



Pharmacy's Little Helper

All you need to know about pharmacy
harm minimisation services in Queensland



The Pharmacy
Guild of Australia



Queensland
Government

The Pharmacy Guild of Australia,
Queensland Branch, thanks all who have
assisted in producing this information
booklet and associated materials.

Disclaimer

This booklet has been developed as a source of information
to assist pharmacists and pharmacy staff in the provision
of harm minimisation services in community pharmacies.

The Pharmacy Guild of Australia, Queensland Branch, has made
every effort to ensure that this booklet is free from errors and
that advice and information drawn upon has been provided
in good faith, at the time of publication.

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How to navigate this booklet

This book will be divided into four parts:

Section 1

Harm minimisation

Harm minimisation involves the identification of specific risks that arise from drug use and the implementation of strategies that aim to reduce preventable risk factors and encourage safer behaviours.

Section 2

Needle & Syringe Program (NSP)

Needle and syringe programs (NSPs) are a public health measure to reduce the potential transmission of blood-borne viruses (BBVs) amongst people who inject drugs (PWIDs) and provide a range of services that include the provision of sterile injecting equipment, education and information on ways to reduce drug-related harms and referral to drug treatment, medical care and legal and social services.

Section 3

Opioid Treatment Program (OTP)

In Australia, the OTP is an evidence-based strategy and the mainstay of opioid dependence management. The use of opioid treatment as replacement therapy is useful in managing addiction and maintaining abstinence and has also been shown to reduce harm and crime.

Section 4

Useful contacts and points of referral

The two significant harm minimisation programs in pharmacy are the:

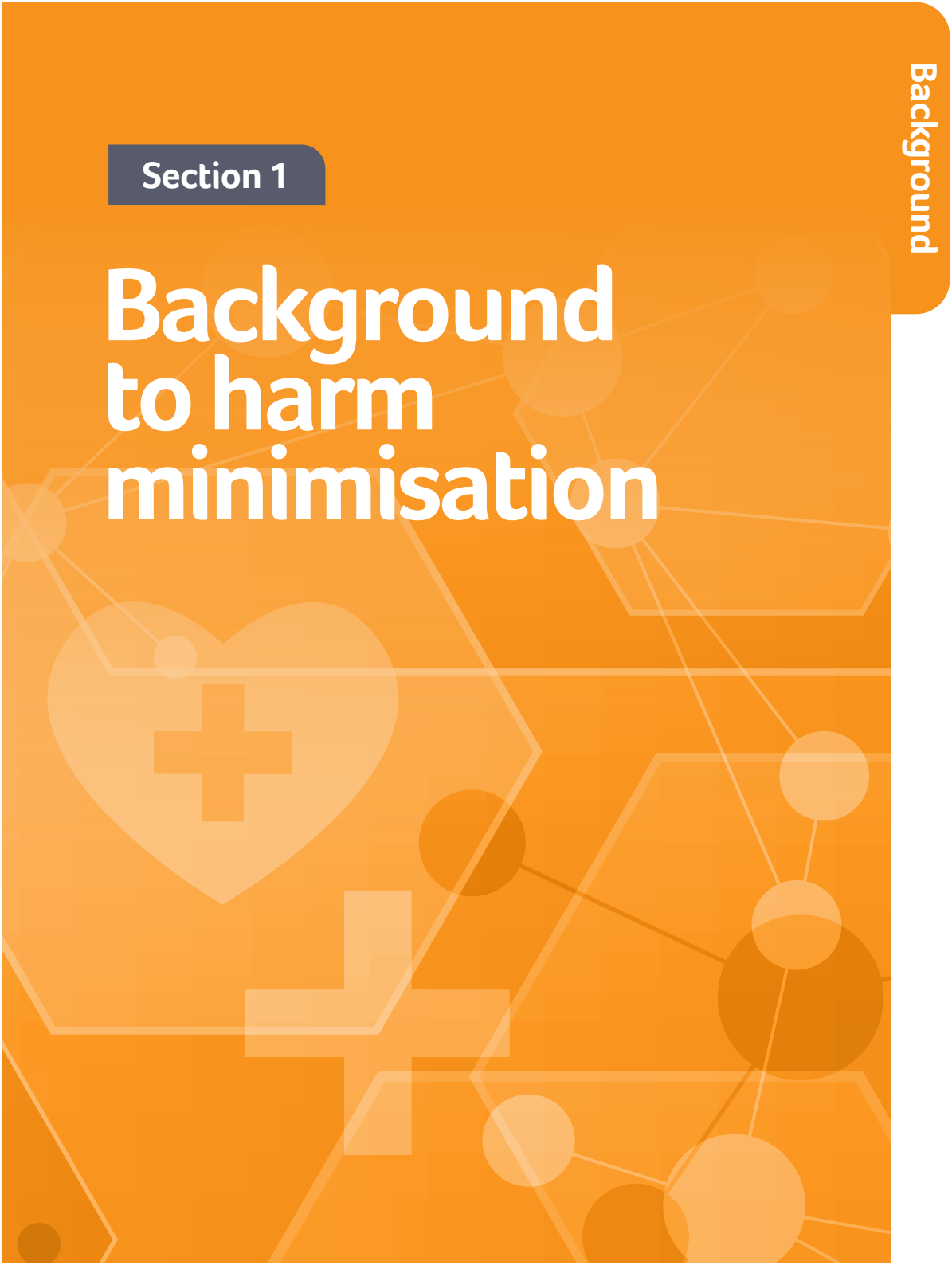
- Needle and Syringe Program (NSP) – please see [Section 2](#)
- Opioid Treatment Program (OTP) – please see [Section 3](#)

Abbreviations

Abbreviation	Acronym
ADIS	Alcohol & Drug Information Service
ALT	Alanine transaminase
ART	Antiretroviral
CNS	Central nervous system
CYP	Cytochrome P
DAA	Direct-acting antiviral
HBC	Hepatitis C virus
HBV	Hepatitis B virus
HIV	Human immunodeficiency virus
IGF	Insulin-like growth factors
MGF	Mechano growth factor
MSM	Men who have sex with men
NSP	Needle & syringe program
NSW	New South Wales
OTP	Opioid treatment program
PBS	Pharmaceutical Benefits Scheme
PEP	Post-exposure prophylaxis
PIEDs	Performance and image enhancing drugs
PNSP	Pharmacy Needle & Syringe Program
PrEP	Pre-exposure prophylaxis
PWID	People who inject drugs
QOTP	Queensland Opioid Treatment Program
RNA	Ribonucleic acid
SARMs	Selective androgen receptor modules
TAD	Takeaway dose
WADA	World Anti-Doping Agency
WFI	Water for injection

Section 1

Background to harm minimisation



Chapter 1

Harm minimisation

In 1985, Australia adopted a harm minimisation approach as part of the National Campaign Against Drug Abuse.¹ Currently in place is a 10-year framework that aims at reducing and preventing the harmful effects of alcohol, tobacco and other drugs – this framework is known as *The National Drug Strategy 2017–2026*.^{1,2}

The National Drug Strategy 2017–2026 focuses on three pillars of harm minimisation. These include demand reduction, supply reduction, and harm reduction.



What is harm minimisation?

There is not a universally accepted definition of harm minimisation.³ In Australia, *The National Drug Strategy 2017–2026* defines harm minimisation as strategies that identify specific risks that arise from drug use. Risks include those that affect the individual using the drugs, their family members and friends, and the broader community. Harm minimisation strategies aim to reduce preventable risk factors and encourage safer behaviours. Harm minimisation strategies can also contribute to a reduction in health and social inequalities among specific population groups.²

Harm minimisation strategies aim to:²

- Reduce risky behaviours
- Provide safer settings.

The defining feature of harm minimisation is the focus on the prevention of harm, rather than the prevention of drug use. Harm minimisation compliments other approaches that aim to prevent or reduce drug use. Harm minimisation recognises that many people who use drugs are unable or unwilling to stop at any given time.³

While harm minimisation is not intended to condone or promote the use of drugs, the strategy is designed to recognise that drug use does occur and provides services and support that aim to reduce the harm associated with drug use.

What is the aim of this resource?

This booklet aims to provide information that may assist in dispelling concerns around harm minimisation services, and acts as a reliable source of information for pharmacists and pharmacy staff to draw upon.

It informs pharmacists and pharmacy staff about the rationale, roles and responsibilities of delivering harm minimisation services in a pharmacy and will provide a resource to assist in delivering effective harm minimisation services and responding to common queries.

Who is this resource for?

This information manual has been developed with the following audiences in mind:

- Pharmacists
- Intern pharmacists
- Pharmacy staff
- Pharmacy students
- Health workers and other relevant stakeholders.

Chapter 2

Blood-borne viruses

A blood-borne virus (BBV) is a virus which is transmitted through infected blood or body fluids containing blood, from one individual to another. Such transfer of the virus from the infected person (host) to another uninfected individual is referred to as blood-to-blood contact. A major risk factor for BBV transmission is injecting drug use. The BBVs of relevance are the Human Immunodeficiency Virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV).



BBVs are viruses that are carried in the blood and are spread from one person to another. BBVs can be transmitted through infected blood, exposure to contaminated blood products, sharing injecting equipment (needles and syringes), failures in infection control in healthcare, mother to child transmission, and unsafe tattooing or body piercing practices.⁴

Principles of transmission

The principles of transmission describe step by step what is necessary for a BBV to be transmitted from one individual to another.

The BBV must:

- Exit the body of an infected source
- Contain sufficient quantities of the virus to successfully transmit
- Survive in the environment and
- Enter the bloodstream of another person.

Human immunodeficiency virus (HIV/AIDS)

HIV is a virus that attacks the body's immune system, specifically the CD4 T cells.⁵ The attack on the body's immune system by HIV leads to a weakened immune system and an impaired ability to fight infections.⁵ Left untreated, HIV reduces the number of CD4 cells in the body, causing the individual to be more susceptible to infections or infection-related cancers.⁵ Over time, HIV destroys so many CD4 cells such that the individual can no longer fight off opportunistic infections and cancers. At this stage, the individual is deemed to have Acquired Immunodeficiency Syndrome (AIDS) – this signals the most advanced stage of HIV infection.⁵

Transmission

HIV can be spread⁶⁻⁸ when blood, semen or vaginal fluid from an infected person enters the body of another person. This can happen through:

- Unsafe sex with someone who is HIV-positive (sex without condoms and/or HIV-positive person not taking HIV treatment and HIV-negative person is not taking preventative treatment)
- Sharing needles, syringes and injecting equipment contaminated with blood or an accidental injury with a contaminated needle or other sharp objects
- Procedures involving unsterile cutting or piercing
- HIV infected donated blood and blood products.*

HIV can also be transmitted to the babies of mothers who are HIV-positive during pregnancy, birth or when breast-feeding (vertical transmission).

** Please note that all blood, organs, tissues and semen donated in Australia is screened for HIV. The risk of getting HIV from these products in Australia is extremely low.⁸*

Testing

Testing for HIV can occur via:⁹

- Laboratory based tests (blood test)
- Point of care rapid testing (finger prick test or oral fluid)*
- HIV self-testing (finger prick test).*

** Please note that diagnosis can only occur after a confirmatory laboratory test for reactive results.⁹*

Prevention and management of HIV

Currently, there is no vaccine or cure for HIV.

Preventative measures for HIV include safe sex practices, the use of sterile injecting equipment, and pharmaceutical measures to reduce transmission and contraction such as pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP). The use of personal protective equipment (e.g. gloves) is advised when giving someone first aid or cleaning up blood and body fluids.

Pre-exposure prophylaxis (PrEP)

PrEP is an antiviral therapy (ART) that is taken by individuals who are HIV-negative as a preventative to significantly reduce the chance of contracting HIV.¹⁰ PrEP contains the co-formulation of tenofovir and emtricitabine.¹⁰ The daily administration of PrEP, used continuously or for shorter periods of time, is recommended as a key HIV-prevention option for men who have sex with men (MSM), transgender men and women, heterosexual men and women, and people who inject drugs (PWID) at substantial risk of HIV acquisition.¹⁰ It is advisable to supply information on safe injecting practices for PWIDs who have been prescribed PrEP.

Post-exposure prophylaxis (PEP)

PEP is an antiviral therapy given to an individual who has been exposed to HIV (e.g. unsafe sex). It is advised that PEP be prescribed and initiated as soon as possible after the exposure, within 72 hours.¹¹ PEP should generally not be prescribed after 72 hours, but may be considered on a case-by-case basis in consultation with a specialist.¹¹

Treatment

Treatment now exists for those living with HIV. The primary goals of treatment are to restore and preserve immune function and improve the length and quality of life through:¹²

- Maximally and durably suppressing plasma HIV viral load
- Reducing HIV-associated morbidity and prolong the duration and quality of survival
- Restoring and preserving immunological function
- Preventing HIV transmission.

The treatment is a combination of (at least three) antiretroviral medications, to be taken long-term. The advantages of combination ART using three medications helps reduce mortality, opportunistic infections, and hospital admissions.¹² These treatments are available on the Pharmaceutical Benefits Scheme (PBS).

Research has now established that people who take ART daily as prescribed, and who achieve and maintain an undetectable viral load (the amount of HIV in the blood), cannot sexually transmit the virus to others.^{13, 14} This is deemed as: Undetectable = Untransmittable (U=U).^{13, 14}

Viral hepatitis

Viral hepatitis refers to an infection that causes liver inflammation (swelling that occurs when tissues of the body are infected or injured) and damage.¹⁵ The liver is involved in a range of functions, such as digestion and processing and distribution of nutrients.¹⁶ The hepatitis infections of interest in this booklet are viral hepatitis B and viral hepatitis C—the viruses that cause these hepatitis infections are referred to as HBV (hepatitis B virus) and HCV (hepatitis C virus).¹⁵

Hepatitis B

Hepatitis B is a liver infection caused by the HBV.¹⁷ The HBV enters the body and travels to the liver via the bloodstream. In the liver, the virus attaches to healthy liver cells and multiplies.¹⁸ This replication of the virus then triggers a response from the body's immune system. People are often unaware they have been infected with hepatitis B at this stage.¹⁸

The liver is the main site of HBV multiplication. Hepatitis B infection can lead to cirrhosis (scarring of the liver), liver cancer, or liver failure if it is not diagnosed and managed appropriately.

Hepatitis B infection is considered to be “acute” during the first six months after infection.¹⁸ An individual is usually considered to have “chronic” hepatitis B if the HBV tests are positive more than six months after initial infection, infection can last a lifetime.¹⁸

Viral hepatitis B results in inflammation of the liver which can cause an acute hepatitis B infection and some patients can become chronically infected.¹⁸ Chronic hepatitis B can lead to cirrhosis, cancers and death.

There is a vaccine available to prevent the spread of hepatitis B.

Transmission

Hepatitis B is most commonly spread through:^{19, 20}

- Sexual contact
- Sharing of injecting equipment
- Needle stick injuries in a health care setting
- Reuse of unsterilised or inadequately sterilised needles
- Child-to-child transmission through contact (e.g. biting)
- Sharing personal items (e.g. razors, toothbrushes, or hair and nail clippers)
- Mother-to-baby – though it is to be noted that the National Immunisation Program has significantly reduced this risk through the administration of the vaccine within 12 hours of birth
- Contaminated blood transfusions and blood products, medical or dental equipment.*

** Please note that all blood, organs, tissues and semen donated in Australia is screened for HBV. The risk of getting HBV from these products in Australia is extremely low.^{8, 20}*

Hepatitis B is not spread by:

- Sneezing or coughing
- Holding or shaking hands
- Kissing on the cheek, or dry lip kissing
- Eating food prepared by an individual living with HBV
- Working with an individual living with HBV
- Playing with a child living with HBV
- Sweat.

