitution maintenance programs. Treatment pathways are shown in Figure 10.

FIGURE 10
GATEWAY MODEL OF TREATMENT WITH BUPRENORPHINE



Longer-term maintenance substitution treatment with buprenorphine (or methadone) should be recommended to persons who:

- cannot stop, or markedly reduce, their heroin use during the withdrawal episode
- relapse into regular heroin use as the dose of buprenorphine is reduced or ceased
- do not feel confident about maintaining abstinence, but do not want to relapse to dependent heroin use and the associated harms.

It is recommended that such persons stabilise on a maintenance substitution medication for a longer period of time before coming off their maintenance treatment, to give them the opportunity to first distance themselves from heroin use and possibly to address any problematic psychological and social issues which may be distressing them.

6.9 OPIOID 6 (06) PROTOCOL

The Opioid 6 protocol employs clonidine and diazepam together with supplementary medications, where buprenorphine is unavailable or not preferred. Although this protocol can be safely administered in a community setting (Saunders, Ward & Novak: 1997), prevention of complication from simultaneous use of opiates and prescribed medication is often challenging

This regime combines the alpha 2 adrenergic agonist **clonidine** and a sedative such as **diazepam**, together with drugs as required for the relief of symptoms such as muscle and abdominal cramps, vomiting and diarrhoea.

The clonidine-diazepam regime is used less commonly now following the introduction of buprenorphine. When it is used, the introduction of the two drugs should be guided by the appearance of severity of the opioid withdrawal syndrome as indicated by the Subjective Opioid Withdrawal Scale (SOWS) scores and patient comfort. If methadone is taken on the day of admission then therapy does not commence until the following day, or the day after that. Excessive sedation and hypotension may result should opioids as well as clonidine be administered together (Novak, 1991). Thus, systematic monitoring using the SOWS chart as discussed in Section **6.6** is strongly recommended.

The core opioid detoxification regime comprises clonidine and diazepam. Clonidine relieves most of the physical symptoms of opioid withdrawal such as chills, piloerection, and shakiness, and alleviates the psychological symptoms such as anxiety and craving to some extent. It is advisable to administer a test dose of 75 micrograms of clonidine and measure blood pressure 30 minutes later (precipitous falls in blood pressure have occasionally been reported). If there is no such effect, a dose of up to 300 micrograms per day is prescribed, according to the protocols. The exact dose depends on body weight, the severity of the withdrawal syndrome and subsequent response to clonidine. Typically, 50-150 micrograms is given three times per day. Omit dose if the blood pressure (systolic/lying) is less than 80mm Hg or pulse less than 50. The dose is maintained at this level for about three days after which it is reduced in a step-wise fashion over a further 2-3 days.

Diazepam is given at a dose of up to 25 mg every day for three days, after which it is tailed off over four days. Diazepam alleviates some of the feelings of anxiety and cravings for opioids. However, some patients still require additional symptomatic relief for specific discomfort. These should be treated on an as required basis according to the particular symptom complex.

TABLE 12

OPIOID 6 (06) PROTOCOL FOR HOME/AMBULATORY HEROIN DETOXIFICATION
CLONIDINE-DIAZEPAM DOSAGE

CLONIDINE REGIME

	6am	2pm	10pm	
Day 1	Nil	Nil	Nil	
Day 2	Nil	Nil	50-75mcg*	*test dose
Day 3	50-75mcg	50-75mcg*	75-150mcg	*if tolerated
Day 4	75mcg	75mcg*	75-150mcg	*if tolerated
Day 5	Nil	Nil	75-150mcg	PRN
Day 6	Nil	Nil	75 mcg	PRN

DIAZEPAM REGIME

	6am	12md	6pm	10pm
Day 1	Nil	5mg	5mg	10mg
Day 2	5mg	5mg	5mg	10mg
Day 3	5mg	5mg	5mg	10mg
Day 4	5mg	5mg	Nil	10mg
Day 5	5mg	Nil	Nil	10mg
Day 6	Nil	Nil	Nil	5-10mg
Day 7	Nil	Nil	Nil	5mg

Symptomatic Relief: Metoclopramide 10mg 8/24 PRN; an antacid (eg Gastrogel 15-20ml 6/24 PRN); Kaolin mixture 15-20ml 6/24 PRN; Propantheline 15mg 8/24 PRN; Quinine Sulphate 300mg bd PRN; Paracetamol 1g 4-6/24 PRN; Ibuprofen 400mg 8/24 PRN

Supplements: Thiamine, Vitamins A, D, E, C & B group

Supportive Environment: Supportive counselling and reassurances by the nurse or carer; education about opiate withdrawal and sleep hygiene; behavioural management techniques; relaxation therapy

***** *Omit dose if BP (systolic/lying) < 80 mmHg or pulse < 50 min. Give half dose or no dose if indicated or requested.*

****** *Dosage given depends on the body size, the severity of dependence and the current withdrawal state.*

CONTINUATION OF TREATMENT FOR EXISTING CONDITIONS

The person's usual medical treatment of existing conditions should be continued. In addition, treatment may need to be instituted for an intercurrent illness diagnosed during detoxification. The principle is that detoxification should not

interrupt the person's usual or intended care. Sometimes it will be apparent that the person's usual medication is inappropriate for the condition or because the person has an alcohol or drug problem (which may not have been recognised by the prescribing doctor). Such medication could include anti-convulsants, anti-depressants, anti-psychotic drugs, anti-hypertensives, cardiac drugs, peptic ulcer treatment and antibiotics.

6.10 AFTER-CARE

Access to structured after-care may increase rates of completion of withdrawal. Follow-up should be planned prior to or from commencement of detoxification. An important role of detoxification services is to provide links with post-detoxification services for those with other physical problems, or psychological or social needs (Lintzeris et al., 2001). Persons should also have access to counselling from their District Alcohol, Tobacco and Other Drugs Services, relapse prevention programs, cognitive behavioural techniques, skills enhancement, residential rehabilitation programs, Narcotics Anonymous (NA), naltrexone treatment, or substitution maintenance programs with methadone or buprenorphine.

TRANSITION TO POST DETOXIFICATION TREATMENT

Buprenorphine maintenance treatment.

Transition to a buprenorphine maintenance treatment program simply requires the continuation of treatment, often with upward titration of the dose to achieve optimal maintenance dose levels (eg. 12-24mg per day).

Methadone maintenance treatment

The transition to methadone maintenance treatment requires the cessation of buprenorphine, with the first dose of methadone given at least 24 hours later. Methadone maintenance programs may be supervised by specialist clinics or private prescribers who have undertaken the methadone prescriber training and have been subsequently authorised to prescribe.

COMMENCING NALTREXONE TREATMENT AFTER DETOXIFICATION WITH BUPRENORPHINE

Naltrexone is an opioid antagonist that can support an abstinence-oriented treatment program in persons who have substantial social support. Normally a seven-day opioid-free period is required before naltrexone can be commenced. However, the pharmacological properties of buprenorphine allow the commencement of naltrexone without major delays. This is thought to be because buprenorphine has a higher affinity for opioid receptors than naltrexone, so the naltrexone does not significantly displace buprenorphine or cause the precipitation of severe opioid withdrawal.

Guidelines for the use of naltrexone in opioid dependence have been published. (See Clinical Guidelines and Procedures for the use of Naltrexone in the Management of Opioid Dependence – National Drug Strategy http://www.health.gov.au/pubhlth/publicat/document/naltrexone_cguide.pdf)

The optimal method of inducting on to naltrexone from buprenorphine treatment has not yet been established, but two general procedures have been used:

1. commencing low doses of naltrexone whilst continuing buprenorphine
2. ceasing buprenorphine and commencing naltrexone several days later.

Sample dosing regimes for the two approaches are shown in the following table.

TABLE 13
NALTREXONE INDUCTION REGIMES

Day	Sample buprenorphine regime (S/L tablets)	Early NTX induction regime (oral)	Delayed NTX induction regime (oral)
1	6mg	0	0
2	10mg	0	0
3	8mg	12.5mg	0
4	6mg	12.5mg	0
5	4mg	25mg	0
6		50mg	0
7		50mg	0
8		50mg	0 or 12.5mg
9		50mg	12.5mg
10		50mg	25mg
11		50mg	50mg

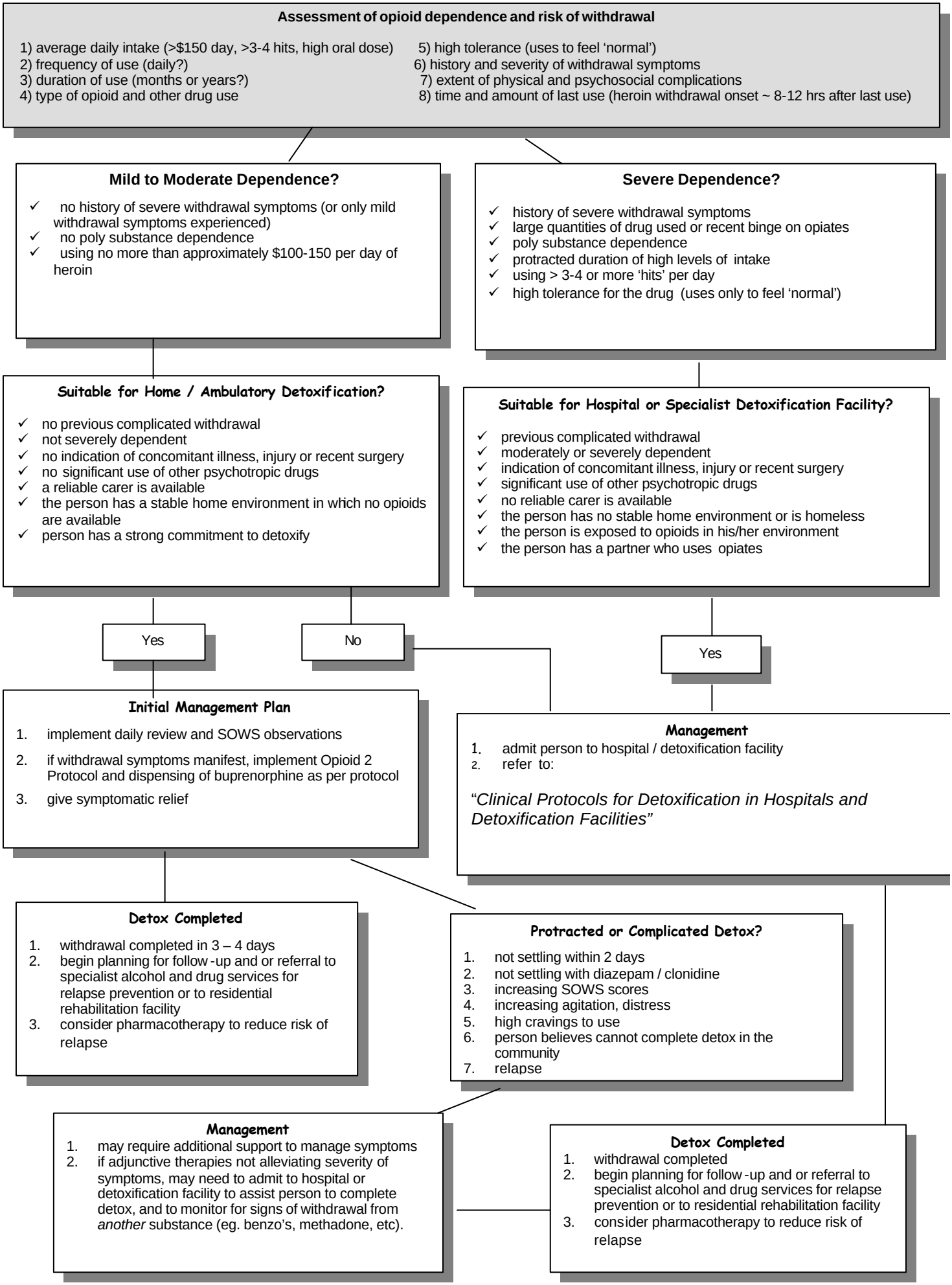
Both regimes result in an increased severity of opioid withdrawal following the first dose of naltrexone. This typically commences 90 minutes to 4 hours after the first naltrexone dose, peaks around 3-6 hours after the naltrexone dose, and generally subsides in severity within 12-24 hours. The withdrawal is frequently experienced as moderate to severe at its peak. Subsequent doses of naltrexone produce considerably less severe withdrawal discomfort.

