

2008 Update
Now the most comprehensive Needle
Exchange resource available free.
Free to workers and users.
More Light! More Power!

Safer Injecting

Resource Pack

2008 Edition

Written by:

This resource pack was written and developed by Kevin Flemen

This version was produced June 2008 and is fully reviewed and partly revised

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Disclaimer

Injecting drugs is an inherently risky activity. No organisation or individual associated with this document can accept liability for accident or injury arising from injecting or other drug-related activity, and the material herein is for advice and guidance only.

This legal and policy sections of this pack relate only to England and Wales.

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Contact Details:

KFx Website: www.ixion.demon.co.uk

Email: kevin@ixion.demon.co.uk

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Ch. 1

Introduction

1: Introduction

1.1 The need for effective needle-exchange workers

Drug users potentially face a range of problems associated with their drug use. While not all drug use causes problems, the use of illicit drugs and other substances brings with it a range of risks.

The risks attached to drug use are far higher for people who inject drugs. Injecting drug users face a number of problems directly related to injecting including:

- Transmission of blood-borne viruses including Hepatitis B and C, and HIV
- Infections caused through injecting
- Injuries caused by injecting
- Increased risk of overdose

In addition to these risks, injecting drug users, who may have been using drugs for a significant length of time, are also likely to encounter a wide range of other problems including:

- Physical health problems
- Legal problems
- Housing issues
- Issues relating to mental health.

It is important that drug users who inject are in contact with services that can help address these areas of harm and potential harm. One of the most important points of contact that injecting drug users have with support and treatment agencies is via Needle Exchanges services.

Most people who use drugs have no contact with drug services. Many only seek to contact agencies when they are experiencing some sort of problem or at times of crisis.

An important exception to this is where injecting drug users maintain contact with a needle exchange service. The client may not currently be experiencing problems related to their drug use. However they are aware of and attempting to prevent problems from developing, through using a needle exchange.

Effective needle exchange work can assist the process of reducing injecting and other drug related harm. And at the same time, Needle Exchange Workers can engage around other issues that may be, or could become problematic.

So while the focus of Needle Exchange Work is on reducing the risks related to injecting, they can have a pivotal role in assessing and identifying other areas of risk, and addressing these before they become problems.

1.2 Needle Exchange

The key functions of needle exchanges:

The original key aim of needle exchange provision was to:

Reduce the transmission of HIV, Hepatitis and other infectious diseases, and contribute to the health of service users.

Increasingly, the role of needle exchanges has become wider, addressing other aspects of risk and health for injecting drug users.

It should be stressed that needle exchange is located within a hierarchy of risk reduction. Needle Exchange does not make injecting drug use safe, and it is a less desirable outcome than other outcomes on the hierarchy.

Before proceeding with needle exchange it is always worth exploring other options on the hierarchy.

The hierarchy looks like this:

- Stop using
- Stop Injecting
- Stop sharing
- Improve technique and reduce other risks

To this end, needle exchanges can offer a range of services that includes:

- Provision of clean injecting equipment
- The safe collection and disposal of used equipment
- Harm minimisation advice about injecting
- Primary health care
- Sexual health services
- Assessment and referral for drug treatment and other services

Needle exchange provision can be delivered in a range of settings by a variety of workers. Needle Exchange can take place in different settings and can be delivered by a range of different professionals. There are advantages and disadvantages to each model of delivery. These are explored in the following pages, which look at some of the key strengths and limitations of different models of provision.

Points of Delivery for Needle Exchange Provision – Advantages and Limitations

Venue	Description	Opportunities	Limitations
Fixed-site exchange	A stand-alone service that exclusively offers services to injecting drug users.	<ul style="list-style-type: none"> • Is able to offer a wide range of interventions including full assessments, training around injecting technique. • May also undertake additional services such as testing for HIV or HCV and primary health care interventions. 	<ul style="list-style-type: none"> • May require significant number of staff and dedicated premises; • Only practical in an area with a high level of injectors. • Research suggests that they tend to work most successfully with older, white male opiate users and may be under-utilised by women, black drug injectors and stimulant users.
Exchanges within street drug projects	Exchange is part of the street drug agencies service, alongside other advice, counselling and other interventions.	<ul style="list-style-type: none"> • Requires less staff to operate the exchange and has no extra premises costs. • Can link clients from exchange services into counselling and treatment services. • Is able to undertake a detailed assessment. • Can undertake harm-reduction and safer injecting interventions where staff skills allow. 	<ul style="list-style-type: none"> • On the whole, research suggests that many drug services tend to be under-used by women and black drug users and so these groups may under-use drug project exchanges.
Exchanges within community drug teams	Similar to above, except that the exchange will typically run alongside other services such as prescribing.	As above	<ul style="list-style-type: none"> • There may be conflict of interests between prescribing services and exchange services, and this can cause confusion for staff and clients. Clients who are in receipt of prescriptions for methadone may not want to use exchange services, out of concerns that they will lose their prescriptions, and strategies need to be in place to 'ring fence' such services.
Community pharmacy needle exchange	Pharmacists will be trained and undertake the distribution and of clean equipment and the collection of used works.	<ul style="list-style-type: none"> • Popular with users who like the anonymity that the local pharmacy can offer, • Essential outlet in rural settings and other areas where local drug services are inaccessible. • May be able to identify some health problems and offer advice or referral 	<ul style="list-style-type: none"> • Often hold a limited range of injecting stock, • Limited space and time to undertake more extensive referral, • Harder to link clients in to other services such as drug agencies. • May find it harder to achieve high return rates, although this is not always the case.
A& E Departments	Many A&E departments in UK hospitals will provide a limited range of injecting equipment.	<ul style="list-style-type: none"> • Open 24 hours • May be used by people who have serious injecting injuries and can be a route into treatment 	<ul style="list-style-type: none"> • Not a widely publicised service, • Injecting drug users and A&E departments often have strained relationships.
Satellite Exchanges	Specialist exchange workers go into to other	<ul style="list-style-type: none"> • Can make exchange provision accessible to "hard-to-reach" populations, especially those who may not use 	<ul style="list-style-type: none"> • May be difficult to carry an extensive range of equipment in satellite settings,

	settings – hostels, day centres, or other settings where users can be contacted – and undertake needle exchange services there.	<p>other drug provision.</p> <ul style="list-style-type: none"> • May be able to undertake a detailed assessment where there is sufficient space. • Makes exchange services accessible in rural areas and other inaccessible settings. 	<ul style="list-style-type: none"> • Clients who are barred from the host agency lose access to satellite services.
Hostel-based exchange	Trained workers in hostel or other housing settings offer needle-exchange provision to residents.	<ul style="list-style-type: none"> • Ensures that clients have an easy and ready access to clean equipment, • Reduces the need to maintain contact with ‘street’ drug scenes; • Cost effective; 	<ul style="list-style-type: none"> • May be limited by space and the skills of the exchange worker, • May only be able to offer a limited range of interventions.
Mobile Exchanges	The exchange operates out of a vehicle such as a minibus.	<ul style="list-style-type: none"> • Can be operated closer to active drug scenes, increasing take-up amongst hard to reach clients. • Have proved effective in working with women, sex workers and homeless drug users. • Can operate late at night. • Some converted vehicles can carry a range of stock and provide space for detailed assessment. • Especially useful when there is no local fixed site exchange or drug project. 	<ul style="list-style-type: none"> • Maintains drug users using street-based services, which can reinforce ‘street’ lifestyles. • Space can limit privacy and hamper assessment.
Street-outreach	Workers go out on the streets and make contact with drug users, offering exchange services.	<ul style="list-style-type: none"> • Can establish contact with users who are not in contact with any other services. • Can encourage users to access other services. 	<ul style="list-style-type: none"> • Can only carry limited range of equipment; • Can only undertake limited assessment or interventions. • Can be very staff intensive.
Home Visits	Workers visit people in their own homes and provide exchange and advice interventions	<ul style="list-style-type: none"> • As for street outreach • Allows deliveries or collections of large quantities • May allow better interventions as worker is in client’s space • Allows for supervision and examination of injection environment and process 	<ul style="list-style-type: none"> • Could put workers in higher risk environments • Intensive in terms of staff time • Discourages clients from going out

Ch.2

Fundamentals of Injecting

2: Fundamentals of Injecting

2.1 What Is Injecting?

Injecting is a method of introducing a drug to the body. Instead of smoking, snorting or swallowing the drug, it is made into a liquid preparation, placed into a syringe, and injected into the body through a needle.

Terms: Terms, especially jargon and abbreviations can be misleading and it is important that they are used correctly. In this document, the generic term Injecting Drug User (IDU) will be used for a person who injects. Within the IDU population, there are different types of injection, notably Intravenous Injection (IV Drug Use), Intramuscular Injection (IM Drug Use) and SubCutaneous Injection (SC Drug Use). Too frequently, the term IVDU is used as a catchall for injectors and disguises the fact that some injectors will not be using intravenously.

Slang terms and jargon related to injecting are included in a glossary at the end of this booklet.

2.2 Why inject?

Different drugs can be introduced into the body in several ways. Drugs can be snorted, smoked, swallowed, taken rectally, or injected. Each of these processes has the same ultimate purpose – to get the drug into the bloodstream, and to reach the brain.

Bioavailability, First Pass Metabolism and Half-life:

Some methods are more effective than others, making more of the drug available in a usable form to the brain. The amount of usable drug available to the body is called **bioavailability**. The bioavailability will vary according to the drug used, route of administration, other drugs used, and the metabolism of the user.

When drugs are swallowed, the drug is absorbed into the bloodstream through the stomach lining and via the digestive tract. This process can take a considerable time, an hour or longer. After absorption into the blood stream, the blood from the stomach and the intestines passes through the liver before reaching the heart.

The liver removes toxins from the blood stream, and part of this process includes breaking down substances such as drugs. This initial pass through the liver is called **first pass metabolism**, and can result in the removal of half the active ingredients from circulation. Each subsequent pass round the body and through the liver removes more of the drug from circulation.

The length of time that a drug remains potent can be measured by its **half life**. The half life of a drug is measured by the time taken for its concentrations in the body to drop by half. So if the half-life of a drug is measured as three hours, this means that three hours after peak levels were reached, concentrations will have dropped by half. Three hours later, the concentrations

will have dropped by half again.

However, the term "half life" is used with less scientific precision to describe the duration of effect of a drug. Many people will say that the half life of heroin is around six hours. What they mean by this is that from when the drug is taken, the effects will largely have worn off after around six hours, when the dependent user starts to withdraw. This interpretation of half-life is probably more useful from a worker and user point of view but will make those of a scientific bent very unhappy.

The half life of a drug can be affected by factors including the route of administration, the drug taken and the metabolism of the individual.

When drugs are injected or smoked, the drugs do not travel through the liver before reaching the heart and the brain, and so no drug is broken down through the first pass metabolism. This means that the bioavailability the drug is greater, maximising its effects. The increased effectiveness of injecting is one of several reasons why people may inject drugs:

2.3 Key Reasons for injecting

- **The effects of the drug are experienced much more rapidly**
When injected, all the drug enters the system at once, so more of it reaches the brain quickly. Absorption through the stomach is very slow and gradual in comparison. Smoking drugs such as heroin and crack is faster, but there is liable to be more wasteful, and there are limits as to how much can be administered in one go.
- **Injecting is a more efficient way of administering drugs**
Other methods of drug use tend to be more wasteful. Smoking drugs means that some of the vapour is lost when the drug is burned. Not all the drug is drawn in to the lungs, and some is exhaled and not absorbed.
Some drugs like heroin or cocaine are relatively ineffective if swallowed, and so this is not a viable route for using.
None of the drug is broken down through first pass metabolism, so bioavailability is maximised.
- **The initial "hit" when the drug takes effect can become very attractive**
The delivery of drugs to the brain is very rapid, and so the pleasurable effect of using is very intense. Rather than a gradual and growing intoxication, as with swallowing a drug, injectors achieve an instant "high." This can be a hugely attractive part of injecting, and many users find this aspect of injecting psychologically addictive.
- **Induction and peer influence**
Injecting drug use was widely seen to be a progression from other methods of use such as smoking heroin. However, workers are increasingly seeing people who start injecting far earlier, maybe as the first method of using heroin.
Such use may be a pattern learned from other users who are injectors, and may be seen as being the "right" or even the "only" way to use the drug.
- **Users with a degree of tolerance may find that other methods of use don't satisfy them**
As tolerance builds up, users find that they need to use larger quantities, and that

previous methods of use such as smoking become ineffective and impractical. Injecting may become an alternative route for using.

- **If quality or availability of drugs decreases, then habitual users may inject their drug of choice to achieve make the most of available drugs.**

As mentioned above, injecting is a more efficient method of administering drugs than smoking or swallowing. When drug availability becomes scarce, quality drops or price increases, some users may seek to maximise the drugs available and injecting may become more prevalent.

- **Some people become attracted to ritualistic elements of injecting, and identify this as a "needle fixation".**

Injecting has a special status within drug use. While for some it is seen as the less attractive side of drug use, for others it is more appealing. With its own language, rituals and mystique, it has many subcultural elements that can make it attractive. The ritualistic aspects of injecting can also end up reinforcing injecting behaviour. The process can become an integral part of drug use, building up anticipation before the actual drug is used. For some people, these aspects of injecting become powerful factors that make it more difficult to stop injecting.

There may be a strong overlap for some people with injecting behaviours and self harming behaviours, and workers will need to assess if the primary intervention is not engagement with a CPN rather than engagement with Needle Exchange.

- **Injecting is the most 'practical option.'**

Other methods of use, may be impractical for some users. Smoking drugs for example is easy to smell and not feasible in some environments. Injecting is relatively quick and discrete and for an experienced groin injector is faster and easier to hide than smoking would be.

Some UK drugs such as base speed arrive in forms that are can't be readily used through other routes – such as snorting and so this precludes these as methods of use.

- **Injecting is 'correct' method of administration.**

Some substances are intended to be injected; some anabolic steroids, ampoules of diamorphine or methadone – these and some other substances are intended to be injected. However, not all are meant to be injected intravenously, and could be dangerous if taken in the wrong way.

- **Ignorance, or inexperience in other methods of use**

It is easy to assume that injecting drug users have progressed on to this method. Some may be unaware that other routes are available or unfamiliar with these routes. Educating people about efficient smoking techniques may be viable in some circumstances.

- **Sharing powder drugs**

It's easier and more egalitarian to split powder drugs as solution using a syringe, rather than trying to accurately divide powder drugs.

- **Smoking unpleasant or impossible**
Lots of people dislike the taste of smoking brown heroin; others may have lung problems and hence find smoking no longer feasible
- **Being injected by somebody else:**
It may be that the person is being injected by another, either by choice or by coercion. As this pattern of behaviour brings additional significant risks to both parties, it is important that workers are able to assess and intervene appropriately.
- **Status/Kudos**
Unfortunately, injecting holds a cachet and kudos, and so within some circles it will hold a level of appeal – like a rite of passage. From a Maslow-esque point of view it may bring achievement, and a sense of group acceptance. Damage from injecting can be viewed by some as status symbols.

2.4 Why the reason for use is important:

To help someone understand and review their injecting behaviour, it will be useful to understand the function of their injecting. This is too often dismissed as just a way of getting the drugs in. But for many people injecting will provide a number of functions, and understanding and addressing these will be critical if the person is to move away from injecting.

For many injectors, the speed of onset and the development of tolerance will be primary reasons for injecting.

But reasons change over time; what was initially rewarding may now be habit; what was once a response to a certain peer-group or environment, may be through lack of awareness of alternatives.

By working with the client to explore function, it may be possible to explore alternatives.