Prevention

Preventative measures for hepatitis B include vaccination, safe sex practices, the use of sterile injecting equipment and avoiding sharing of personal items. The use of personal protective equipment (e.g. gloves) is advised when giving someone first aid or cleaning up blood and body fluids.²⁰

Testing

Many people with hepatitis B have no signs of illness and thus, are not aware that they have hepatitis B.²¹ Hepatitis B is diagnosed through various blood tests, which look for markers of the HBV in the blood (e.g. HBV antigen, antibody). Other test results may indicate some liver damage and prompt the doctor to suggest a test for hepatitis B.²¹ These tests may also be conducted once a person is diagnosed to help identify changes in liver function and support decisions regarding the timing of treatment.²¹

Vaccination

Hepatitis B can be prevented with a safe and effective vaccine available since 1982.²² In Australia, the hepatitis B vaccination program commenced in 1988, targeting groups at particularly high risk of infection. Please refer to the Australian Immunisation Handbook for recommendations on vaccination schedule for particular population groups.²³ The hepatitis B vaccine is usually administered in a 3-dose schedule (0, 1, 6 months).²³ It is now recommended that all babies and adolescents be vaccinated against hepatitis B.²² Adolescents aged 11–15 years can receive an alternative 2-dose schedule at 0 and 6 months.²³

Treatment

Treatment for hepatitis B is used to manage the effects of the infection, but is not a cure.²⁴

Treatment aims are to stop the HBV from multiplying, or to reduce the rate of multiplication as much as possible.²⁴ This decreases the risk of serious liver disease developing later in life and makes it possible for the liver to repair some of the damage and improve function.²⁴

For those with acute hepatitis B, treatment is mostly supportive; however antiviral therapy may be indicated in some cases.

Hepatitis B treatment is suitable for people who are classified as being in a particular stage of hepatitis B infection, which is characterised by:²⁴

- Increased virus activity and liver inflammation demonstrated by elevated liver enzymes (e.g. alanine transaminase (ALT))
- Inflammation and activity in the liver as seen in the results of a liver biopsy
- High levels of HBV DNA in the blood.

In general, people who are chronically infected but do not have any signs of current liver damage will not need treatment.²⁴ However, it is important to closely monitor liver health with regular (6 monthly) liver function tests.²⁴ When a person has signs of liver damage they should consider having treatment for hepatitis B.²⁴

The decision on when to start treatment is complex.²⁴ Under the PBS, several antiviral medications are available for the treatment of hepatitis B.²⁴ Pegylated interferon may sometimes be used as necessary but is associated with many potential side effects but can control the HBV in a third of patients without need for long-term medication.²⁴

Hepatitis C

Hepatitis C is caused by the HCV and results in liver infection, inflammation and damage.^{25, 26}

The first 6–12 months of infection is called the “acute phase” – a period when the body’s immune system is combating the virus.²⁵ Many people do not feel unwell at this stage.^{25, 26}

Approximately 25% of people infected with HCV will eliminate the virus naturally.²⁵ However, HCV infection is usually life-long for the majority of individuals, unless treated.²⁵

Chronic infection by HCV usually involves ongoing liver inflammation.²⁵ Continuing liver damage may result in cirrhosis (scarring of the liver). Long-term cirrhosis may lead to liver failure and cancer.²⁵ The outcome of a HCV infection will depend on alcohol intake, age when hepatitis C was acquired and the level of liver inflammation.²⁵

Transmission

Hepatitis C is most commonly spread through:^{25, 26}

- Sexual contact*
- Sharing of injecting equipment
- Needle stick injuries in a health care setting
- Reuse of unsterilised or inadequately sterilised needles
- Sharing personal items (e.g. razors, toothbrushes, or hair and nail clippers)
- Mother-to-baby
- Contaminated blood transfusions and blood products, medical or dental equipment.†

** The rate of transmission of HCV is very low in this manner. However the risk is increased with certain sexual practices in circumstances where there is a possibility of blood-to-blood contact or anorectal fluid-to-blood contact.²⁶*

† Please note that all blood, organs, tissues and semen donated in Australia is screened for HCV. The risk of getting HCV from these products in Australia is extremely low.^{8, 20}

Hepatitis C is not spread by:²⁶

- Sneezing or coughing
- Holding or shaking hands
- Kissing on the cheek, or dry lip kissing
- Eating food prepared by an individual living with HCV
- Working with an individual living with HCV
- Playing with a child living with HCV
- Sweat.

Prevention

Preventative measures for hepatitis C include safe sex practices (hepatitis C is not usually considered a sexually transmissible infection²⁶), the use of sterile injecting equipment, and avoiding the sharing of personal items.²⁷ The use of personal protective equipment (e.g. gloves) is advised when giving someone first aid or cleaning up blood and body fluids.²⁷

Testing

Hepatitis C is diagnosed through various blood tests, which look for markers of the HCV in the blood (e.g. HCV antigen, antibody). Other test results may indicate some liver damage and prompt the doctor to suggest a test for hepatitis C.²¹ These tests may also be conducted once a person is diagnosed to help identify changes in liver function and support decisions regarding the timing of treatment.²¹

Vaccination

There is no vaccine available against hepatitis C.

Treatment

Hepatitis C is now a treatable and curable condition. Since March 2016, a range of new medicines known as direct-acting antivirals (DAAs) have become available on the PBS.²⁸ DAAs offer a cure for most people living with HCV and have relatively few or no side effects and may be prescribed by a general practitioner, specialist or authorised practitioner.²⁸ Treatment with DAAs will depend on the HCV genotype (strain), presence of cirrhosis, prior treatment and other existing health conditions.²⁸

DAA agents that target multiple steps in the HCV replication life cycle have been developed and are highly effective, safe and require a short treatment duration.²⁹ Some DAAs are able to treat all genotypes of HCV, while some are suitable for particular genotypes.²⁸ The treatment for HCV will continue to evolve as newer agents come onto the market.²⁹

Treatment with DAA offers many advantages over conventional therapy, these include:²⁸

- Shorter treatment duration lasting for a period of 8–12 weeks (up to 24 weeks for those with liver damage)
- Fewer side effects and better tolerance
- Oral formulations
- Cure rate of above 95%.

The goal of Hepatitis C treatment is cure – defined as undetectable plasma HCV ribonucleic acid (RNA) at least 12 weeks after treatment has ceased.^{28, 29} It is important to note that the treatment and cure of hepatitis C does not prevent reinfection. Therefore, those cured of hepatitis C can reacquire the virus and require new treatment.

Cure

Curing hepatitis C has many benefits. These include improved quality of life for the individual, loss of infectivity, reduction in liver disease and reduction in other complications of chronic hepatitis C.²⁹

Chapter 3

Illicit drug use

This section aims to provide information about commonly used illicit drugs in Australia. For the purpose of this booklet, illicit drugs refer to illegal drugs and legal drugs that can be misused. The following information is to be used as a guide only. Drug use and effects are different for everyone – the individual, the environment and the drug all having an impact.



Who uses drugs?

Everyone uses drugs in one form or another. Many daily indulgences and products are actually drugs. These may include chemicals or substances such as nicotine, caffeine alcohol, cannabis, heroin and methamphetamine. The legal classification of a substance often determines how society views it (e.g. licit versus illicit).

Why do people use drugs?

People use drugs for a variety of reasons: for relaxation and enjoyment, to be part of a group, and to avoid or lessen physical and/or psychological pain.³⁰ Others may experiment out of a sense of curiosity, excitement or rebellion.³⁰ Alcohol and other drugs may also be used as a coping mechanism, to avoid certain feelings, to relieve stress, or to overcome boredom.³⁰ When the reasons people choose to use drugs are considered, it is important to bear in mind that drug use can be a different experience for everyone. For example, consider someone who has an alcoholic drink after work to relax compared with someone else who has an alcoholic drink after work to enhance a good feeling.

Drugs are used in different situations and frequencies, and for different reasons, depending on the individual and at the specific point in their life.³⁰ People can move between categories, one stage will not inevitably lead to another, and there is no clearly defined start or end stage. The majority of people who use drugs do not become dependent or develop serious problems as a result.³⁰ It is important to remember that the vast majority of people who drink alcohol or use legal or illegal drugs do not become dependent on any of these substances.³⁰

People choose a particular drug mainly for the feelings they get as a result of using them.³⁰ For example, people may use codeine to relieve pain; drink alcohol to relax and relieve stress; take amphetamines to increase energy; or use hallucinogens to alter their perception.³¹ Using one drug does not necessarily lead people to trying other drugs.³⁰

The next chapter considers a range of drugs, where they come from, how they are used and their effects, withdrawal and the effects of an overdose. The drugs listed mainly focus on drugs that can be injected but is not an exhaustive list of all drugs (illicit or misused pharmaceutical drugs). Drug use patterns change over time, as do the colloquial terms used for drugs.

Amphetamine type substances (ATS)

Class and origin

ATS are central nervous system (CNS) stimulants.³⁰ ATS are synthetic substances and are weakly basic in nature.³² ATS include key substances such as amphetamine (e.g. “speed”) and methamphetamine (e.g. “ice” – a more potent form of crystal methamphetamine³³).³⁴ Amphetamines are structurally similar to endogenous dopamine and noradrenaline and exist as a chiral molecule.³² Methamphetamines only differ from amphetamines in the addition of a methyl group on the chain.³² ATS also include substances such as methcathinone, fenetylline, ephedrine, pseudoephedrine, methylphenidate and MDMA (sometimes known as “Ecstasy” – an ATS derivative with hallucinogenic properties).³⁴

ATS may be in the form of powder, tablets, crystals or capsules.^{30,35} ATS powder can range in colour from white through to brown, sometimes it may have traces of grey or pink. It has a strong smell and bitter taste.³⁰ Methamphetamine, particularly in the crystalline form of the drug, is often sold in points (approximately 0.1 grams).³⁵ The powder form of the drug is also sold in larger quantities (half-grams, grams) and is typically diluted with adulterants (e.g. glucose or sucrose), resulting in lower purity.³⁵

ATS inhibit dopamine metabolism and reuptake, and increase the release of noradrenaline and serotonin.³² ATS are metabolised by liver enzymes, including CYP450 2D6.³²

The use of ATS is a global and growing phenomenon.³⁴ In recent years, there has been a pronounced increase in the production and use of ATS worldwide.³⁴ Younger people, in particular, seem to possess a skewed sense of safety about the substances believing rather erroneously that the substances are safe and benign.³⁴

ATS and the law

In Australia, the use of methamphetamine is against the law and the use of amphetamine is restricted.^{33,36} Federal and state laws provide penalties for possessing, using, making, selling, importing or exporting, and driving under the influence of amphetamine and methamphetamine.³³ The importation or exportation and the procuring of precursor drugs (e.g. pseudoephedrine) with the intention of manufacturing a Schedule 8 (Controlled Drug), is also illegal.³³ Laws have been introduced that prevent the sale and possession of ATS paraphernalia in some states and territories.³³

ATS continues to be the fastest growing illicit drug market in Queensland.³⁷ There has been a change from the use of methamphetamine in powder form to crystal form (ice).³⁷ There has also been a shift away from clandestine domestic production (which previously accounted for most methamphetamine on the Queensland market) to importations of high-purity final product (crystal methamphetamine) from overseas.³⁷

It is generally believed that most of the crystalline methamphetamine available in Australia is imported from China and other locations in the Asia-Pacific region.³⁸ Most of the methamphetamine available in Australia is produced domestically in clandestine chemical laboratories.³⁸ Methamphetamine distribution mainly occurs through social networks of drug users and word-of-mouth (like a pyramid or multi-level marketing scheme). The majority of methamphetamine users have more than one dealer.³⁸

Administration

ATS are generally administered orally, intranasally (inhaled, smoked and snorted) or intravenously (injected).^{30, 32, 34, 39} It is important to note that there is no safe level of use.³⁹

Effects on the body

ATS affect everyone differently, based on:^{32, 36, 39}

- Size, weight and health of the individual
- Whether the person is used to taking it
- Whether other drugs are taken around the same time
- The amount taken (dose)
- The strength of the drug (varies from batch to batch with illegally produced drugs).

Short-term effects of ATS include:^{35, 36, 39, 40}

- Increased energy
- A sense of euphoria and wellbeing, increased attention and alertness
- Increased talkativeness
- Increased heart rate, breathing and body temperature
- Decreased appetite
- Jaw clenching and teeth grinding
- Nausea and vomiting
- Dry mouth
- Changes in libido
- Nervousness, anxiety and paranoia.

The consumption of large quantities of ATS can intensify some of the abovementioned effects.⁴⁰ High doses may lead to aggression, hostility and violent behaviour.

Long-term effects may include:

- Agitation or aggression
- Decreased motivation
- Depression and anxiety
- Poor concentration and memory
- Psychotic symptoms (e.g. paranoia, auditory and visual hallucinations, compulsive behaviour, panic state)
- Disturbed sleep
- Weight loss
- Chest pains.

Withdrawal effects may include:⁴⁰

- Paranoia, confusion, hallucinations
- Headache
- Increased appetite
- Nausea
- Stomach cramps
- Irritation, mood swings, depression, restlessness, lethargy
- Increased heartrate
- Hot and cold flushes.

Several toxic reactions can follow the use of ATS. ATS toxicity is often called methamphetamine overdose, but it can occur with relatively small doses, especially in combination with other drugs or when there are pre-existing medical conditions.⁴⁰

Symptoms of methamphetamine toxicity may include:^{36, 40}

- Nausea and vomiting
- Chest pain
- Tremors
- Increased body temperature and heart rate
- Seizures
- Extreme paranoia, anxiety, panic and agitation
- Hallucinations and delirium.

Withdrawal

Some frequently reported withdrawal symptoms of ATS include:^{36, 41}

- Irritability
- Aches and pains
- Depression
- Impaired social functioning.

These symptoms may persist for between five days to three weeks.

Overdose

Any person who abuses amphetamines is in danger of an amphetamine overdose. Symptoms and signs may include dry mouth, dilated pupil, tachypnoea, chest pain, increased alertness and energy, aggression, agitation, chest pain, hyperthermia, palpitations, confusion and gross psychosis with paranoia.⁴²

Opioids

Class and origin

Opioids refers to a class of synthetic and natural chemicals or drugs that are derived from or related to the opium poppy.⁴⁰ The term “opiates” refers to a subset of opioids, which are naturally derived from the opium poppy plant, rather than synthetic substances.⁴⁰ Opioids act on the opioid receptors in the CNS⁴⁰ to cause slowing of breathing and heart rate.⁴³ An overdose, or even death, can occur if breathing and heart rate slows or stops.⁴³ Opioid receptors also stimulate the release of dopamine, which leads to sensations of pleasure and pain relief.⁴³

Opioids include a range of substances, such as codeine, fentanyl, morphine, oxycodone, buprenorphine, methadone and heroin.^{43, 44}

Administration

Depending on the substance, opioids may be administered orally, or intravenously. It is important to note that there is no safe level of use.⁴⁵

Effects on the body

Opioids affect everyone differently, based on:⁴³

- The size, weight and health of the individual
- Whether the person is used to taking it
- Whether other drugs are taken around the same time
- The amount taken (dose)
- The strength of the drug (varies from batch to batch with illegally produced drugs).

The effects of opioids include:⁴³

- Extreme relaxation
- Drowsiness and clumsiness
- Confusion, slurred speech
- Slow breathing and heartbeat.

If a large dose is consumed, the following symptoms may develop:⁴³

- Cold, clammy skin
- Slow breathing
- Blue lips and fingertips
- Falling asleep
- Death by respiratory depression.

Short-term effects include:⁴⁶

- Small pupils
- Slurred and slow speech
- Slow breathing
- Decreased heart rate or palpitations
- Sweating
- Cold clammy skin
- Itchiness
- Drowsiness
- Dizziness
- Confusion
- Nausea/vomiting
- Abdominal pain
- Constipation
- Difficulty urinating.

Long-term effects include:^{43, 46}

- Increased tolerance
- Constipation
- Dependence
- Reduced libido
- Irregular menstruation and fertility issues
- Decreased appetite
- Decreased motivation
- Mood swings
- Damage to vital organs such as the lungs, brain and heart.

The use of opioids with other drugs may be dangerous and is not recommended. The combination of opioids with other CNS depressants (e.g. alcohol, cannabis, benzodiazepines) will slow breathing and brain activity and increase the risk of overdose.⁴³ The concurrent use of opioids with a CNS stimulant (e.g. ATS) may cause strain on the heart, kidneys and increase the risk of overdose.⁴³

Withdrawal

Withdrawal symptoms are similar for all opioids, but will vary in severity and duration depending on the opioid taken.⁴⁷ Withdrawal symptoms are unpleasant but are rarely life-threatening, provided that adequate hydration and electrolyte balance is maintained.⁴⁷ Symptoms include:⁴⁷

- Lacrimation, rhinorrhoea and sneezing
- Yawning
- Hot and cold flushes, sweating and piloerection
- Craving
- Anxiety, restlessness and irritability
- Disturbed sleep
- Gastrointestinal tract symptoms (e.g. anorexia, abdominal pain, nausea, vomiting and diarrhoea)
- Muscle, bone and joint aches and pains, headache, muscle cramps
- Tremor.