Most persons undergoing this procedure request symptomatic medication, and clonidine (100-150mcg every 3-4 hours as required) and a benzodiazepine (eg. diazepam 5mg 3-4 hourly, maximum of 30mg in a day, as required) should be prescribed.

Note: Great care must be taken to inform the person of the dangers involved in discontinuing naltrexone treatment and subsequently using opiates, due to dramatically reduced tolerance to opiates. Overdose may occur at much smaller than usual doses of opiates.

Caution *is advised when prescribing NALTREXONE for those who are severely depressed, are polydrug users, have a history of head injury or seizures, have severe liver impairment, are pregnant, have chronic pain or cardiac disease*.

6.11 Decision Tree for the Management of Opioid Detoxification



6.12 GUIDE TO THE USE OF THE SUBJECTIVE OPIOID WITHDRAWAL SCALE (SOWS)

ADMINISTRATION OF SOWS RATING SCALE	The SOWS Scale is the person's assessment of their withdrawal symptoms, ie. a person self-evaluation. Persons are asked if they have suffered the symptoms in the last 24 hours and to rate each symptom according to severity. Each item is rated on a 4 point scale **0 = none** **2 = moderate** **1 = mild** **3 = severe** As this is a person self-evaluation the clinician's role is to assist the person to complete the task, not do it for them or interpret their symptomatology. For most persons the 10 items SOWS will take less than 1 minute to complete.

SOWS ITEM		**Symptom Domain**
1.	Feeling sick (nauseated)	nausea, vomiting
2.	Stomach cramps	abdominal cramps, diarrhoea
3.	Muscle spasms/twitching	leg cramps, restless legs
4	Feelings of coldness	hot and cold flushes, cold peripheries
5.	Heart pounding	jumping of heart in chest
6.	Muscular tension	stiff neck, shoulders, (tightness)
7.	Aches and pains	headache, painful joints, general aches, backache
8.	Yawning	not related to lethargy
9.	Runny eyes/nose	runny nose, redness/itching of eyes and nose, vision obscured from runny eyes.
10.	Insomnia, problems sleeping (complete in relation to previous night)	nightmares, early morning wakening, difficulty falling asleep, fatigue.

The symptom domains are included as a guide only and to aid clarification for the person.

Adapted from Gossop, M., 1990. The development of a short opiate withdrawal scale (SOWS). *Addictive Behaviour,* 15(5), 487-490.

A suggested interpretation of the SOWS Scores:

Severity	SOWS Scores
Mild	1 – 10
Moderate	11 – 20
Severe	21 – 30

6.13 Royal Brisbane & Royal Women's Hospital Health Service Districts

ALCOHOL AND DRUG SERVICE

SUBJECTIVE OPIOID WITHDRAWAL SCALE

UR……

NAME……

ADDRESS……

……

DOB……/……/…… M F

RATINGS: Score for how you feel now.

0 None **1 Mild** **2 Moderate** **3 Severe**

PUPIL SIZE -- Scale in mm

Date & Time of last Opiate use: ……/……/…….. am / pm	**DATE**									
	TIME									
	BAL									
Do you have nausea or are you vomiting?										
Do you have stomach cramps?										
Do you have leg cramps &/or restless legs?										
Are you having hot or cold flushes or shivering?										
Is your heart pounding?										
Do you have muscle tension?										
Do you have aches and pains?										
Are you yawning often?										
Do you have a runny nose &/or weepy eyes?										
Did you have sleeping problems last night?										
TOTAL										
B P SUPINE										
B P ERECT										
PULSE										
TEMPERATURE (per axilla)										
RESPIRATIONS										
PERSPIR-ATION 0 Nil 1 Moist skin 2 Beads on face & body 3 Profuse, whole body wet										
PUPILS + reactive -- no reaction B Brisk S Sluggish	**Size**									
	Reaction									
MEDICATION GIVEN?										
NURSE INITIALS										

SUBJECTIVE OPIOID WITHDRAWAL SCALE

17 / 09 / 2001

7 PSYCHOSTIMULANT PROTOCOLS

7.1 OVERVIEW OF PSYCHOSTIMULANTS

Amphetamines and cocaine are the most commonly used illicit psychostimulants in Australia, and use of these drugs is reported to be increasing (AIHW, 2000). Amphetamine is the prototype of the family of synthetic stimulant drugs, and there are many other analogues derived from the parent drug, including the widely used methamphetamine. Methamphetamine can be smoked, injected, used intranasally ("snorted") or ingested orally; smoking and injecting lead to a rapid onset of intense pleasurable effects. The 1998 report from the Australian National Drug Strategy (Australian Institute of Health and Welfare, 1999) reported that amphetamines were the most commonly injected drugs among those who had *ever* injected illicit drugs.

Amphetamines and cocaine, while both central nervous system stimulants, have different half-lives. Cocaine has approximately half-hour duration of action and has a half-life of one hour in the body. Methamphetamine has acute effects that last from 8-24 hours and a half-life of around 12 hours (Proudfoot & Teesson, 2000). As a consequence, regular users of cocaine dose themselves much more frequently (up to six times a day) than do amphetamine users (Pead et al., 1999).

Amphetamines act on the neurotransmitters dopamine, serotonin and noradrenaline to cause wakefulness, increased mental alertness and ability to concentrate, hyperactivity, reduced appetite and euphoria. The adverse effects of amphetamines include over stimulation with attendant restlessness, insomnia, anxiety and tremor. Physical tolerance develops rapidly. However, when the acute effects of amphetamine diminish, the person often experiences a rebound effect such as dysphoria, irritability, lethargy and general malaise. This phase becomes more pronounced in people who use amphetamines repeatedly and is termed the "crash" (Saunders, 1989). Excessive and continued use of amphetamines can also induce toxic psychosis characterised by delusions and hallucinations. It can also precipitate out-of-control rages and extremely violent behaviour (Proudfoot & Teesson, 2000).

Cocaine is a natural substance that is derived from the leaves of the South American coca plant and is most commonly seen as a white powder called cocaine hydrochloride. This powder is usually "snorted" or injected. More recently a free-base form of cocaine ("crack") has been developed which can be smoked leading to almost immediate euphoric effects. Cocaine differs from other drugs of abuse in that it tends to be used in heavy binges rather than on a more continuous basis. Cocaine abusers tend towards polysubstance misuse especially alcohol and sedatives. There is also a high prevalence of psychiatric disorders among cocaine users (Proudfoot & Teesson, 2000).

The use of cocaine is highly reinforcing and can rapidly cause dependence in frequent users. Its effects include euphoria, increased heart rate, agitation, sexual arousal, increased alertness and energy, inability to assess risks, unpredictable and aggressive behaviour, reduced appetite, increased body temperature and dilated pupils.

Regular cocaine use can cause nasal congestion (if snorted), inflammation and perforation of the septum of the nose. As with amphetamines, injecting cocaine also carries with it the risk of HIV and hepatitis infection. Smoking crack cocaine can cause chronic inflammation, soreness of the throat and lung complications. Heavy (binge) use of cocaine can also result in increased anxiety, restlessness and paranoia, which may lead to full-blown psychosis (Proudfoot & Teesson, 2000).

Toxic complications can occur following protracted use of psychostimulants or overdose and should be treated in an emergency medical setting. Complications include: cardiac arrhythmia, hypertension, chest pain, cerebral haemorrhage, cardiac ischaemia, hyperthermia, seizures, and rhabdomyolysis.

7.2 OVERVIEW OF PSYCHOSTIMULANT DETOXIFICATION

As with other abused drugs, detoxification may be a crucial step towards long-term therapy before rehabilitation can commence. The settings for psychostimulant detoxification will depend on the needs of the person and on the availability of a supportive home environment. It will also depend on any intercurrent medical or psychiatric complications, in particular the presence of psychotic symptoms.

The mainstay of treatment for psychostimulant withdrawal is **psychosocial supportive care** and ongoing counselling for relapse prevention and management. Most psychostimulant detoxification can take place on a home or ambulatory basis if the home environment is stable, a reliable carer is available and there are no psychostimulants or other psychoactive drugs available in the home. Residential detoxification in a community setting will be required where no stable home environment is available. Inpatient care is necessary where medical or psychiatric problems are acute. Thus, it is necessary to admit a person who presents with psychosis or who presents requiring more intensive monitoring because of depression and/or suicidality, and when a severe withdrawal is anticipated.

PRESENTATIONS WITH PSYCHOSIS

Many persons may initially present with an amphetamine-related psychosis (either acute or low-grade psychotic symptoms) and then upon recovery experience the various phases of the withdrawal syndrome. Typically a psychosis occurs during or at the end of a protracted period of amphetamine use or a “run” as it is sometimes known.

Signs of an impending psychotic episode include:

- increasing agitation
- insomnia
- anxiety
- fear
- suspiciousness
- paranoia
- over-valued ideas
- erratic behaviour

Persons who go on to develop a frank psychosis may experience hallucinations, delusions (particularly of a paranoid or persecutory flavour) and thought disorder. They are often extremely agitated and anxious, and are difficult to placate through reasoning alone. Due to the risk the person poses to themselves or others, if the person will not voluntarily accept mental health treatment it is often necessary to invoke the powers of the Mental Health Act to ensure that they are assessed and managed in a safe environment.

The symptoms of psychosis associated with toxicity should resolve within 7 days following abstinence. Usually, a low dose of the anti-psychotics haloperidol or risperidone, coupled with diazepam to reduce restlessness is effective in the management of an amphetamine-induced psychosis. The person should be monitored over several weeks to ensure that depressive symptoms do not occur.

AMPHETAMINE WITHDRAWAL AND DEPRESSION

Psychostimulant withdrawal is rarely life threatening in itself, however a complication of uncontrolled psychostimulant withdrawal is the high risk of the person developing severe depression with associated suicidal ideation. There is also an increased likelihood of impulsive behaviour and the emergence of psychotic symptoms. Thus, the most important aspect of management is to provide a safe and supportive environment with education regarding symptom monitoring and management, and treatment for any persistent depressed mood or psychotic symptoms.

Detoxification may proceed without the assistance of drugs. There is no evidence that tapered withdrawal is preferable to abrupt cessation (Wickes, 1992). In Australia, the proportion of people presenting for treatment with a primary amphetamine problem has doubled in recent years (Torres et al., 1996, cited in Topp & Darke, 1997) although amphetamine use is still seen most commonly as part of a polydrug problem. Treatment of cocaine users is still the major concern in the United States, but is currently relatively uncommon in treatment services in Australia, except in specific geographical areas such as inner-city Sydney.