3: Fundamentals of Injecting – Physiology

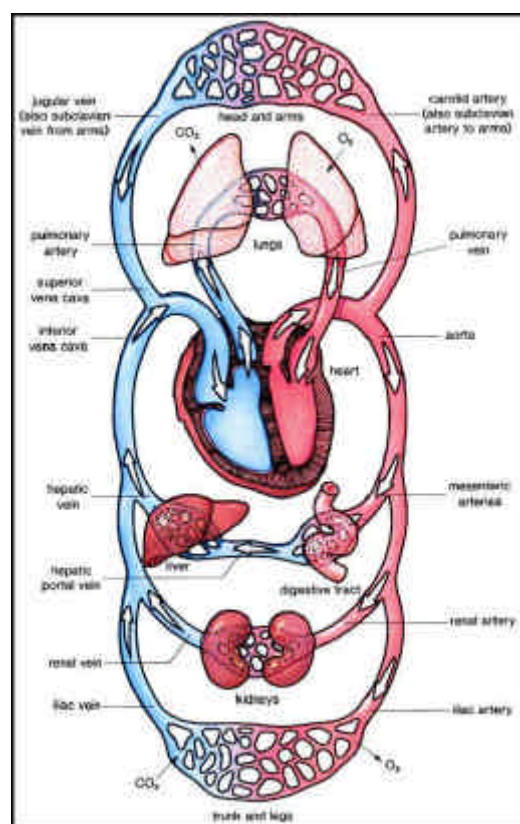
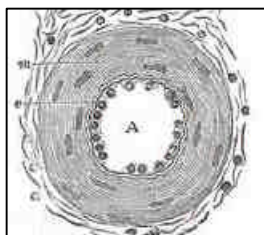
An understanding of the way that the human body and the circulatory system works is useful for both needle exchange workers and injecting drug users. By understanding how blood travels round the body and the structures involved, workers and injectors can better develop techniques that minimise damage and reduce risk. This is a complex subject matter; the better workers understand it, the more equipped they will be to explain it and work with service users to enhance their understanding. What follows is an exploration of how the blood transport systems work and the implications of this for injecting.

The venous and arterial systems

Blood travels around the body through a network of blood vessels. Starting at the heart, blood is pumped, under pressure, to the lungs. The blood there picks up oxygen. The blood returns to the heart, and is pumped, again under pressure, to the brain, the internal organs and all other parts of the body. There the oxygen and nutrients are absorbed, before the blood returns back to the heart and the lungs. The blood passes through the liver, where toxins are broken down. In the liver, the process of removing drugs from circulation takes place.

Arteries

The oxygenated blood from the heart travels through **arteries** to different parts of the body. The rhythm of the blood being pumped through arteries can be felt as a **pulse** in larger arteries. The oxygen in the red blood cells means that arterial blood is bright red and appears frothy. In the event of an artery being cut or pierced, red frothy arterial blood will



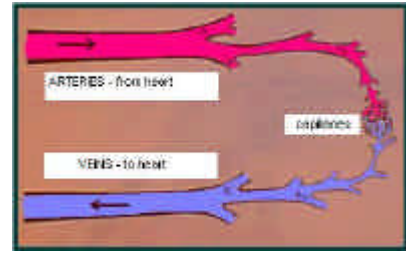
jet out under pressure. Arteries have thick muscular walls to contain the blood under pressure. The muscles allow the arteries to expand and contract in order to regulate blood flow. Arteries are also well served with nerves, and so injections into an artery will be painful.

Arteries may become blocked by attempts – accidentally or intentionally, to inject into them. The injection of substances such as solids such as tablets in solution, gel capsules such as Temazepam, or methadone mixture can cause blockage in an artery. The process of injecting into an artery can cause the muscles in the artery to spasm, cutting off the blood supply.

There are relatively few arteries in the body. Unlike veins, there are no alternative routes for blood from the heart to reach all round the body. If an artery becomes blocked, this can cut off the supply of blood to an organ or a limb. Deprived of oxygen, the affected area can die.

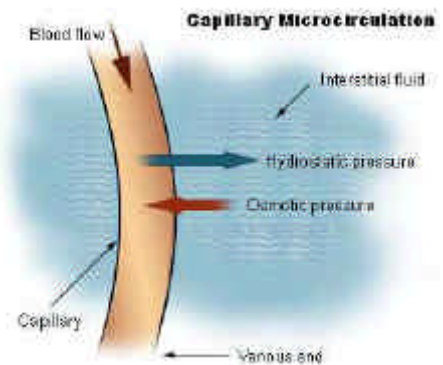
This can result in very serious problems such as loss of limbs. It can also be fatal if medical treatment is not obtained.

The arteries branch out, forming smaller vessels called **arterioles**. Arterioles may not have a discernible pulse, but do still contain blood under pressure. The arterioles subdivide further and further, until they form a network of tiny blood vessels called **capillaries**. As the vessels become smaller and smaller, they are more prone to getting blocked by undissolved matter in the injection mixture.



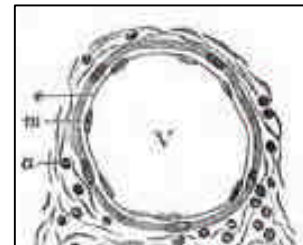
Capillaries

Capillaries are tiny blood vessels that form a network to supply muscles, organs and other tissue with oxygen and nutrients carried in the blood. They are thin, and some are too small to see with the naked eye. This blood supply is essential to keep tissues in the body alive. Particles entering the blood stream may travel round the larger vessels but can become lodged in the smaller capillaries. This can reduce circulation in the affected areas. If the blockages are extensive, the lack of blood to the affected area may result in tissue death, leading to complications such as the loss of feeling in the extremities, increased risk of ulcers and infections, and in extreme cases may lead to amputation.



Veins

Blood returns to the heart from the organs and limbs in **veins**. The deoxygenated blood travels from the capillaries into small veins. Some of these veins run close to the surface of the body and are termed **superficial veins**. Veins join together, forming larger veins, which tend to run deeper in the body and in turn return in ever larger veins to the heart.



Venous blood travelling back to the heart is not under pressure. From some parts of the body, especially the legs, it has to travel back against gravity. Veins have one way valves in them, which allows the flow of blood towards the heart but prevents blood flowing back away from the heart.

The blood in the veins is darker red, as it is no longer carrying oxygen. If a vein is cut or punctured, blood will not spurt out as with an artery but will ooze out.

There are a larger number of veins, and the network allows some blood to find other routes back to the heart. This may mean that previously very small veins start to carry more blood and become more noticeable. New veins may also be produced to compensate for damaged or blocked veins. This may mean that the injector may believe that they have some new usable veins. However these new or expanded veins are fragile and more likely to rupture or collapse if used for



injection.

Blockages to veins, especially larger deep veins, can stop the effective flow of blood from a limb back to the heart. As with blockage of an artery, this can cause serious complications, with potentially fatal consequences.

Unlike the arterial supply, venous blood starts in small vessels and travels in progressively larger vessels until reaching the heart. Particles or other matter entering the vein travel through these vessels and can reach the heart and the lungs. This means that infections, undissolved matter and blood clots can travel to the heart and the lungs, which can cause damage and can be fatal.

Veins and Arteries	
Arteries	Veins
Carry oxygenated blood	Carry deoxygenated blood
Carry blood away from heart	Carry blood towards heart
Hold bright red blood	Hold dark red blood
Blood at high pressure	Blood at low pressure
Bleed profusely –spurt blood	Does not bleed profusely – ooze blood
Served by many nerves	Few nerve connections
Thick walls	Thin wall
Muscular/elastic	Not elastic/muscular
No valves	Valves
Less numerous	More numerous
Recognisable pulse in larger arteries	No pulse
Mostly deep	Deep and superficial
<i>[From the Safer Injecting Briefing, HIT.]</i>	

In order to find veins and avoid arteries, the following steps may help. They are of course not foolproof and this should be stressed when discussing with injectors:

Indicator/Strategy	Caveats
Avoid risky areas: Avoid anatomical points where arteries are more accessible – especially points such as over joints (elbow, behind knee, armpit, neck, groin)	<i>Will substantially reduce risks but many injectors will intentionally be going in to high risk areas</i>
Feel for a pulse use fingers to feel for a pulse; if it has one it is an artery – inject elsewhere	<i>This strategy will work well on larger arteries where there is a strong pulse. But even the arterial pulse in the groin may be hard to feel in a seated person, and the pulse in small arteries such as fingers and toes will not be felt.</i>
Place needle slowly and carefully Before the needle actually touches the artery there may be warning signs – increased nerve sensations like electrical shocks as the needle gets close to the artery, and cramps as the	<i>By going in slowly, the injector should get advance warning that they are near the artery – and before actually piercing it. This warning sign is lost if the site is numb due (for example) to injecting cocaine.</i>

needle touched the artery wall	
<p>Arterial Cramp ? Pull Out! If the needle scratches or starts to pierce the artery, the thick muscular wall might go in to spasm. If this happens, circulation in the affected area may be cut off. The person will experience a sharp painful jolting cramp, followed by coldness and numbness in the area or limb. The needle needs to be removed; hopefully circulation will resume, otherwise tissues, deprived of blood, will start to die off.</p>	<p><i>There's no point in injecting in to an artery – the blood will be taking the drug in the wrong direction, and so if someone is on the verge of piercing an artery it's dangerous and pointless.</i></p>
<p>Blood pressure/colour If the warnings to date have been disregarded or missed, the person may have pierced the artery. With a larger artery blood pressure will be great enough to force blood in to the syringe. With a smaller artery this may not be the case.</p> <p>Whether it spurts in or needs to be drawn in, the arterial blood will be bright red.</p>	<p>If the person is injecting in small veins (hands or feet for example) the pressure is not enough to force blood in to the barrel. So this indicator is only good on big arteries.</p> <p>The colour of blood is a good indicator provided one is not injecting in the dark, or under blue lights.</p>

Hit an Artery? Action points!

In the event of hitting an artery workers cannot take chances and so the advice they should give should be clear, concise and unambiguous:

**1: give up trying to inject on this occasion:
do not try to go in a different site; if you use and go to sleep you may continue to bleed out and could lose a lot of blood or die**

2: remove needle from site

3: if possible you or a friend apply pressure to the site and try and elevate the wound if possible

4: always seek medical help; even a small arterial wound could drip for a long time.

Ch.4

The Drugs –

What gets Injected

4: The drugs – what gets injected

Broadly, there are two categories of substance that may be injected:

Injectables and Non-injectables

4.1 Injectables:

Injectables are substances that come in a form intended to be injected. Typically they come in a sterile form, in a sealed glass ampoule, in prepacked single or multi-dose preparations.

Different types of drug and different preparations are intended for injection in different ways. Some may be intended to be injected into muscle; others are intended to be injected intravenously or just under the surface of the skin. It can be damaging and in some cases life-threatening to administer an injectable by a route for which it was not intended.

Some injectable drugs may be legitimately prescribed, while others may be diverted to illicit street markets.

In order to reduce the risks when using injectables, the following steps could be adopted:

- **Check the strength and type of drug:**

Users may be unaware of the range of different injectable products that exist, or the different strengths and preparations. This can cause serious risk of harm or overdose. For example, many injecting drug users talk simply about “amps” as shorthand for ampoules. Both they – and frequently workers, assume that this is a reference to Methadone Ampoules, but this is not automatically the case.

Furthermore, methadone ampoules come in a wide range of strengths. The print on ampoules is typically very small and may not be intelligible to all users. So a user who typically injects two ampoules that were 10mg/1mL could, by accident, buy two concentrated ampoules containing 50mg/1mL. The combined dose of 100mg of methadone compared to the usual 20mg would probably be fatal.

- **Check for tampering:**

Most injectables come in a glass vial with a snap-off top. A few come in multi-dose bottles with a rubber stopper, and some come in plastic vials. Users should check that the vial or container is intact. It may be that someone else has drawn up from it.

- **Check for expiry date:**

Old stock which is out of date may no longer be sterile. Although this, for many users, would not be a reason not to use the drug.

- **Get advice:**

If a drug is unfamiliar, seek advice from a drugs agency to check on dosages, routes for administration and risks.

Injectables

The following drugs are amongst the many preparations that are intended for injection. It is not exhaustive but concentrates on the substances that are most likely to be encountered by workers. For further information about the substances, dosages and side effects, workers should consult an up-to-date copy of the *British National Formulary*.

Drug	Type	Strengths	Route	Notes
Diamorphine Hydrochloride:	Opiate	5,10,30mg Amps Larger multi-dose amps also exist	SC, IM, IV	Diamorphine Hydrochloride is pharmaceutically pure heroin. It may come as a freeze-dried powder within an ampoule that is reconstituted using sterile water, or as wet amps. Diamorphine is not widely prescribed outside of hospital settings., and does not get sold on at a street level very frequently.
Methadone Hydrochloride:	Opiate	10mg/1mL: 20mg/2mL 35mg/3.5mL 50mg/1mL 50mg/2mL 50mg/5mL (and possibly other variants)	SC or IM Methadone amps are NOT intended to be used IV but often will be.	<ul style="list-style-type: none"> • Methadone for injection is prescribed in a variety of strengths. A set weight of methadone, measured in milligrams (mg) is dissolved in liquid measured in millilitres (mL). Injectable Methadone is typically available under its brand name, Physeptone. • It is important that both workers and users are clear that methadone ampoules come in different strengths. • Nationally, the most commonly available ampoules are 10mg/ml. In certain areas (notably Central London), concentrated 50mg/1mL amps are the most widely available, especially in the illicit markets. • Certain dose ranges may be hard to inject and require larger barrels – for example someone on 85mg would need at least a 5ml barrel. • Methadone ampoules are not intended for IV use, although they are widely prescribed and used in this fashion. This can cause damage to veins and injection sites. This is discussed in more detail below.
Morphine Sulphate	Opiate	10/15//20/30mg in 1 and 2ml amps	IM, SC, IV	Rarely available in illicit street markets
Pethidine	Opiate	50mg/mL in 1,2mL amps 10mg/mL in 5 and 10mL amps	IM, SC, IV	Relatively short-acting opiate analgesic.
Dihydrocodeine	Opiate	50mg/ml in 1mL amp	SC, IM	Enjoys reasonably high popularity on the illicit markets, especially as a

tartrate: "DF118":				'standby' when drug of choice is not available.
Diazepam Valium	Benzo	5mg/mL in 2mL amp	IM or IV	Does turn up on the streets, especially as a result of leakage from private prescriptions. Not a frequent first drug of choice but may be used to offset stimulant comedowns, or by people attempting DIY detoxes from opiates.
Nandrolone Testosterone Other steroids: <i>Anadrol Anavar Dianabol Deca- durabolin Finajet Parabolin Strombajet</i>	Anabolic steroid	Various strengths and formulations	IM	There are a range of other steroids that may be used illicitly. Most of these are not listed in the BNF, and may be manufactured illegally, imported from countries where they are still prescribed, or diverted from veterinary stocks.
Ketamine Hydrochloride <i>Ketalar</i>	Anaesthetic	10mg/mL 20mL vial 50mg/mL 10mL vial 100mg/mL 10mL vial	IM, IV	Does crop up in both street and dance scenes. Some is diverted from hospital supplies. Other ketamine is actually veterinary supplies, and will have different formulations. Larger bottles may end up being shared by several people and represent a risk of infection.
Insulin <i>Humulin</i>	Hormone	various	SC	Aside from legitimate treatment for diabetes, Insulin is also injected by some body-builders as a way of increasing glucose absorption. High risk of problems with blood-sugar levels and some authorities suggest that it increases risk of causing diabetes.
Human Growth Hormone	Hormone	Various	SC (but some use IM)	Used as a performance enhancing drug ; can cause range of health problems including acromegaly.

Concentrated methadone ampoules

Concentrated methadone ampoules, at a strength of 50mg/1mL, have been readily available on the illicit drug market in Central London for a number of years. From a user's perspective, they have some advantages over street-heroin in that, when genuine ampoules are purchased, users know the strength of the drug, and it is also sterile. The relative cost of an ampoule on the street (£10) compares favourably to the equivalent quantity of heroin (£50-60).

However, these advantages are offset by the potential for people to buy amps on the street that have been tampered with, or to mistake the strength of ampoules. The 50mg/mL ampoules are strong, and a large amount of drug is introduced into the body very rapidly. On the one hand this makes them appealing to users; on the other hand, it increases the risk of overdose. This is especially applicable to users who are new to taking ampoules, and those whose use is increasing. Gradations for increasing heroin use are smaller, typically increasing by a £10 bag at a time. Amp use may increase an ampoule at a time, increasing 50mg at a time, meaning that users build up tolerance to high doses and also increasing the risk of overdose.

The ampoules are intended for intramuscular, not intravenous injection. Yet even when used intramuscularly, there are a range of potential side effects. Literature relating to concentrated methadone ampoules warns of possible side effects including "*dizziness, nausea, vomiting or an increase in pressure within the skull which may cause severe headaches. You may also experience pain at the site of injecting. In the case of injecting under the skin irritation and tissue damage may be caused...*" [cited in *Monkey* magazine #2]. Where the drug has been used intravenously, some users have reported burns that go through the fat layer to the muscle and permanent serious scarring.