Overdose

Opioid overdose (fatal and non-fatal) is often related to polydrug use (particularly using alcohol or benzodiazepines in conjunction with opioids) or as a result of a reduction in tolerance following a break in use.

Signs of an opioid overdose may include:⁴⁶

- Very slow breathing and/or gurgling sounds
- Slow heart rate
- Low body temperature
- Muscle twitching
- Cold clammy skin
- Blue lips and fingertips
- Skin with a bluish tinge
- Vomiting
- Confusion
- Drowsiness
- Loss of consciousness.

The treatment for an opioid overdose is administration of naloxone.⁴⁸ Naloxone works by competitively blocking opioids from binding to opioid receptor sites in the CNS,⁴⁸ thus reversing the effects of the opioid (e.g. slowed breathing and heart rate). Naloxone is short-acting, non-addictive and administered by injection into the thigh muscle, or via a nasal spray.⁴⁵ Naloxone can reverse opioid overdoses within minutes.⁴⁸ Naloxone is only useful to reverse opioid overdoses and will not affect overdoses due to alcohol, benzodiazepines, stimulants or other non-opioid based substances.⁴⁸ For further information on naloxone, please see section [Naloxone](#).

In February 2016, naloxone became available as an over the counter drug as a Schedule 3 (Pharmacist Only) medicine and is now readily available in community pharmacy.⁴⁹ Naloxone is recommended for anyone using opioids.⁴⁵

The below discusses some commonly injected opioids. Please note, methadone is often injected when diverted but is discussed in section [Methadone hydrochloride](#).

Heroin

In Australia, heroin may come in the form of a fine white powder, off-white coarse granule or small pieces of light brown powder or rock.^{40, 45, 50} Heroin is highly addictive and is not prescribed for any medical purpose.⁴⁰ The white powder from South-East Asia is soluble in water, and more readily used for injection.⁴⁰ It is normally cut (combined) with other substances, typically sugar or caffeine. The brown powder from South-West Asia is insoluble in water, so it is less amenable to injecting.⁴⁰

Heroin and the law

Federal and state laws provide penalties for possessing, using, making or selling heroin, or driving under the influence.⁵⁰

Australia's geographic isolation, and the costs and complexities associated with importing heroin into Australia, contribute to the relatively high price of heroin in Australia compared to other international markets.⁵¹ The heroin market in Queensland is small and remains concentrated in pockets of south-east Queensland, with the majority of heroin seizures occurring in the greater Brisbane region.⁵¹ Very little heroin is available outside the south-east corner of Queensland.⁵¹ Opioid pharmaceuticals (e.g. oxycodone, fentanyl and morphine) are often used as substitutes in areas of the state where there is a lack of heroin.⁵¹

Administration

Heroin is commonly injected and may also be heated and the vapours inhaled.⁴⁰ It may also be smoked, by being added to cigarettes and cannabis, or snorted.⁵⁰ The effects of heroin are usually felt immediately, but may take up to 10–15 minutes if snorted.⁵⁰

Effects on the body

Please refer to the section [Opioids](#) for the effects of heroin.

There is no safe use of heroin. When combined with other drugs or substances, its effects can be unpredictable and dangerous. Concurrent use of heroin with a CNS stimulant (e.g. ATS) can cause strain on the heart and kidneys and increase the risk of an overdose. When combined with a CNS depressant (e.g. alcohol, cannabis, benzodiazepine), breathing may be slowed or stopped.⁵⁰

Pharmaceutical opioids

Pharmaceutical non-medical use refers to the consumption of a prescription or over-the-counter drug for non-therapeutic purposes or other than directed by a registered healthcare professional.⁴⁴ There has been an increase in the misuse of pharmaceutical opioids over the last few years.⁴⁴

Data from the National Drug Strategy Household Survey 2016, shows that pharmaceutical opioids were the most common pharmaceutical used for non-medical purposes (3.6%).⁴⁴ Numerous pharmaceutical opioids are misused for non-medical purpose in Australia; these include morphine, oxycodone, buprenorphine, buprenorphine/naloxone and fentanyl.^{40, 44} Morphine, oxycodone and fentanyl will be discussed in greater detail in section [Oxycodone](#) and section [Fentanyl](#). Doctor shopping and diversion via family and friends with legitimate prescriptions are the most common methods for obtaining pharmaceutical opioids for misuse.⁵²

Morphine

Morphine is used for the management of chronic moderate-to-severe pain, or as an adjunct during general anaesthesia.^{48, 53} Morphine is the precursor to other opioids (e.g. codeine, fentanyl, methadone, oxycodone).⁵⁴ The misuse of morphine is common in Australia.⁵³ In some cases, morphine is used as a substitute for illicit heroin, particularly in areas where heroin is not readily available.⁵³

In Australia, morphine is available as tablets, capsules, liquid and injections.⁴⁸

Morphine and the law

In Queensland, prescribers must follow state legislation when prescribing morphine and must notify the appropriate health authority.⁵⁵ The use of morphine without a prescription from a doctor, or the selling or giving of prescription morphine to someone else, is illegal.

Administration

Morphine is usually swallowed or injected.⁴⁸

Effects on the body

Please refer to section [Opioids](#) for the effects of morphine.

There is no safe use of morphine except under the direction of a doctor. Morphine has a prolonged duration of action and cumulative effects in people with liver and renal disease.⁵⁶

When combined with other drugs or substances, its effects can be unpredictable and dangerous. Concurrent use of morphine with certain classes of medications (e.g. tricyclic antidepressants, beta blockers, CNS depressants) can increase the CNS depressant effects of morphine.⁵⁶ Morphine can also enhance the neuromuscular blocking effects of skeletal muscle relaxants (e.g. baclofen).⁵⁶ Combined use of morphine with cimetidine can cause apnoea, significant reduction in respiratory rate and grand-mal seizures.⁵⁶ Morphine can also affect the action of diuretics as it stimulates the release of anti-diuretic hormone, causing spasm of the bladder sphincter which can lead to acute retention of urine.⁵⁶

Withdrawal of morphine should be undertaken gradually. Abrupt withdrawal in patients who are physically dependent may precipitate an acute withdrawal syndrome.⁵⁶

Oxycodone

Oxycodone is commonly used to relieve severe pain. As a Schedule 8 (Controlled Drug) medication, oxycodone comes in a number of forms including capsules, tablets, liquid and suppositories, in a variety of strengths.⁵⁷

Oxycodone and the law

In Queensland, prescribers must follow state legislation when prescribing oxycodone and must notify the appropriate health authority.⁵⁷ The use of oxycodone without a prescription from a doctor, or selling or giving them to someone else, is illegal. There are also laws against forging or altering a prescription, or making false representation, to obtain oxycodone, or a prescription for oxycodone, from a health professional.⁵⁷

Administration

Oxycodone is usually swallowed but is sometimes injected or used as a suppository.⁴⁸

Effects on the body

Please refer to section [Opioids](#) on the effects of oxycodone.

There is no safe use of oxycodone except under the direction of a doctor. When combined with other drugs/substances, its effects can be unpredictable and dangerous. Concurrent use of oxycodone with alcohol can increase confusion, clumsiness and difficulty in breathing.⁵⁷ When used with certain antidepressants (e.g. monoamine oxidase inhibitor), delirium, convulsions, respiratory failure, coma and death can occur.⁵⁷

Fentanyl

Fentanyl is a very strong opioid for the management of acute or chronic pain – it is about 80–100 times stronger than morphine.⁵⁵ As a Schedule 8 (Controlled Drug) medication, fentanyl is available as a transdermal patch, lozenge/lollipop and intravenous injection.^{48, 55}

Fentanyl and the law

In Queensland, prescribers must follow state legislation when prescribing fentanyl and must notify the appropriate health authority.⁵⁵ The use of fentanyl without a prescription from a doctor, or the selling or giving of prescription fentanyl to someone else, is illegal.⁵⁵ There are also laws against forging or altering a prescription, or making false representation, to obtain fentanyl, or a prescription for fentanyl, from a health professional.⁵⁵

Administration

Fentanyl can be illegally extracted from fentanyl transdermal patches and injected. This is dangerous as it is extremely hard to judge the strength of the fentanyl extracted (dose size).⁵⁵ Fentanyl can be diverted and occurs when medication prescribed by a medical professional is not used appropriately, or is given or sold to a third party.⁵⁵

Prescribed fentanyl can be diverted when individuals:⁵⁵

- Obtain medication inappropriately through their profession (e.g. healthcare professionals)
- Use their own prescribed medication recreationally for a non-medically intended purpose
- Use medication prescribed to another person.

Fentanyl is sometimes mixed with other drugs to increase potency.

Illicitly manufactured fentanyl can be:

- A stand-alone product
- A low-cost additive to increase the potency of other illicit drugs such as heroin
- Sold as counterfeit medicines.

Effects on the body

Please refer to section [Opioids](#) for the effects of fentanyl.

There is no safe use of fentanyl except under the direction of a doctor. When combined with other drugs or substances, its effects can be unpredictable and dangerous. Concurrent use of fentanyl with alcohol can increase adverse effects and increase the risk of respiratory depression and overdose.⁵⁵ Combined use of fentanyl with certain antidepressants (e.g. monoamine oxidase inhibitors) can result in severe unpredictable reactions.⁵⁵ The use of fentanyl with benzodiazepines may cause additive sedative effects and suppress breathing.⁵⁵

Performance & image enhancing drugs (PIEDs)

Class and origin

PIEDs are substances used with the intention of changing the user's physical appearance and enhancing sporting performance.⁵⁸ Due to improved self-esteem, confidence and the desirable effects on physique, people who use these drugs can develop a psychological dependence.⁵⁸

PIEDs include a broad range of substances such as steroids, insulin, human growth hormone, clenbuterol and erythropoietin.⁵⁹ The below lists the most common types.

Anabolic steroids

Anabolic-androgenic steroids are synthetic hormones that imitate male sex hormones, specifically testosterone. They can be taken either as an injection or as a tablet. Steroids are used due to their anabolic effects that assist in the growth and repair of muscle tissue.^{58, 60}

Peptides

Peptides stimulate the release of human growth hormone, which has an important role in muscle and bone growth. Peptides have become increasingly popular among professional and amateur athletes as they are hard to detect due to how quickly they are absorbed by the body.⁵⁸

Hormones

There are numerous artificial hormones and hormone stimulating drugs available in the PIEDs market. These promote bone and muscle growth and repair. They include:⁵⁸

- Growth hormones like AOD-9604, which has fat burning properties and is used by athletes to increase power-to-weight ratios⁶¹
- Selective Androgen Receptor Modules (SARMs) which appear to only act on anabolic receptors that cause tissue (such as bone and muscle) growth.⁶¹ These are classed as prohibited drugs by the World Anti-Doping Agency (WADA)⁶²
- Insulin-like growth factor (IGF-1) is a hormone produced by the liver, necessary for cell growth in the body. It is used for muscle growth and the development of cartilage and bone.⁶¹ This substance is a prohibited substance on the WADA list⁶²
- Mechano growth factor (MGF) is derived from IGF-1 and helps with tissue repair and adaptation.² It is used mostly by bodybuilders and is on the WADA prohibited list.⁶²

PIEDs and the law

It is illegal to manufacture, import, possess, use or supply PIEDs without a prescription or medical practitioner licence. The penalties for illegally administering PIEDs vary for every Australian state and territory. Medical practitioners can only prescribe steroids for legitimate medical reasons.⁵ The penalties for possessing, supplying, and importing PIEDs in Queensland are now the same as heroin, cocaine, MDMA, and methylamphetamine.⁵⁹

PIEDs use is banned in competitive sport. Testing positive for steroids can result in fines, suspensions or permanent bans. It is also against the law to inject another person with steroids.²

The market for PIEDs has continued to grow in Queensland over the past three years, largely due to demand from young males seeking muscular and athletic physiques.⁵⁹ However, the market remains smaller than that of traditional illicit drugs.⁵⁹ PIEDs are illegally supplied and obtained over the internet and through distributors within the fitness industry. Other methods of illegal supply include theft and diversion from veterinary clinics and hospitals and from unethical medical practitioners.⁵⁹

Administration

Steroids can be taken orally in the form of tablets or capsules but are more commonly injected into muscles. There is no safe level of use⁵⁸, however, it is important to note that many PIEDs do have legitimate medical uses when prescribed and their use supervised by a medical professional.⁵⁸

PIEDs use may be cycled (periods of 'on and off' in an attempt to avoid side effects), or stacked (using various amounts of PIEDs together to try to produce specific effects).⁶³ There is no evidence that either methods is beneficial.⁶³

Effects on the body

The expected effects of using PIEDs may include:⁵⁸

- Increasing the size and definition of muscles
- Reducing water retention
- Reducing body fat
- Increasing strength and endurance
- Helping the body recover quicker from injury.

PIEDs can also cause a range of undesirable effects, some of these include:^{40, 58, 63}

- Acne
- High blood pressure
- Liver and heart problems
- Gynaecomastia (growth of breast tissue in men)
- Hair loss
- Increased aggression and irritability
- Depression
- Shrinking testicles and prostate problems⁴
- Water retention
- Numbness of the hands and feet
- Increased fatigue.

People addicted to anabolic steroids may experience withdrawal if they suddenly stop taking the drug or rapidly reduce their dosage. This happens because of the hormonal imbalance caused by anabolic steroid abuse. Steroids mimic the male sex hormone testosterone and the bodies of steroid users become used to having an increased level of testosterone. Steroids cause an unnatural increase of testosterone levels, which, in turn reduces the body's ability to produce testosterone on its own. Symptoms of withdrawal includes anxiety, depression, insomnia, mood swings, nausea, headaches and lethargy.⁶³

The combined use of PIEDs with cocaine or other PIEDs can be fatal.⁶³

Overdose

PIEDs overdose may cause irreversible heart damage when used for prolonged periods at high doses outside of medical supervision.⁴⁰ PIEDs use has been associated with liver damage.⁴⁰

Overdose from PIEDs may lead to collapse, coma, convulsions and death.⁶⁴ High doses of PIEDs may cause dangerous increases in body temperature and blood pressure, and may increase the incidence of heart failure and stroke. Extreme overdose (although rare) can lead to convulsions, collapse, coma and sudden death.⁶⁴

Cocaine

Class and origin

Cocaine is classed as a CNS stimulant and originates from the leaves of the South American coca bush (*Erythroxylum coca*).^{65, 66} The leaf extract is processed to produce three different forms of cocaine⁶⁵:

- **Cocaine hydrochloride:** a white, crystalline powder with a bitter, numbing taste which is the most common form of cocaine.⁶⁶ Cocaine hydrochloride is often combined with other substances such as lactose and glucose to dilute it before being sold.
- **Freebase:** a white powder with less impurity than cocaine hydrochloride.⁶⁵ This form of cocaine is rarely detected in Australia.⁶⁶
- **Crack:** crystals ranging in colour from white or cream to transparent with a pink or yellow hue, it may contain impurities.⁶⁵ This form of cocaine is rarely detected in Australia.⁶⁶

The physical and social harms associated with cocaine use are lower in comparison to other traditional illicit drugs.⁶⁶ The effects from ingesting cocaine do not last for long which may result in people using more of the drug to sustain the effects, leading to dependency.⁶⁶

Cocaine and the law

Federal and state laws provide penalties for possessing, using, making or selling cocaine, or driving under its influence.⁶⁵ In Queensland, the cocaine market has grown slightly over the past years but remains smaller than other traditional illicit drug markets.⁶⁶

Administration

Cocaine hydrochloride is commonly snorted but may be injected, rubbed into the gums, and added to drinks or food.⁶⁵ Freebase and crack cocaine are usually smoked.⁶⁵ There is no safe level of cocaine use.⁶⁵

Effects on the body

Cocaine affects everyone differently, based on:⁶⁵

- The size, weight and health of the individual
- Whether the person is used to taking it
- Whether other drugs are taken around the same time
- The amount taken (dose)
- The strength of the drug (varies from batch to batch).