A decision tree for the management of psychostimulant detoxification is provided in Section **7.12**

These protocols deal firstly with the management of amphetamine withdrawal and then with the management of cocaine withdrawal.

7.3 MANAGING AMPHETAMINE WITHDRAWAL

Determining the appropriate management of persons with amphetamine problems involves:

(1) diagnosis of amphetamine dependence (including severity of dependence)
(2) detecting those at risk of developing a withdrawal syndrome
(3) determining if a dependent person at risk of withdrawal can be safely managed in a community setting.

DIAGNOSIS OF AMPHETAMINE DEPENDENCE

Dependence may occur with amphetamines as readily as other drugs such as alcohol, benzodiazepines and opiates. Prolonged and habitual users often experience withdrawal symptoms following cessation of use.

The criteria for dependence were presented in detail in Section 2.4. In summary, a diagnosis of amphetamine dependence can be made if **three or more** of the following criteria are evident (WHO ICD-10, 1993):

CRITERIA FOR DEPENDENCE	**COMMENTS (**mild+, moderate++, severe+++**)**
Compulsion to use	
Impaired control over drug use	
Withdrawal symptoms	
Increased tolerance	
Priority of drug use	
Continued use despite harmful effects	

DETECTING THE PERSON AT RISK OF WITHDRAWAL

Withdrawal features, characterised by low mood and cravings, are common when a person who uses amphetamines heavily and regularly ceases his/her drug use. Continued use of amphetamines may occur to alleviate the symptoms of withdrawal. Many regular amphetamine users will also use a depressant drug like alcohol or benzodiazepines to alleviate the stimulating effects of heavy amphetamine use, to sleep and to cope with the “crash hangover” and withdrawal features.

Many people with amphetamine problems will present with health, social or mental state problems associated with or exacerbated by amphetamine intoxication, withdrawal or “crash”. These associated problems are often the major concern of the person rather than their amphetamine use per se. The person may be

unaware that these problems are even associated with amphetamine use. They may be seeking prescriptions for benzodiazepines, codeine or other opioids in an effort to self-detoxify or to deal with the features of amphetamine intoxication, "crash" or withdrawal (Pead et al., 1999).

Therefore, on presentation it is important to fully assess the person for their level of amphetamine dependence, the likelihood of their withdrawal and their associated mental health problems. The areas to concentrate upon are outlined below and in Tables 22 and 23.

ASSESSING FOR THE LIKELIHOOD OF AMPHETAMINE WITHDRAWAL

- Amount of amphetamine used per day or during a binge. Most amphetamine in Queensland is actually methamphetamine and typically is sold as 'base', a moist yellow-brown substance. The amount of amphetamines used can be measured either in dollars spent on the drug or in 'points' or grams.
- The number of intravenous "shots" per day (Physically dependent persons usually use at least 1-3grams per day in 4-12 "hits" or divided intravenous doses). This is dependent upon the strength of the amphetamines. A hit of 'base' (60-70% pure) can last for 12-24 hours.
- Duration of use.
- Time and amount of the last dose.
- Presence and severity of the dependence syndrome (including withdrawal).
- Experience of amphetamine-related physical, psychosocial and psychiatric complications (see Figure 11 and Tables 22 & 23).

FIGURE 11: Complications of Amphetamine Use

Physical	**Psychosocial**
(mainly related to injecting practices) ✓ HIV/AIDS ✓ Bacterial endocarditis ✓ Septicaemia ✓ Metastatic cutaneous or deep abscesses ✓ Heart valve, bone, joint infection, inflammation ✓ Hepatitis B & C	✓ Crime (especially burglary, larceny, extortion, fraud) ✓ Amphetamine and other drug dealing ✓ Prostitution ✓ Absenteeism ✓ Estrangement from family ✓ Unemployment

TABLE 14
MENTAL STATE PROBLEMS

'Odd thoughts' (often prompt treatment)	**Manifestation**
• **Features** ✓ Suspiciousness (paranoid), anger ✓ Delusions, jealousy ✓ Misperceptions, auditory hallucinations ✓ Magical thinking • **Insight?** ✓ Worrying about unusual thoughts	✓ Carrying, keeping weapons ✓ Checking doors, windows ✓ Hiding under bed ✓ Fear of being busted, ripped off ✓ Avoiding friends • **Transient / episodic / prolonged** • **During / beyond drug intoxication**

(adapted from Pead et al., 1999)

Assessing the status of odd thoughts can be difficult even for the experienced practitioner because odd events are an integral part of the real world of illicit drug use. However, health care practitioners should prompt for and recognise mental state problems in people who use psychostimulants by undertaking a thorough mental status screen. It is recommended that a rapport be established with the person by taking a history of less sensitive aspects of their life before moving onto the mental state screening (Pead et al., 1999).

The amount of amphetamine use required to trigger a psychosis will vary widely from person to person, and for any given individual over time depending upon the contributions of the factors listed in Table 23. In a young person developing schizophrenia or who is biologically vulnerable to the development of it, amphetamine use may be only a minor contributor to psychosis (Pead et al., 1999).

TABLE 15
ASSESSING FOR THE RISK OF PSYCHOSIS

- **Intensity of amphetamine use**
  - high doses, intravenous use, protracted duration of use, potent drug type
- **Psychosis vulnerability**
  - hydration, sleep and nutrition
  - other concurrent drug use: cannabis, alcohol, hallucinogens
  - current illness – systemic infection, thyroid disease
  - past history of:
    - drug-related psychotic symptoms in the past (kindling)
    - schizophrenia
    - paranoid disorder
    - brief reactive psychosis
    - mood disorder with psychotic features
    - family history of serious mental illness

(adapted from Pead et al., 1999)

Taking a history of factors which may contribute to psychosis in a person using amphetamines will assist in determining the need for specialist care and the information, advice and interventions that are appropriate.

ASSESSMENT TO DETERMINE THE SETTING FOR DETOXIFICATION

Once a person has been found to be dependent on amphetamines and at risk of withdrawal or psychosis, then his/her suitability for a particular detoxification setting must be determined. The areas outlined in the boxes will assist health care practitioners to decide which particular setting is more appropriate for the person after his/her assessment. The decision tree for the management of psychostimulant detoxification (see Section **7.12**) also provides guidelines as to where the person can be safely detoxified.

If the person is experiencing amphetamine psychosis, he/she needs a psychiatric assessment and treatment instituted immediately. Persons with active psychosis would typically be admitted for psychiatric treatment then transferred to an inpatient specialist detoxification facility (if there is one available) when the psychosis has settled.

HOME/AMBULATORY DETOXIFICATION

Home or ambulatory detoxification is suitable if the following criteria (see the box below) are met: the person has a stable home environment and a reliable carer is available; the person is not severely dependent and no severe withdrawal is anticipated; there is no indication of any concomitant medical or psychiatric illness, specifically severe psychotic symptoms or severe depression; and there is no history of polydrug dependence.

For a home detoxification, the person is supervised at home by a carer and has daily visits from a registered nurse or a general practitioner. In an ambulatory detoxification, the person attends his/her local Alcohol, Tobacco and Other Drugs Services or his/her local hospital (in some regional areas) daily, or sees his/her general practitioner second daily. This enables the withdrawal process to be monitored and appropriate interventions undertaken. The aim is to manage the symptoms of withdrawal, monitor the person's mood, educate them about the course of withdrawal and the likelihood of enduring symptoms, and plan for after-care.

Assessing for Suitability for Home / Ambulatory Detoxification

- no polydrug dependence
- no severe withdrawal is anticipated
- no medical complications requiring close observation or treatment are evident
- no significant psychiatric complications, specifically psychotic symptoms or severe depression (see Appendix 1 for details of comorbidity)
- has strong social supports (family members and carers often require education and support themselves)
- has a drug-free and supportive home environment
- has not previously failed ambulatory detoxification
- is personally committed to detoxification

COMMUNITY RESIDENTIAL SETTING

When the home environment is not supportive of detoxification or where previous attempts have been unsuccessful, the person can be referred to a community residential setting for detoxification. This setting is suitable for persons who meet the criteria outlined in the box below.

Assessing Suitability for Community Residential Setting Detoxification

- no polydrug dependence
- no severe withdrawal is anticipated
- no medical complications requiring close observation or treatment are evident
- no significant psychiatric complications, specifically psychotic symptoms or severe depression (see appendix 1 details of comorbidity)
- has an unfavourable home environment or is homeless
- previously failed ambulatory detoxification

HOSPITAL/SPECIALIST DETOXIFICATION UNIT

The need for admission to a hospital or specialist detoxification unit is less common than for the other drug types covered in these protocols. These settings are suitable for persons who have had a previous complicated withdrawal (depression/psychosis); are moderately to severely dependent; where there is an indication of concomitant medical or psychiatric illness; a history of polydrug dependence; no stable home environment; no reliable carer is available; have access to, or may be exposed to amphetamines in their home environment; and have had previous unsuccessful home or ambulatory detoxifications. Inpatient care is also required for persons who present with psychosis or for persons who require more intensive monitoring because of his/her depression and/or suicidality problems.

If inpatient treatment is necessary the duration of stay should be tailored to the individual. In all cases it should be long enough for the resolution of the psychotic or withdrawal symptoms to occur, and adequate monitoring of depression and cravings to use.

Assessing for Suitability for Hospital / Specialist Unit Detoxification

- polydrug dependence
- severe withdrawal is anticipated
- medical complications requiring close observation or treatment
- significant psychiatric complications, specifically psychotic symptoms or severe depression and/or suicidal ideations (see Appendix 1 for details of comorbidity)
- no reliable carer or social supports are available
- has an unfavourable home environment or is homeless
- previously failed ambulatory detoxification

7.4 FEATURES OF THE AMPHETAMINE WITHDRAWAL SYNDROME

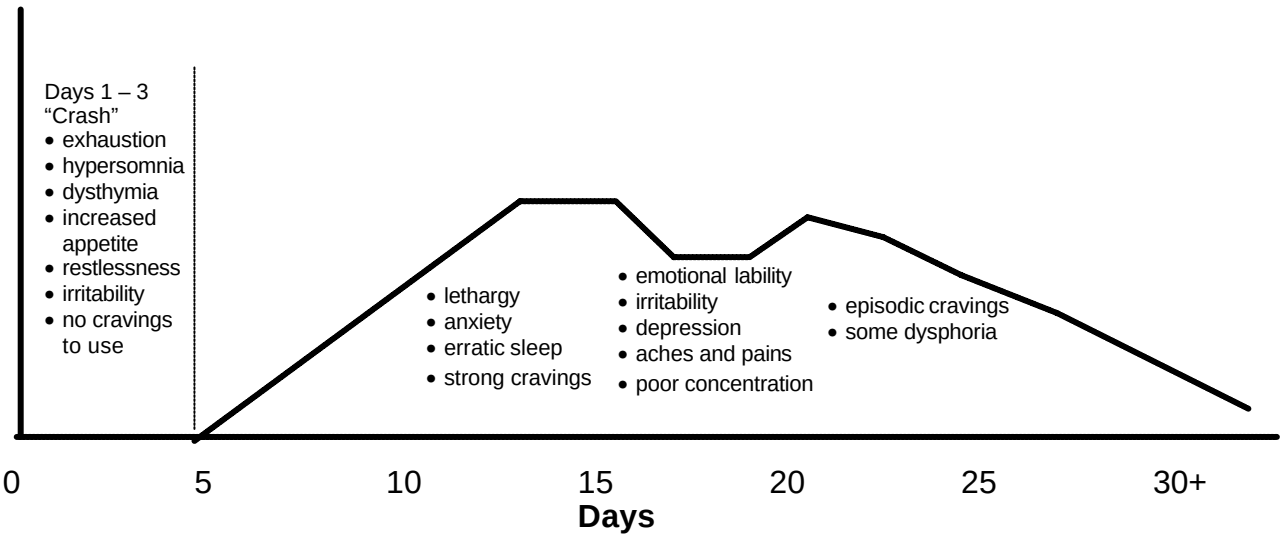
The withdrawal syndrome from amphetamines often emerges from a state of intoxication. Amphetamine intoxication is characterised by restlessness, agitation and apprehensiveness, which may border on panic. This state may progress to a hypomanic picture with paranoid ideation, and auditory and visual hallucinations. There is tachycardia and elevation in blood pressure because of these drugs' sympathomimetic properties. There may be confusion and frank delirium. Convulsion and coma may result from poisoning and the outcome may be fatal, with death from exhaustion, aspiration or cardiac arrhythmia (Saunders,1995).