A strategy for reducing the risks of concentrated methadone ampoules is to inject them intramuscularly, as intended, rather than intravenously. This route will still cause some discomfort and pain, but is a less dangerous route than intravenous use.

However, many injectors will still seek to inject the ampoules intravenously. Strategies such as diluting the ampoules with sterile water for injecting are advocated by some. However while such dilution may reduce some of the risks caused by concentrated methadone, they increase the risks of veins bursting when the increased volumes of fluid are introduced into the vein.

Anabolic Steroids:

Anabolic steroids are supplied illicitly through a variety of sources. A large proportion of the products on the market are low-quality fakes, containing little or no active ingredients. Standards of production are highly variable, and products are liable to be manufactured in non-sterile environments.

Products are available in oral preparations, single dose ampoules and multi-dose bottles.

Solutions for injection are intended to be injected intramuscularly, and often oil-based, resulting in a thicker solution than water based preparations.

While in many situations, workers would want to advocate oral routes of administration over injecting, but this maybe less of a viable option when considering anabolic steroids. The concern is that oral preparations will need to be taken in larger quantities and more frequently and this, combined with the route of administration, put a far greater strain on the liver. Hence oral consumption is unlikely to be considered a viable alternative for body-builders intent on using anabolic steroids.

Many body-building websites provide detailed information about injecting technique and generally this is of a high standard with good pictures and harm-reduction intervention. Some of the larger sites also offer discussion forums and bulletin boards which allow users to discuss injecting problems and wounds. The following information is drawn from information on these sites and other sources:

- **Quality of product:** users should check products and suppliers against known lists of scammers and counterfeit products. When sourcing products from a new source, these should be checked wherever possible against these lists.

Products should be visually inspected for tampering, expiry dates and, where feasible, sterility.

- **Injectable products** will invariably be injected IM; the process and health care are discussed in more detail in the additional section on Steroid Injecting below.

4.2 Non-Injectables

Non-injectables are substances that are not sold in a form designed for injection but which users may still attempt to inject despite the potential risks. These may come as liquids, tablets, capsules or powders.

From a harm-reduction perspective, it is important to stress that:

There is no safe way to inject non-injectable substances.

While injecting is an inherently dangerous mode of use, these risks are greater where the substance being injected is not intended for this purpose. While workers and injectors can work to try and reduce some of these risks, they cannot make the process wholly safe.

Key problems related to the injection of non-injectable products include:

- **Sterility:** The products are non-sterile and so represent a source of infection.
- **Contaminated:** The drugs is invariably mixed with other substances; street drugs will be 'cut' with other, non-sterile, potentially harmful additives. Tablets may be composed of filling agents that may not be soluble or may cause irritation or blockages.
- **Unknown strength:** Unlike pre-packaged injectables, street drugs will be of an unknown strength. This exposes users to an increased risk of overdose.
- **Insoluble:** Most powders or tablets will not dissolve fully, and, even when filtered, will contain undissolved particles. These will enter the blood stream or tissues when injected,

and can cause irritation or blockage to veins, abscesses and other problems.

Liquids:

Many medicinal preparations come as a liquid. This may make them an attractive proposition to injecting drug users. However, very serious health risks can result from attempts to inject liquid preparations not intended for injection.

Methadone Mixture – Oral preparations

Methadone mixture is usually supplied as a thick sugary green liquid. It is mixed at strength of 1mg/1mL. Most preparations of Methadone Mixture include substances that make it painful to inject, to discourage users from trying to inject the drug.

As methadone mixture is a relatively weak preparation, as users would have to inject large volumes of the liquid to gain the desired effect. Very few people attempt to do so, as the quantities required are so large as to be impractical.

80mg of methadone mixture (80mls of fluid) would need to either be placed in a very large barrel or, alternatively be injected in a series of smaller injections (e.g. 8x10ml injections).

In areas where more concentrated methadone (e.g. Methadose) is prescribed, the incidence of attempts to inject the mixture may increase. Mixed at a strength of 10mg/1ml, 80mg of methadose would only take up 8ml of fluid, and so would fit in a 10ml barrel.

Given that the preparation is thick and syrupy, there is a high risk of blood flow in veins being affected, vein irritation and collapse. Users would typically need to use a large needle, to get round the thickness of the preparation and this increases the damage at the injecting site.

Despite this, some users do still attempt to inject Methadone Mixture, causing serious problems. They may present at needle exchanges requesting large barrels. Such requests should lead to a careful assessment of drugs being injected, and safer practices discussed. Workers should be advised that there is little that can be done to reduce the problems of injecting methadone mixture and should strongly discourage such behaviour.

Alcohol

Infrequently workers may encounter people injecting alcohol. This may take the form of pure alcohol used in medical settings, or strong spirits.

The injection of alcohol can cause intense irritation and serious vein damage. Workers should discourage such practices.

Tablets

Tablets are not a pure source of drug: tablets may contain the following:

Active Ingredient: - *the drug itself*
Diluents: *bulk the pill to make it easier to handle – e.g. starch, silica*
Coating: *e.g. sugar, wax, to make pill easier to swallow;*
Flavourings: *e.g. sugar – make pill more palatable*
Colourings: *permitted colourings to help identify pill*
Binding agents: *hold pill together – e.g. dextrose*
Buffering agents: *to delay release of drug – e.g. wax*
Disintegrators: *speed up breakdown of pill in body – e.g. cellulose, sodium lauryl sulphate*

Some people will use two spoons to crush tablets to a powder. Both spoons should be clean, and there is a risk of BBV transmission if

spoons are shared amongst injectors.

Fillers used in tablets may not be soluble, and if injected may cause serious problems. While some of these may be removed through the use of home-made filters, some particles will inevitably enter the mixture being injected, and cause irritation, blockage, and other health problems.

Some people may put crushed tablets into a large barrel, and add water to the barrel, shaking the mixture vigorously to dissolve the tablets. Requests for large barrels could be an opening to discuss the risks inherent in injecting tablets.

Users may use bigger needles when injecting tablet preparations, as they are less likely to clog than finer needles. However, the use of such needles will cause more local damage when injecting and allow more undissolved matter to enter the body.

Tablets that have traditionally been associated with injecting include:

- Benzodiazepines
- Cyclizine
- Dexedrine (Dexamphetamine sulphate)
- DF118 (Dihydrocodeine)
- Diamorphine,
- Diconal (Dipipanone)
- Pethidine,
- Palfium (Dextromoramide)
- Temgesic (Buprenorphine)

Dexamphetamine sulphate (Dexedrine) is one of the drugs that comes in tablet form that is still injected. It comes in the form of a white, scored tablet. The tablets contain 5mg of the active drug.

Tablets should not be injected intramuscularly or subcutaneously. Undissolved particles will be introduced below the surface of the skin, where they can remain and can remain, and cause irritation, infection or other complications.

Top advice for people thinking about tablet injecting:

- Don't!
- buy clean tablets in original packaging
- crush thoroughly on clean surface
- ideally run through filters at least twice
- DON'T heat wax-based tablets (e.g. MST)
- beware of OD from increased bioavailability

Capsules

Capsules may contain powders (e.g. Tuinal, Seconal). The capsules may be opened and the contents dissolved. Problems related to lack of sterility and solubility identified with other tablets similarly apply to injecting the contents of capsules.

Other capsules contain fluids, which may not be water soluble. An important example is Temazepam, which may come as a gell-filled capsule. Liquid-filled temazepam capsules were widely injected and in an effort to reduce this problem, they were phased out and replaced with capsules containing a thick gel.

Users found that, when heated, the gel became a liquid that could be injected. However, on cooling, the gel resolidified in the body. This could cause veins to become blocked and, where temazepam had been injected into the groin, could lead to the formation of deep vein thrombosis. When injected into arteries, the blockages caused by the gel could lead to loss of blood supply to limbs, gangrene and amputations.

The production of gel-filled temazepam capsules still takes place, especially in Eastern Europe, and prescribing from existing pharmacy stocks in the UK may still take place.

Given the problems related to injecting Temazepam gel-capsules, many agencies adopt an approach of saying that there is no safe way to inject Temazepam capsules, and attempt to discourage the practice.

Powders and other street drugs

Most street drugs come in the form of a powder, which may be dissolved for injection. It is invariably not sterile and has invariably been 'cut' with other powders to bulk it out for street sale. Despite anecdotal information about the use of highly dangerous fillers being used in street-drugs, this is not borne out by analysis of drugs. Preferred fillers include baby-milk powder, paracetamol and caffeine and sucrose. However, other substances may be used from time to time.

Street drugs are not sterile; in some instances this may cause infection. However, it can also lead to fatalities, as a series of heroin-related deaths in 2000 demonstrated. Bacteria in heroin led to serious complications when injected into muscles, and led to the deaths of a number of users.

The strength of street drugs is highly variable, and this increases the risk of overdose.

Some drugs will require the addition of an acidifier to help dissolve the drug. This increases the potential for infection and irritation to veins.

As with tablets, drugs that come as powders will inevitably contain tiny undissolved particles when prepared for injection and these can cause health problems when injected.

Commonly available powders that may be prepared for injection include the following drugs.

Street Heroin: "Brown, smack, skag"

- Street heroin in the UK is typically sold by the 'bag,' which can vary widely in weight, cost and purity. There is wide regional variation, and can be marked local differences too. In 1995, the purity range of street heroin was 25-45% with an average of 42.5%

- Levels of use vary dramatically between individuals. People who have not been using for very long and have a low tolerance may use only one or two £10 'bags' a day, the equivalent of between an tenth to a fifth of a gram. However, heavier users could use one or more grams of heroin a day.
- 'Brown' heroin does not dissolve readily in water and so an acidifier is needed.
- It is usually injected intravenously; injecting street-heroin intramuscularly or subcutaneous is likely to cause local infections or more serious complications.

Amphetamine Sulphate: "Speed, whizz" **Base Speed:** *base*

- The speed market has changed significantly with a shift from the acidic salt **amphetamine sulphate** being replaced in many areas by the stronger, alkaline base form of the drug, **base speed**.
- It is CRITICAL on advising injectors that both worker and client are clear if they are talking about salt or base speed.
Acidic (salt) Speed: very water soluble; probably sold as a wrap; dry powder; dissolves readily if placed on tip of tongue; sharp acidic taste;
Alkaline (base) Speed: poor solubility; damp, puttyish consistency; acrid smell of ammonia (cat piss smell).
- Early on a speed user may take 30-60mg per hit; later this could go up to up to 500mg after regular use. With badly adulterated speed, this could equate to several 1gm wraps.
- A heavy user may inject several times a day, repeating a dosage every one or two hours.
- Amphetamine sulphate is soluble in water, and so can be fixed without citric acid. This may entail it being placed straight into a barrel, water added and the mixture being shaken. Ideally it should be filtered first
- Base speed is NOT water soluble; it should be placed in a spoon with water and acid, and stirred to ensure it is fully dissolved.
- There have been several accounts of injectors not adding acid, and just heating base speed with water and then injecting the result. The speed congeals as it cools, blocking veins, and leading to serious complications.

COCAINE: "Coke, Charlie." **CRACK:** "Rocks, stones, freebase."

- Cocaine is more usually snorted, and crack cocaine smoked. They are also sometimes injected. As with amphetamines, cocaine dissolves in water and so no acidifier is required although some users do still add one. This does not apply to the injection of crack cocaine, and rocks need to be crushed and an acidifier introduced prior to injecting. This in effect would return it to being acidified cocaine again, rather than free-base cocaine.
- Injecting cocaine carries a number of specific risks.
- Cocaine is a relatively short acting drug, and amongst dependent users, there may be a strong compulsion to use soon after effects have worn off. This may mean that injecting cocaine users inject often very frequently.

- Such use increases the damage to veins and means that they do not get time to recover. This is exacerbated by the damage that cocaine can do to surrounding tissue. Cocaine can restrict blood flow near the injecting site that can further reduce healing.
- Local damage may also result from cocaine's properties as a local anaesthetic. Cocaine rapidly numbs the injection site, making meaning that injuries may go unnoticed.
- The frequency of cocaine injecting can also increase the likelihood of equipment being shared especially in situations where several cocaine injectors are using together.
- Given the likelihood of frequent injecting, cocaine injectors will need to ensure that they have a plentiful supply of clean equipment.
- Use of cocaine increases the risk of circulatory problems such as strokes or heart attacks. There is also an increased risk of seizures, as well as tears to tissue in the lungs.
- The above problems of cocaine injecting are all increased by other side effects of extensive cocaine use. Diet is often poor, and so the general health and well-being of users may be impaired. Regular and heavy use can lead to paranoia, increasing reluctance to use and engage with services.

Fixing Crack!

Exchange Supplies undertook research on Crack Injecting and found the following:

"Crack dropped into cold water with citric dissolved straightforwardly - if anything, it was easier than using warm water so less citric was used.

The cold prep method also worked for speedball preparation. We found that it was possible to prepare a speedball by cold preparing the crack, scrupulously ensuring that all of it had gone into solution and then subsequently adding the heroin, direct heat and a few more grains of citric if required - once the crack was properly in solution it tolerated heating fine. These solutions were very stable and were stored for a couple of weeks for pH testing. They stayed perfectly in solution.

The ratio of citric to crack needed was consistently about 1 to 2. So, for example 100mg of crack dissolved using around 50mg citric (about half a sachet). Solutions prepared using this ratio ended up between pH 4-5, or to express it another way, less acidic than heroin alone might be when prepared optimally (which should be in the pH 2-3 range).

Crack dropped into warm water (or a warm heroin solution) with citric, dissolved without much problem - the only difficulty was that it smeared on the bottom of the spoon and took some work to incorporate into solution (increasing the amount of citric seemed to make this a bit easier, but it would still dissolve with smaller amounts).

Crack heated alone melted as expected (at 98°C from memory) and reformed as expected (reforming took only 14 seconds!). The reformed crack would not then go into solution at all, even after adding 5 times as much citric to crack by weight. Heating it past its boiling point had made it insoluble - don't know why, but that's what happens.

Crack heated together with citric was also problematic - it took on a slushy (wallpaper pasty) look and was similarly insoluble.

[Source: UKHRA discussion forum]

Ch. 5

Equipment

5: Equipment

Injecting drug use can involve a large quantity of equipment. Needle exchange workers can provide some of this, but other items cannot currently be supplied legally.

Needle Exchange Workers need to work with injecting users to assess that:

- Clients have access to appropriate clean equipment,
- Clients know how to use the equipment as safely as possible,
- Clients have safe strategies for coping if equipment is unavailable.

The following equipment is needed:

5.1 Syringes and needles

Basic Anatomy of a syringe:

A syringe consists of a barrel and a tight-fitting plunger. Barrels come in a variety of sizes, and are typically calibrated down the side so dosage can be measured. Needles and syringes come in two types: **one-piece units** and **separates**.

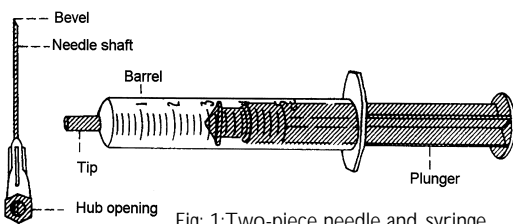
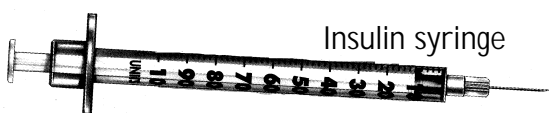


Fig. 1: Two-piece needle and syringe

Separates: Needles and syringes may be distributed as separate items, as illustrated in Fig.1. The hub of the needle is attached to the tip of the barrel, and so different combinations of needle and barrel size can be obtained.



One-piece unit: In addition, there are also "one-piece" unit where the needle is permanently attached to the syringe, as illustrated, which both workers and users are

most familiar. However, just because it is widely requested and widely used, this does not automatically mean that it is the correct piece of equipment in all settings; in fact in many settings, this will be an inappropriate piece of equipment.

There are a number of different types of syringe and needle combination, and this may cause confusion for both workers and service users. It is important for both workers and clients to be aware that different pieces of equipment are suited to different methods of use, and so may not always be interchangeable. Conversely, workers and injectors should be clear which equipment could be used safely in different settings, by changing methods of use.