The effects of cocaine may include:⁶⁵

- Happiness and confidence
- Talking more
- Feeling energetic and alert
- Quiet contemplation and rapture
- Feeling physically strong and mentally sharp
- Reduced appetite
- Dry mouth
- Enlarged (dilated) pupils
- Higher blood pressure and faster heartbeat and breathing (after initial slowing)
- Higher body temperature
- Increased sex drive
- Unpredictable, violent or aggressive behaviour
- Indifference to pain.

Withdrawal

It is hard to cease cocaine consumption after long periods of use as it is challenging for the body which has become used to functioning with it.⁶⁵ Withdrawal symptoms usually start around one to two days after last use (days four to seven will be the worst) and can last for approximately 10 weeks.⁶⁵

Withdrawal usually happens in three phases:⁶⁵

- **Crash:** agitation, depression or anxiety, intense hunger, cocaine cravings, restless sleep, extreme tiredness (experienced in the first few days).
- **Withdrawal:** cocaine cravings, lack of energy, anxiety, angry outbursts and an inability to feel pleasure (can last for up to 10 weeks).
- **Extinction:** intermittent cravings for cocaine (ongoing).

Overdose

High doses and frequent heavy use can also cause “cocaine psychosis”, characterised by paranoid delusions, hallucinations and out of character aggressive behaviour. These symptoms usually disappear a few days after the person stops using cocaine.

The risk of overdose increases if an individual consumes a large amount or a high dose of cocaine.⁶⁵ Symptoms may include:^{65, 67}

- Nausea and vomiting
- Extreme anxiety
- Chest pain
- Panic
- Extreme agitation and paranoia
- Hallucinations
- Tremors
- Breathing irregularities
- Kidney failure
- Seizures
- Stroke
- Heart problems.

Chapter 4

Methods of administration

Injecting is only one way to get drugs into the body. The route of administration will partly be determined by the physical make-up of the drug being used, the individual's choice, and the environment in which the drug use occurs.

It is important to be aware of the different methods of administration and risks for each method. Injecting as a method of drug delivery is considered to have the highest delivery risk.



The method in which a substance is taken into the body, has a critical role in influencing the effects of the substance, in addition to the chemical properties of the substance itself, the dose and dosing frequency, and the route of administration.⁶⁸ The addictive potential of a substance is largely determined by the speed at which that substance is able to reach the brain – the faster it can reach the brain, the more likely it is to be addictive.⁶⁸ The below discusses the different ways of getting drugs into the body. It is important to note that all routes of administration are associated with potential risks.⁶⁸

Injecting

Injecting drugs is the process of using a needle to insert drugs into the human body either directly into the veins, into the muscle or into the subcutaneous tissue. Injecting is the quickest way of experiencing the effects of a drug – effects are usually felt in less than one minute.⁶⁹ Drugs such as heroin, ATS and pharmaceutical opioids are often injected.

It is important for PWIDs to inject drugs as safely and as carefully as possible. Significant adverse health outcomes are attributed to injecting drug use. Injecting is a high risk activity for BBV transmission such as HIV and hepatitis B and C through the sharing and/or reusing of injecting equipment. Injecting is also a precursor for a number of serious vein care issues (see section [Injecting related injury and diseases \(IRIDs\)](#)).⁷⁰ PWIDs are at an increased risk of overdose (both fatal and non-fatal).⁷⁰ The safest option is to not inject drugs, however, adherence to safer injecting practices minimises infections and injection related harms for PWIDs.

Safer injecting practices

Safer injecting practices are very much determined by context. The different circumstances and environments in which PWIDs inject drugs will impact their capacity to inject safely, hygienically and with the minimum amount of BBV transmission potential. For example, an individual who may, through necessity or otherwise, choose to inject in a toilet or car is potentially at greater risk of compromising his/her health than someone who is able to inject in a well-lit, hygienic environment with access to sterile, single-use equipment.

Unsafe injecting practices include:⁷¹

- Lack of awareness of the risks of unsafe injections
- Reusing and/or sharing of syringes, syringes and paraphernalia
- Unsafe sharps waste disposal and management
- Injecting someone else, or being injected by someone else.

What constitutes safer injecting practices?

Safer injecting practices include:

- Using sterile injecting equipment for every instance of injecting drug use
- Cleaning the surface of the area where preparation for injecting is likely to occur
- Washing hands before and after injecting
- The safe disposal of injecting equipment.

The below briefly outlines the steps to be taken to ensure safe injecting:

Preparation^{72, 73}

1. Choose a safe place to inject – preferably at a location that is private, clean, well-lit and with access to running water if possible.
2. Use soapy water to wipe down the surface where mixing up and injection will occur. If this is not feasible, attempt to make the area as clean as possible (e.g. lay down some clean paper or plastic from the bag the injecting equipment came in).
3. Ensure that all paraphernalia and injecting equipment are within reach.
4. It is preferable to use water for injection (please see section [Water for injection \(WFI\)](#)) for injecting. If this is not available, tap water should be boiled for at least 10–15 minutes to be sterilised. Please note, water from the kettle is not sterile as it is likely to contain bacteria.
5. Wash hands (in warm soapy water if possible) – hand washing is very important to remove viruses, bacteria, and general dirt from injecting equipment. If hand washing is not possible, use single swipes with new swabs to clean them. Rubbing swabs back and forward simply spreads the dirt and bacteria around.

Mixing up^{72, 73}

1. Clean the spoon and other mixing equipment by wiping it once with a new alcohol swab, then let it dry.
2. Use sterile injecting equipment to draw up some sterile water from a new WFI ampoule or freshly sterilised water.
3. Never let used equipment come into contact with a group mix (drug mixture that the whole group has been using), regardless of how well it has been cleaned. Used injecting equipment poses an infection risk. Each person should have all their own injecting equipment and should mix up separately.
4. Add the water to the spoon and mix it.
5. Add the filter to the spoon (please see section [Filters](#) for further details).
6. Draw the solution up through the filter to remove impurities. Filters also help stop the needle getting blunted on the bottom of the spoon.
7. Remove any air bubbles by pointing the needle skywards and flicking the side of the syringe. Gently push the plunger in until the air escapes through the eye of the needle.

Injecting^{72, 73}

1. Wipe the injection site once with a new swab.
2. If needed, place the tourniquet around the upper arm, or above the injection site – it is important not to leave the tourniquet on for too long. If a vein can't be found, loosen the tourniquet, have a short rest, and try again.
3. Running warm water over the injection site will usually help raise a vein. Alternatively, the movement of opening and closing the hand in a pumping action might also be useful.
4. Do not touch anything that hasn't been cleaned until injection is completed.
5. If injecting intravenously (e.g. for ATS, opioids): put the needle into the vein at a 45-degree angle, with the hole at the end of the needle facing upwards. Blood will sometimes appear in the barrel of the syringe when the needle is inserted.
6. Jack back (pull back the plunger) and blood should appear if the needle is correctly situated in a vein. If experiencing difficulty in finding a vein, remove the tourniquet and needle from the arm, apply pressure to the site (using a cotton ball, tissue or toilet paper) to stop any bleeding. Take a few deep breaths, relax and start again. Getting too stressed will not help.
7. Once the needle is properly situated in the vein, gently loosen the tourniquet and slowly depress the plunger. If pain or unusual resistance is felt, jack back a little to see if the needle is still in the vein. If it is not, re-insert the needle or try a different injection site.
8. If injecting intramuscularly (e.g. anabolic steroids): put the needle at 90-degree angle into the deltoid muscle of the upper arm, dorsogluteal muscle in the buttocks or the vastus lateralis muscle of the outer thigh.
9. Once injection is completed, ensure that the tourniquet is fully loosened and remove the needle from the arm. The arm should be kept straight and pressure should be applied to the injection site (using a cotton ball, tissue or toilet paper) for a couple of minutes to minimise bruising. Do not use a swab at this point as it will stop the blood clotting and cause more bleeding.
10. It is important to rotate injection sites to ensure safer, easier and more comfortable injections and to preserve the health and longevity of the injection sites.
11. Do not inject into the neck, breasts, armpits, penis or deep veins – injections into these sites is dangerous and can lead to severe complications (e.g. infections, abscesses, damage to blood vessels, nerves and bones).⁷⁴ Do not inject drugs into arteries.

Cleaning up^{72, 73}

1. Dispose of all used injecting equipment in an appropriate sharps disposal container (please refer to section [What constitutes an appropriate sharps disposal container](#)).
2. Dispose of all other paraphernalia appropriately e.g. in the rubbish bin.
3. Clean the area using soapy water if at all possible. If there was any blood visible (even just droplets), the area should be cleaned with household bleach.
4. Do not reuse swabs, filters or open water ampoules – these can all become contaminated once opened.
5. Wash hands and arms with soapy water. If this is not possible, use single swipes with new swabs instead.
6. Store all equipment in a clean, safe place.

Vein care

Vein care is vital to ensuring the health and longevity of the intravenous injection sites and minimising the risk of BBV transmission. Poor vein care can lead to infections and other injection-related harms – please see section [Injecting related injury and diseases \(IRIDs\)](#).

The below lists some ways to practise vein care:

- Always rotate injection sites
- Use tourniquets which are elasticised – do not use a lace or belt as this can twist veins
- Use the appropriate and smallest needle necessary as this will cause less tissue and injection site damage
- Use a new sterile needle, syringe and water every time
- Inject slowly
- Remove needle slowly to prevent vein collapse
- Learn to inject with both hands
- Never inject others or be injected by others
- Remove all rings and tight jewellery before injecting (in case of swelling)
- Rest veins by taking drugs in other ways (e.g. smoking, snorting, swallowing, shafting – see the following for more information).

Snorting/sniffing

Snorting is the process of “sniffing” drugs into the nose.⁶⁸ This process introduces the drug to the mucous linings of the nose where they are absorbed into the bloodstream. When a drug is snorted, 30–60% of it enters the bloodstream via the mucous membrane in the nose, and the stomach, causing effects to be felt usually in two minutes.^{68, 69} Snorting drugs is generally considered safer than injecting drugs in relation to a lower risk of BBV transmission.⁷⁴ The transmission of viruses can still occur if straws and other snorting equipment are used by two or more people.⁷⁴

Snorting may also have adverse effects. Snorting drugs may cause the body to produce mucus to protect the nose lining (exacerbate sinus problems), or destroy the tissue in the nose and nasal cavity.^{68, 74}

Powdered drugs such as ATS and cocaine are commonly snorted.

Inhalation

Inhalation (sometimes known as “chasing”^{68, 74}) is the breathing of a volatile substance (e.g. petrol, nitrous oxide) into the body.⁶⁹ The effects of drugs inhaled is fast, like the intravenous administration of the drug because the gaseous molecule can travel easily and quickly through the cell walls of the lungs into the bloodstream.⁶⁹ Please note, inhalation is sometimes deemed to be the same as smoking.^{68, 74}

Smoking

When a drug is smoked – it is burnt.⁶⁹ The substance then seeps into the bloodstream through the lungs and travels quickly to the brain.⁶⁸ The effects of smoking are not felt as fast as some other methods of administration as tiny particles in the smoke do not pass from the lungs into the bloodstream as quickly.⁶⁹

Smoking offers:⁷⁴

- No risk of BBV transmission
- Lower risk of overdose
- Lower health risks
- An alternative for those who are finding venous access difficult or wishing to rest injection sites.

Smoking drugs can have a negative effect on the health of an individual. Smoking can lead to chest and bronchial infection, chronic obstructive pulmonary disease, high blood pressure, heart disease and cancers of the mouth, throat and lung.⁶⁸

Tobacco and cannabis are commonly smoked, as are some variants of heroin and cocaine.

Swallowing

Many drugs are swallowed. When a drug is swallowed, it enters the bloodstream via the lining of the stomach and intestines.⁶⁸ Compared with other methods of administration, the absorption of the drug through the gut is relatively slow, and as a result its effects tend to be less extreme and not felt immediately. Swallowing is one of the safest ways to take substances due to the defence mechanism of the gastrointestinal tract (e.g. designed to induce vomiting, acidic nature of the stomach) and its slower absorption process.⁶⁸ Drugs such as ATS (mixed in fluid) and pharmaceutical opioids are often swallowed.⁷⁴

Shafting

Some drugs are placed into the rectum for absorption, although this is fairly uncommon. The functions of the rectum are to store faeces and reabsorb fluid in order to prevent dehydration. It has an excellent supply of blood in order to carry out the latter function, therefore any fluids introduced into the rectum are quickly absorbed.⁷⁴ When placed in the rectum, drugs are absorbed into the mucous membranes and absorbed into the bloodstream. The shafting of a drug allows for very rapid uptake (almost as fast as injecting).⁷⁴

The method of shafting is simple: the needle is removed from the syringe and the syringe tip is inserted into the rectum.⁷⁴ The drug is deposited into the rectum when the plunger is depressed.⁷⁴ People who shaft drugs may also roll the drug in cigarette paper, apply lubricant to the anus and insert the wrapped drug into the rectum.

There are some risks in shafting drugs. The mucous membranes of the rectum and anus can be very fragile and drugs that are very acidic tend to burn the tissue and may cause damage. Shafting of opioids can cause constipation and absorption of the drug by faeces.⁷⁴

Shelving

Shelving refers to the insertion of a drug into vagina, similar to shafting.

Section 2

Needle & Syringe Program

Chapter 1

Needle & Syringe Programs

Needle and syringe programs (NSPs) are a public health measure to reduce the potential transmission of BBVs amongst PWIDs. Transmission may occur through the sharing and/or reusing of injecting equipment and unsafe sharps waste disposal. The importance of NSPs has been highlighted by ecological studies which suggest that HIV prevalence tends to be substantially greater in areas where NSPs are not easily accessible compared to locations where NSPs are available.⁷⁵



Needle & Syringe Program (NSP)

NSPs are important public health initiatives aimed to reduce the transmission of BBVs. In Australia, NSPs are supported by the National Drug Strategy's harm minimisation framework and provide a range of services that include the:⁷⁶

- Provision of sterile injecting equipment
- Education and information on ways to reduce of drug-related harms
- Referral to drug treatment, medical care and legal and social services.

The first Australian NSP was piloted in Darlinghurst, Sydney in 1986.⁷⁶ The NSW government endorsed NSPs through policy in 1987 and the other states and territories soon followed.⁷⁵ The importance of NSPs was highlighted by the first National HIV/AIDS Strategy in 1989 – this document identified the role of NSPs in the education and prevention of HIV.^{75, 77} NSPs have been shown to be effective in reducing the transmission of BBVs amongst PWIDs^{78, 79} and continue to be supported and valued by various national strategies on BBVs.

NSPs are now deemed as an integral component of harm minimisation, and related policies, and focus on reducing all drug-related harms. This includes the prevention of BBV infections, minimisation of needle and syringe sharing and reuse, reduction of the volume of discarded needles and syringes in the environment, and facilitation of safe access to sterile paraphernalia.⁷⁸ They also act as sites for the opportunistic provision and support of relevant health information and services.^{78, 80}

Types of Needle & Syringe Programs

In Australia, NSPs operate in all states and territories but their operation and funding arrangements differ considerably across jurisdictions and localities.^{75, 76, 78} Depending on the jurisdiction, NSPs may be government-operated or privately-administered.⁷⁶ In Queensland, NSPs operate from the following broad outlet types. These are:⁷⁵

- **Primary NSPs** are stand-alone agencies that are specifically established to provide a wide range of sterile injecting equipment to PWIDs, sometimes along with primary medical care. Primary outlets also provide relevant education associated with injecting drug use. Primary outlets may refer individuals to other services (e.g. health and social services) as necessary.⁷⁵ Primary NSPs may also liaise with a range of local stakeholders including police, other criminal justice service providers and local government in addition to health and community services, to better assist the individual depending on their circumstances.⁷⁵ Primary NSP staff provide these specific services in a non-judgemental manner and develop a rapport with individuals who are otherwise hard to reach.⁷⁶

- **Secondary NSPs** operate within existing health or community services (e.g. hospital Accident and Emergency Departments and community health centres) and are not directly funded to employ staff to deliver NSP services.⁷⁵ Staff providing NSP services do so in addition to the roles for which they are primarily employed.⁷⁵ Secondary NSPs may provide the same range of services that primary NSPs do but typically have limited capacity to deliver services other than the provision of sterile injecting equipment and disposal facilities.⁷⁵
- **Outreach or mobile programs** are services provided by a team of NSP workers, sometimes from a vehicle or via “foot patrols”.⁷⁶
- **Syringe dispensing machines (vending machines)** dispenses sterile injecting equipment for a small fee. These machines are monitored and operated by NSP staff.⁷⁶
- **Pharmacy NSPs** are community retail pharmacies that choose to deliver the NSP services. Pharmacy NSPs distribute a range of sterile injecting equipment to PWIDs⁷⁵ and are avenues for the safe disposal of sharps waste. Pharmacy NSPs are readily accessible and are uniquely placed to also provide medical care and assistance to PWIDs. Pharmacy NSPs are a critical component of NSP service delivery in Queensland, accounting for approximately 25% of syringes distributed for injecting drugs.