Chronic abusers of amphetamines may present with an acute psychotic episode that resembles paranoid schizophrenia (Novak, 1991).

An ongoing feature of intoxication, such as psychosis, can coexist with a withdrawal symptom such as depression. The time-course and features of a typical withdrawal state, unaffected by residual toxicity symptoms are as shown in Figure 12 and described in the text.

ONSET AND DURATION

FIGURE 12: Typical Amphetamine Withdrawal



The withdrawal syndrome begins with what is described as coming down or a "crash". This acute period is typically characterised by hypersomnia, increased

appetite, feeling 'flat', exhaustion and no craving to use amphetamines. The presentation could be described as the opposite of amphetamine intoxication.

Within two to five days the body begins to recover. This (notionally) second phase of the withdrawal syndrome is characterised by mood swings, irritability, angry outbursts, sleep disturbances, headaches, aches and pains, poor concentration and a steady increase in cravings to use amphetamines. People often experience social and relationship conflict during this time due to irritability and mood swings. During this phase some people may experience extreme rebound depression, with some contemplating and even attempting suicide. Mood monitoring is crucial during this period.

While the mood swings may last several months (up to six months to a year in some cases), there is usually a gradual return of normal sleep, mood and activity levels, and major improvements in general health and mood after two months from the onset of withdrawal.

Some people experience a psychotic episode in the context of protracted use of high doses of amphetamines. This is covered in Section Appendix 1 concerning comorbid mental health disorders and substance use.

7.5 DETECTING AND MONITORING AMPHETAMINE WITHDRAWAL

If an individual's history or presentation suggests a possibility of an amphetamine withdrawal, the person should be commenced on the Amphetamine Withdrawal Scale (AmpWS) as shown in Section **7.13**. It is a 10-item checklist of symptoms with a four-point scale (0-3) to rate the severity of the symptom. The person is asked to rate each subjective symptom according to the severity of his/her withdrawal. Monitoring should be commenced as soon as possible after the assessment is obtained and continued until the detoxification is complete. It is recommended that the person be assessed daily during withdrawal.

PROCEDURE

After the assessment, take and record the vital signs on the Amphetamine Withdrawal Scale to act as baseline data. Continue to monitor the person during detoxification in a manner that is suitable to the setting. This may include the person recording subjective symptoms at home and bringing the completed AmpWS to the clinic or surgery each day for review by the medical staff.

Medications for symptomatic relief can then be titrated against these observations and the course of withdrawal may be monitored accurately.

7.6 AMPHETAMINE DETOXIFICATION PROTOCOLS

SEDATION

The primary goal of pharmacological interventions is to obtain and sustain abstinence by lessening the discomfort of withdrawal. In the majority of cases no drug treatment is required (Wickes, 1992). However, on some occasions a physically exhausted but mentally overwrought person may need a small dose of diazepam to initiate the phase of restorative hypersomnia. Tricyclic anti-depressants have been used to alleviate the depression of amphetamine withdrawal. The evidence is meagre and given the many side effects of these drugs, there are few occasions when they should be currently considered. Selective serotonin reuptake inhibitors (SSRIs) are becoming more widely used. Again the evidence that they alleviate withdrawal-related depression is small, but it is appropriate to consider an SSRI in persons with a persistently depressed mood in the long-term.

Persons suffering from amphetamine-induced psychosis should be treated with major tranquillisers, preferably haloperidol rather than phenothiazines (which lower the seizure threshold). Cardiac arrhythmias should NOT be treated with beta-blockers (alpha blockers are acceptable) or lignocaine or related compounds that have properties similar to amphetamines (Saunders, 1989). Treatment for complications such as these is more appropriate to inpatient settings.

SYMPTOMATIC RELIEF

Headaches and generalised body aches and pains can be problematic in the first one or two weeks as a result of increased muscle tension. These symptoms can be treated with paracetamol 1g every 4-6 hours as required. Alternative management includes light stretching exercises, warm baths or massages.

SUPPLEMENTS

Supplements are sometimes necessary in persons undergoing amphetamine detoxification. Appetite is often reduced by amphetamine use and this can result in significant weight loss and malnourishment. The appetite usually returns within days of ceasing drug use, so carers should encourage the person to eat healthy foods such as fresh fruits and vegetables. However, a multivitamin preparation is appropriate to cover possible deficiencies in B group vitamins and vitamin C.

It is also beneficial for the person to drink at least two litres of fluids, preferably water or fruit juice, throughout each day to promote the release of accumulated toxins.

SUPPORTIVE ENVIRONMENT

People undergoing amphetamine withdrawal need a lot of support, explanations, and reassurance. They also need close monitoring of their withdrawal process and the organisation of medical or psychiatric reviews if necessary. A review would be particularly important if the person experiences profound depression or suicidal ideation during the course of the withdrawal.

People frequently experience episodes of intense craving to use amphetamines in the early stages of withdrawal. The carer can help the person through these episodes by encouraging distraction with activities such as watching TV or a video, listening to music or a relaxation tape, walking briskly with them, and generally being available to talk and listen.

Some people experience mild paranoia during amphetamine use and this can increase during detoxification so it is important to reduce stress and maintain a non-threatening, non-stimulating environment as much as possible.

It is important that the person and their carer are well informed about the possibility of ongoing mood swings; sleep disturbances and other symptoms of withdrawal. Such information reduces the anxiety associated with withdrawal and increases a person's confidence to complete the detoxification and enhances motivation to change.

STANDARD CARE

The person's usual medical treatment of existing conditions should be continued. In addition, treatment may need to be instituted for an intercurrent illness diagnosed during detoxification. The principle is that detoxification should not interrupt the person's usual or intended care. Sometimes it will be apparent that the person's usual medication is inappropriate for the condition or because the person has an alcohol or drug problem (which may not have been recognised by the prescribing doctor). Such medication could include anti-convulsants, anti-depressants, anti-psychotic drugs, anti-hypertensives, cardiac drugs, peptic ulcer treatment and antibiotics. In specific persons it could also include benzodiazepines (eg. clonazepam (rivotril) for epilepsy), opioids (eg. methadone in someone having a selective detoxification) and medication for pain relief.

It is important however to recognise that there are significant drug interactions between amphetamines and some prescribed medications such as SSRI's (serotonergic syndrome → hypertension, seizures), alkalising agents (can increase half-life of amphetamines) and some medications prescribed for psychiatric conditions (eg. tricyclic antidepressants, MAO inhibitors, lithium carbonate). It is important that the person is educated about these interactions as there is a possibility of relapse back to amphetamine use following detoxification.

7.7 MANAGING COCAINE WITHDRAWAL

At the present time very few cocaine users present for treatment in Australia. This reflects the relative scarcity and high costs (between $200 to $300 per gram) of the drug, and in all probability the predominant pattern of recreational weekend use rather than compulsive administration throughout the day. Nonetheless it is essential to enquire about cocaine use when persons present with acute psychoses, cardiac arrhythmias, evidence of intravenous drug use and nasal disorders (Saunders, 1989).

Determining the appropriate management of persons with cocaine problems involves the same process as discussed in Section **7.3** for amphetamine withdrawal. These include:

(1) diagnosis of cocaine dependence (including severity of dependence)
(2) detecting those at risk of developing a withdrawal syndrome
(3) determining if a dependent person at risk of withdrawal can be safely managed in a community setting.

DIAGNOSIS OF COCAINE DEPENDENCE

Cocaine dependence occurs without the specific physiological withdrawal symptoms observed with the abstinence of alcohol, benzodiazepines and opiates. Cocaine dependence is likely to develop within a social/occupational context.

Initial tolerance to cocaine develops rapidly, but thereafter cocaine users seldom seem to develop tolerance for increased amounts. Tolerance may not be obvious because of the tendency to mix cocaine use with other drugs, in particular heroin (known as “speedball”), to enhance effects (Commonwealth Department of Human Services and Health, 1994).

The ICD-10 allows a diagnosis of dependence without a requirement for the presence of the physiological phenomena of tolerance, withdrawal and relief of withdrawal by substance use. This broader view is especially relevant to drugs such as cocaine, which do not have prominent physical withdrawal phenomena (Saunders et al., 2001). Therefore, a diagnosis of cocaine dependence can still be made if **three or more** of the following criteria are evident (WHO ICD-10, 1993):

CRITERIA FOR DEPENDENCE	**COMMENTS (**mild+, moderate++, severe+++**)**
Compulsion to use	
Impaired control over drug use	
Withdrawal symptoms	
Increased tolerance	
Priority of drug use	
Continued use despite harmful effects	

DETECTING THE PERSON AT RISK OF WITHDRAWAL

Cocaine is highly reinforcing and it is widely accepted that its reinforcing properties are largely due to its action of blocking the reuptake of dopamine (Proudfoot & Teesson, 2000). Thus, people who use cocaine soon become compulsive users, especially when intravenous use or free-base are employed. The reward is immediate and the return to baseline mood levels or below occurs rapidly. Both the intense euphoria and its disappearance drive the person to seek more cocaine. With nasal absorption the mood peak is lower, but complusive patterns of use are known to develop with this technique as well (Arif, 1987).

After a prolonged series of stimulations and dysphoric reactions to reduced cocaine serum levels, sudden cessation can produce a stimulant-withdrawal syndrome characterised primarily by deep depression. In an effort to relieve the depression, the person soon relapses to compulsive use. In addition, during the withdrawal phase the person is unable to enjoy ordinary pleasures for days or weeks thereafter. This picture of combination positive and negative conditioning – the intense euphoria associated with cocaine use, the effort to avoid dysphoria, the distressing post-cocaine depression and the painful anhedonia associated with residual phase – graphically illustrates why relapse occurs so frequently during treatment (Arif, 1987).

A person who is dependent on cocaine may become moody, suspicious, irritable, and, in certain circumstances, violent or suicidal. Heavy cocaine use can lead to cocaine psychosis, a condition closely resembling amphetamine psychosis. It is characterised by delusional and hallucinatory experiences and paranoia.

As previously mentioned, it is therefore important to enquire about cocaine use when persons present with acute psychoses, cardiac arrhythmias, and evidence of intravenous drug use and nasal disorders. The areas to concentrate on when assessing a person at risk of cocaine withdrawal are similar to that of amphetamine withdrawal as discussed on pages 7-5 to 7-9. The reader is referred to those pages.