For example, an injector could make do with using a 2mL barrel, if a 1mL barrel were not available, by only utilising half the volume.

Barrel Sizes and types

Barrel sizes are generally measures in millilitres (mL). One millilitre (1mL) is 1/1000th of a litre.

Smaller barrels are easier to hold in the hand but are generally longer; bigger barrels are fatter, but shorter. For arms most people find a 1ml barrel is fine, but some people prefer 2ml barrel for the groin, finding the shorter barrel length easier to work with.

In some parts of the country, syringes are being made available that are meant to be non-reusable; the plunger locks in to place when fully depressed, or the needles retracts, meaning that it not meant to be reusable. However, there availability is currently limited, and their effectiveness and popularity questionable. People who want to reuse their equipment may dismantle the barrel to defeat the single-use mechanism, which increases chances of contaminating the barrel.

Needle Gauge

Needles are measured in terms of their Length, and their Gauge. Length may be given in millimetres (mm) or in imperial measures.

The size of a needle is also measured by the **external diameter** of the needle, which is called the **Gauge (G or GA)**. This is given as a number, typically between 28 and 18. The Gauge is *inversely proportional* to the external diameter, so the larger the Gauge number, the smaller the needle.

The hubs of needles are also colour coded. This means that both workers and users will often simply talk about orange needles or green needles, as shorthand for different gauges.

However, this colour-coding only refers to **gauge** not **length** and it is important that workers make sure that the client is aware of different needle lengths.

Some regions of the country may use different pharmaceutical suppliers or may make different combinations of equipment available. It is important to ensure when working with a client to identify their equipment needs that:

- They are obtaining the most appropriate equipment for their needs
- They understand how to use the equipment safely, especially if it is unfamiliar to them,

The reference table overleaf looks at the different needles commonly available, and their relative sizes.

Thoughts on getting the 'right' equipment:

1: Cost Implications

Unfortunately, budget constraints will affect what is and is not available to service users. Most exchanges carry a limited range of the most 'popular' lines and other equipment, however

appropriate, is not carried. This is unfortunate as giving out the wrong equipment puts both the service user and the agency at risk and is ultimately a false economy.

2: Pre-pack versus Pick and Mix

Some exchanges purchase in pre-packed equipment from companies. Some of these companies offer a limited range of pre-packed equipment, while others will prepare bespoke orders.

Either way, once the client collects their pre-pack bag they have little say over the contents. Sometimes, this can mean colossal amounts of waste. For example, if a pack containing 10 2ml barrels offers a flexible collection of needles, it could contain 10 each of blue and orange needles. The odds are that a large proportion of these are going to be binned unused.

The advantage of corporate-supplied pre-packs is that this can free up staff time to undertake face-to-face work and avoids storing boxed stock in small premises.

The cheaper alternative is to secure NHS supplies and make up bespoke packs on site. This means that the packs can reflect what service users tend to want, and makes it easier to tailor the contents.

The most flexible provision is true pick and mix where the client can identify exactly what equipment they want and receive this alone. This is highly desirable as a model BUT is staff intensive and requires sufficient space to store and distribute. But in terms of the quality of the intervention it is probably the best option.

3: One-piece v. Separate needle and Syringe

This is a source of much discussion, and the arguments run as follows:

- The one-piece syringe is small, easy to handle and injectors are familiar with it. It means that they have less equipment to handle and there is no chance of having a barrel but no needle or vice-versa.
- However the one-piece insulin syringe is not strictly intended for IV use, and is intended for SC use only. Having said this it generally proves adequate for IV use of superficial veins.
- The amount of space to 'draw-back' in a 0.5ml or 1ml barrel is small, and makes it harder to check that the user is in the vein.
- The needle is adequate for superficial veins; however, it is too short to reach deeper veins and utterly inadequate for IM use. Where users are unaware of this or use this equipment to reach such sites when unable to reach superficial veins, serious injury can result. Reports have been made of femoral injectors using 1ml insulin syringes to inject into the groin, pushing the needle, hub and barrel in to the wound to get sufficient depth.
- With one piece units, there is reduced scope for maintaining needle integrity. The needle is liable to be blunted or contaminated during the process of drawing up.
- If the needle becomes blocked or damaged, there is no scope for changing the needle over; the whole hit needs to be transferred to another syringe.
- If the user wants to inject at two different sites, there is no scope for changing needles.
- Options for other options – e.g. using rectally – are not possible when using one-piece needles.

- Separates allow for full range of needles to be made available
- Drawing up can take place either through a needle which is then discarded, or through the barrel with no needle present.
- Needle can be removed to allow for rectal use, or to replace a blocked needle.
- However, means more equipment to carry and may be less familiar to clients.

4: Needle size, volume of fluid and other considerations

The FINER the needle means:

- Less damage to the injection site,
- Quicker healing
- The needle is more fragile – easier to bend, blunt or break
- The needle is more prone to blockages
- Fluid comes out at higher pressure
- The needle will only reach superficial veins or be adequate for SC

On balance, reports suggest that the finer needles (31G,30G,29G) are more prone to damage and blockage. Blood drawn up is more likely to clog the needle. These needles may be acceptable by people using SC and to some IV users.

The right needle for an IV drug user is:

- Long enough to reach their intended injecting site with a small amount of needle still visible once the needle is in the vein;
- Strong enough to survive the process
- Has a sufficient bore not to get clogged with blood or by filtered solution
- Is the smallest needle possible bearing in mind the above.

For people injecting IM, different concerns come in to play; the needle will need to be longer, to reach the correct muscle depth, and strong enough not to bend or snap. The wider bore will reduce the pressure at which fluid comes out, so reducing trauma at the site.

When assessing for the appropriate needle size for IM use, this will need to take account of intended injection site, the users build and the depth of tissue at the site. The needle will need to be long enough to leave a few millimetres of visible needle in case needles snap.

This may mean that a range of needles from medium blue to long green needles may be appropriate.

5: More volume/less volume:

Should clients add more fluid to a solution or use as little water as possible? There doesn't seem to be a good answer to this question at the moment, but working through the following should allow workers to help advise clients:

- Street heroin should, once acidified, dissolve in a relatively small quantity of water. Adding more water will not increase the amount of heroin that will dissolve
- More water can mean that potentially caustic or acidic solutions feel less painful as they are more dilute

- However, if the water used is not sterile, then more water means more contaminants
- If the vein is fragile, or tourniquets are left in place, then larger volumes increase risk of veins being stretched or bursting
- There is little risk of injecting such large quantities that body metabolite levels are affected; however, the principle that smaller quantities are preferable would seem to apply here.

Gauge	Diameter	Length (mm)	Length (inch)	Colour	Notes
<i>This is not a comprehensive list of all needles and syringe combinations that exist; it is a summary of key combinations available from common suppliers.</i>					
30G	0.30	8mm	5/16"	NA	BD Ultrafine Insulin syringe one-piece; not generally distributed by exchanges; most will find the needle too fine and prone to clogging or blunting. Not intended for IV use
29G	0.33	8mm	5/16"	NA	Needles fitted to many Insulin Syringes including Myjector, Artsana, BD Microfine syringes. Distributed by many exchanges. Fragile needle; may clog or bend
28G	0.36mm	13mm	½"	NA	Myjector. Terumo and others offer this one piece needle. More robust.
27G	0.4mm	12mm		NA	Myjector offer a 27G Insulin syringe; needle more robust and longer than the 29G needle
30G	0.30	10mm/25mm	3/8"/1"	Yellow or clear	Separate needle – not routinely distributed Problems as described above with integral needles.
28G	.36mm	13mm	½"	Clear	Can't source a separate 28G needle in the UK but they do exist! May be useful for people using superficial veins.
27G	0.4mm	12/25mm/35mm		Grey	Not widely distributed, which is a great shame. Good short fine needle for superficial veins.
26G	.45mm	13mm	½"	Brown	Sometimes supplied. Good for superficial veins. However, probably largely redundant if the 27G needle above is stocked.
25G	.5mm	16mm	5/8"	Orange	AKA <i>Short Orange</i> . Superficial veins
		25mm	1"		AKA <i>Long Orange</i> Most people should be able to reach the femoral vein with one of these
		40mm	1½"		This needle is not widely distributed and is a very long orange. It should be more widely distributed as it would be the preferred needle for people with deeper femoral veins as it would provide the length without the greater trauma caused by fatter needles.
23G	.6mm	19mm	¾"	Blue	There are a range of different length Blue needles supplied; 1" and 1¼" needles are the most commonly supplied. Only the largest people will need a blue needle to reach the femoral vein; otherwise blue needles will be used mainly by people taking steroids IM; assess depth of muscle and use an appropriately long needle,
		25mm	1"		
		30mm	1¼"		
		40mm	1½"		
22G	.7mm	40mm	1½"	black	Muscles or deep veins; but a finer needle would be better if possible
21G	.8mm	40mm 50mm	1½" 2"	Green	This is the largest gauge needle commonly encountered, though large needles do exist. Mainly for drawing up or big deep muscles. Shouldn't be needed for groin; long orange, blue or grey would be less damaging.

Equipment Size		Use	Not to be used for	Notes
One piece needle and syringe:		Intravenous injecting into superficial veins Subcutaneous injecting	Injecting into deeper veins Intramuscular injecting	Needles block easily; Small barrel size makes it difficult to draw back when checking needle is in the vein;
0.5 mL syringe	28Gx½"			
1mL syringe	27-29Gx½"			
1mL syringe	30Gx½"	As above	As above	"Nevershare" syringe with coloured plunger intended to reduce accidental sharing. Needle is detachable and so can allow drawing up through barrel but this is not how the product was designed to be used. Very fine needle; may be prone to blocking.
Barrel sizes				
1mL syringe		Intravenous Intramuscular Subcutaneous		Separate 1mL barrels and the correct needles will need to be given to people injecting into deeper veins, or injecting IM.
2mL syringe		Intravenous Intramuscular	Subcutaneous; volume is too great	Users often find larger barrels and separate needles harder to handle at first.
5mL syringe		Intravenous	Intramuscular or subcutaneous injecting: volume is too great	Users who are diluting concentrated methadone ampoules will need larger barrels. A person injecting 50mg/1ml amp with two parts water would need a 5mL barrel.
10mL syringe		Intravenous: very large quantities	Subcutaneous Intramuscular	May be some users; for example a user injecting to two 35mg/3.5mL ampoules of methadone would need a 10mL barrel. Large barrels may be used for mixing and injecting crushed tablets or injecting methadone mixture Workers should be careful to establish what large barrels are needed for, and identify safer alternatives where possible.
20mL Barrels and larger		Intravenous – very large quantities	Subcutaneous Intramuscular	Few exchanges make such large barrels available. Workers should be vigilant for users attempting to inject methadone mixture, and should try to find less risky methods of use where possible.

5.2 Other injecting paraphernalia

Water

Most injecting drug users will need access to water in which to dissolve substances for injection.

The safest source of water to use is sterile water for injecting and other alternatives are less safe.

The legislation specifies that the product that can be distributed is: ***“ampoules of water for injection, only when supplied or offered for supply in accordance with the Medicines Act 1968 (4) and of any instrument which is in force thereunder.”***

“Water for Injection” in quantities of 2ml or less is no longer a Prescription Only Medicine (POM) and so is lawful for distribution both in terms of the Misuse of Drugs and the Medicines Act. However at the time of writing the only product that fits these criteria is packaged in glass ampoules and brings some additional risks in terms of opening them.

Larger ampoules containing 5ml of water remain POMs and so can only be given out as prescription items.

“Sterile Water” is in many respects suitable for purpose, and, as it is not a medicine, does not require a prescription for distribution. It had been made available by Exchange Supplies, in plastic 1.4ml ampoules. However, the product was not licensed for injection and so distribution of this product has now been suspended.

In the absence of Sterile Water for injection, injecting drug users may source water from a number of other sources, as illustrated below.

Source	Safety factors	Additional information
Water for injection	<ul style="list-style-type: none">• Ceases to be sterile once opened.• Ampoules for one-only use should be given out to prevent sharing or reuse.• Large ampoules liable to be shared• Glass ampoules will require an ampoule cracker	2ml ampoules lawful to distribute without prescription; 2ml + ampoules are Prescription-only medicine. Not available everywhere. Legal under the revised paraphernalia legislation
Sterile Water	<ul style="list-style-type: none">• Were available in a 1.4ml plastic ampoule which reduced risks of sharing and problems with opening ampoules	Not strictly lawful under paraphernalia laws MRHA has instructed agencies not to distribute this as is not licensed for injection
Saline	<ul style="list-style-type: none">• Spray saline aerosols are balanced to human body fluids, sterile and cannot be contaminated	Mainly used for contact lens storage; Also used for irrigating wounds; preferable: aerosols rather than squeeze bottles; must be preservative free and NOT sterilising solution

Boiled water	<ul style="list-style-type: none"> • Should be boiled for three minutes in a clean kettle or pan and allowed to cool in a covered pan. • Needs to be decanted in to a clean container • Should not be shared or stored. 	In the absence of Sterile water for injecting, this would be safest source of water for injecting. However, the process can introduce new risks – dirty kettle, not enough boil time, not covered when cooling, kept for later etc. So only advocate when client is able and prepared to follow all the required steps.
Tap water	<ul style="list-style-type: none"> • Use water from the rising cold main • Draw water straight in to syringe • Do not use hot water, mixer taps or water from header tanks. • Tap should be run for a few seconds. • Water should not be shared from a communal cup. 	Tap water is less safe than either sterile water for injection or boiled water. It is however, safer than bottled water. Tank water or hot water is much less clean. Watch for bulletins relating to poor water quality.
Bottled drinking water	<ul style="list-style-type: none"> • Should be avoided wherever possible; if it is to be used it should be boiled • Don't drink from bottle first 	Although users may think that a sealed bottled of drinking water is more hygienic than tap-water, this is not the case. Bottled drinking water may have been exposed to bacteria in the air and kept in warm conditions. Water that has been drunk from will contain back-wash; bacteria from the mouth and throat. Use of large bottles encourages storage and sharing.
Other sources	<ul style="list-style-type: none"> • Some users, especially those who are very chaotic and vulnerable, may use water from other sources such as toilet bowls, rainwater etc. This hugely increases the risk of infection and should be strongly discouraged. 	Such behaviour indicates high levels of chaos and risk taking behaviour. Urgent steps need to be taken to increase stability and address this and other areas of harm. Injecting drug users should be made aware of these risks and encouraged to identify other sources of water which are less dangerous.

Acidifiers

Some street-drugs, especially “brown” street heroin and crack, do not dissolve readily in water. An **acidifier** is used to help the drug dissolve. Acidifiers can be a source of infection or other complications.

Substances that may be used as acidifiers are not without risk. They are not intended for injection. While sterile compounds are now available, use of other non sterile products bring with them risk of infections. All acidifiers can cause irritation and damage to veins.

The least risky substances to use as acidifiers are ascorbic and citric acid.

Other substances may be used, and carry greater risks than ascorbic and citric acid, as illustrated below.

Acidifier	Safety Factors	Other comments
Citric Acid BP	<ul style="list-style-type: none"> Prepared in sterile conditions Fit for purpose Small quantity/reduces risk of sharing Can cause vein and tissue irritation, especially when larger quantities are used. 	<p>Supply of Citric Acid now lawful following revision to paraphernalia laws.</p> <p>A more acidic acid, and so less is required. However, if too much is added, an overly acidic solution will be the result.</p>
Ascorbic Acid 'Vit C'	<ul style="list-style-type: none"> As above, plus Ascorbic acid thought to be less irritating than citric. 	<p>Ascorbic Acid now lawful</p> <p>A less acidic acid. More will be needed compared to citric. But a little too much won't over acidify.</p>
Citric – DIY Bagged Up	<ul style="list-style-type: none"> Can make small quantities available to end users Cheaper option 	<p>Some exchanges buy in citric and bag it up themselves. This is not a risk free process especially as better options are now available.</p>
Citric Acid (catering)	<ul style="list-style-type: none"> Prepared to food-safety standards Comes in larger bags – increases risk of contamination, sharing 	<p>Available in many grocers, it is a useful option if no other options are available; do not share or overuse; keep bag closed when not in use.</p>
Lemon Juice	<ul style="list-style-type: none"> Non sterile; Contains fragments of lemon pulp, bacteria etc. Can become contaminated with HCV or HIV through sharing. Lemon juice thought to be linked to fungal infections via injecting, leading to vision damage and other conditions. 	<p>Due to the difficulties of obtaining Citric or Ascorbic Acid, lemon juice is a widely used standby. Its use should however be discouraged, and alternatives sought.</p>
Vinegar	<ul style="list-style-type: none"> Non sterile; Can become contaminated with HCV or HIV through sharing. 	<p>As with lemon juice, use of less dangerous alternatives should be encouraged.</p>
Other: Battery Acid, bile, shampoo, kettle descaler, drain cleaner	<ul style="list-style-type: none"> Lots of other acids are available and are clearly all highly risky 	<p>Find safer alternatives.</p>

Filters

Filters are used to reduce the quantity of undissolved material that is injected. The presence of tiny, undissolved particles in solution can cause health risks, and so it is important that they are removed as far as is possible. However, the use of filters can also cause health problems.