Needle & Syringe Program in pharmacies

In Queensland, pharmacies participating in the Pharmacy Needle & Syringe Programs (PNSP) are accessible health care destinations where sterile injecting equipment is supplied and sharps waste is collected. The availability of these services through community pharmacies increases access to sterile injecting equipment and safe sharps waste disposal for those who need it. By increasing access, people are more likely to use sterile injecting equipment for every injection and dispose of sharps waste safely. Together, these contribute to the reduction in the transmission of BBVs and injection-related harms. Pharmacy staff in participating PNSP pharmacies are also trained and readily available to provide medical advice (e.g. wound care, dental care), deliver related services (e.g. Opioid Replacement Program, staged supply of medications), and offer support and referral to other relevant services and service providers, to PWIDs. Together, these combine to contribute to the improvement of the overall health of PWIDs and the wider community.

Chapter 2

Sterile injecting equipment

The NSP provides sterile injecting equipment free of charge, or at a subsidised price, depending on the NSP site (see section Types of Needle & Syringe Programs).

The provision of sterile injecting equipment is paramount to the:

- Reduction in the transmission of BBVs
- Reduction in injection-related harms
- Reduction in the sharing and/or re-using of injecting equipment.

Access to sterile injecting equipment and supportive social networks are likely to create an environment which encourages safer injection and deters equipment sharing.^{81, 82} The availability of, and access to, sterile injecting equipment are also important contributors to the promotion of safe injecting practices and the reduction of BBV transmission and injection-related injury and disease harms (IRIDs, see section Injecting related injury and diseases).⁸³

In Queensland, primary and secondary NSP sites supply sterile injecting equipment free of charge to PWIDs. Community pharmacies participating in the PNSP supply sterile injecting equipment to PWIDs in the form of pre-packed sharps kits for a set fee (set by Queensland Health).

What's in a sharps kit?

Several types of sterile injecting equipment (sharps kits) are available under the PNSP. They differ in the types and number of the syringes contained. Pharmacies participating in the PNSP are able to choose from the various types sharps kits available under the PNSP and procure the type(s) that best suit the pharmacy's demand. All sharps kits offered under the PNSP contain syringes, alcohol wipes, filters and a small disposal unit. The most commonly distributed sterile injecting equipment (sharps kit) is the 5 pack 1 mL.⁸⁴ Regardless of type, all sharps kits supplied under the PNSP are charged at a set fee as per the current program terms and conditions.

The supply of sharps kits

Controversial scenarios

The following topics are listed as controversial scenarios because they have been mentioned as some of the major challenges faced by pharmacists and pharmacy staff when it comes to the supply of sterile injecting equipment (sharps kits) to PWIDs. While these may be morally challenging scenarios for some, it is important to understand:

- The principle of harm minimisation, under which the PNSP operates
- The rationale behind making sterile injecting equipment available to all requesting individuals.

Sales to minors

The sale and provision of sterile injecting equipment to minors is one of the biggest concerns pharmacists and pharmacy staff have with a pharmacy-based NSP outlet. It is important to remember that young people need the same protection from BBVs as adults.

Some community pharmacies participating in the PNSP have refused the sale of sterile injecting equipment to individuals whom the pharmacy staff have considered “too young” or “inexperienced” to be injecting drugs. Certain pharmacy staff believe that the use of drugs can be prevented if the individual is refused the supply of sterile injecting equipment. However, it is highly unlikely that a young person who is intent on accessing needles and syringes will be deterred from using drugs despite being refused the sale of clean injecting equipment. It is likely that the individual may seek alternative options of accessing injecting equipment, such as sharing or reusing another person’s needles or syringes. This greatly exposes the individual to the risk of contracting BBVs and is against the principles of harm minimisation and NSPs.

It should be noted that there is no law which prohibits the sale and provision of injecting equipment to minors. The arrangements for dealing with minors seeking injecting equipment differ between the states and territories.

Drug use and pregnancy

Some people may feel morally challenged when providing sterile injecting equipment to pregnant women. However, there are important reasons why such products should be provided:

- HIV and hepatitis C can both be spread through vertical transmission.^{85, 86} Vertical transmission is the transmission of an infectious organism from mother to baby during pregnancy, delivery or breastfeeding.^{85, 86} The provision of sterile injecting equipment is vital to the prevention of the transmission of the abovementioned viruses to the mother, and therefore reduces the likelihood of transmission to the baby.
- It is important to remember that the health and wellbeing of the woman and the baby is a healthcare issue, not a moral one.
- The delivery of NSP service in a community pharmacy setting is a point of contact between the woman and a healthcare provider. This contact may help facilitate further contact and interactions between the woman and other relevant healthcare professionals.

PWIDs and children

There has been concern about the welfare and development of children who accompany individuals purchasing sterile injecting equipment in the pharmacy. However, such apprehension is not always warranted. There is little research about children of PWIDs and therefore little is known about their needs.

In most cases, individuals (e.g. parents, guardians) tend to “hide” their drug use and purchase of sterile injecting equipment from their children to avoid embarrassment and tricky questions. It is important that pharmacy staff do their utmost to respect and accommodate the confidentiality of the parties involved (e.g. children, parent) in all cases.

Ensuring that PWIDs have access to sharps waste disposal units is also an important consideration on every occasion. The provision of a sharps disposal container (e.g. sharps bin) helps ensure safety and prevents needle stick injuries. Community pharmacies participating in the PNSP are ideally placed as avenues for the safe disposal of sharps waste.

Building rapport with, and keeping the lines of communication open for, PWIDs is vital, especially for individuals who have children. This client group should, and needs to, be made aware, that there are suitable treatment and referral options available to them in relation to drug use – community pharmacy staff are well placed to assist.

Sale of sterile injecting equipment without a sharps disposal container

In Queensland, it is not illegal to sell sterile injecting equipment without an appropriate sharps disposal container. However, to do so raises concern on how the individual will then dispose of the used needle and syringe (sharps waste). The lack of a sharps disposal container provides the individual with limited options to dispose of sharps waste in a safe manner and poses a lost opportunity to encourage the safe disposal of sharps waste.

All sharps kits provided under the PNSP includes a sharps disposal container. Pharmacy staff are well-placed to encourage individuals to retain and use the sharps disposal container provided in sharps kits to allow for the safe and appropriate disposal of sharps waste.

The disposal of sharps waste has legal implications. Under the *Drugs Misuse Act 1986*,⁸⁷ a person must “use all reasonable care and take all reasonable precautions” to dispose of a needle and syringe in accordance to the procedures prescribed by the regulation to “avoid danger to the life, safety or health of another”. Failure to do is deemed as an offence.

Discarded sharps waste is classified as clinical waste and has the potential to cause disease.⁸⁸ Under the Waste Reduction and Recycling Regulation 2011 (41ZA) in relation to disposal of sharps, a person must:⁸⁸

- Place the needle or sharp in a rigid-walled, puncture-resistant container
- Seal or securely close the container.

Sale of single syringe

All PNSP sharps kits contain multiple needles and syringes. Pharmacy staff should not break open a sharps kit to sell a single needle or syringe, even if requested. The sale of a single syringe is not ideal as it encourages reusing and sharing and therefore increases the potential of the transmission of BBVs.

Limit on the number of sharps kits to be supplied

There is no limit as to how many sharps kits a client can purchase at any one time in a PNSP pharmacy. Pharmacies can, and should, sell as many sharps kits to clients as requested. The purpose of supplying subsidised sterile injecting equipment to clients is to minimise reuse and sharing of needles and syringes.

Retractable syringes

A retractable syringe is designed for the needle to spring back into the syringe barrel after sufficient pressure is applied by the user.⁸⁹ The purpose of retractable syringes is to lower the risk of needle stick injury and prevent reuse and sharing.⁹⁰

There is considerable community concerns on the potential for needle-stick injury and disease transmission posed by discarded needles and syringes in public places.⁹¹ There has been much debate regarding the use of retractable needles and syringes by the NSP. The Commonwealth committed \$27.5 million to fund an implementation strategy for the development and introduction of retractable needle and syringe technology in Australia. It is intended that this initiative will benefit a number of groups within society including health care workers, people with diabetes and PWIDs with the aim of minimising the risk of injury from discarded needles and syringes in public places.⁹²

While the intent behind retractable syringes is valid, the retraction of the needle can cause blood or drug splatter (even in microscopic amounts) and poses a health hazard as it may facilitate the transmission of BBVs and other pathogens, and contaminate the surrounding area.⁸⁹⁻⁹¹ The powerful spring in retractable syringes may also cause vein and tissue damage as it recoils into the barrel (e.g. bruising or tearing).⁹⁰ Pharmacy staff are advised to “exercise caution” if selling retractable syringes.⁸⁹

Chapter 3

Injecting

It is important for individuals to inject as safely and as carefully as possible. Unsafe and careless injecting practices places a person at risk, not only of contracting BBVs, but also of bruising, vein damage, blood poisoning, abscesses and other infections resulting from poor injecting practices.



People who inject drugs (PWIDs)

There is a tendency to stereotype PWIDs – people often harbour negative beliefs on this group of individuals. Public perception of PWIDs is often not based on scientific evidence.⁹³ Many people comment that they know which people are collecting sterile injecting equipment for the purpose of illicit drug use by the way an individual looks or acts. It is important to remember that not everyone fits the same mould.

Stigma is defined as the experience of being “deeply discredited” or marked due to one’s “undesired differentness.” To be stigmatized is to be held in contempt, shunned or rendered socially invisible because of a socially disapproved status.⁹⁴

There is an extensive body of literature documenting the stigma associated with individuals with alcohol and other drug problems.⁹³ It is important for pharmacy staff to treat all clients the same – this is particularly relevant in relation to opening channels of communication, providing support and understanding PWIDs. Prejudiced behaviour and attitude towards PWIDs will prevent these individuals from seeking and completing addiction treatment, using harm minimisation services and seeking necessary healthcare. Over time, this will cause this vulnerable population to become increasingly socially isolated, not seek or use appropriate and necessary healthcare services and thus, increasing their need for medical and social services in the future.⁹³

Working with PWIDs

Providing quality pharmacy services to PWIDs is an essential harm minimisation component. Some tips for pharmacy staff when working with people accessing sterile injecting equipment include:

- Smiling and making eye contact – this could be the first smile someone has had all day
- Avoiding making judgements – this kind of activity is obvious in the body language and attitude shown towards the customer
- Engaging with the client in the same manner that is used to greet and serve all customers in the pharmacy
- Remembering the harm minimisation reasons behind selling sterile injecting equipment
- Ensuring all clients have access to sharps disposal containers when procuring sterile injecting equipment and that they are made aware that the pharmacy is an avenue for safe sharps waste disposal
- Providing access to targeted health information resources
- Not being afraid to discuss drug use issues with the client – pharmacies are well-placed to provide support and relevant services (e.g. OTP).

Injecting related injury and diseases (IRIDs)

PWIDs are at risk of a series of infections and injuries as a consequence of injecting – these are collectively known as injecting related injury and diseases (IRIDs).⁹⁵ The risk of IRIDs increases with both the duration and frequency of injecting.^{96, 97}

Causes of IRIDs

The cause of IRIDs can be attributed to a range of factors including non-sterile injecting practices, ubiquitous skin flora (e.g. *Streptococci*, *Staphylococci*), contaminants in the substance being injected, additives used to help dissolve drugs (e.g. lemon juice), and the physical and chemical properties of the substances injected.⁹⁸

Examples of IRIDs

The definition and classification of IRIDs may differ in clinical and scientific literature.^{95, 99} In most cases, cutaneous conditions (e.g. abscesses and cellulitis) and other injecting-related sequelae (e.g. septic arthritis, osteomyelitis, septicaemia, thrombosis and endocarditis) are classified as IRIDs.⁹⁹ Other clinical signs associated with injecting (e.g. bruising, redness and skin hyperpigmentation or “track marks”) may be classified as IRIDs,¹⁰⁰ or in a separate category of injecting-related problems.^{96, 97}

IRIDs may be classified into the following categories:

- **Non serious:** These may include transient redness and swelling, hives, numbness and collapsed or blocked veins.
- **Potentially serious:** These may include abscesses, cellulitis, thrombophlebitis (vein inflammation related to a blood clot), oedema and puffy hands syndrome.
- **Serious:** These may be systemic infections such as endocarditis (an infection of the endocardium which includes the heart valves and lining of the heart chambers), deep vein thrombosis (blood clot in deep veins), gangrene and venous ulcers.

IRIDs may be localised or systemic. Some may be easily treated but then become life threatening or result in limb loss.

Burden of disease associated with IRIDs

PWIDs are associated with a disproportionate burden of diseases and limited access to healthcare access.¹⁰¹ IRIDs can result in significant morbidity and mortality, especially if left untreated.^{96, 102} The treatment for IRIDs poses a substantial cost to the individual and the healthcare system.⁹⁶ Barriers to accessing medical care are well-documented amongst PWIDs.¹⁰³ Pharmacy staff can provide care and advice to PWIDs about IRIDs.

Injecting equipment and drug paraphernalia

Drug paraphernalia refers to any equipment, product or accessory that is intended or modified for the making, using, or concealing of drugs. This may include items used to take (e.g. bong, cocaine spoon, pipe, syringes) and produce drugs (e.g. scales, hydroponic cultivation equipment, pill press).¹⁰⁴

In Queensland, the possession of drug paraphernalia is an offence.¹⁰⁴ The legislation relating to drug offences also concerns the possession of items which relate to drug taking or production (drug paraphernalia),⁸⁷ with the exception of needles and syringes.⁸⁷ An individual may be charged for possession if any of such items have been used for a drug offence, or are intended to be used for a drug offence.¹⁰⁴ For example, an individual can be charged with the possession of a bong, without actually being charged with the possession of marijuana.¹⁰⁴ Under the *Drugs Misuse Act 1986*, it is an offence punishable by a maximum penalty of 15 years imprisonment to possess things to be used, or that have been used, in connection with a drug offence.⁸⁷

In Queensland, the possession of needles and syringes is legal. However, it is important to have a safe and appropriate means of disposal of such needles and syringes. Failure to do so will constitute an offence.⁸⁷ Under the *Drugs Misuse Act 1986*, “a person (other than a medical practitioner, pharmacist or person or member of a class of persons authorised so to do by the Minister administering the *Health Act 1937*) who supplies a hypodermic syringe or needle to another, whether or not such other person is in Queensland, for use in connection with the administration of a dangerous drug commits an offence”.⁸⁷ An individual who has a syringe or needle must take all reasonable precautions to avoid danger to the life, safety or health of others.⁸⁷ A used syringe must be placed in a sharps container and disposed of appropriately (e.g. at a NSP site).

A wide range of equipment and devices are used in the injection of drugs. A full discussion of these is beyond the scope of this publication. The following will examine some common items used in injecting drug use.

Hypodermic needle

Hypodermic needles, sometimes known as “sharps” are medical tools which consist of a thin, hollow tube with a sharp tip with a small opening at the pointed eye. It is commonly used with a syringe (a hand-operated device with a plunger), to inject into, or extract fluids out of, the body.

Needles are available in a variety of sizes and lengths. It is common to see a needle labelled with a number, followed by “G”, and then another number.