ASSESSMENT TO DETERMINE THE SETTING FOR DETOXIFICATION

Once a person has been found to be dependent on cocaine and at risk of withdrawal or psychosis, then his/her suitability for a particular detoxification setting must be determined. As there are few cocaine users presenting for treatment in Australia, the information provided here is based on the US experience.

Home or ambulatory detoxification is still preferable to inpatient detoxification if there is a stable home environment and a reliable carer as it causes less disruption to the person and his/her family. The relapse rates are significant even after long hospital stays as experienced by treatment centres in the US. Inpatient

detoxification is, however, recommended for persons with severe depression accompanied by suicidal ideation or psychotic symptoms, if either persists beyond the third day of the post-cocaine period, or homicidal ideation, and for those who have had several relapses following home or ambulatory detoxification. Other conditions that may require inpatient care include: heavy free-base or intravenous use; concurrent dependence on alcohol and other drugs; concomitant medical or psychiatric problems; no stable home environment; and lack of family or social support (Arif, 1987).

7.8 FEATURES OF THE COCAINE WITHDRAWAL SYNDROME

Gawin and Kleber (1984, cited in Wickes, 1992) divided withdrawal experienced after chronic cocaine use into three phases as described below.

Phase 1 "Crash": 9 hours - 4 days

The agitation, depression, anorexia and high craving experienced at the end of a "run" (heavy use for several days or weeks at a time) gives way to feelings of fatigue and increased desire to sleep which is as yet unattainable. Depression remains but craving decreases. Exhaustion eventually leads to prolonged but disturbed sleep. There is intense hunger on awakening, but no craving to use.

Phase 2 Withdrawal: 1 - 10 weeks

There are a few days of respite where normal sleep patterns return and mood settles with low craving to use and low anxiety. This is replaced by depressed feelings, a lack of interest in life, a lack of energy and anxiety with possible sudden angry outbursts. Craving to use is high, and is exacerbated by conditioned cues. Cocaine withdrawal is characterised by a particularly rapid onset and marked intensity when compared with other drugs. There is a high probability of relapse to drug use.

Phase 3 Extinction, Indefinite Duration

This phase is characterised by an episodic craving to use often in response to conditioned cues, which interrupts a normal mood and interest in life. It may last minutes or hours and may emerge months or years after the cessation of drug use. Relapse may occur at any stage.

Other symptoms experienced during withdrawal may include;

- sleep disorders
- vivid dreams
- hyperphagia
- irritability
- nausea
- muscle aches
- lethargy.

7.9 DETECTING AND MONITORING COCAINE WITHDRAWAL

There is currently no specific rating scale in general use for cocaine withdrawal. This is due to the relative infrequency of cocaine users presenting for assessment and detoxification. The Amphetamine Withdrawal Scale could be used for cocaine detoxification as the withdrawal symptoms are quite similar. Refer to Section **7.13** for the use of the Amphetamine Withdrawal Scale if required.

A suggested interpretation of the Amphetamine Withdrawal Scale Scores:

Severity	AmpWS Scores
Mild	1 – 10
Moderate	11 – 20
Severe	21 – 30

7.10 COCAINE DETOXIFICATION PROTOCOLS

SEDATION

As in amphetamine detoxification, the primary goal of pharmacological interventions is to obtain and sustain abstinence by lessening the discomfort of withdrawal. In the majority of cases no drug treatment is required. However, if dysphoric agitation occurs, it is best treated with diazepam. Research findings regarding the therapeutic effectiveness of the tricyclic anti-depressants in cocaine detoxification are equivocal. However, some studies conclude that they may have differential effectiveness dependent upon underlying pre-existing psychiatric conditions. (Proudfoot & Teesson, 2000). Stitzer and Walsh (1997, cited in Proudfoot & Teesson, 2000) concluded that although the serotonin reuptake inhibitor, fluoxetine hydrochloride (Prozac) may not prove effective for primary cocaine abusers, it has shown potential to effectively treat polydrug users. Other anti-depressants such as bupropion and trazodone have either too little research data on their efficacy in this area, or there have been equivocal findings (Proudfoot & Teesson, 2000).

Psychotic symptoms are usually transient (lasting less than 14 days) and usually remit following normalisation of sleep patterns. Major tranquillisers such as chlorpromazine and haloperidol apparently have all been used successfully to manage persons with these symptoms (Arif, 1987).

SYMPTOMATIC RELIEF

Generalised body aches and pains can be problematic in the first one or two weeks as a result of increased muscle tension. These symptoms can be treated

with paracetamol 1g every 4-6 hours as required. Alternative management includes light stretching exercises, warm baths and massage.

SUPPLEMENTS

Supplements are sometimes necessary in persons undergoing cocaine detoxification. Appetite is often reduced by cocaine use and this can result in significant weight loss and malnourishment. In severely malnourished persons who cannot take solid food intravenous solutions may be necessary. However, the appetite usually returns within days of ceasing the drug use, so carers can encourage the person to eat healthy foods such as fresh fruits and vegetables. A multivitamin preparation is appropriate to cover possible deficiencies in B group vitamins and vitamin C.

It is also beneficial for the person to drink at least two litres of fluids, preferably water or fruit juice, throughout each day to promote the release of accumulated toxins.

SUPPORTIVE ENVIRONMENT

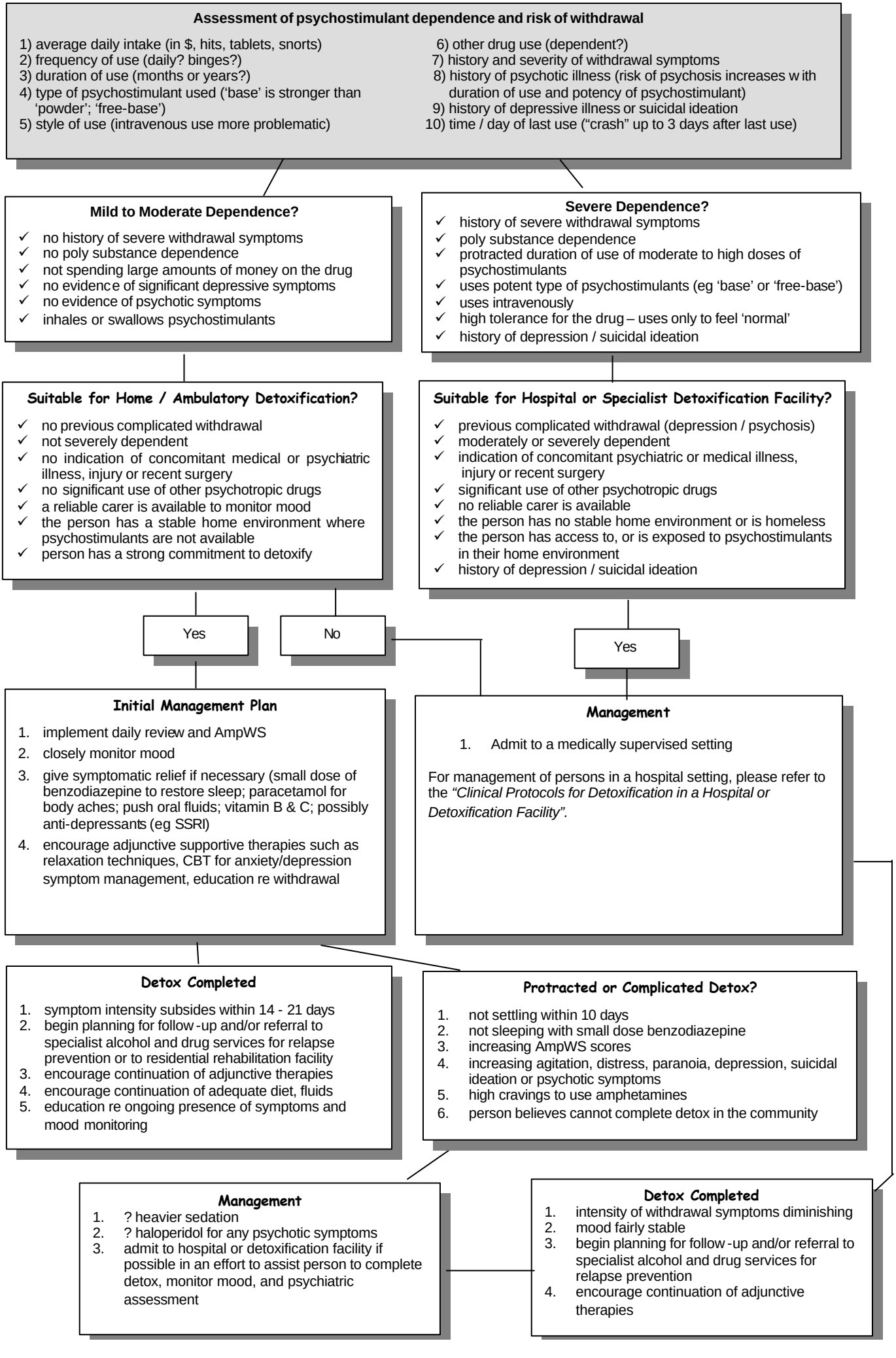
As with people undergoing amphetamine withdrawal, people undergoing cocaine withdrawal need a lot of support, explanations, and reassurance. They also need close monitoring of their withdrawal process and the organisation of medical or psychiatric reviews if necessary. A review would be particularly important if the person experiences profound depression or suicidal ideation during the course of the withdrawal.

People frequently experience episodes of intense craving to use cocaine both in the early stages of withdrawal and at later stages. The support person can help the person through these episodes by encouraging distraction by activities such as watching TV or a video, listening to music or a relaxation tape, walking briskly with them, and generally being available to talk and listen. Some people experience mild paranoia and this can increase during detoxification so it is important to reduce stress and maintain a non-threatening, non-stimulating environment as much as possible. It is important that the person is well informed about the possibility of ongoing mood swings; sleep disturbances and other symptoms of withdrawal. Such information reduces the anxiety associated with withdrawal and increases a person's confidence to complete the detoxification and enhances motivation to change.

7.11 AFTER-CARE

As with all the drug classes, plans for after-care need to be considered prior to amphetamine or cocaine detoxification or during the early stages of detoxification in an effort to reduce the likelihood of relapse. Such plans could include referral to his/her District Alcohol, Tobacco and Other Drugs Services for a relapse prevention program, cognitive behavioural therapy for anxiety/depression symptom management, or residential rehabilitation programs.

7.12 Decision Tree for the Management of Psychostimulant Detoxification



7.13 Royal Brisbane & Royal Women's Hospitals Health Service Districts

ALCOHOL AND DRUG SERVICE

AMPHETAMINE WITHDRAWAL SCALE

UR……

NAME:……

ADDRESS:……

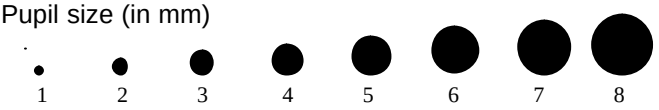
……

DOB:……/……/…… M F

RATINGS:

0 NONE **1 MILD** **2 MODERATE** **3 SEVERE**

Pupil size (in mm)



Date & Time of last Amphetamine use? ……/……/…….. ……..AM / PM	**DATE**										
	TIME										
	BAL										
Do you feel tired?											
Are you sleeping a lot?											
Is your mood low?											
Are you easily annoyed?											
Do you feel anxious?											
Do you have aches / pains?											
Is your appetite poor?											
Are you hearing &/or seeing unusual / disturbing things?											
Do you feel suspicious / mistrustful of others?											
Is your concentration on tasks poor?											
TOTAL											
BLOOD PRESSURE											
PULSE											
TEMPERATURE											
RESPIRATIONS											
CONSCIOUS LEVEL **1** Alert,obeys,oriented **2** Confused,responds to speech **3** Stuporous,responds to pain **4** Semi-comatose **5** Comatose											
PUPILS + Reactive - No Reaction B Brisk S Sluggish	**SIZE**										
	REACTION										
MEDICATION GIVEN?											
NURSE INITIALS											

AMPHETAMINE WITHDRAWAL SCALE

8 CANNABIS PROTOCOLS

8.1 OVERVIEW OF CANNABIS

For some time there has been a belief that cannabis did not precipitate a dependence syndrome. However, there is now general agreement that people can in fact meet diagnostic criteria for cannabis dependence.