All filters carry some degree of risk; cotton dental filters are the preferred option, followed by slim, plastic wrapped hand-rolling filters

Several different products may be used to filter drugs, with varying levels of effectiveness and additional related problems.

Products and notes	Specific Risks	General Risks
Commercial Syringe Filters: <i>Designed to filter out small particles. Some are designed to filter out bacteria. Examples include "Sterifilt" and Wheel Filters.</i>	Do not filter out viruses; May be reused Are very expensive Slow to draw up through; May block easily. Not widely distributed in the UK	Make-shift filters are non-sterile and may be contaminated. Handling filters prior to use increases contamination. Cannot filter out all particles and may shed particles into the solution themselves.
Cotton Dental Pellets	Are sterile May be reused Smaller, reduced handling	May be reused by the same or another user. This can spread blood borne viruses and bacterial infections.
Filters for hand-rolling cigarettes	Some, especially Rizzla filters, found to be the most effective make shift filter. Plastic-wrapped ones are safer than boxes of unwrapped filters.	Two or more users may draw up from the same filter at the same time, which risks transmission of infections.
Filters from ready-rolled cigarettes	Widely used as a makeshift filter, though may be less effective than hand-rolling filters. Hard to take them out of a cigarette without damaging the surface or handling the filter.	By drawing up through barrel rather than through needle, less residue is left in the filter; this makes the size of the filter less of an issue and avoids the need to break down the filter or the impetus to store them,
Cotton wool Clothing, tissue etc.	Hard to handle without causing contamination; Fibres more likely to break off and enter the syringe. Least effective and desirable	

Alcohol Swabs

Alcohol swabs are intended to sterilise a site prior to injection. They are frequently supplied as part of needle exchange provision but they are often not used properly and this can cause health problems.

Increasingly, needle exchange advice would be to wash the hands and the intended injecting area with soap and water. If this has been done, there is little additional benefit in swabbing.

If the person is swabbing prior to injection, the area should be swiped once (one way only, not

back and forth) and then left long enough for the alcohol to evaporate away.. This gives time for the alcohol to kill bacteria, and to evaporate off. Swabs should not be used after injecting as they slow the healing process.

Alcohol swabs are also used as a makeshift heat source. Swabs burn briefly but vigorously and so represent an effective way of cooking up drugs.

It is lawful to distribute swabs under the revised paraphernalia legislation.

Tourniquet

A tourniquet is used to help raise veins prior to injection. Some people find that it helps keep veins still, and stops them rolling or slipping out from under the needle.

However, a badly-used tourniquet introduces many new risks and it would be safer not use one at all rather than to use a bad tourniquet badly.

Tourniquets may be purpose made, out of fabric or rubber, with velcro fastening catches or similar. Alternatively tourniquets may be fashioned out of belts, shoelaces, strips of fabric or other items.

- A tourniquet should not impede arterial flow down the arm, but should restrict venous flow back up the arm. If a tourniquet is too tight, it will reduce arterial flow and make veins less, not more visible.
- A tourniquet needs to be wide enough to avoid bruising or digging in to flesh; thin string is likely to bruise tissue; straps and belts would be less damaging.
- Once in place, a tourniquet should be kept on for as little time as possible.
- The tourniquet will need to be released before the plunger is depressed. Otherwise extra fluid is added to a vein which is effectively shut at one end. This increases the risk that the vein will burst, that fluid will leak into surrounding tissue, or valves will get damaged.
- If a tourniquet is left on after injection it may impede blood flow and compromise the limb.
- At this point needs to keep the needle, in the vein, very still while releasing the tourniquet. This will require: three arms or a friend or a tourniquet held in the mouth and released. Many tourniquets require a hand to operate the release catches and so are not suitable.
- Both fabric and release mechanisms of tourniquets are liable to be contaminated with blood. Where the tourniquet is shared or reused, this increases the risk of BBV transmission. Top standard tourniquets can be cleaned in an auto-clave but this is not practical for IDUs.

- It is NOT lawful at present to distribute tourniquets for the use of illicit drugs.



As a compromise position, a long strip of rubber (e.g. a bicycle inner tube sliced open and trimmed) which has been thoroughly washed and dried may make an acceptable tourniquet as:

- It can be looped around the arm, and held on using the mouth
- It is broad enough to avoid trauma to the flesh
- It will come off when released
- It can be washed after use
- It will not absorb blood or other fluids

Cookers and Spoons

Cookers are used as a receptacle for the mixing and heating of drugs prior to injection.

Since August 2003 it has been lawful to distribute cookers to IDUs.

Product	Advantages	Limits
Steri-cups 	Purpose-made aluminium cups; prepared in sterile conditions; single use	Some users find them flimsy; risk of burnt fingers if handle is not used; expensive Some users find the flat bowl hard to draw up from
Sterile Spoon 	Purpose made steel cup; single use Integral handle, bowl shape	May be reused;
Spoon	Household item; cheap or free Can be washed	Will be reused; Increased risk of sharing or not being cleaned
Can base	Can be washed; May be used once and discarded	Not sterile Hard to hold
Foil cake cups	Produced to food hygiene standards May be used once and discarded	A useful stand-by

Heat Source:

Some sort of heat source will be required: the heat helps the solution to dissolve but does NOT sterilise it. The heat required to sterilise would also destroy the drug. Different heat sources again introduce different risks.

Product	Advantages	Limits
Gas lighter	Goes out when dropped Cheap Available	Might get hot Need a hand to hold lighter and a hand to hold cooker
Petrol lighter	Can be stood up and leaves a hand free	Gives a more sooty flame which may leave deposits on mixture Will stay lit if dropped – fire risk
Matches	Cheap	May need several matches to heat mixture

		Risk of burnt fingers Lots of soot
Alcohol swab	Burns and then goes out The exchange gives them out Good clean flame	You were meant to clean the site with them May set fire to table if not placed on non-flammable surface
Cooker	Gives off good heat	Won't go out unless you turn it out Too much heat

Blood-proof pads and dressings:

A clean, blood proof pad is useful to apply pressure to an injecting site post injection. The use of alcohol swabs for this purpose should be discouraged as it is likely to delay healing. A clean blood-proof pad can reduce bruising and reduce risk of BBVs being spread. Likewise, having clean dressings to hand can reduce risk of infections.

Bleach

Bleach is useful on several counts. It can be used to:

- Clean spoons after use,
- Clean surfaces that are used for injecting,
- As a last resort, to clean injecting equipment when no clean equipment is available.

Spoons should be clean effectively after use. Where they are cleaned using bleach, they should be thoroughly rinsed before use.

Surfaces that are used for injecting can be wiped down using a dilute bleach solution, and should be rinsed down before use.

Soap and Water

Use of soap and water can reduce risk of infections. Hands should be washed and washing of injecting sites is useful too, and may be preferable to swabbing.

Environment

Many people inject in environments that are less than ideal. A good environment would be:

- Somewhere which is not going to inconvenience others
- Somewhere with privacy but where the person can be found quickly if there is an OD
- Well lit
- Hot and cold running water
- A surface on which to prepare drugs
- Clean and hygienic
- Safe

For users who do not have such resources available, placing a sheet of clean newspaper or paper towels on a surface and using this as a clean space on which to work can marginally reduce risks.

Condoms

The distribution of condoms has typically taken place alongside the distribution of injecting equipment. Advice about safer sex can and should take place alongside safer injecting advice.

A range of condoms should be available including stronger condoms for anal intercourse, flavoured condoms for oral sex and other condoms as required. Cost concerns have frequently meant that the distribution of condoms has been scaled back and distribution of large quantities of condoms discouraged.

Workers should be aware that a proportion of injecting drug users may also be engaged in sex-work, and so will need adequate supplies of condoms, dental dams, lubricant and other safer-sex equipment. Such requests should be dealt with sensitively, and referral made to services for sex-workers, STD clinics and other services as appropriate

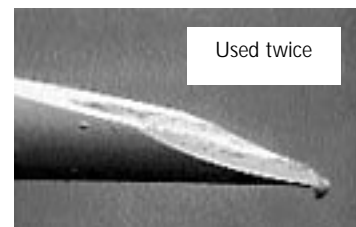
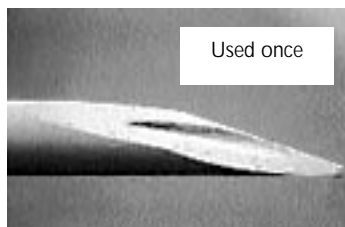
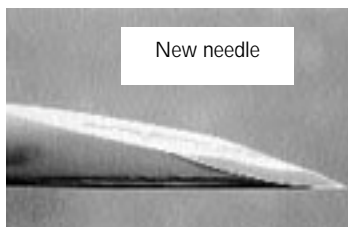
5.3 Reuse of equipment

Reuse of equipment increases the risk of infection and injury and should be discouraged. The rule for injecting drug users should be:

Use a fresh sterile needle and syringe for every injection.

There are several reasons for this:

- Once opened, equipment ceases to be sterile; this increased the chances of infection when the equipment is used.
- Used equipment is likely to be contaminated with blood and drug residue. The reuse of such a syringe, even if the same person is reusing it, can cause serious health problems.
- Even after only a single use, a needle will be significantly blunted. The reuse of a blunt needle increases the amount of damage that the needle will do vein and body tissue.



Cleaning Equipment

The cleaning of injecting equipment is not thought to be 100% effective, and it should only be seen as a last resort. It is far better for injecting drug users to ensure that they have access to a supply of clean equipment than to try to clean old equipment.

The following guidance on bleaching is suggested by the *Safer Injecting Handbook [HIT]*

- Do it when it only when it is unavoidable
- If you are going to reuse equipment, reuse your own
- Flush out works with cold water immediately after use

To clean a needle and syringe prior to reuse:

- Rinse with cold water
- Draw up full-strength household bleach and shake for at least 30 seconds
- Flush out with clean, cold water
- Repeat the process, and finish by flushing with clean cold water.

Boiling equipment will not generally be effective as the equipment will probably not survive the process in a usable form.

Boiling or cleaning may weaken the glue, and increase the risk that a needle will become detached.

5.4 Safe Disposal of used equipment:

Sharps containers

Sharps bins come in a wide range of shapes and sizes and it is important that clients receive a sharps bin that is appropriate for their needs and situation.

- Very large bins may be impractical for service users who are street homeless. They are also hard to transport discretely. It may assist returns to arrange collection.
- Bins used in exchange settings should have a non-return mechanism to discourage re-use of needles.
- Smaller bins have a limited capacity, and some cannot easily accommodate larger barrels.
- Bins should not be over filled; they should be returned to an exchange when two-thirds full.

For additional information on sharps disposal, please refer to the section on discards and returns.

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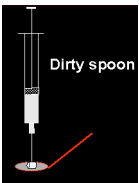
Viral Transmission and Infection

6: Viral Transmission and Infection

A key role of needle exchange has been to reduce the incident of HIV and Hepatitis B and C transmission through the provision of clean injecting equipment and advice. However it is essential that workers and injectors are aware that the risk of viral transmission is not limited to the sharing of syringes and needles. There is a risk that injecting drug users will think that, as they are using a clean, sterile needle, they are no longer at risk of contracting or transmitting blood-borne viruses.

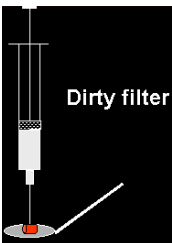
HCV and HIV can be spread at various points in the injecting process. By highlighting these risks, workers can help work with injectors to identify points where transmission could take place.

In addition to the risks of HIV and HCV, these are also some of the points where other infections can occur.



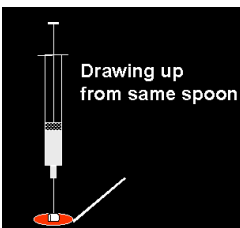
Spoons: Sharing spoons that have previously been used for injecting is a common practice but represents a transmission route for HIV and HCV. In addition, other contaminants on the spoon can cause local or systemic infections.

Users should ensure that they have their own spoon and don't share spoons with others. The spoon should be washed thoroughly before and after use.



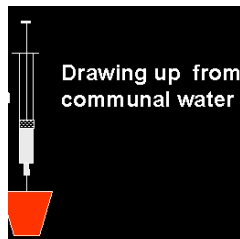
Filters: Here, another user has drawn up through the filter so it is now contaminated. Each person should use their own, clean filter and dispose of it after use. Reusing filters, including ones own, increases the risk of local and systemic infections.

This situation would apply if two people draw up from the filter at the same time.



Sharing spoons: Although the spoon was clean, and both users are using their own injecting equipment and filters, they are drawing up from the same spoon, and so the drugs in the spoon may now be contaminated. Sharing a hit this way is common.

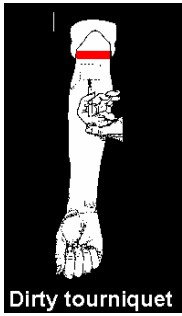
Injectors should be encouraged to prepare their own hit in their own spoon, rather than sharing in this way.



Sharing water: Water may be contaminated if another injector draws up from or flushes back into the water source. This may be an ampoule of sterile water, or a glass of tap or boiled water for example.

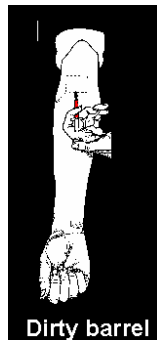
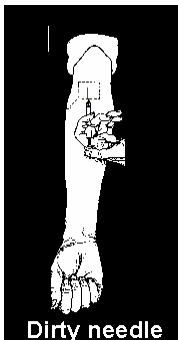
Water should not be shared and should only be used once. Any left over water should be discarded and the container washed thoroughly.

The same risk of contamination would exist if people draw up from a communal source of lemon juice or vinegar.



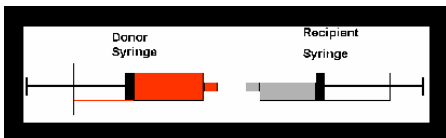
Tourniquets: Tourniquets may become contaminated during injecting. If the tourniquet is used by another, there is a risk of cross contamination via the tourniquet. Infections such as hepatitis C could be passed on in this manner.

Tourniquets should not be shared. They should be clean and cleanable, Using rubber rather than cloth strips makes it easier to keep a tourniquet clean.



Needles and syringes: This is probably the area of risk about which both workers and injectors are most conscious. If another user has previously used the needle, or the syringe, it may be infected. If the same user reuses their own needle or syringe, it can reinfect, or can introduce bacteria and other infections into the blood stream.

Users should use a fresh, clean needles and syringes for each injection, and ensure that the old needles and syringes are disposed of safely to prevent reuse by others.



Sharing a 'hit.' Where an injection is shared, through frontloading (illustrated) or backloading, any contamination in the donor syringe can be transferred to the recipient syringe. Even if the donor syringe is fresh and sterile, the process of preparing the drug may have been contaminated through sharing filters water, etc as discussed above. So if at any point the preparation has become contaminated, this can be passed on through the sharing of the hit.

Minimising infections

Reducing the incidence of HIV and Hepatitis transmission is a key aim of advice and needle exchange. But injecting drug users are regularly and in some cases avoidably exposed to other infections.

Some of these risks are unavoidable. When injecting street heroin for example, the drug is inevitably non-sterile and will represent a risk of infection. However, at other points in the preparation, the risks of infection can be reduced.