- A hypodermic needle is routinely measured by its inner measurement or opening (thickness). This is known as the Birmingham gauge, commonly abbreviated as G – e.g. 26G refers to 26 gauge. The higher the gauge value, the thinner the needle. For example, a 26G needle is thinner than a 18G needle.
- The second number refers to the length of the needle in inches – e.g. ½ denotes half an inch.

Needles of different gauges and lengths are used for different purposes:

- Larger gauge (thinner) needles are used for intravenous injections:⁸⁴
 - It is advised that intravenous injections should be performed using shorter and thinner needles (e.g. 27G needle) – the smaller/more delicate the vein, the thinner the needle should be used.¹⁰⁵
- Smaller gauge (thicker) needles are used to draw up liquids into the syringe while medium-sized needles are generally used for administering intramuscular injections:⁸⁴
 - Intramuscular injections will require a longer and thicker needle (e.g. 23G needle) to reach the muscle.¹⁰⁵

Needles and syringes are key pieces of equipment needed to inject drugs.¹⁰⁵

The selection and use of the most appropriate needle for injecting is vital for vein health.⁸⁴ When injecting, it is important to consider the:

- Gauge of the needle
- Volume to be injected
- Viscosity of the fluid to be injected
- Route of injection (intravenous or intramuscular)
- Site of injection
- Condition of the injection site (e.g. condition of vein).

Water for injection (WFI)

WFI is the recommended water to be used when injecting drugs. Once an ampoule or bottle of WFI is opened, it is no longer sterile. The reuse of opened WFI can cause serious infections (e.g. phlebitis, septicaemia). NSP staff are encouraged to sell WFI ampoules to people purchasing sharps kits and to promote the use of water from a clean source for injecting (e.g. WFI, cooled boiled water, distilled water). The use of bottled water carries the same reuse risk as WFI.

Please note, WFI is not included in the sterile injecting equipment (sharps kits) supplied by community pharmacies participating in the PNSP due to concerns that they may encourage re-use of the WFI. WFI is available in certain primary and secondary NSP site and may incur a cost.

Filters

Most drugs are not intended for intravenous injection and contain a mixture of excipients and other particulate and insoluble compounds (e.g. chalk, talc, xanthan gum, corn starch, hydroxyethyl cellulose).¹⁰⁶ When injected, these compounds can block capillaries and internal organs causing a range of morbidities (e.g. embolism, cellulitis, abscesses, phlebitis, pulmonary talcosis, strokes, amputation).^{106, 107} The use of a filter helps to remove impurities, particulate matter and the aforementioned compounds. A filter works in a similar way to the plunger device on a coffee percolator – allowing liquid to pass through but blocking insoluble particles.¹⁰⁸

Different filters have varying degrees of efficacy in relation to the removal of the above.¹⁰⁷ The effectiveness of each type of filter is measured in micrometer (μm).¹⁰⁸ Cotton wool, cigarette filters, tampons or small parts of dry swabs are commonly used as filters.^{84, 108} These filters generally remove larger particulate matter which may block the syringe, but do not remove substances that may block capillaries or organs.⁸⁴ Cigarette filters will remove most particulates above $50\mu\text{m}$ ⁸⁴ and are available in the sterile injecting equipment (sharps kits) supplied under the PNSP. It should be noted that these filters contain insoluble fibres and may cause problems such as the clogging of blood vessels and other organs.¹⁰⁸

Commercial filters are able to filter insoluble particulates, and even bacteria, by filtration through a membrane.¹⁰⁸ An example of this is the wheel filter, which is attached to a needle and used to draw up the dissolved solution.¹⁰⁸ Wheel filters come in various pore sizes and can remove particulates from $0.22\text{--}0.45\mu\text{m}$ but have the tendency to become blocked if the mixture is not pre-filtered with a cigarette filter due to its small filter pore size.⁸⁴ The $0.22\mu\text{m}$ wheel filter is the wheel filter with the smallest pore size available, and is able to filter out bacteria, but not viruses.⁸⁴ This highlights the fact that wheel filters are unable to remove relevant BBVs such as HIV, hepatitis B and hepatitis C.⁸⁴ Primary and secondary sites supply cigarette and wheel filters but these may incur a cost. Wheel filters are not available through the PNSP.

The use of a filter will retain a small amount of the drug.¹⁰⁷ However, the benefit of using of a filter to remove impurities, particulate matter and other undesirable compounds to minimise vascular complications far outweighs this shortcoming.¹⁰⁷ The retention of drug in filters can motivate PIWDs to reuse the filter, or even to share or sell it.¹⁰⁷ PIWDs should be reminded that all filters should only be used once and should not be shared – the conservation, reuse and sharing of filters increases the risk of transmission of BBVs and other diseases.¹⁰⁷

Several barriers have been identified which hinder filter use. The time taken to use a filter, and the clogging of the filter due to small pore size (particularly by viscous/high density and insoluble particle content) have been named as reasons why PIWDs choose not to use filters.¹⁰⁷ The belief that current filtration technique is sufficient in eliminating particles and that some drugs don't require filtration because no insoluble particles are visible in the solution are also named as barriers to the use of filters.¹⁰⁷ It should be noted that clear solutions may also contain insoluble particles invisible to the naked eye.

Winged infusion set

A winged infusion set is a small, flexible device specialised for accessing a superficial vein for either intravenous injection or phlebotomy (venipuncture). It consists of, from front to rear, a hypodermic needle, two bilateral flexible “wings”, a flexible small-bore transparent tubing, and a connector. This connector attaches to another device (e.g. syringe, transfusion bag/bottle). Winged infusion sets are commonly known as a “butterfly” or “scalp vein” sets. Winged infusion sets are available from certain primary and secondary NSP site and may incur a cost.

Winged infusion sets offer numerous advantages over a simple straight needle. The infusion set allows for the precise placement of the needle – this is particularly useful if the vein is poorly accessible or fragile. Its shallow-angle insertion design also enables venipuncture of superficial veins (e.g. veins of the hand, wrist, scalp¹⁰⁵).¹⁰⁹ The flexible tubing of the winged infusion set tolerates more movement than the convention needles and reduces the likelihood of profuse bleeding after use.

The use of a winged infusion set allows large amounts of liquids (e.g. methadone, numerous pills) to be injected, when used with an interchangeable Luer Lock syringe.¹⁰⁹

Chapter 4

Disposal

Ensuring that safe sharps waste disposal options are readily accessible and available in the community is vital to ensuring public safety. Many members of the community who require the use of injecting equipment must be provided with convenient and safe options for sharps waste disposal.



Disposal

Unsafe disposal of injecting equipment is a concern in the community.

In addition to the provision of sterile injecting equipment, NSPs are also important avenues for the safe disposal of sharps waste. There are a number of options available for the safe disposal of injecting equipment within Queensland. Both primary and secondary NSP sites supply sharps disposal containers and are sites for the disposal of sharps waste. Community pharmacies participating in the PNSP also have sharps disposal containers available for sale, or in PNSP sharps kits. The majority of PNSP pharmacies also have a sharps disposal bin for the collection of sharps waste from the community.

Safe disposal

It is vital that sharps waste is disposed of in an appropriate sharps waste container to minimise needle stick injuries and the risk of BBV transmission. The majority of people who use injecting equipment dispose of sharps waste appropriately. However, a few individuals continue to dispose of sharps waste irresponsibly (e.g. in alley ways, public toilets) and this poses a serious threat to the wider community and can cause fear and concern.

What constitutes an appropriate sharps disposal container for returned sharps waste?

A suitable container for sharps waste must fit these criteria and be:

- Rigid-walled
- Puncture resistant
- Crush resistant
- Able to be securely sealed (e.g. a proper lid).

Cardboard boxes, plastic bags, plastic milk bottles, soft drink bottles, glass jars and plastic take-away containers are not suitable containers for sharps disposal as they do not fit the above criteria. Appropriate sharps disposal containers are available at:

- Primary and secondary sites – free of charge
- Pharmacy NSPs – inside sharps kits, or for sale.

What to do if a loose needle is found?

When a loose needle or syringe is found, the best way to safely dispose of it is to place it in an appropriate sharps container to be disposed of, when safe to do so. If this is unavailable, the loose needle or syringe should be placed in a rigid-walled, puncture resistant hard plastic container with a securable screw top. It is important to not attempt to replace the cap on the needle and to pick up the needle or syringe by the barrel or plunger (keep away from the sharp end of the needle). Gloves and other protective equipment should be used at all times.

Alternatively, the Clean Needle Helpline (1800 633 353) or local council in the area may be contacted to arrange for the collection of the loose needle and syringe within 48 hours. The Clean Needle Helpline is a state-wide service which operates 24 hours a day, every day of the year, and is a free-call number. It provides information on:

- Safe disposal of sharps waste
- Locations where sharps waste can be disposed of
- Referral to appropriate clean up services, where applicable
- Management of needle stick injury
- Appropriate counselling services.

The Clean Needle Helpline can also provide a range of Alcohol & Drug Information Service (ADIS) resources on safe sharps waste disposal free of charge (e.g. brochures, posters). NSP staff are encouraged to direct clients to contact the Helpline on enquiries regarding safe sharps waste disposal.

Disposal sites

NSPs are well placed to provide information to clients regarding access to safe sharps waste disposal facilities and to encourage appropriate disposal of used needles and syringes.

The locations and details of sharps waste disposal sites for the below can be found at:

- **Primary and secondary NSP sites:** <https://www.health.qld.gov.au/public-health/topics/atod/queensland-needle-syringe-program>
- **Pharmacies participating in the PNSP:** <https://www.guild.org.au/guild-branches/qld/professional-services/pharmacy-needle-syringe-program>
- **NSP mobile app:** <https://www.guild.org.au/guild-branches/qld/professional-services/pharmacy-needle-syringe-program/app-for-the-queensland-needle-and-syringe-program>

Disposal of sharps waste in pharmacies

In Queensland, sharps waste may be disposed of in community pharmacies participating in the PNSP. These pharmacies form a network that allows clients to dispose of used sharps waste in a convenient and safe manner.

To ensure safety and hygiene, all sharps waste for disposal in a pharmacy participating in the PNSP must be stored in an appropriate sharps disposal container (see section [What constitutes an appropriate sharps disposal container](#)). For occupational health and safety reasons, pharmacy staff cannot accept sharps waste which is not stored in an appropriate sharps disposal container.

Some pharmacies may have a sharps waste disposal bin outside or near the pharmacy to allow the disposal of sharps waste. Funded by the local council, these bins are a collaborative initiative between government bodies, local councils and the pharmacy. The presence of these sharps disposal bins provide a convenient and accessible options for the community to dispose of sharps waste and thereby reducing the incidence of unsafe disposal of used syringes in public places.

Disposal of sharps waste as general waste

Depending on the local council, sharps waste may be disposed of into the domestic general waste bin if stored in an appropriate sharps disposal container. While some councils encourage this as a disposal option for injecting equipment, guidelines and legislation often differ between towns and cities. Clients are advised to consult their local council to ensure the disposal of sharps waste in general waste is acceptable.

What to do you if you find a syringe

It may be confronting to find a used needle or syringe discarded in either a private or public place. Irresponsible disposal practices pose a threat to the safety and health of the community. If a used needle or syringe is found, the preferred option for disposal is to contact the Clean Needle Helpline or the local council. The following steps may be undertaken to dispose of the used needle or syringe if the individual feels confident, and it is safe to do so.^{110, 111}

1. Do not touch the syringe before obtaining the designated equipment (where available) – do not improvise equipment if the designated equipment is unavailable.
2. Put on latex/rubber gloves if possible (in the event that there is bodily fluid in the needle or syringe – this will help protect against the possible transmission of BBVs).
3. Find a rigid-walled, puncture-resistant container with a well-secured lid.
4. Do not attempt to bend, break or recap the needle – do not attempt to separate any part of the needle/syringe.
5. Bring the container to the needle/syringe.
6. Place the container on the ground beside the needle/syringe on a stable, level surface – do not hold the container upright in your hands as you are disposing of the needle/syringe as a misdirected needle/syringe may come into contact with the hand or forearm and result in a needle stick injury.
7. Pick up the needle/syringe by the middle of the barrel – keep the sharp end of the needle/syringe facing away at all times.
8. Place the needle/syringe in the container sharp end first – do not force the needle into the container, obtain a larger container if the needle/syringe does not fit.
9. Securely place the lid back on the container, holding the container at the top.
10. Remove gloves (if appropriate) and wash hands with running water and soap.
11. Return the container to the nearest NSP site for disposal or contact the Clean Needle Helpline (1800 633 353) for further information on disposal options.
12. Other items that have come into contact with the needle/syringe should be disposed of in the same container as the used needle/syringe, or be cleaned with detergent and warm water (while wearing impermeable gloves), then immersed in a bleach solution for at least one minute. The area where the needle/syringe was found should also be cleaned with bleach or an appropriate detergent.

Managing a needle stick injury

A needle stick injury can cause significant anxiety and distress. However, the risk of transmission of BBVs due to a needle stick injury is low.¹¹² There are no reported cases of a member of the public becoming infected by HIV, hepatitis B or hepatitis C following accidental injury from discarded injecting needles in the community setting.¹¹²

The below lists the procedure to undertake in the event of a needle stick injury:¹¹¹

1. Stay calm.
2. Wash the area with soap and running water and soap as soon as possible.
3. Apply an antiseptic and a clean dressing to the exposed area and follow first aid procedures.
4. Obtain prompt medical advice from the hospital emergency department or doctor (e.g. general practice, sexual health clinic) as soon as possible.
5. Report the incident to a supervisor or biosafety officer as soon as possible (if applicable).

Chapter 5

Workplace Health and Safety

Under the *Workplace Health and Safety Act 1995* (Queensland) employers are obliged to ensure the health and safety of all workers, and the health and safety of other people who may be affected by their actions or omissions.



Workplace health and safety

Employers have an obligation to ensure the workplace health and safety of their staff and clients.

There are six basic steps that can be taken to assist employers to identify hazards in their workplace and manage exposure to the risks associated with these hazards. The *Work Health and Safety Act 2011* (Qld)¹¹³ provides a framework to protect the health, safety and welfare of all workers at work. It also protects the health and safety of all other people (e.g. the general public) who might be affected by the work. The Act places the primary health and safety duty on a person conducting a business or undertaking (PCBU). The PCBU must ensure, so far as is reasonably practicable, the health and safety of workers at the workplace. Duties are also placed on officers of a PCBU, workers and other persons at a workplace.

Identify hazards

Identify skin-penetrating injury hazards in the workplace. Consult with staff and determine whether there are any locations, tasks or activities where this hazard is present, e.g. public toilets, garbage bins.

Assess risks that may result because of the hazard

Assessment of risk includes determining the likelihood and consequences of a skin-penetrating injury occurring. Consideration should be given to issues such as:

- How often discarded sharps are found in the workplace
- How many sharps are found at the workplace
- How many staff come into contact with sharps
- Adequate lighting and housekeeping of the area where sharps are found discarded
- The availability of appropriate equipment for the safe collection and disposal of sharps
- Staff training on infectious disease risk and safe work practices.

Decide on control measures to prevent or minimise the risk

- **Elimination:** involves eliminating the hazard. It may not be possible to eliminate discarded sharps from the workplace; however, it may be possible to discontinue a work practice that exposes staff to risk e.g. installing locks on toilet doors for staff use only.
- **Substitution:** involves replacing the hazard with one that presents a lower or more manageable risk, e.g. arranging to place disposal units within toilet areas that are identified as high-risk locations.
- **Redesign:** involves changing the designs of a workplace, equipment or work process e.g. ensuring adequate lighting so that discarded sharps can be readily detected.
- **Isolation:** involves isolating the sharp in a rigid-walled, puncture-resistant sharps container e.g. ensuring a sharps container is present within your workplace for the safe disposal of discarded sharps.
- **Administrative Controls:**
 - *Procedures:* minimise risk through developing and implementing safe work procedures and practices on the correct method of handling and disposing of sharps when a discarded sharp is discovered. Each pharmacy should endeavour to have a sharps disposal kit available which includes a sharps handling device such as gloves and a sharps container. Staff should be trained in its use.
 - *Training:* provide induction and ongoing training to staff about skin-penetrating hazards and risks. Training should include information about infectious diseases, safe work practices to prevent injury, safe handling and disposal of sharps and managing accidental blood exposures. For more information regarding training, please contact the Pharmacy Guild of Australia, Queensland Branch on (07) 3831 3788.
 - *Housekeeping:* ensure areas are kept tidy to prevent sharps concealment.
 - *Surveillance:* implement surveillance systems. An example is implementing regular inspection and needle sweeps of high-risk areas to ensure the prompt detection and disposal of discarded sharps.
 - *Sharps Reporting:* maintain a register of needle collections so that high-risk areas can be identified. This ensures all staff are aware of new 'hot spots' that may arise.
 - *Drug and Alcohol Policy:* implement a drug and alcohol policy to deter drug use in the workplace.
 - *Managing accidental blood and bodily fluid exposures and skin-penetrating injuries:* Implement systems to manage accidental blood and bodily fluid exposures and skin-penetrating injuries. This should include instructions for first aid, prompt medical referral and counselling.