A rise in the availability of high potency cannabis (higher levels of THC: tetra-hydro-cannabinol) has occurred since the 1970s and a higher reward/reinforcement liability has increased the dependence prevalence of the drug. Adandamide has been identified as a neurotransmitter directly related to THC.

Cannabis dependence potential is identified in the increased levels of THC, high degree of reinforcement potential, rapid absorption, high intrinsic pharmacological activity of the drug, the long half life, low clearance and cumulative drug load (Smith and Seymour 1997). Prolonged and habitual users often meet the criteria for dependence in compulsion to use, impaired control, continued use in spite of adverse consequences, a high degree of salience, narrowing of repertoire and rapid reinstatement after a period of abstinence (Murphy 1996).

The existence of a discrete cannabis withdrawal syndrome, on the other hand, remains contentious, with no clear natural history of such a withdrawal syndrome meeting wide acceptance. However, due to many studies reporting a variety of withdrawal symptoms among cannabis dependent subjects we can reasonably infer how such a syndrome may manifest.

For example, a lengthy withdrawal process may ensue due to THC being retained in the body's fat cells and its slow elimination from the body. Acute symptoms may occur 6-12 hours after last use and the individual can experience anxiety, irritability, perspiration, sleep disturbances, moodiness, tremors and nausea (Haney, Ward, Comer et al., 1999). Subtle symptoms may exist for up to several weeks after last use and improvement in cognitive function may be observed over several months. Cannabis withdrawal **should not** require an inpatient detoxification and can be successfully managed in the community with either ambulatory or home detoxification with an emphasis on supportive therapies.

Features of cannabis withdrawal may include:

- anxiety
- irritability
- insomnia
- perspiration
- craving
- mood swings
- tremor
- nausea
- poor concentration
- headache

8.2 SEDATION AND OTHER PHARMACOLOGICAL MANAGEMENT

Usually no medication is needed during cannabis withdrawal and so no specific pharmacological management protocol exists. However, medication for symptomatic relief may be given in some cases for persistent insomnia or particularly distressing symptoms.

8.3 SUPPORTIVE ENVIRONMENT

Clients undergoing cannabis detoxification need support and regular observation, and supportive counselling should be undertaken during the withdrawal process. "A Guide to Quitting Marijuana" supplied by the Alcohol and Drug Information Service (ph.no.1800177833 or 3236 2414) can be a good adjunct to treatment in helping the client understand the withdrawal process and implement strategies for cessation of use. Family support may also be very useful during the person's recovery phase as possible irritability and mood swings may adversely impact on the home environment. Clients suffering from psychosis, depression or suicidal ideation need to have a psychiatric assessment and may need hospitalisation to adequately treat these symptoms.

8.4 PROTOCOLS FOR USE OF CANNABIS WITHDRAWAL OBSERVATION CHART

If the client's history on presentation indicates the possibility of cannabis withdrawal the client should be commenced on the Cannabis Withdrawal Observation Chart. It is a 12-point rating scale to indicate the presence and severity of withdrawal symptoms and a **Yes or No** answer to rate the severity of the withdrawal.

- Take and record vital signs on Cannabis Withdrawal Observation Chart (shown below) to chart baseline data

- Ask the person to subjectively rate their withdrawal symptoms on the scale and bring the chart to the clinic or general practice during withdrawal. If the client is showing any signs of cannabis withdrawal syndrome, continue to have them record the data on the Cannabis Withdrawal Observation Chart.

- Observe for any signs of change and medication may be given according to the judgement of the health practitioner based on protracted or distressing symptoms.

8.5 CANNABIS WITHDRAWAL OBSERVATION CHART

NAME _____UR_____
D.O.B. _____
AGE _____SEX_____
DATE OF ASSESSMENT _____TIME OF ASSESSMENT _____
DATE AND TIME OF LAST DRUG USE _____AM/PM_____

Date								
Time								
Anxiety								
Perspiration								
Irritability								
Insomnia								
Paranoia								
Hallucinations								
Mood Swings								
Tremor								
Appetite(good)								
Concentration								
Hot Flushes								
Headache								
Temperature								
Pulse								
Respirations								
Blood Pressure								
Conscious Level								
Sedative Drugs								
Signature								

9 VOLATILE SUBSTANCES PROTOCOLS

9.1 OVERVIEW OF VOLATILE SUBSTANCES

There are many volatile substances available (VS) which are utilised for their abuse potential such as petrol, paint thinners, chrome-based paints, glues and adhesives, nail varnish removers, cleaning fluids, lighter fuels, aerosols, antifreeze anaesthetic products and nitrites. Volatile substances primarily act to depress the central nervous system, with effects similar to that of alcohol. Intoxication has a rapid onset (within 1 to 5 minutes), which diminishes fairly swiftly (within 30-60 minutes). A vessel or plastic bag is usually placed over the nose and mouth and the VS is inhaled deeply.

Effects of volatile substance abuse (VSA) depend on the product used, amount inhaled and the person's experience with the substance. Effects may include alterations in levels of consciousness, euphoria, visual hallucinations, lowering of inhibition, disorientation and impaired motor coordination.

Evidence of permanent damage from short-term use is as yet not documented and is thought to be rare. Effects are normally reversible if inhalant use ceases. However, long-term use of aerosols and cleaning fluids can damage the kidneys, liver, brain and peripheral nervous system. Long-term inhalation of leaded petrol can cause leukaemia and other types of cancers, and although rare has been associated with permanent brain damage (Rose, 2001). Deaths from inhalants are mainly due to misadventure e.g. suffocation or accident while intoxicated, or 'sudden sniffing syndrome', which is caused by heart failure from receiving a sudden fright or performing strenuous exercise (eg running from police) while intoxicated (CEIDA, 2002).

9.2 MANAGING VSA WITHDRAWAL

It has been suggested that regular heavy users can become dependent on volatile substances and meet diagnostic criteria for dependence, but it is generally the psychological aspects of dependence that are evident such as compulsion to use, impaired control over drug use and salience. Despite studies examining subjective reports of withdrawal symptoms associated with VSA, it is generally accepted that there is no specific withdrawal syndrome that can be directly attributed to volatile substances hence there are no specific pharmacological management protocols that are recommended so it is important that community clinicians regularly monitor and manage symptoms as they arise in the context of a supportive environment.

Due to the high prevalence of polysubstance abuse in conjunction with VSA (eg. Young et al., 1999) if withdrawal symptoms do manifest the symptoms may be

attributable to withdrawal from another drug. Hence, a thorough alcohol and other drug assessment should be undertaken in the first instance.

Symptoms that are reportedly associated with withdrawal from volatile substances include:

- headache
- tremor
- muscle cramps
- abdominal pain
- nausea and vomiting
- craving
- fatigue

9.3 SUPPORTIVE ENVIRONMENT

The community clinician should endeavour to facilitate a multi-disciplinary approach, which includes counsellors, family, cultural and peer support and health education. Dependence on volatile substances should be addressed in the same way that dependence on another drug would be addressed. That is with supportive counselling and a targeted psychological intervention that addresses relapse prevention, management of cravings, reasons for drug use and in the case of youth, managing peer pressure to use. Further, a suitably supportive and safe residential environment needs to be established. Ideally there would be at least one non-using friend or relative available at all times to provide reassurance, and take the person for review if necessary.

Long-term interventions for volatile substance abusers should be tailored to meet the cultural and environmental needs of the client. Young Indigenous people who sniff petrol in rural and remote settings have different treatment needs than young, non-Indigenous city based clients who abuse volatile substances in the context of disadvantage and homelessness. For a thorough background to the issue of VSA and long-term treatment see Rose, 2001.

10 STEROID PROTOCOLS

10.1 OVERVIEW OF STEROID DETOXIFICATION

The existence of an anabolic-androgenic steroid **(AAS)** dependence syndrome is becoming more widely accepted and recent research indicates that some individuals experience a variety of subjective withdrawal symptoms following cessation from prolonged use (Copeland et al, 2000). However, there is *no widely accepted withdrawal syndrome* or *natural history* associated with AAS dependence, hence no pharmacological protocols or withdrawal assessment scales for the management of AAS withdrawal are included in this publication. As is the case with cannabis and inhalants, the management of withdrawal is primarily concerned with supportive, opportunistic interventions and formalised detoxification in a medical setting is not required.

Major indicators of AAS dependence include continued use despite harmful consequences (use in hazardous situations, recurrent legal problems, recurrent physical side effects), importance of drug use (salience), experience of withdrawal symptoms and subsequent using to avoid or ameliorate withdrawal symptoms (see WHO criteria of dependence, Section 2, Table1).

Adverse effects attributed to prolonged and/or high dose use of AAS include:

- hypertension
- gynecomastia
- hair loss
- acne
- impaired liver function
- increased cholesterol levels
- increased irritability
- stunting of growth in adolescents
- increased agitation/aggression (known as “roid rage”)

Regarding aggression and violence, it should be noted “the interactions of heavy training, polypharmacy, consumption of other psychostimulants, personality dimensions, extreme diet and AAS use are immensely complicated and therefore generalisations about mood and behaviour alterations and their severity in AAS users cannot be readily made” (Korkia, 1998). Hence, assessment of these clients should be thorough and encompass all of these dimensions to ensure an appropriate and individualised management plan can be developed.

10.2 MANAGING STEROID WITHDRAWAL

AAS withdrawal can be successfully managed in the community with either ambulatory or home detoxification. Reported subjective symptoms of steroid withdrawal include:

- depression
- anhedonia
- apathy
- craving
- body image dissatisfaction (body dysmorphia)
- loss of libido
- fatigue
- insomnia
- loss of appetite
- anxiety

Less common symptoms may include, restlessness, headaches, nausea and suicidality.

Treatment should be aimed at managing the individual's presenting symptoms as many combinations have been reported. Withdrawal symptoms such as craving, depression and body image dissatisfaction tend to be more prominent which may be managed by psychological therapies such as cognitive behavioural therapy (CBT) or supportive counselling. Usually no medication is needed during withdrawal however medication may be given in some cases for depression and relief of distressing symptoms.