The strategies for reducing infection depend in part on situation of the person injecting. A person who is housed, with access to hot and cold running water and other facilities is better able to inject cleanly than a person who is homeless. A person who injects chaotically will probably find it harder to prepare themselves and their drug cleanly.

By keeping equipment, surfaces and self clean during the process can reduce the risk of infection and workers should work with injectors to improve injecting techniques.

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Types of Injection

7: Types of Injection

The most common method of injection is by injecting drugs into the vein: **intravenous (IV) injection**. However, workers should also be aware of and familiar with other methods of injecting, where drugs are injected under the surface of the skin: **subcutaneous (SC) injection** or into the muscle: **intramuscular (IM)**. It is common practice for people to refer to all injecting drug users as IV users, even though they may not be solely injecting into veins. As specific equipment and advice is required for intramuscular or subcutaneous injecting, it is important that workers make a distinction between different methods of injecting.

7.1 Intravenous Drug Use

This is the most prevalent method of injecting drugs. The drugs are injected directly to the vein and then travel to the heart and lungs before reaching the brain. It is a rapid and efficient way of delivering the drugs to the vein, and means that the effects of the drug will be felt most intensely.

There are a number of sites around the body that are used for intravenous injection. They carry varying levels of risk. As sites are used, they are liable to become damaged.

Injectors may use sites for a specific reason. Initial sites may be selected because of their accessibility. The veins on the inside of the forearm are, for example, relatively accessible and so are used extensively.

However, some people may initially inject into other, less obvious sites. Some people may wish to avoid using more visible sites on the arm and use more hidden sites such as the legs. The initial site of choice may also depend on education; a person new to injecting may learn to use certain sites from peers; this means that they may end up using less safe sites earlier on while healthier, safer sites remain available.

Over time, sites used for injection become damaged and veins become unusable. This will result in less safe sites being used, and fewer sites being used more frequently, accelerating the loss of veins.

When assessing if a site is a "good site" or a "bad site," the following checklist is useful to help evaluate sites:

Accessible:	site can be easily reached by the injector
Vein is large and healthy:	vein is springy, not bruised, scarred, hardened, inflamed. Fills with blood quickly
Vein is visible or palpable	the person can see or feel the vein below the surface of the skin
Site is not close to important structures	vein does not lie close to nerves, arteries, tendons, bones or organs
Consider infection travel	infections travelling in to the groin, or around the neck will be harder to treat, and more dangerous, than infections in (for example) the arm

Amputatability

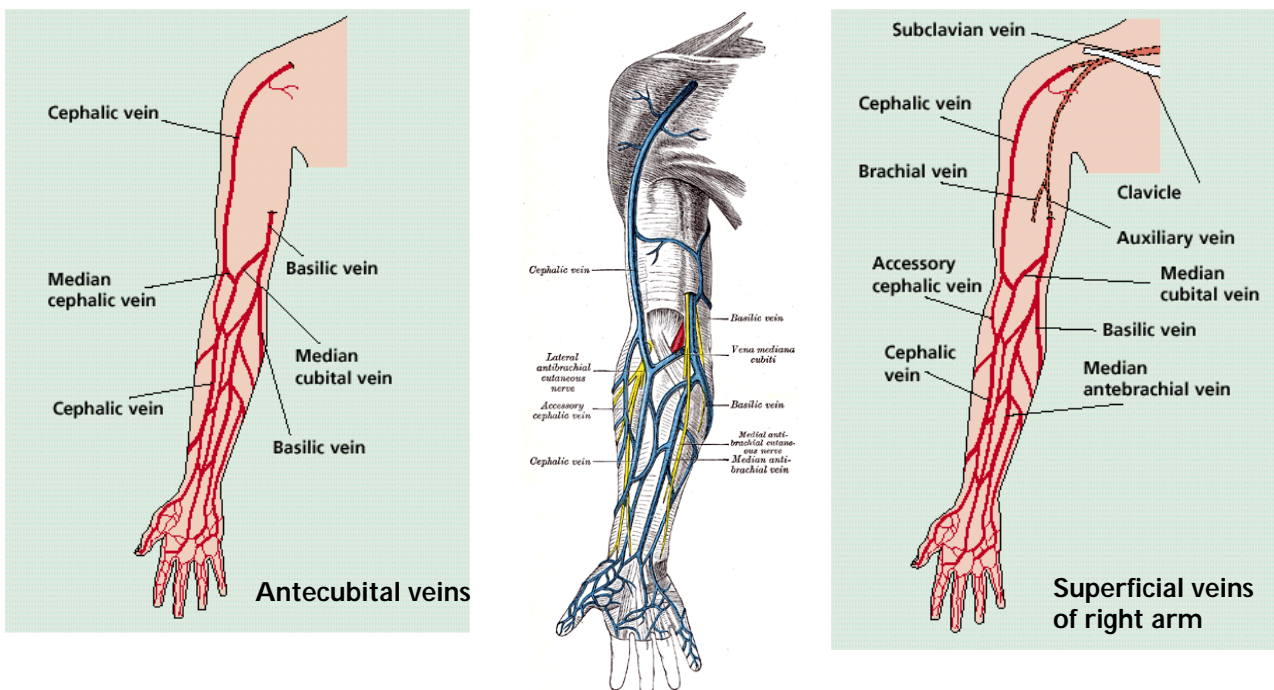
If, in a worst case scenario, amputation is required, some areas (e.g. neck) have worse outcomes than others.

Arms:

The veins in the lower arm are the safest injecting sites for intravenous drug use and so are the preferred veins for use.

There are a number of veins in the arms, providing relatively accessible injecting sites. In many people, some of these veins are easily visible. However, not all the available veins will be ordinarily visible, and seeing veins may be more difficult for people with darker skin tones.

Depending on the build of the injector and the vein being used, different needles will be required. The smallest needle possible to reach the vein should be used, which will typically be a 29G – 25G needle. Short needles will usually be adequate for superficial veins.



Strategies for raising a vein

For some of these veins, help may be needed to raise veins for injecting. There are several ways of making veins more prominent.

Tourniquet: A tourniquet is a strip of material that is wrapped around a limb to restrict the flow of venous blood back from the extremities to the heart. The restriction causes the veins to become more prominent, and thus easier to find. Some commentators suggest that use of tourniquets is primarily beneficial and makes veins more accessible so that they are less prone to damage. This may be true if a good tourniquet is used properly. Other commentators, perhaps more concerned about the potential for damage if used incorrectly, suggest that tourniquets be used only if necessary.

If a tourniquet is used, it should be put on approximately three finger-widths above the bend of the arm. It should be only sufficiently tight to indent the skin slightly, but sufficiently slack to get two fingers under the tourniquet.

If a tourniquet is put in place too tightly, it can impede the flow of arterial blood. This firstly means that the presence of the tourniquet will actually make veins harder to find, and so make injecting more difficult. In turn this can cause tissue to be deprived of blood leading, eventually, to gangrene.

The tourniquet will need to be removed once the needle is in the vein prior to injecting. It should be fastened in such a way that the person injecting can remove the tourniquet without moving the needle. Tying a tourniquet so that it can be released with a tug of the mouth is a useful technique that allows a tourniquet to be removed while still holding the needle.

Other measures for raising a vein

There are several other methods of making veins become more prominent, without using a tourniquet. These include:

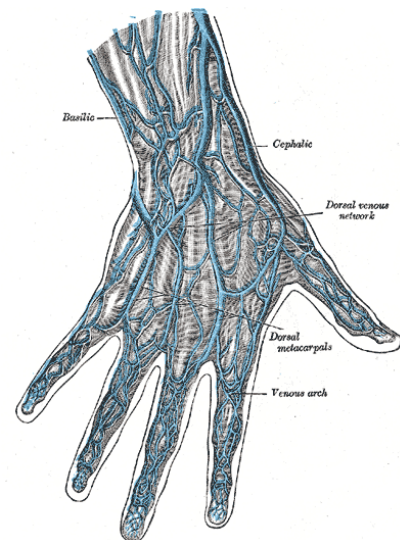
- **Clenching and unclenching a fist**
- **Swinging the arm around**
- **Letting limb hang down,**
- **Bathing the limb in warm water**
- **Gently slapping the skin over the vein.**

Measures such as getting in a hot bath should be avoided, as they increase the risk of overdose, or accidents.

Hands

The problems and risks related to injecting into the hands mean that use of the hands as injecting sites has more drawbacks than the arms. But it remains an accessible and viable area.

Many people have prominent veins on the back of their hands, but these are fragile and prone to damage if used for injecting. They may also be very painful when used. Damage to veins in the hand, infection, or injecting into an artery in the hand can cause the hand or fingers to become infected or swollen. This can be very problematic, especially if finger with rings on become swollen. This can cut off blood supply to the digits.



Injecting into the hands is ideal. For people who are intent on using the hands, all jewellery should be removed prior to injecting. This point should be stressed to women who inject into their hands.

Short needles, 30G – 26G should be used, and only small quantities of drug should be injected at the site. The injection should be made slowly, to reduce the risk of rupturing small thin veins.

Once veins in the arms have become damaged, swelling of the hands is more likely and this will make the hands less feasible as an injecting site.

Feet

The problems and risks related to injecting into the feet mean that use of the feet as injecting sites should be discouraged.

As with hands, although veins in the feet may be prominent, they are not a preferred site for injecting. The veins are small and fragile, and circulation from the feet is slower, as it is working against gravity to return blood to the heart.

Injecting into the feet is also prone to infections and slow healing. Needle sizes and techniques should be as for injecting into hands.

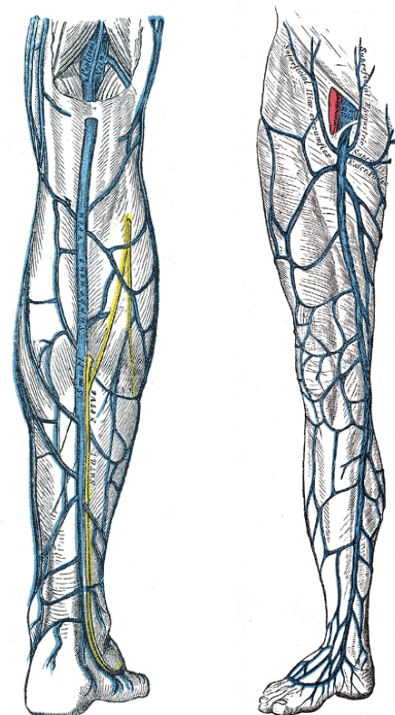
Legs

Veins in the leg are more risky to use than veins in the lower arm and so are less preferable.

Circulation in the legs is relatively slow, and the veins in the leg have many valves. The superficial veins in the leg are less clearly visible, and harder to reach. Injecting into these veins is more likely to cause damage to the veins and especially the valves, resulting in blockages and vein collapse. The damage to the circulation in the legs can increase the risk of tissue damage such as ulcers. These factors mean that injecting into the veins in the leg is not a preferred route.

As with other points where circulation is slow, injection should take place gradually, to give the solution time to enter the bloodstream. The smallest needle possible to reach the vein should be used.

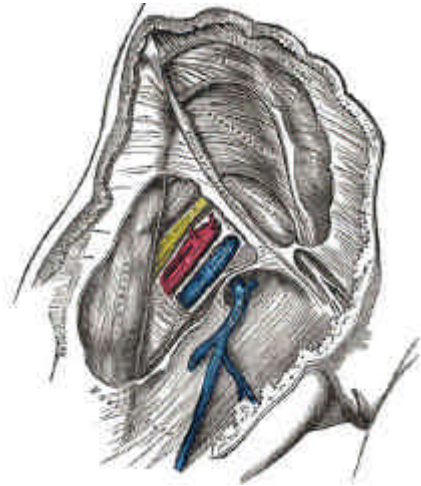
Where vein damage has occurred, varicose veins may form. In pale skin, these veins may be more clearly visible, and so chosen for injecting. However, this should be avoided as the veins are thin and are fragile; if punctured they may bleed extensively.



Groin

Injecting into the groin area is an inherently unsafe activity. Where it is happening referral should be made to specialist agencies to either identify less dangerous alternative sites or techniques.

Groin injecting is injecting into the femoral vein, or the external iliac vein. This is a relatively accessible site and is largely used by injectors who have exhausted sites on the arm. However, there has been an upsurge in groin injecting amongst newer injectors. For some, this has been the result of rapid exhaustion of other sites. However, for other new users, this has been a site of choice rather than a site of last resort.



Due to the potential health consequences of femoral injecting, some organisations will not advise on or give equipment for groin injecting. Some commentators will argue that it will be possible in the vast majority of cases, to find usable veins elsewhere that are safer to use.

In the case of people injecting methadone ampoules, a move towards deep intramuscular injection could be contemplated as a move away from injecting into the femoral vein.

The femoral vein runs along side two other important structures, the femoral artery, and the femoral nerve. Their proximity makes accidentally hitting these structures a big risk. Damage or injection into the artery could result in serious blood loss, and circulation being cut off to the limb. This can result in loss of a limb.

Use of the femoral vein, especially regular use, increases the risk of infections around the site. Other complications such as ulcers, or development of a sinus (permanent hole) between the vein and the skin are risks.

Injections into the femoral vein can lead to the formation of clots within the vein. This is a **deep vein thrombosis**. This can result in a pulmonary embolism where the clot breaks free and travels to the lungs; this can be fatal.

Wherever possible, alternative sites should be found, and groin injecting should be discouraged. Some agencies will only offer limited advice on, and workers should ensure that they have policy on this subject before embarking on any advice giving.

Other sites

While other sites are used, these sites are inherently risky. Injectors using or contemplating using these sites should be referred to specialist injecting services who can advise and identify safer alternatives.

Injecting does place intravenously into other sites including the neck, and the armpit. Men may attempt to inject into the penis; women may attempt to use the superficial vein on the breasts. These sites are all generally considered too risky to offer harm reduction information and injecting into these sites should be discouraged and other sites or alternatives to injecting should be identified.

7.2 Intramuscular Injection

Intramuscular injecting is inherently unsafe when the substances are non-sterile powders or crushed tablets. Such use should be discouraged.

However, Intramuscular injection of methadone ampoules is safer and less damaging than using intravenously, and is a viable and in many respects preferable alternative.

When drugs are injected into the muscle, they are absorbed into the blood stream via the muscle's blood supply, and then return via the venous system to the heart, lungs and on to the brain.

Intramuscular injecting takes longer to reach the brain than intravenous injecting. This is especially true if the injecting only goes into the muscle a short way. The blood supply is more plentiful deeper in the muscle so absorption is more rapid here.

In some respects this is an advantage. The drug will be absorbed more slowly, and so reduces the risk of overdose. At the same time, although the drugs are absorbed more slowly, the effects will last longer.

Anabolic steroids: Some drugs, notably anabolic steroids are usually injected into muscles, and to use intravenously would be dangerous and potentially fatal.

Most anabolic steroid users inject with the aim of the drug working systemically (across the whole body).

Some users suggest that very fast acting anabolics (e.g. Winstrol) are site injected to maximise effect in that area. A minority will undertake specific site injections with the aim of picking up 'sagging' muscles. Some argue that such an approach is ineffective while others are convinced that it has an impact on muscle development.

Health risks

Methadone ampoules are intended to be used intramuscularly. However, with most other substances, injecting into muscles will lead to complications. Other substances injected such as crushed tablets or street drugs will leave deposits in the muscle tissue that can lead to local infections. Some infections, caused by anaerobic bacteria thrive in the oxygen-free environment, and can cause botulism and other potentially fatal conditions.

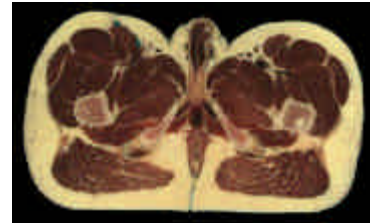
Some infections are an inevitable consequence of injecting street drugs intramuscularly. So while this may be a viable alternative for injectors who use methadone ampoules, it is not an option for people using heroin, cocaine or other street drugs or tablets.

Anabolic steroids: Anabolic steroids are liable to have been prepared in clandestine labs, and may be non-sterile, contaminated or of variable strength. This can result in infections and other complications.

Equipment

Intramuscular injections require a longer, thicker needle than intravenous injection. A longer needle is required to reach an adequate depth into the muscle. There is a risk that thin needles would snap off in the muscle and so a thicker needle will be required.