Implement control measures

This involves:

- Communicating changes to staff
- Providing instructions and training in the changes
- Supervision to ensure new control measures are being followed
- Maintenance of new controls.

Monitor and review the effectiveness of measures

The final step is to monitor and review the effectiveness of the control measures. It is important to continually assess:

- Have the measures been implemented as planned?
- Are they working?
- Are there any new problems?

Documentation

All steps of the risk management process should be documented.

The *How to manage work health and safety risks – Code of Practice 2011*¹¹⁴ provides sample risk management forms.

Additional information can be found at <https://www.worksafe.qld.gov.au> (Queensland Government).

Section 3

Opioid Treatment Program (OTP)

OTP

Chapter 1

Opioid Treatment Program

Worldwide, the misuse and diversion of opioids is common and poses a major public health concern with social and economic implications.¹¹⁵ In Australia, the OTP is an evidence-based strategy and the mainstay of opioid dependence management.^{116, 117} The use of opioid treatment as replacement therapy is useful in managing addiction and maintaining abstinence, and has also been shown to reduce harm and crime.¹¹⁷



Opioid dependence is a chronic condition.¹¹⁸ A cure is unlikely and frequent recurrences can be expected.¹¹⁸ An appreciation of the neurological changes that occur in opioid dependence is important when understanding patient behaviours and problems and when defining realistic treatment methods and goals.¹¹⁸ The treatment and management of opioid dependence should be underpinned by a focus on reducing harm related to opioid use including, but not confined to, a goal of abstinence.¹¹⁹ An open discussion and examination of opioid (and other drug) use, severity of dependence, and a determination of the level of willingness to change, will assist in clinical decisions about treatment and management.¹¹⁹

Opioid dependence can be managed by both pharmacotherapy and behavioural and cognitive therapies.¹²⁰ The latter is beyond the scope of this booklet and may include abstinence-focused programs, behaviour interventions (e.g. contingency management approaches) and self-directed interventions (e.g. Narcotics Anonymous).^{120, 121} Cost is an important factor to consider and may be a barrier to access, as pharmacotherapy and other relevant healthcare services may incur out-of-pocket expenses.^{119, 120}

Detoxification programs

Detoxification is a relatively brief medical intervention designed to stabilise the acute physical and emotional distress and instability caused by recent cessation of heavy alcohol or drug use.¹²² Detoxification can be considered as a starting point for treatment with individuals linked to post-withdrawal services such as counselling, self-help programs, residential therapeutic communities and opioid maintenance treatment. Detoxification is rarely associated with sustained periods of abstinence or even improved function.¹²²

Rehabilitation/Maintenance programs

Rehabilitation programs are generally longer in duration (medium to long-term, four weeks to 12 months¹²³) and may involve multiple types of medical and social services designed to help recently stabilised patients achieve sustained periods of drug-free living and stable personal and social function.¹²² There is evidence to suggest that the use of illicit drugs is lower in individuals in long-term OTP maintenance programs.¹²⁴

Drug treatments for Opioid Treatment Program (OTP)

In Australia, the OTP is the mainstay of opioid dependence management.^{117, 119, 125} The aim of treatment is to reduce the health, social and economic harms to the community.^{126, 127} OTP also reduces morbidity and mortality, and improves mental and physical health and social functioning of those dependent on opioids,^{120, 125, 127, 128} reduce unsanctioned opioid use and the risk of overdose.¹²⁷

OTP is delivered through public (state and territory-funded) and private specialist clinics, correctional-based centres, community-based medical centres (by doctors) and pharmacies (by pharmacists).¹²⁸ The use of opioid treatment as replacement therapy is useful in maintaining abstinence, and has been shown to also reduce harm and crime.^{117, 120} Short-term treatments aim to relieve withdrawal symptoms and promote abstinence while long-term pharmacotherapies for opioid dependence also help to counteract or reverse the underlying neural abnormalities.¹¹⁸

Methadone and buprenorphine are the two most commonly used OTP medications and are long-term treatments with proven effectiveness.¹²⁵ They are listed on the World Health Organization's *List of Essential Medicines* as core medicines for the treatment of people who are opioid dependent.¹²⁵

Pharmacotherapy for opioid maintenance is listed as an accepted harm minimisation strategy in the National Drug Strategy.^{2, 124} It is recognised that dosing with these agents may be for an indefinite period or for a substantial number of years with the view of eventual abstinence, although this is not a necessary goal.¹²⁴ The use of these agents for maintenance allows the individual to develop a life free of the need to seek opioids and allows the development of social networks, employment and other life functions.¹²⁴ Both drugs have been shown to reduce the quantity and frequency of illicit drug use, criminal activity and the risk of BBV transmission while providing opportunities for individuals to re-establish stability in their lives.¹²⁵ Cost remains a significant barrier to OTP access.^{125, 128}

The choice of treatment goal for OTP must be realistic in terms of what is achievable with the opioid dependent person. It must be noted that the goal of total abstinence from all opioid drugs may be unattainable for some individuals.¹²⁴ It is not uncommon for those on the OTP to continue to use illicit drugs occasionally or at a reduced rate.¹²⁴

Methadone hydrochloride

Methadone is a potent, synthetic, long-acting opioid agonist.^{118, 127} Methadone is administered orally as a liquid and is absorbed well.¹²⁷ It produces minimal tolerance and lessens cravings, compulsive drug use and may improve the hormonal disruptions found in opioid dependent individuals.¹¹⁸ Treatment with methadone reduces relapse rates, facilitates behavioural changes and enables patients to concentrate on life tasks (e.g. maintaining relationships and employment).¹¹⁸

Methadone is available as:^{120, 127}

- **Methadone syrup®**: contains 5 mg/mL methadone hydrochloride as the active ingredient and sodium benzoate, ethanol, sorbitol solution, glycerol, sunset yellow FCF, anise spice SCS491233 and purified water as the inactive ingredients.
- **Biodone Forte®**: contains 5 mg/mL methadone hydrochloride as the active ingredient and purified water and permicol-red colouring as the inactive ingredients.

Pharmacokinetics

Methadone can be detected in the blood 15–45 minutes after oral administration, with peak plasma concentration at 2.5–4 hours.¹²⁹ Onset of methadone withdrawal typically occurs 36–48 hours after the last dose, with peak symptoms at five to seven days.¹³⁰ Methadone has a long half-life, and will contribute to a continued rise in blood levels during the first week of dosing, and a relatively slow fall in blood levels between doses.¹²⁹ Methadone reaches a steady state (where drug elimination equals the rate of drug administration) after approximately 3–10 days (five half-lives).¹²⁷ Due to its long half-life, a staged reduction of methadone is advised as it will reduce the severity of withdrawal symptoms and associated discomfort.¹³⁰

Table 1: *Pharmacokinetics of methadone*

Onset of effects	15–45 minutes
Peak clinical effects	2.5–4 hours
Duration of effects	20–36 hours

Metabolism

Methadone is primarily metabolised in the liver via the CYP450 3A4 and 2B6 isoenzymes, as well as 1A2, 2C8, 2C19, 2D6 and 2C9 systems.^{127, 131} Approximately 10% of orally administered methadone is eliminated unchanged.¹²⁷ The rest is metabolised and the (mainly inactive) metabolites are eliminated in the urine and faeces. Methadone is also secreted in small amounts in breast milk.¹²⁹

Side effects

The effects of methadone are qualitatively similar to other opioids. Most people who have used opioids will experience few side-effects from methadone.¹²⁷ Side effects of oral methadone in controlled doses are relatively minor however the long-term effects on teeth, constipation, sexuality and sleep can cause distress and warrant appropriate management.¹²⁷

Drug interactions

The major hazard associated with methadone is the risk of overdose.¹²⁹ The slow onset of action and long half-life mean that methadone overdose can be deceptive and toxic effects may become life-threatening many hours after ingestion.¹²⁷ Toxicity and death have resulted from interactions between methadone and other drugs.¹²⁷ Some psychotropic drugs may increase the actions of methadone because of additive effects (e.g. benzodiazepines, anti-psychotic drugs, alcohol).¹²⁷ Inducers and inhibitors of the CYP450 system can affect the metabolism and concentration of methadone.¹²⁷

Buprenorphine

Buprenorphine is a partial agonist of mu-opioid receptors,¹²⁵ and is a derivative of an opioid alkaloid – thebaine.¹²⁷ Buprenorphine has actions similar to the full opioid agonist drugs but with less efficacy. An μ in buprenorphine dose will have a progressively less increase in its effect (i.e. not proportional increase). Dose increases beyond those required to saturate the majority of mu opioid receptor sites (usually 16mg) will cause a prolonged duration of action with additional full opioid agonists having little or no effect.¹²⁷ At low doses, buprenorphine elicits an agonist effect. At higher doses, it causes an antagonistic effect and can precipitate withdrawal.¹³²

Buprenorphine can block the effects of other opioid agonists in a dose-dependent fashion. By its dual effects of reducing craving and reducing the response to other opioid drugs, buprenorphine reduces the self-administration of opioids.¹²⁹ Buprenorphine also exhibits antagonist effects at the kappa opioid receptor, which may contribute to an antidepressant action.¹²⁷

Buprenorphine is administered as a tablet or film for sublingual absorption.¹²⁷ These formulations are available as either buprenorphine-mono (tablet) or as a 4:1 combination with naloxone (film).¹²⁷ Buprenorphine (by itself) is available as sublingual tablets (Subutex®) as 0.4mg, 2mg, 8mg strengths and buprenorphine/naloxone is available as sublingual films (Suboxone®) as 2mg/0.5mg and 8mg/0.5mg strengths.¹²⁷

The combination of buprenorphine and naloxone is intended to limit potential misuse and diversion as buprenorphine/naloxone combination preparations are less likely to be injected than mono preparations.^{133, 134} The properties of buprenorphine and naloxone are such that, when taken sublingually, buprenorphine/naloxone will act as if it is buprenorphine alone.¹³⁴ However, if the combined preparation is injected, the naloxone will have a clinically significant effect such that it is likely to reduce the effects of the buprenorphine in the short-term, and is also likely to precipitate withdrawal symptoms in opioid dependent individuals using other opioid drugs.¹³⁴

Pharmacokinetics

Buprenorphine is a long-acting drug with a terminal elimination half-life of 24–37 hours.¹²⁹ Peak plasma concentrations are achieved 1–4 hours after sublingual administration. Typically, effects will continue to be experienced for up to 12 hours at low doses (2mg), but as long as 48–72 hours at higher doses (16 or 32mg).¹²⁹ The prolonged duration of effect at high doses enables double (alternate-day dosing), and even triple (third-day dosing) dispensing regimens.¹³⁵

Table 2: *Pharmacokinetics of buprenorphine*

Onset of effects	30–60 minutes
Peak clinical effects	1–4 hours
Duration of effects	8–12 hours (low dose, e.g. 2mg) 24–72 hours (high dose, e.g. > 16mg)

Metabolism

Buprenorphine is principally metabolised by two hepatic pathways: conjugation with glucuronic acid and N-dealkylation, mediated by the CYP450 3A4 isozyme.¹²⁹ The metabolites are excreted in the biliary system, with enterohepatic cycling of buprenorphine and its metabolites. Most of the drug is excreted in the faeces and, to a lesser extent, in the urine.¹²⁹

Buprenorphine undergoes extensive first pass metabolism in the small intestine and the liver when taken orally. The use of buprenorphine by the enteral route is therefore inappropriate and the recommended administration method for buprenorphine is sublingual. The bioavailability of sublingual buprenorphine reflects the time the drug is in contact with the oral mucosa, and is approximately 30–40%.¹²⁹

Females exposed to the same doses of buprenorphine as males have higher blood concentrations of buprenorphine and active metabolites. The difference is likely to be due to differences in body composition, and is considered unlikely to be a major concern.¹³⁶

Side effects

The side effects of buprenorphine are similar to those of other opioids.¹²⁷ The most common being constipation, disturbed sleep, drowsiness, sweating, headaches, nausea and reduced libido.¹²⁹ Unlike methadone, the effect of buprenorphine on respiratory depression reaches a ceiling. This action makes buprenorphine safer than methadone in overdose. However, even low doses of buprenorphine can be toxic when combined with sedatives (e.g. benzodiazepines and alcohol).¹²⁹

Drug interactions

Caution should be exercised when buprenorphine is administered with CYP3A4 inhibitors (e.g. protease inhibitors, ketoconazole, nifedipine, atazanavir) as this may lead to increased plasma concentrations of buprenorphine.¹³⁷ Buprenorphine appears to have less serotonergic potential than methadone.¹³⁸ There is a case report of serotonin toxicity that may have been associated with buprenorphine in a client on tricyclic antidepressants,¹³⁹ and three reports of serotonin toxicity associated with buprenorphine in combination with mono-amine oxidase inhibitors.¹³⁸

Buprenorphine exerts a degree of competitive blockade similar to the effects of full agonist opioids, which may complicate the use of additional opioids for analgesia.¹⁴⁰ Under certain circumstances, buprenorphine may precipitate opioid withdrawal symptoms one to four hours after the first dose.¹⁴⁰ It has a higher affinity and lower intrinsic activity than full agonists such as methadone, morphine or heroin. Consequently, buprenorphine displaces agonists from opioid receptors and, in the short-term, may not produce sufficient agonist effects to compensate for the displaced opioid, producing withdrawal as the buprenorphine reaches its peak effects.¹²⁹ This can largely be avoided by using appropriate dose induction procedures.¹⁴⁰

Naltrexone

Naltrexone is an antagonist at the mu opioid receptor.¹²⁷ In doses of 50mg/day, oral naltrexone will block the effects of opioid drugs.¹²⁷ In naltrexone maintenance treatment, this blockade of opioid drugs provides support for relapse prevention treatment.

Individuals initiating naltrexone should be free from all opioids (including methadone and other opioid-based treatment medications); otherwise, severe withdrawal can occur.¹¹⁸ While naltrexone will block the effects of opioids, high opioid doses may overcome the blockade and cause fatal overdoses.⁴⁸

Sustained release and implant preparations of naltrexone are currently not registered in Australia and remain experimental.¹²⁷ Naltrexone is indicated as an adjunctive relapse prevention treatment in people who have withdrawn from opioids and are seeking to remain abstinent.¹²⁷ Given the potential for overdose after relapse, naltrexone treatment is most likely to be useful for those with a reasonable chance of remaining abstinent.¹²⁷

Contraindications to naltrexone treatment are:¹²⁷

- Current physiological dependence on opioids – those currently physiologically dependent should be offered withdrawal management or referred to specialist services
- Acute opioid withdrawal – there needs to be a drug-free interval before commencing naltrexone
- Opioid use for chronic pain states – this requires specialist assessment
- Acute hepatitis or liver failure – as naltrexone can be hepatotoxic in high doses. The margin of separation between the apparently safe dose of naltrexone and the dose causing hepatic injury appears to be only fivefold or less
- Known adverse reactions or sensitivity to naltrexone.