The use of other ergogenic (efficiency-enhancing) drugs is very common and has been found to be associated with significant morbidity (Gruber & Pope, 2000). Therefore, identification, assessment, management of use and cessation of the **following drugs** may be necessary:

Drug	Desired Effects
Human Growth Hormone	Increased muscle and tendon strength
Insulin	Increased protein synthesis/muscle bulk
Stimulants	Increased energy/weight loss
Gammahydroxybutyrate (GHB)	Stimulates growth hormone release
Diuretics	Weight loss
Beta Blockers	Reduce hypertension
Thyroxine	Weight loss
Clenbuterol	Reduce body fat
Creatine	Muscle energy and recovery
Human Chorionic Gonadotrophin (HCG)	Stimulates testosterone formation
Tamoxifen	Combats gynecomastia

Initial harm reduction mechanisms are indicated if immediate cessation of use is not acceptable to the client or is delayed (eg. impending competitions etc). This should include education regarding safer injecting practices; adverse effects identification and management, management of use of other ergogenic drugs and redesigning the users AAS program. Self-help literature available includes "Anabolic Steroids: What you need to know" (Millar, 2001) and "Steroid Facts" (NDARC, 1998).

10.3 SUPPORTIVE ENVIRONMENT

Clients undergoing AAS detoxification benefit from support and regular observation. Supportive counselling should be undertaken during the withdrawal process with emphasis on body image, self-esteem and diet management. Additional support would include helping the client understand the withdrawal process and developing strategies for relapse prevention and management. Due to the prevalence of depressive symptoms in the context of withdrawal, clients should be advised to monitor their mood and to inform their clinician if thoughts of self-harm occur.

11 THE LEGISLATION GOVERNING THE TREATMENT OF DRUG DEPENDENT PERSONS IN QUEENSLAND.

11.1 OVERVIEW

Under the Health (Drugs and Poisons) Regulations 1996, a medical practitioner needs approval to treat a drug dependent person with either controlled drugs (such as buprenorhpine or methadone), or Restricted Drugs of Dependence such as diazepam or panadeine forte.

The need for approval includes the use of drugs used to assist in detoxification, and does not only apply to drugs being used on an ongoing basis.

There are valid reasons why approval is necessary to treat drug dependent persons.

1. The patient may already be receiving treatment with drugs from another medical practitioner
2. The patient may be registered on the methadone syrup program and be obtaining extra drugs to use in addition to those they are already receiving
3. The patient may be obtaining additional drugs to sell to a third party
4. The patient may subsequently try to obtain drugs from another medical practitioner
5. Information on the clinical presentation of the patient on this occasion may be of use to other medical practitioners on subsequent occasions when they present for treatment

It is therefore necessary to contact the Drugs of Dependence Unit to obtain approval **prior** to treating the patient.

Patients presenting for detoxification outside of business hours

1. Patients who appear on weekends or after hours should only be prescribed minimal amounts of drugs until their status/history can be confirmed at the earliest opportunity.
2. Patients displaying opioid withdrawal should only receive symptomatic relief.
3. Patients should not be given a prescription for twenty tablets or more just because this is the quantity contained in a proprietary pack. Medication

given out of hours, before the history is confirmed should ideally be dosed at the surgery.

The regulations governing the treatment of drug dependent persons are S*ection 122* of the regulation, which deals with the use of controlled drugs, and *Section 213* of the regulation, which deals with restricted drugs of dependence.

It is now possible under *Section 213(5)* for a medical practitioner to treat a class of drug dependent persons for their drug dependence with the following restricted drugs of dependence:

- Diazepam to a maximum of 40mg per day; and
- Nitrazepam to a maximum of 10mg per day

For a period of two weeks, subject to the following conditions:

- ✓ the medication is to be dispensed on a daily basis
- ✓ notifications are to be sent to Queensland Health for each individual requiring detoxification for this regimen; and
- ✓ individuals requiring drug treatments above the level specified in this regimen, or with controlled drugs, will require individual approvals.

It is proposed that these blanket approvals can be issued to practitioners who are treating reasonably large numbers of patients. The practitioner is still required to contact DDU before prescribing, but does not then require an individual approval for each patient.

Dealing with other drug seeking patients out of hours

When treating drug dependent people please remember:

1. The use of false identification and stolen medicare cards is not uncommon.
2. Ensure all prescription paper is inaccessible.
3. Contact the Drugs of Dependence Unit if you become aware that prescription paper has been stolen or is missing.
4. Unless it is an emergency, write a prescription in preference to using doctor's bag supplies. (This assists in monitoring prescription shopping).
5. Advise the Drugs of Dependence Unit if a patient's presentation causes you concern. This information may assist other doctors if the patient commences "prescription shopping".
6. Patients who claim to have lost or vomited their methadone syrup doses should be referred back to their approved prescriber. Because of the long half-life of methadone, one or two missed doses will not cause significant withdrawal. Symptomatic treatment is usually adequate.

7. If you are unsure of a patient's drug dependence status but consider that it is necessary to treat them with opioids for a genuine medical condition, it is recommended that only a minimum quantity be prescribed. Clarification should be sought from the Drugs of Dependence Unit as soon as possible. In these cases treatment should ideally consist of long acting oral medication and not injectable drugs. It is preferable that any required medication be consumed in front of the treating practitioner or dispensing pharmacist.

Other Functions of the Drugs of Dependence Unit

The Drugs of Dependence Unit operates a confidential telephone enquiry service, which allows you to:

1. ascertain a patient's known status in regards to drug dependence (for controlled drugs, in most cases)
2. obtain information about the recent opioid prescriptions received by a patient
3. obtain information about treatment facilities that are able to assess and treat patients who may be drug dependent. This includes patients who wish to cease using heroin and other illicit drugs; and
4. obtain information about your legal obligations under the Health (Drugs and Poisons) Regulation 1996.

The telephone enquiry service operates between
8:15am and 5:00pm
Monday to Friday
on (07) 3896 3900

Outside of Brisbane, Queensland Health through the Public Health Unit Network can also provide similar information from local environmental health services whose numbers are listed below.

PUBLIC HEALTH UNIT NETWORK CONTACT DETAILS

Environmental Health Services

BUNDABERG	(07) 4150 2780
CAIRNS	(07) 4050 3601
HERVEY BAY	(07) 4128 5474
MACKAY	(07) 4968 3858
SOUTH COAST	(07) 5591 3849
ROCKHAMPTON	(07) 4920 6989
SUNSHINE COAST	(07) 5479 4655
TOOWOOMBA	(07) 4631 9888
TOWNSVILLE	(07) 4750 4020

APPENDIX 1

COMORBID SUBSTANCE USE AND MENTAL HEALTH DISORDERS

As many as 60% of Australian outpatients with a serious mental illness such as schizophrenia may have a substance use disorder (Fowler et al., 1998), while the prevalence of substance abuse among people with mood, anxiety or personality disorders is also extremely high (Regier, 1990). The combination of the two disorders referred to as comorbidity or dual diagnosis, is included in this manual due to the frequency with which health care practitioners manage these patients in the community. (Refer to Davies, J. (2000) for comprehensive information regarding mental health issues in general practice).

There are many reasons for the common co-occurrence of substance abuse and mental illness, although the issue is complex and remains unclear. For many people, substance use may be normative in the context of adolescent experimentation however the psychoactive effect of the substance can interact with a biological vulnerability to trigger a psychotic episode (Hall, 1998). For others, the mental illness may precipitate the use of substances as a way to control symptoms of psychosis, dysthymia, depression or the side effects of prescribed anti-psychotic medication (Dixon et al., 1990 and 1991; Noordsy et al., 1991). It may also be true that the dopamine pathway dysregulation of the mental illness itself reinforces the use of substances by stimulating the dopamine reward pathways (Green, 1999). The cognitive deficits associated with some psychoses have also been implicated in the development of problematic substance use due to the person's compromised ability to make prudent judgements (Kavanagh, 1995).

Substances can trigger transient mental health disorders such as depression and anxiety in the context of alcohol or benzodiazepine withdrawal or a psychosis in the context of amphetamine or cannabis intoxication (Bell, 1973; Hall, 1988; Hall, 1998). The onset of enduring psychotic disorders such as schizophrenia may be linked to substance use, as the chemical changes in the brain produced by drugs such as LSD may represent the internal stressor or assault that triggers psychosis in vulnerable individuals.

The negative effects of substance use on those with mental illness are often profound and are frequently at odds with a person's expectation of that effect (Young, 1994). For example, while small doses of alcohol may help to relieve feelings of tension and anxiety, alcohol is associated with reduced effectiveness of anti-psychotic medication (Soni & Brownlee, 1991), impulsive behaviour, increased depression and more frequent suicide attempts among people with mental illness (Drake & Wallach, 1989). Similarly, although people expect a

euphoric effect from cannabis it often increases the positive symptoms of psychosis, such as paranoia, hallucinations and suspiciousness (Kavanagh, 1995). Psychostimulants such as amphetamines pose a particular risk for relapse of psychotic symptoms (Pandurangi, 1989).

The social costs of substance abuse incurred by the mentally ill can also be serious and include family dysfunction, homelessness, poverty, disrupted relationships and exclusion from services (Drake et al., 1989).

Despite the impact of substance abuse on outcomes in mental health treatment, services often miss cases due to inadequate screening procedures. When dual problems are detected, many people 'fall between the gaps' of traditional mental health and alcohol and drug services, or receive less than optimal care (Mueser et al., 1992). There is little research in the literature evaluating treatment outcomes (Kavanagh et al., 1999), however, people with both a mental illness and substance abuse can improve considerably following identification and treatment.

It is becoming increasingly more evident that an integration of interventions for substance abuse and any mental health disorder is critical to the optimal effectiveness of treatment for this population (Drake et al., 1993). Integrated interventions usually include (Jenner et al., 1998):

- ✓ comprehensive assessment for both mental health and substance use disorders
- ✓ determination of reasons for use of substances
- ✓ exploring expectancies of drug use
- ✓ education regarding substance effects
- ✓ monitoring mental health symptoms
- ✓ goal setting
- ✓ managing cravings
- ✓ alternatives to drug use
- ✓ psychiatric symptom management
- ✓ relapse prevention for both disorders.

In summary, the compromised resources of many sufferers of psychotic disorders leave them extremely vulnerable to the negative impact of substance abuse. Because psychotic symptoms tend to be exacerbated by emotional arousal, people with dual diagnosis are vulnerable to both the effects of problems generated by their substance use (eg. legal problems and loss of accommodation) and to the direct pharmacological effects of the substances on arousal. The overall effect is that this group tends to experience more severe problems from a lower level of substance use than does the general population.

If it is necessary to manage an ambulatory withdrawal in a person with a mental health disorder, special attention should be paid to the possibility of exacerbation

of psychiatric symptoms such as anxiety, depression or psychoses. For this reason if an ambulatory detoxification is the only available option, it is recommended that the general practitioner and a mental health clinician or community nurse share monitoring of the person's mental state. In this context, case conferencing and care planning are highly recommended to improve both short and long-term outcomes for these persons (see Davies (2000), "Substance abuse" and "Working with mental health services").

Personality disorders are over represented among people with a substance use disorder, so strategies to support and manage behaviour are useful.

APPENDIX 2

GUIDE TO THE USE OF THE WHO CRITERIA FOR DEPENDENCE CHECKLIST

1. Compulsion (Craving)

2. Impaired control

- Have you often found that when you start using (*substance*) you:
  - ended up using much more than you were planning to?
  - ended up using for much longer than you were planning to?
- Have you tried to cut down or stop using (*substance*)?
  - If Yes, did you ever actually stop using (*substance*) altogether?
  - How many times did you try to cut down or stop altogether?

3. Withdrawal

- Have you ever had any withdrawal symptoms (such as – *describe relevant symptoms for the substance*) when you cut down or stopped using (*substance*)?
- What symptoms did you have?
- Did you find yourself using (*substance*) to relieve withdrawal symptoms or stop yourself from getting them?