Fluid leaves a fine needle under higher pressure than a larger-bore needle. The increased pressure from fine needles can cause increased local tissue damage and so larger needles should be used for intramuscular injection.



Depending on build, depth of fat and size of muscles, and the site selected, a 22G or 23G (blue) or of the appropriate length will be required. As the illustration shows, the amount of fat and depth of muscle can be quite substantial.

Anabolic steroids: According to information from a variety of body-builders, most use 23G needles and use of 21G (green) needles is less common for injecting though often used for drawing up fluids. Fewer used a green needle for injecting and it is not clear if this is a result of needle exchange advice.

Only a small quantity of liquid can be injected into an intramuscular site. Again, depending on size, build and site used, a maximum of 3mL of solution should be injected into the thigh and buttock sites. The maximum that should be injected into IM sites on the arm is 1.5mL.

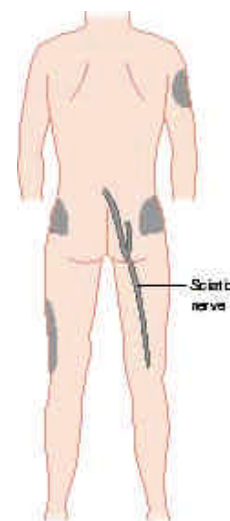
If larger quantities are to be injected, they should be injected at different sites. A fresh needle should be used each time to reduce damage.

Although this advice is generally accepted by exchange workers, body builders routinely report injecting larger quantities per site; many respondents were injecting as much as 4ml per site in the glutes.

Sites

The sites indicated are the preferred sites for intramuscular injection. Sites will take a long time to heal, and so recently used sites should not be reused until they are fully healed.

Where an injector is attempting to inject themselves intramuscularly, rather than being injected by a third party, the site on the thigh is the only accessible site.

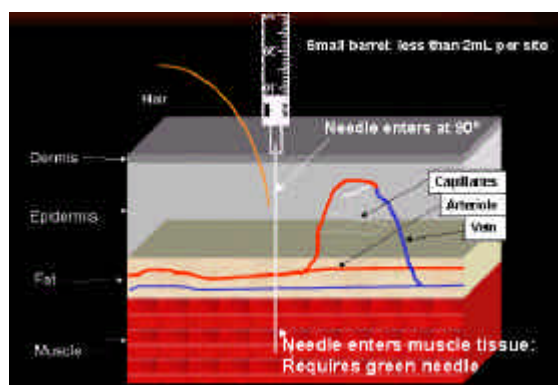


Process

- IM (Intramuscular) injections should be delivered deep into large muscle areas, the drugs are absorbed slower and steadier than with IM injection which means that there is not such a rush and less chance of overdose (although it is still possible). This means that the effects

of the drug come on much slower (20-30 mins) and last much longer.

- There are three areas which are suitable for IM injections - buttocks (Gluteus Maximus), mid thigh (Quadriceps), and upper arm (Triceps). Only the mid thigh is advisable for someone injecting themselves.
- Only drugs prepared for IM injection should be injected into muscle areas. Any powders or solid contaminants will remain in the muscle and may cause infection.
- The maximum amount of fluid should be no more than 3mls. Larger amounts should be split and injected separately into different sites.
- Always use sterile equipment.
- Choose the site (remembering to rotate sites and avoiding bruised or damaged areas).
- Wash hands before opening equipment.
- If using oil-based anabolic steroids, gently warm in a bowl or warm water as this will help the steroids become more fluid and less viscous. The solution should not be overheated; warm, not hot.
- If using multi-dose bottles of steroids, clean the rubber top first using a swab.
- Some illicitly produced ampoules will be made of poor standard glass, or not be scored; some body building sites advocate using a file to score the neck prior to snapping it; others advocate using a piece of plastic tubing or other finger protection to prevent glass injuries.
- Stay relaxed; tensing the muscle will only make entry difficult causing increased pain and damage.
- Clean area, either using Sterets or with soap and warm water. Draw up the drugs with one needle (which should be unused) and dispose of as it will have been blunted and barbed by the ampoule. When filling from multi-dose bottles, it may be easier to add the stage below;
- [for multi-dose bottles – initial filling: draw air into the syringe; the volume drawn in should be the same as the intended quantity of drug to be injected. The needle should be pushed through the rubber stopper, and the air forced in to the bottle. Then, when the needle is drawn back again, the fluid will be forced into the barrel more easily.]
- Use a separate needle to inject.
- The injecting needle should be a 22G or a 23G needle of a suitable length for the site in question, needle as this will reduce damage cause from the pressure of the fluid and is less likely to break. People with a very large build going in to deep muscles may need a Green 40mm 21G needle as this will reduce damage cause from the pressure of the fluid and is less likely to break.



- Grab the area around the site and pinch the muscle, this deepens the muscle mass, reduces the chance of the needle scraping the bone and helps to ensure that the drug is delivered deep into the muscle where blood flow is better.
- Hold the syringe like a dart and resting the injecting hand on the thigh. The needle should pierce the muscle at 90 degrees (right angle) with one smooth jab using a rolling motion from the wrist. Do not push the needle in slowly as this will only cause more pain and tissue damage.
- Do not push the needle in right to the hub as this will add trauma to the site and will increase the chance of the needle snapping.
- Pull back slightly (aspirate) on the plunger to make sure that the needle is not in a blood vessel, if it is a small plume of blood will appear. If this happens withdraw the needle and place pressure on the site. Discard the preparation and begin again. At the very least change the needle.
- If no blood appears (there will be a small bubble of clear fluid) then the needle is in the muscle.
- Inject slowly and steadily as this will reduce tissue trauma.
- Withdraw the needle slowly.
- If any blood appears then apply pressure using clean fingers. Do not use Sterets as they will harden the skin and increase bleeding and bruising.
- Gently rub the muscle to aid absorption.
- Dispose of the equipment in a sharps bin.

7.3 Subcutaneous injections

Subcutaneous injecting is also often referred to as *skin popping*. As the name suggests, the injecting is made into below the surface of the skin, between the skin and muscles below.

As with intramuscular injecting, absorption of the drug is less efficient and the same problems relating to infections and deposits at the injection site are present. These risks are especially high when crushed tablets or powders are injected, and will inevitably lead to infections and complications.

Injecting drugs subcutaneously is very likely to lead to health problems and is not a viable long term strategy for injecting drugs.

The other group who may inject subcutaneously and come in to contact with needle exchanges is the small number of body-builders who use Insulin after training sessions. The principle behind this is that the use of Insulin will increase the storage of glycerin in muscle tissues. Typically this will involve injecting Insulin immediately after training followed by a high level of carbohydrate intake.

The long-term risks associated with this pattern of use is not yet clear; in the short term, there is a risk of blood-sugar levels dropping dangerously low, possibly resulting in unconsciousness or coma. People using insulin in this context will need to be aware of these risks, of the symptoms of hypoglycaemia and strategies for preventing and managing the risk.

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Equipment

Subcutaneous injections require small quantities of fluid be injected using fine needles. No more than 0.5mL of solution should be injected into a site, so a 0.5mL or 1mL barrel will be adequate.

A short fine needle (30G – 27G) should be used.

Sites

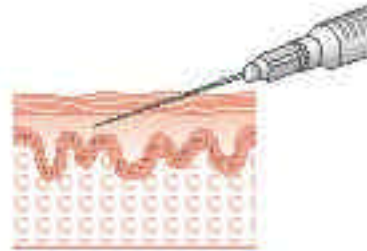
The indicated sites are the preferred ones for subcutaneous injections. Sites where the skin is already bruised, discoloured or blemished should be avoided.

Sites will take a long time to heal, and so recently used sites should not be reused until they are fully healed.



Process

- Clean hands.
- Use clean, unused equipment.
- The site is swabbed, and allowed to dry. The needle is inserted into the skin at a shallow angle, so that it is under the surface of the skin, and enters the fatty layer below.
- The contents should be injected slowly into the site.



Ch. 8

The Process, The Risks and Reducing the Risks

8: The process the risks and reducing the risks

Injecting is not a single action but a series of smaller acts strung together. At various points in the process, bad habits, poor technique or other factors can expose the user to risk.

By working through the process with the client, areas of risk or other problems can be identified. This can enable the client to change their behaviour in very small ways, which can reduce the risk.

The process described here refers to the intravenous injection of street heroin. It draws on information in the *Guide to Safer Injecting* by HIT.

Preparing and Injecting Street Heroin. A Step-by-step guide to identify and reduce risk		
Beforehand		
Process	Risks	Harm Reduction strategies
Scoring	Do you have works when you go to score? Obtaining drugs, but not having any clean injecting equipment can cause problems. It increases the risk of sharing equipment, or reusing old equipment.	<ul style="list-style-type: none"> • Obtain clean equipment before scoring; • Maintain a store of clean equipment; • Don't wait until about to use before obtaining equipment.
	At this point, needle and syringe are still in sealed packaging.	
Finding a space	Where are you going to inject? Is it somewhere where you have space, and where you will not be interrupted? Is it somewhere clean, where you can wash before using?	<ul style="list-style-type: none"> • Ideally use somewhere quiet and where you have privacy. However using on your own increases risk of overdoses going undetected. • Try to avoid injecting in public arenas; you are more likely to be rushed and make mistakes.
Preparing self	Are you withdrawing, feeling edgy or otherwise feeling 'strung out?' Have you been drinking? What else have you used How do you feel?	<ul style="list-style-type: none"> • It's better not to be rushed • Choose your own space and company if you can • Knowing when you are going to fix avoids struggling when you're 'strung out.' • Get to know your own 'triggers.' • Avoid injecting when drunk; it increases risk of poor injecting or accidents • Use less or don't use if you have been using other drugs • Be especially wary of injecting when feeling depressed, ill or run-down

Preparation		
Process	Risks	Harm Reduction strategies
Wash hands	How clean are your hands, and your injecting sites? Dirty hands and sites increases the risk of infection.	<ul style="list-style-type: none"> Washing hands and injecting sites with hot soapy water will reduce the risk of infections. It can also make veins easier to find.
	At this point, needle and syringe are still in sealed packaging.	
Clean surfaces	Where are you going to inject? Is it clean? What other surfaces have you come into contact with? Touching other surfaces – such as taps, door-knobs etc can mean you have sources of infection on you.	<ul style="list-style-type: none"> Most surfaces will be potential sources of infection, including Hep B & C. Placing a clean sheet of newspaper on a table can reduce the risk of infection, as can wiping surfaces with hot soapy water before and after use. Wash hands again.
Check strength	How strong is this drug? If it is stronger than usual, or tolerance has dropped, there is a risk of overdose.	<ul style="list-style-type: none"> Know your dealer, Inspect gear closely, Talk to other users, If in doubt, smoke a small amount first to test strength, Administer drug slowly or fix in two hits.
Crush drugs	Are you crushing powders, tablets or rocks with a second spoon? Is this spoon clean?	<ul style="list-style-type: none"> Ensure that any object used to crush tablets, powders, or rocks, is clean. Wash the spoon before and after use. Heroin and tablets should be crushed as fine as possible; this will help it to dissolve when mixed with water.
Drugs into cooker	Is the 'cooker' clean? The 'cooker' – bottle top, cake foil, spoon etc. may be a source of infection. If others have used it for cooking up or drawing up this could HIV or Hep B/C.	<ul style="list-style-type: none"> Use your own spoon or cooker, and clean it first. Discard disposable cookers after use Wash the spoon after use. Don't share cookers.
Add acidifier	What sort of acidifier is being used? Lemon juice and vinegar contain germs. Lemon juice contains fungus which damages the eyes. Lemon juice, vinegar and citric acid all irritate the veins.	<ul style="list-style-type: none"> Use a minute quantity of Ascorbic or citric acid to fix heroin. Do not use lemon juice or vinegar. Keep Acid powder in a sealed container to reduce contamination.
Add water	Where are you going to get water from? Sterile water for injection is safest, followed by boiled water that has cooled. Water that others have used or drawn up from may be a source of infection.	<ul style="list-style-type: none"> Use only Sterile water for injection fresh boiled water, or fresh clean water from the cold tap. Don't flush back into water, or use water that someone else has flushed into.
	How long are you heating it for?	<ul style="list-style-type: none"> Heat until the mixture has dissolved

Heat	<p>Heating will not sterilise the mixture Heating for longer will not dissolve more of the drug; but it may dissolve more of the adulterants. Hot solution will irritate vein linings more.</p> <p>Are you stirring the mixture? What with</p>	<p>and allow to cool.</p> <ul style="list-style-type: none"> • Some people stir the mixture and may use an uncapped needle; this means that the needle is no longer sterile, and could cause infection. • Another clean item should be used to stir the mixture.
Add filter	<p>What sort of filter are you using? Is it the safest filter you can use? Some filters are likely to shed fibres into the solution which can cause problems.</p> <p>Is it clean? Reusing or sharing filters increases the risk of infections such as HIV, Hep B/C and septicaemia.</p> <p>How much are you handling it? Handling filters contaminates them and increases the risk of infections.</p>	<ul style="list-style-type: none"> • There is no SAFE way to filter, and clients should be advised as such. • Some small particles will pass through most filters. Cotton wool fibres may become dislodged, clog the needle, or enter the vein and cause damage; even cigarette filters can cause problems. • Rizzla filters for hand-rolling are thought to be the safest.
Draw up from spoon into syringe	<p>Are you drawing up from your own clean spoon into your own clean syringe? Sharing needles and barrels can transmit HIV, Hep and other infections. You can contract Septicaemia from your own used works.</p> <p>Do you ever front or backload? Any contamination in the process above will be shared by both people if you share a hit by front or back loading.</p>	<ul style="list-style-type: none"> • With one-piece syringes, the needle needs to be placed on the filter for the drug to be drawn up; • With separates, the tip of the barrel can be used to draw up the solution through the filter; this avoids blunting the needle and maintains its sterility longer. • Ensure that all the equipment is clean. If you are dissolving tablets in a separate barrel or sharing a hit through front or backloading, ensure that all this equipment is clean and sterile.
<p>At this point the barrel will no longer be in its sterile packaging; In the case of two piece syringes, the needle will still be in its packing. In the case of one-piece insulin syringes, syringe and needle will no longer be sterile.</p>		
Expel air	<p>Is there air in the syringe? Although the small amounts of air in a barrel are unlikely to cause problems, it is safer to get rid of them.</p>	<ul style="list-style-type: none"> • Hold the syringe pointing upwards/ • Tap the barrel to dislodge bubbles • Gently push the plunger to expel air • All the air is gone when liquid starts to emerge from the needle. • Touching or licking the tip of the syringe would contaminate it and should be avoided.
Injecting		
Process	Risks	Harm Reduction strategies
	<p>Where are you going to inject? Some veins are more risky to use than others;</p>	<ul style="list-style-type: none"> • Some veins will be visible, while others will need to be identified by feeling for them.

<p>Identify vein:</p>	<p>Veins need an opportunity to heal before being used again. Repeated use of the same vein will slow down healing and increase likelihood of infection. It can also lead to loss of veins.</p>	<ul style="list-style-type: none"> • Small vein and recently-expanded veins are fragile and easily damaged; these should be avoided. • Deep veins such as the groin are risky sites for injecting. • Other sites that should be avoided include the neck, armpit and penis and breasts. There is no safe way to inject into these sites.
<p>Swab Site</p>	<p>Has the site been cleaned properly? If you haven't washed the site with soap and water, swab it now. Swabbing the site with an alcohol swab can reduce the risk of infection. However, they are ineffective if not used properly and could increase the risk of infection.</p>	<ul style="list-style-type: none"> • Swab the site, by wiping – not rubbing with an alcohol swab. • Leave the site until it has dried before injecting. • Do not use swab again.
<p>Raise vein</p>	<p>Do you use a tourniquet? A tourniquet is not essential and some people can find and use veins without one. Is the tourniquet clean? If other people have used the tourniquet and it has blood on it, this could cause infection? Is the tourniquet too tight? If the tourniquet is too tight it can cause harm.</p>	<ul style="list-style-type: none"> • Using a tourniquet can make it easier to find veins on the arm. It should be placed three-fingers width above the bend in the arm. It should slightly indent the skin - any tighter will restrict the flow of arterial blood. • Veins can also be raised by clenching a fist, rubbing the skin, soaking the arm in warm water, wrapping with a warm towel, or 'windmilling' the arm • Getting in the bath is dangerous, and should be discouraged as it increases the risk of accident and overdose.
<p>The needle</p>	<p>Is the needle the right size? A large needle will cause more damage.</p>	<ul style="list-style-type: none"> • Use an appropriate size needle for the site.
	<p>Is the needle clean? The fresh needle should be kept away from possible sources of contamination. Reusing an old needle increases the risk of infections and will be blunt causing more damage.</p>	<ul style="list-style-type: none"> • The needle should not be left on unclean surfaces prior to injection. • All air should be expelled from the syringe before you inject. • Licking or wiping the tip of the needle prior to injection contaminates the needle.
	<p>Is the needle being held correctly? Good technique will reduce the amount of damage and leave a clean hole that heals faster.</p>	<ul style="list-style-type: none"> • The needle should be held at an angle of 45 degrees or less when entering the skin. • The direction of the injection should be in the direction of blood-flow – towards the heart. • The eye of the needle should face upwards, so that the sharp point of the needle punctures the skin.