Naloxone

Naloxone is a drug that can temporarily reverse opioid overdose. It works by blocking opioid drugs, from attaching to opioid receptors in the brain.¹⁴¹ Naloxone is administered intramuscularly (via an injection) or delivered via a nasal spray.¹⁴¹ There is no evidence that extended use of naloxone can cause harmful physical effects or dependence. People who take naloxone do not develop a tolerance to its effects and there have been no reported deaths from naloxone overdose.¹⁴¹

Pharmacokinetics

Naloxone acts within three to five minutes and its effects can last from 30–60 minutes before wearing off.¹⁴² Naloxone is metabolised by the liver and eliminated by the kidneys.¹⁴² Naloxone should be administered again if the overdosed individual shows no response to the first dose.¹⁴³

Due to its short half-life, it is important to note that its effect may wear off before the opioid has left the system.¹⁴³ If this is the case, the individual may experience a second overdose once the effects of naloxone wear off. Another dose of naloxone may be required.¹⁴³

Side effects

Most side effects from naloxone are mild. However, if someone is opioid-dependent and they are given a high dose of naloxone, it can bring on symptoms of opioid withdrawal such as:

- Nausea and vomiting
- Sweating
- Trembling
- Nervousness
- Fast pulse.

Chapter 2

OTP provision and delivery

The broad goal of OTP is to reduce health, social and economic harms to individuals and the community arising from unsanctioned opioid use.¹²⁷ OTP in Queensland is provided by Queensland Health OTP Clinics, and medical prescribers authorised as private OTP prescribers. The use of community pharmacies and public facilities in both metropolitan and rural areas has been vital in enabling the dispensing and supply of OTP medications across Queensland.

OTP service providers

OTP in Queensland is provided by Queensland Health OTP (QOTP) Clinics, and medical prescribers authorised as private OTP prescribers.¹²⁷

- QOTP clinics adopt a multidisciplinary team approach where a range of specialist medical, nursing, allied health and pharmacy professionals provide a mix of medical care (including prescribing), case management, counselling and psychosocial support to individuals on the OTP.¹²⁷
- Private OTP prescribers work in a variety of settings, ranging from general practitioners in primary care, to addiction medicine specialists and psychiatrists working in private clinics.¹²⁷ Interventions to reduce risks associated with the use of opioids and other substances are integral. It is important to note adjunctive treatment may vary depending on the specialty of the private prescriber.¹²⁷ Holistic care and management of comorbidities may be managed independently by the private prescriber, in consultation with other health service providers, or by referral to other services.¹²⁷

Patient reviews throughout OTP management

Frequent reviews by a prescriber are required in the first few weeks of treatment. This provides opportunities for the prescriber to:

- Determine the optimal dose for the individual
- Assess the patient
- Discuss treatment plans further.

As the treatment progresses, the prescriber should review the patient two to three times per week until the patient has stabilised.

Monthly reviews will follow, with a possibility for three-month reviews for patients who are very stable.

All patients should be reviewed at least every three months. Patients who are displaying signs of instability, continuing high risk drug use, psychiatric or social problems will require more regular reviews.

OTP dosing locations

The use of community pharmacies and public facilities in both metropolitan and rural areas has been vital in enabling the provision of a state-wide OTP service.¹²⁷ A significant portion of opioid treatment is primarily dispensed to individuals through community pharmacies.^{127, 144} Community pharmacies are ideally placed to supply OTP services due to their accessibility, convenience, extended hours of operation and delivery of professional services. Evidence shows that dosing in community pharmacy positively impacts on the individual's lifestyle in the long-term.

The dosing of OTP through community pharmacies offers many advantages.¹⁴⁴ For public clinics, client transfer to community pharmacies relieves workload and costs, and increases capacity for new OTP patients.¹⁴⁴ From a patient's perspective, dosing at a pharmacy is relatively more flexible and is generally more preferable to dosing at clinics.¹⁴⁴ Pharmacists stand to gain clientele, revenue and increased foot traffic through the pharmacy.¹⁴⁴ The retention of patients in OTP programs with community pharmacies is higher compared to clinic or hospital-based OTP programs.^{144, 145}

Role of community pharmacy

Pharmacists are well-placed to provide a range of opioid-related services as they are trusted, accessible and are trained in the effective use of medicines.^{125, 146} They are an important part of the healthcare team to address opioid dependence through the provision of OTP and the promotion of the uptake of over-the-counter naloxone to prevent and reverse opioid overdoses.¹⁴⁶ Pharmacists are also well-equipped to help individuals better manage other health conditions associated with, or in addition, to opioid dependence (e.g. dental problems, constipation, cardiovascular health).¹⁴⁴ Many individuals on the OTP develop rapport with the pharmacist and pharmacy staff at the community pharmacy where they receive OTP.

The role of the pharmacist

In the dosing of OTP, community pharmacists should:^{127, 130, 147}

- Check that the OTP Written Instruction satisfies the legal requirements
- Ensure positive identification of the client before administration of any dose
- Explain any side-effects of medication when appropriate
- Assess the client for intoxication and contacting the OTP service provider if necessary
- Ensure the dose is correct
- Supervise the consumption of each administered dose
- Supply any takeaway doses (TADs) in accordance with the Written Instruction

- Provide any relevant information regarding the client's progress, including missed doses, restart after missed doses, dose diversion, intoxicated presentations and other issues of concern to the OTP service provider
- Support the client and encourage a healthy lifestyle
- Ensure that client information is kept confidential
- Ensure all pharmacy staff (including locum pharmacists) are appropriately trained and informed regarding QOTP requirements
- Report incidents to the OTP service provider and Monitored Medicines Unit
- Ensure that methadone and buprenorphine are stored and recorded in compliance with current legislation.

Patient behaviour

Inappropriate or violent behaviour should not be tolerated from clients on the OTP. Behaviour that is out of character can be an indicator that there may be some disruptions and instability occurring in a person's life. This is a good time for the pharmacist to recommend a review with their prescriber. The review may provide an opportunity for referral to allied health support such as counselling.

Clinical guidelines

The *Queensland Medication-Assisted Treatment for Opioid Dependence: Clinical Guidelines 2018* is a comprehensive manual on the OTP. Pharmacies providing the OTP are advised to be familiar with this guideline. The guideline contains a section specifically related to pharmacists on the dosing of methadone and buprenorphine to clients on the Queensland OTP. The guideline can be found on the Queensland Health Queensland OTP webpage <https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/medicines/drugs-of-dependence/qld-opioid-treatment>

Chapter 3

Common concerns

Each individual's experience, and use, of the OTP differs. It is not uncommon for individuals to be on the OTP for extended periods of time or not be able to achieve treatment goals. Community pharmacies play a pivotal role in the dispensing of OTP to thousands of individuals across Queensland. Pharmacists and pharmacy staff can have a significant impact on the success of the OTP through good communication, decreasing stigma and understanding of the challenges faced by people who are drug dependent.



Intoxicated clients presenting for dosing

The pharmacist is not obliged to supply doses to clients who present, in their opinion, as intoxicated.¹²⁷ Client safety is the key consideration in responding to those who present for OTP dosing when intoxicated with opioids, alcohol, benzodiazepines or other drugs.¹²⁷ Clients who appear intoxicated should not be given their usual OTP dose or any TADs at that time.¹²⁷

The pharmacist is to contact the OTP service provider for instructions.¹²⁷ The dose should still be withheld, and the client referred to the nearest hospital emergency department if the pharmacist has safety concerns and is unable to contact the OTP service provider.¹²⁷ The pharmacist is also to notify the OTP service provider at the earliest opportunity.¹²⁷

Lost, stolen or broken TAD OTP doses

Lost or stolen TADs should not be replaced by the pharmacist. The client should report these to both the OTP service provider and the police.¹³⁰ Similarly, broken or damaged TADs should not be replaced without advice from the OTP service provider.¹²⁷

Irregular attendance for OTP

It is not uncommon for clients to miss doses occasionally due to work and other life commitments. A small proportion of clients have poor attendance for dosing. This may be due to ambivalence about treatment, access issues (e.g. transport, work commitments, limited dosing hours) or medical issues (e.g. mobility problems, cognitive impairment).¹²⁷ Regular attendance at the pharmacy for the OTP is preferred as it leads to less fluctuation in pharmacotherapy levels and greater patient stability.¹⁴⁸ Irregular attendance may be indicative of illicit drug use or a patient's need for counselling or review.

The pharmacist should notify the OTP service provider when a client fails to attend for their dose, and when the client has been restarted on their OTP medication at pharmacy after missed doses.¹²⁷ A 'missed dose' is calculated based on the equivalent of daily doses not administered or supplied.¹²⁷ Repeated missed doses can be associated with reduced opioid tolerance, opioid withdrawal or use of other substances, which in turn can impact on treatment safety and effectiveness.¹²⁷ Given this, the response to missed doses varies depending on the medication, the number of days missed and the client's clinical presentation when they next attend for dosing.

Different prescribers may have different requirements on the number of doses clients are allowed to miss before the client must be reviewed by the prescriber. Dosing will only resume once the prescriber reviews the client to ensure the appropriateness of dosing. A single missed dose may not be significant, but the OTP prescriber should be advised when a patient attends irregularly for pharmacotherapy doses. If a patient is frequently missing doses, the prescriber should be notified in order to review the appropriateness of OTP doses

Vomited dose

Vomiting after a dose of methadone creates uncertainty about the amount of dose absorbed.¹²⁷ If the vomiting occurs 10 minutes or more after the dose is given, the pharmacist can give reassurance that the entire dose has been absorbed. If vomiting occurred less than 10 minutes after dosing, the OTP provider should be contacted for further instruction and advice.¹²⁷ A substitute dose should not be supplied to a client who claims they have vomited a dose (and requests a replacement dose), without prior approval of the OTP service provider.¹²⁷ As buprenorphine is absorbed sublingually, there is no need for replacement of buprenorphine if a client vomits after dosing. However, the OTP service provider should be notified of the incident.¹²⁷

Diversion

Diversion refers to OTP doses being used other than as intended (e.g. being removed from the dosing point). Diversion of supervised doses and TADs of both methadone and buprenorphine does occur.¹²⁷ While most clients do not divert their medication, the potential for some clients to attempt to divert their medication, for a range of reasons, always remains a risk and is treated very seriously.¹²⁷

To avoid diversion, clients should be provided with clear guidance on why and how the OTP medication is given and the method to take the dose appropriately.¹²⁷ Clear instructions to clients on how they should present during the observed consumption of the dose can help to avoid unnecessary suspicion of diversion.¹²⁷

Other medications

Some clients require treatment with prescribed medications for acute or chronic medical conditions. In these circumstances, it is appropriate for the dosing pharmacy to dispense the associated prescriptions.¹²⁷ It is important to note that the combination of opioids and sedating medications may be potentially hazardous. If a client presents with a prescription for a sedating medication from a prescriber other than the OTP prescriber, the pharmacist should contact the prescribing physician to discuss any safety concerns.¹²⁷ The OTP service provider should also be contacted.¹²⁷

Concurrent illicit drug use while on the OTP

Polydrug use is not uncommon amongst those on OTP.¹⁴⁹ Continued illicit drug use negatively affects the individual's stability, treatment and health outcomes and increases treatment dropout.^{149, 150} In a pharmacy environment, the recognition that an individual is concurrently using drugs while on the OTP can be an opportunity for the pharmacist to show concern and open lines of communication. The OTP prescriber should be notified if there are concerns regarding the wellbeing of the individual.

A person may not appear intoxicated whilst using additional drugs. However, if there are signs of intoxication following a brief assessment, pharmacists should contact the prescriber for instructions prior to dosing.

The pharmacist should exercise the usual care in circumstances in which a Pharmacy Only (S2) or Pharmacist Only (S3) medication is requested.¹²⁷ If there is any suspicion of inappropriate or hazardous use of medication, the OTP service provider should be notified.¹²⁷

Inability to pay for OTP doses

It is important to explain to clients the fees and payment arrangements for OTP dosing in the pharmacy. A patient contract or agreement is helpful to list all the patient's and pharmacy's responsibilities and payment arrangements for the OTP. Accurate record keeping of all payments is vital to remove confusion and disagreements.

Purchasing sterile injecting equipment while on the OTP

The philosophy of harm minimisation is based on decreasing drug related harm to the individual and broader community. Harm minimisation is not intended to condone or promote the use of drugs, it recognises that drug use does occur and provides services and support that aim to reduce the harm that can be associated with its use. One defining feature of harm minimisation is the focus on the prevention of harm rather than the prevention of drug use. The provision of sterile injecting equipment is well documented to prevent the possible transmission of BBVs in individuals and the broader community.

Section 4

Useful contacts & points of referral



Services

Aboriginal and Drug Alcohol Council

Phone: (08) 8362 0395

Website: www.adac.org.au

Alcohol and Drug Information Service (ADIS)

Roma St, Brisbane City Q 4000

Free call: 1800 177 833 (24 hours, 7 days a week)

(07) 3236 2414

Website: adis.health.qld.gov.au

Association for Prevention and Harm minimisation Programs Australia (ANEX)

Phone: (03) 9486 6399

Website: www.anex.org.au

Australian Drug Information Network (ADIN)

Website: www.health.gov.au/contacts/australian-drug-information-network-adin

Biala City Community Health Centre

Ground Floor, 270 Roma St, Brisbane Q 4000

Phone: (07) 3837 5600

Brisbane Youth Services (BYS)

42 McLachlan St, Fortitude Valley Q 4006

Phone: (07) 3620 2400

Website: www.brisyouth.org

Clean Needle Helpline

Phone: 1800NEEDLE (1800 633 353)

CHAMP Clinic (Alcohol and Drug Ante-natal care)

Mater Mother's Hospital, Raymond Tce, South Brisbane Q 4101

Phone: (07) 3163 2417

Email: champ@mater.org.au

Family Drug Support (FDS)

Phone: 1300 368 186 (24 hours)

Website: www.fds.org.au

Hepatitis Queensland

3/100 Campbell St, Bowen Hill Q 4006

Phone: 1800 437 222

Website: www.hepqld.asn.au

Hospital Alcohol and Drug Service (HADS)

(hospital inpatient withdrawal management service)

Royal Brisbane and Women's Hospital, Herston Q 4209

Phone: (07) 3676 8704 (8am–8pm, 7 days)

Insight – Centre for alcohol and other drug training and workforce development

Floor 4, Biala, 270 Roma St, Brisbane Q 4000

Phone: (07) 3837 5655

Monitored Medicines Unit (MMU)

Phone: 13 78 46

Email: mmu@health.qld.gov.au

Operating hours: 8am–8pm, 7 days a week

Clinicians available: 9am–5pm, Monday to Friday

Office of the Health Ombudsman

400 George St, Brisbane Q 4000

Phone: 13 36 46 (9am–5pm, Monday to Friday)

Website: www.oho.qld.gov.au

Queensland Ambulance Service (QAS)

Phone: 13 74 68

Website: www.ambulance.qld.gov.au/index.html

Queensland Aids Council (QuAC)

30 Helen St, Teneriffe Q 4000*

Phone: (07) 3017 1777
outside Brisbane 1800 177 434

Website: quac.org.au

Queensland Injectors Health Network (QuIHN)

1 Hamilton Pl, Bowen Hills Q 4006*

Phone: (07) 3620 8111
outside Brisbane 1800 172 076

Website: www.quihn.org

Queensland Pharmacotherapy Advice and Medication Service (QPAMS)[†]

(Inside QuIHN) 1 Hamilton Pl, Bowen Hills Q 4006

Phone: 1800 175 889
(07) 3620 8111

Website: qnada.org.au/location/quivaa-queensland-injectors-voice-advocacy-action

SHADES Clinic (Alcohol and Drug Ante-natal care)

Maternity Outpatients

Royal Brisbane Women's Hospital, Butterfield St, Herston Q 4029

Phone: (07) 3647 3957 (1pm–3pm, Monday)

Phone: (07) 3647 3962 (other times, Maternity Outpatients)

* The organisation has branches/offices in other parts of Queensland, please refer to their website for further information.

† Service available across Queensland.

Websites

Queensland Health (Alcohol Tobacco and Other Drugs)

<https://www.health.qld.gov.au/public-health/topics/atod>

The Alcohol and Drug Foundation

www.adf.org.au

The Alcohol and Other Drugs Council of Australia

www.adca.org.au

The Australian Federation of AIDS Organisations

www.afao.org.au

Hepatitis Australia

www.hepatitisaustralia.com

The Pharmacy Guild of Australia, Queensland Branch

www.guild.org.au/guild-branches/qld



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