4. Tolerance

- Have you found that you needed to use a lot more (*substance*) in order to get the feeling you wanted than you did when you first started using it?
- Did you find that when you used the same amount, it had much less effect than before?

5. ***Prioritisation of substance use (salience)***

- Have you spent a lot of time obtaining or using (*substance*)?
- Have you had times when you would use (*substance*) so often that you started to use (*substance*) instead of working, spending time with family or friends, or engaging in other important activities?
- Establish if there are problems related to substance use
  - Did you keep on using anyway?

6. Continued use despite harm

- Did you find yourself carrying on using (*substance*) when you knew it was harming you?

(adapted from Saunders, Dore and Young, 2001)

APPENDIX 3

DSM-IV Diagnostic Criteria for Substance Dependence

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three or more of the following, occurring at any time in the same 12 month period:

1. Tolerance, as defined by either:
   a. a need for markedly increased amounts of the substance to achieve intoxication or the desired effect.
   b. markedly diminished effect with continued use of the same amount of the substance.

2. Withdrawal, as manifested by either of the following:
   a. A characteristic withdrawal syndrome
   b. The same or a closely related substance is used to relieve or avoid withdrawal symptoms

3. the substance is taken in larger amounts or for a longer period than intended.

4. there is a persistent desire or unsuccessful efforts to cut down or control substance use

5. a great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects.

6. important social, occupational or recreational activities are reduced or given up because of substance use.

7. substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

(Taken from the Guidelines for the Treatment of Alcohol Problems p.199. Commonwealth Department of Health and Ageing)

REFERRALS

Alcohol and Drug Information Service (**ADIS**)
Biala
270 Roma Street
Brisbane, Qld. 4000
Phone: **3236 2414**
1800 177 833 (outside of metropolitan area)
24 hour phone counselling, support, information and referral
Note: contact ADIS for information on rehabilitation services if needed or updated ATODS list

Drugs of Dependence Unit (Environmental Health)
Health and Welfare Building
69 George Street
Brisbane, Qld. 4000
Phone: **3896 3900** (Monday to Friday between 0815 – 1700 hours). Outside Brisbane, Queensland Health through the Public Health Unit Network can also provide similar information from local environmental health services.

Operates a confidential telephone enquiry service which allows medical practitioners to:

- ascertain a patient's known status in regards to drug dependence (for controlled drugs, in most cases)
- obtain information about the recent opioid prescriptions received by a patient
- obtain information about treatment facilities that are able to assess and treat patients who may be drug dependent. This includes patients who wish to cease using heroin and other illicit drugs
- obtain information about your legal obligations under the Health (Drugs and Poisons) Regulation 1996.

Hospital Alcohol and Drug Services (**HADS**)
Royal Brisbane Hospital
Herston Road
Herston, Qld. 4006
Phone: **3636 8704**

- referrals direct or via other agencies; medical detoxification for alcohol and/or other drugs
- assessments & admissions via Biala, RBH Department of Emergency or RBWH GB Psychiatric Assessment Unit

ZONAL & DISTRICT HEALTH ALCOHOL, TOBACCO & OTHER DRUG SERVICES
CONTACTS
As at 11/2002

DISTRICT HEALTH SERVICE	*PHONE/FAX*	*STREET ADDRESS*	*POSTAL ADDRESS*
Bayside	Ph: (07) 3240 8311 Fax: (07) 3821 4782	Bayside Alcohol, Tobacco and Other Drug Service Redlands Health Service Centre Weippin Road CLEVELAND QLD 4163	PO Box 585 CLEVELAND QLD 4163
Bundaberg	Ph: (07) 41502 740 Fax: (07) 4150 2729	Bundaberg Alcohol, Tobacco and Other Drug Services Bundaberg Base Hospital Bourbong Street BUNDABERG Q 4670	PO Box 34 BUNDABERG Q 4670
Cairns	Ph: (07) 40 503 900 Fax: (07) 40 514 151	Cairns Alcohol, Tobacco and Other Drug Service 31 Shields Street CAIRNS Q 4870	PO Box 1336 CAIRNS Q 4870
Central West	Ph: (07) 46 583 344 Fax: (07) 46 583 496 Mob: 0408 009 056	Central West Alcohol, Tobacco and Other Drug Services 18 Duck Street LONGREACH Q 4730	18 Duck Street LONGREACH Q 4730
Charleville	Ph: (07) 4654 1380 Fax(07) 4654 3298	Charleville Alcohol, Tobacco and Other Drug Services 2 Eyre Street CHARLEVILLE QLD 4470	PO Box 636 CHARLEVILLE QLD 4470
Cooktown	Ph: (07) 40695270 Fax: (07) 40695617	Alcohol & Drug Program Hope Street COOKTOWN Q 4871	PO Box 287 COOKTOWN Q 4871
Fraser Coast District Health Service	Ph: (07) 41 242 177 (Hervey Bay) (07) 4123 8733 (Maryborough) Fax: (07) 41 245 751	Fraser Coast Alcohol, Tobacco and Other Drug Services Bauer-Wiles Complex Community Health Neptune Street MARYBOROUGH QLD 4650	PO Box 301 Maryborough Q 4650
Gold Coast	Ph: (07) 55 718 777 Fax: (07) 55 718 505	Gold Coast Alcohol, Tobacco and Other Drug Services Ground Floor Quarters 1, Northside Clinic Gold Coast Hospital 108 Nerang Street SOUTHPORT Q 4215	Ground Floor Quarters 1, Northside Clinic Gold Coast Hospital 108 Nerang Street SOUTHPORT Q 4215
Gladstone	Ph: (07) 4976 3184 Fax: (07) 4976 3203	Gladstone Alcohol, Tobacco and Other Drug Services Park Street GLADSTONE Q 4680	PO Box 299 GLADSTONE Q 4680
Logan-Beaudesert	Ph: (07) 3299 8760 Fax: (07) 3209 3601	Logan/Beaudesert Alcohol, Tobacco and Other Drug Services Cnr Wembley and Ewing Roads LOGAN CENTRAL Q 4114	PO Box 240 LOGAN CENTRAL Q 4114
Mackay	Ph: (07) 49 683 858 Fax: (07) 49 683 857	Mackay Alcohol, Tobacco and Other Drug Services 12-14 Nelson Street MACKAY Q 4740	PO Box 688 MACKAY Q 4740

DISTRICT HEALTH SERVICE	*PHONE/FAX*	*STREET ADDRESS*	*POSTAL ADDRESS*
Mount Isa	Ph: (07) 47 447 102 Fax: (07) 47447 135	Mt Isa Alcohol, Tobacco and Other Drug Services 26-28 Camooweal Street MT ISA Q 4825	PO Box 2172 MT ISA Q 4825
Northern Downs	Ph: (07) 4662 8859 Fax:(07)4662 8424 Mob: 0407 132 527	Chinchilla Alcohol, Tobacco and Other Drug Services Slessar Street CHINCHILLA QLD 4413	PO Box 365 CHINCHILLA QLD 4413
Redcliffe-Caboolture	Ph: (07) 5433 83000 Fax: (07) 5433 7322	Redcliffe-Caboolture Alcohol, Tobacco and Other Drug Services McKean Street CABOOLTURE Q 4510	Caboolture Community Health Centre Locked Mail Bag No 1 CABOOLTURE Q 4510
Rockhampton	Ph: (07) 49 21 4 281 Fax: (07)49 214 279 Mobile: 0404 819 313	Rockhampton Alcohol, Tobacco and Other Drug Services District Support Unit 56 Alma Street ROCKHAMPTON Q 4700	PO Box 4041 Rockhampton Q 4700
Roma	Ph: (07) 46 222 277 Fax: (07) 46 224 706	Roma Alcohol, Tobacco and Other Drug Services 69 Arthur Street ROMA Q 4455	PO Box 1030 ROMA Q 4455
Royal Brisbane Hospital and District	Ph: (07) 3253 8377 Fax: (07) 3253 1862	Royal Brisbane Hospital Alcohol, Tobacco and Other Drug Services (HADS) Herston Road HERSTON Q 4029	Royal Brisbane Hospital Herston Road HERSTON Q 4029
South Burnett	Ph: (07) 41 629 220 Fax: (07) 41 629 380	Kingaroy Alcohol, Tobacco and Other Drug Services 116 Youngman Street KINGAROY Q 4610	PO Box 333 KINGAROY Q 4610
Southern Downs District Health Service	Ph: (07) 46 716 627 Fax: (07) 46 712827	Goondiwindi Health Service Bowen Street GOONDIWINDI Q 4390	PO Box 399 GOONDIWINDI Q 4390
Southern Public Health Unit Network	Ph: (07) 3810 1537 Mobile: 0404823697	West Moreton Public Health Unit, C/o Ipswich Hospital, Chelmsford Avenue IPSWICH Q 4305	PO Box 73 IPSWICH Q 4305
Sunshine Coast	Ph: (07)5470 6869 Fax: (07) 5470 6178	Sunshine Coast Alcohol, Tobacco and Other Drug Services C/- Nambour General Hospital Hospital Road NAMBOUR Q 4560	C/- Nambour General Hospital PO Box 547 NAMBOUR Q 4560
The Prince Charles Hospital and District	Ph: (07) 3238 4022 Fax: (07) 3236 2397	The Prince Charles Hospital Alcohol and Drug Services 270 Roma Street BRISBANE Q 4000	PO Box 8161 BRISBANE Q 4001
The QEII Hospital and District	Ph: (07) 3844 9222 Fax: (07) 3846 3345	QEII Hospital Alcohol and Drug Service 66 Peel Street SOUTH BRISBANE Q 4101	66 Peel Street South Brisbane Q 4101
Toowoomba	Ph: (07) 46 316 100 Fax: (07) 46 316 080	Toowoomba Alcohol, Tobacco & Other Drug Services Toowoomba Base Hospital TOOWOOMBA Q 4350	Private Bag Mail No 2 TOOWOOMBA Q 4350
Toowoomba	Ph: (07) 46 316 100 Fax: (07) 46 316 080	Toowoomba Alcohol, Tobacco & Other Drug Services 3 Bell Street TOOWOOMBA Q 4350	PO Box 1775 TOOWOOMBA Q 4350

DISTRICT HEALTH SERVICE	PHONE/FAX	STREET ADDRESS	POSTAL ADDRESS
Townsville	Ph: (07) 47 789 677 Fax: (07) 47 789 666	Townsville Alcohol, Tobacco & Other Drug Services 1st Floor 242 Walker Street TOWNSVILLE Q 4810	PO Box 5224 TOWNSVILLE Q 4810
Tropical Public Health Unit Network	Ph: (07) 49 683 957 Fax: (07) 49 683 857	Tropical Public Health Unit Network, Mackay Community Health Centre 12-14 Nelson St MACKAY Q 4740	PO Box 688 MACKAY Q 4740
West Moreton	Ph: (07) 3817 2501 Fax: (07) 3817 2355	West Moreton Alcohol, Tobacco and Other Drug Services Ipswich Health Plaza Bell Street IPSWICH QLD 4305	PO Box 878 IPSWICH Q 4305
West Moreton	Ph: (07) 3817 2501 Fax: (07) 3817 2355	West Moreton Alcohol, Tobacco and Other Drug Services Ipswich Health Plaza Bell Street IPSWICH QLD 4305	PO Box 878 IPSWICH Q 4305
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If there are suggestions, comments or variations to this protocol please make a note below and send this information to:

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