Piercing the skin	<p>Are you clear where you are aiming for? Digging around for a vein increases the amount of damage and causes bruising.</p> <p>Is your hand steady? Withdrawal or anticipation can cause hands to shake. This is dangerous; you are more likely to miss the vein.</p>	<ul style="list-style-type: none"> • Don't fish around for the vein. • Repeated stabbing will cause bruising and scarring. • One clean stab increases the chance of hitting the identified vein. • Try and relax before injecting.
	<p>Have you hit an artery? Red frothy blood entering the syringe under pressure indicates that the needle has hit an artery. This is dangerous and potentially life-threatening.</p>	<ul style="list-style-type: none"> • Do not continue to inject. • Remove the needle. • Apply pressure to the site for at least 15 minutes. • Raise the limb. • Seek medical help urgently.
Draw back	<p>Are you in a vein? The needle may have gone right through the vein, or have missed the vein altogether. Injecting now would mean that the hot would be lost, and could cause infection around the site.</p>	<ul style="list-style-type: none"> • Pull the plunger back slightly; a small amount of blood should trickle into the syringe; this shows that the needle is in the vein.
Remove tourniquet	<p>Is the tourniquet still in place? Injecting with the tourniquet in place can cause the vein to pop. If you become drowsy or fall asleep with a tourniquet on, this can lead to loss of blood supply to the limb and gangrene.</p>	<ul style="list-style-type: none"> • Remove tourniquet
Injecting	<p>Are you injecting slowly? Injecting fast can cause damage to veins.</p>	<ul style="list-style-type: none"> • Inject slowly.
Finish	<p>Are you booting or flushing? Some users draw blood back into the barrel and expel it back into the blood stream. This increases turbulence and damage within the vein.</p>	<p>When the plunger is fully depressed,, cease injecting. Do not flush or boot.</p>
Withdraw needle:	<p>How should I withdraw the needle? Withdrawing the needle too fast can cause the vein to collapse; Leaving the needle in place causes damage to the vein and surrounding tissues.</p>	<ul style="list-style-type: none"> • Withdraw slowly, but ensure that the needle is withdrawn from the site.
Afterwards		
Process	Risks	Harm Reduction strategies
Press on the site	<p>What are you going to use to press on the site? Pressing on the site prevents bleeding from the site. This is more hygienic, and prevents bruising. Bruising will make sites harder to find next time you want to inject. Using alcohol swabs can delay healing, increase bleeding and bruising.</p>	<ul style="list-style-type: none"> • Press on the site using clean dressing or clean fingers for three minutes, to reduce bleeding from the site.

<p>Disposal:</p>	<p>Do you tidy as you go? The injecting site represents a health risk, especially once you have finished injecting. You, or another could be injured or use equipment that is now dirty.</p>	<ul style="list-style-type: none"> • Tidy the surface any spilt blood; • Needles, syringes, filters and swabs should all be disposed of in a secure sharps bin. • Clean spoons and tourniquets. • Sharps bins should be kept out of the reach of children. • Sharps bins should be returned to an Exchange when 2/3 full or more often as required.
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Ch. 9

Health Problems

9: Health Problems

The mechanics of injecting, the sharing of injecting equipment, the reuse of old equipment and contact with sources of contamination during the injecting process can expose an injecting drug user to a range of health problems.

Many injectors and indeed some workers become quite nonchalant about minor injecting injuries and health problems. But the majority of these problems could be avoided, and their presence indicates poor injecting technique or other problems that should be addressed. Even apparently minor infections and injuries can worsen. This is especially true amongst injecting drug users who are homeless or vulnerably housed. Injecting injuries, combined with poor diet poor opportunities for hygiene, and a weakened immune system can rapidly become life threatening illnesses.

9.1 Overdose

What is an overdose

Overdose is an imprecise term, which can be interpreted in several ways. In the case of prescribed medicines, and overdose could be interpreted as exceeding the recommended or prescribed dosage. In the case of non-prescribed drug use, overdose is harder to quantify. For example, when methadone is used as a substitute for heroin, the medical dosage would be sufficient to prevent withdrawal, but less than would be required to achieve the intoxication sought by many users.

Outside of medical settings, users may, depending on the nature and pattern of use, seek to use sufficiently large quantities to become heavily intoxicated. The effects of use at this level, which can come close to drifting in and out of consciousness, would, in the eyes of many people, be considered an overdose. However, this may be the level of intoxication sought by the user. For them, an overdose would be going further than this desired or planned state.

Of most concern to workers and clients are overdoses that cause damage to the body or can be fatal. Depending on the drug taken, they can cause respiratory or heart failure, cause failure of internal organs, or have other potentially fatal consequences.

Most frequently, reference is made to opiate overdoses; however, workers should increasingly be aware of and address stimulant overdoses.

Factors in opiate overdose:

Some of the factors that increase the likelihood of opiate overdose are as follows:

Drop in tolerance: If a person has stopped or reduced their drug intake, their tolerance to the drug will decrease. A resumption of use or increase in use can result in overdose, as the dose may exceed their tolerance.

Key groups at risk include:

- **Drug users who have been recently released from prison.** Tolerance is likely to have decreased either because use stopped while in prison or because drugs in prison may be of lower purity than those outside, and may be less available.
- **People leaving treatment or rehab programmes.** People who have been engaged with treatment or been abstinent for a period will have lower tolerance, and so may be more likely to overdose.

People using combinations of drugs: Using combinations of different drugs increases the risk of overdose. Using combinations of depressant drugs can result in overdose as the level of sedation of the combined drugs and interaction between the drugs can be higher than anticipated.

Using combinations of stimulant drugs carries an increased risk of heart failure, and so should be avoided.

A combination of stimulant and depressant drugs can also cause overdose. A fairly common model is taking cocaine in combination with heroin. In the short term, the cocaine will offset some of the effects of the heroin. The true level of sedation because of the heroin may not be noticed, and more heroin may be consumed.

The stimulant, however, wears off faster than the opiate, and so there is a risk that, as the stimulant wears off, the user can overdose on the remaining opiate.

Drugs of unknown strength: At times, exceptionally pure drugs may be sold on the streets. Tablets and ampoules may also be sold on the streets at different strengths. Users may therefore inadvertently take a larger quantity of drugs than intended.

In the case of pharmaceutical drugs users can minimise some of these risks by ensuring that they check the strength of preparations before use. With street drugs, the only viable option is to take a small amount of the substance to assay the strength.

Environmental factors: Rushing a preparation or an injection, or a preparation made or administered by another are also factors that may contribute to overdose. They each reduce control over the process and so increase the risk of overdose and other problems.

Symptoms:

The symptoms of overdose will vary from person to person and the drug being used. In the case of heroin overdose, the symptoms may include:

- Increasing lack of response, becomes unrouseable,
- Excessive 'gauching,' tailing off in speech, and appearing to drift in and out of consciousness,
- Shallow breathing
- Breathing stopping
- Tiny, pin-prick pupils
- Bluish tinge to lips and skin

- Skin feels cold and clammy.

ACTION

In all cases where overdose is suspected action will need to be taken promptly. If the person remains conscious, a close eye should be kept on the person, and medical help called. While attempting to keep the person roused is no bad thing, there is no benefit in slapping them or making them walk around.

- If the person loses consciousness, they should be placed in the recovery position, ensuring that the airway is open and unobstructed.
- If breathing or heart beat stops, suitably trained people should undertake CPR until the ambulance arrives.
- The ambulance crew should be told which drugs have been used if known. This allows the correct treatment to be initiated early on. Any substances found on the person should be passed to the paramedics to allow correct identification.
- The risks of overdose are increased when they take place unattended, or when people around take no action or the wrong action.
- Work with injectors to reduce their personal risk of overdose can be complemented by working with their peers to develop effective responses to incidents of overdose, such as use of the recovery position and calling ambulances promptly.

Factors in stimulant overdose:

Organisations are increasingly aware of the significance of stimulants of drug-related deaths. Cocaine and amphetamine use can increase heart rate and blood pressure. This can lead to fatalities – including heart failure. Further, stimulant use can lead to elevated temperature and convulsions, which again cause fatalities.

Strategies to reduce stimulant overdoses could include:

- Avoid stimulants if there is any personal or family history of cardio-vascular problems;
- Don't use stimulants when using medication which could raise blood pressure, or cause heart problems
- Don't exert when using or shortly after using stimulants
- Don't binge on stimulants
- Have blood pressure tested
- Avoid using in hot environments
- Don't use if you have a history of fitting, epilepsy, or if withdrawing from alcohol or benzos.

9.2 Blood-borne viruses:

HIV, Human Immunodeficiency Virus

Description

HIV can attack the immune system, leaving the infected person progressively more prone to infections. The cumulative infections can, ultimately be fatal.

There are two main types and several sub-types of HIV. It is possible for a person who is HIV positive to reinfect themselves or be infected by a different strain of HIV by using and sharing dirty equipment. There is no current vaccine against HIV or a cure for the disease. Treatment is available that can slow and even stop the virus replicating. However, treatment regimes are complex and can require a high level of compliance. The virus can become resistant to treatments and continue to replicate.

Causes and harm reduction

HIV can be transmitted through the sharing of all injecting paraphernalia, as well as through unprotected sex and from mother to child during childbirth.

Any points where injecting equipment or resources are shared should be treated as a risk factor for HIV transmission. The HIV virus can remain viable for as much as three weeks outside the body.

Where risky behaviour around sharing is identified, workers should work with the injector to identify the nature of the risk and strategies to avoid the risk.

Symptoms

There are usually no initial signs that a person has been infected with HIV. There are usually no symptoms, and the infected person may remain healthy and unaware of their viral state for months or even years.

The presence of the virus can be detected by testing blood for antibodies. The presence of the antibodies indicated the presence of the virus. Testing for the antibodies only becomes possible at least three months after the point of infection.

After time, people may start to develop conditions that are the result of HIV infection. However, the symptoms could equally be the result of other ill-health, and cannot alone be taken to indicate that a person has the virus. Some of the general signs of symptomatic HIV infection may include the following:

- Fatigue
- Fever
- Severe night sweats
- Weight loss
- Malaise
- Diarrhoea
- Enlarged lymph glands
- Oral thrush
- Anal herpes

It should be noted that several of these symptoms are similar to the effects of using or withdrawing from some drugs. So while workers should be aware of these symptoms and look out for them, they may well have other causes. More worrying is when the symptoms start to appear in someone whose health has otherwise been generally good and stable.

ACTION

The client may indicate that they think that they have been exposed to the virus, and may wish to explore HIV counselling and testing. Workers should ensure that the tests will not provide an accurate result until three months after the point of exposure. Injectors should be encouraged to practise safe injecting techniques regardless of their viral status, known or otherwise.

Where a client is presenting with symptoms of HIV-related illnesses, they should be referred to medical services where they will be able to explore options around testing and treatment.

Hepatitis B and C

Hepatitis is an inflammation of the liver. It may be caused by viruses or by other sources such as alcohol consumption.

The two main types of Hepatitis virus affecting injecting drug users are the hepatitis B virus (HBV) and the Hepatitis C virus (HCV). There are several other strains of Hepatitis virus, and sub-types of the main viruses.

While some people develop no symptoms, others go on to develop liver disease. A smaller proportion of these will develop cirrhosis of the liver, and a proportion of these will develop cancer of the liver.

Causes and Harm-reduction

As with HIV, HBV is spread both through sexual contact and through blood-borne transmission. HCV is primarily spread through blood and blood products.

The hepatitis virus can survive in a viable state outside the human body longer than the HIV virus, and smaller quantities are required for infection. Prevalence of the virus is high amongst injecting drug users.

Symptoms

As with HIV, many people exposed to the virus will not immediately develop any symptoms. About 80% of people who are infected will go on to develop chronic infection, which lasts longer than six months. This may not result in noticeable symptoms. It may however result in bouts of acute hepatitis. Of people who are infected some 50% may, over months or years develop liver disease.

Symptoms that may be reported include through this period may include:

- Jaundice - yellowing of the skin and the whites of the eyes
- Nausea and lack of appetite
- Some people report an aversion to smoking and greasy food
- Weight loss

- Pale stools
- Dark urine
- Depression
- Fatigue
- Pain in side
- Increased tendency to bruising
- Increased and longer lasting intoxication through drinking.
- Joint pain

ACTION

Injecting drug users can be vaccinated against the Hepatitis B virus, and should be encouraged to both be vaccinated and adopt safer injecting practices.

People who think they have been exposed to Hepatitis B or C can go for tests. People exposed to the virus will take at least four weeks (HBV) and eight weeks (HCV) and as much as six months to produce antibodies that will show up in a test.

There is no vaccine against HCV; treatment is available that restricts the spread of the virus but, at present, there is no cure, though some patients do go on to clear the virus completely from their system.

People who have tested positive to HCV and go on to develop symptoms may need information and support to manage the condition.

9.3 Other non-local health issues

Septicaemia

This is a bacterial infection of the blood that has spread throughout the whole body. If left untreated it can cause serious illness and can be fatal.

Causes and Harm Reduction:

Septicaemia is best avoided by cleanliness throughout the injecting process. The bacteria that can cause septicaemia can be found in old blood, so ensuring that clean sterile needles and syringes are used is imperative. Ensuring that spoons or other cookers are clean, using only clean, unused filters and fresh boiled water can also reduce the risks.

Septicaemia can also be caused when an abscess bursts into the blood stream, and so it is important that all suspected abscesses receive medical attention.

Symptoms:

Initially symptoms may include a high temperature. Any injecting drug user presenting with raised temperature should be urgently referred to medical services to assess for septicaemia. Symptoms for septicaemia can include:

- High temperature
- Feeling generally unwell or ill
- Headache
- Becoming dizzy and confused
- Have convulsions.

ACTION:

Urgent referral to medical services; an ambulance may be advisable.

Pulmonary embolism

Pieces of clotted blood or other obstructions have travelled into the lungs, and caused blockage and other damage. This can be fatal if not treated rapidly.

Causes and Harm Reduction

A blood clot in the body, such as a deep vein thrombosis has broken up or become dislodged. Parts of the clot have reached the lung. Avoiding injecting in the femoral vein reduces the chances of DVTs and so reduces the risk of pulmonary embolisms. Where veins do become thrombosed, treatment should be sought urgently. Where a deep vein thrombosis is suspected, hospitalisation is required (see below).

Symptoms:

- Chest pains
- Breathlessness
- Cold clammy skin
- Irregular heart rate
- Low blood pressure
- Coughing up blood
- Unconsciousness

ACTION:

Immediate medical attention; call an ambulance.

Endocarditis

This potentially fatal condition is an inflammation of the valves and/or smooth tissue lining the heart. It can lead to heart failure.

Causes and harm reduction.

A wide range of factors could be responsible for causing endocarditis, and the *Safer Injecting Handbook* highlights the following as being key factors: A pre-existing heart condition

- Poor hygiene when injecting
- Failure to clean injecting site before injecting
- Licking or blowing the tip of the needle
- Licking the injection site
- Injecting crushed tablets or other particulate matter
- Injecting cocaine

It is important to reinforce the need to for cleanliness and hygiene throughout the injection process to reduce the risks of contracting endocarditis.

Symptoms

There may be no symptoms detectable to the lay observer. There may be a high temperature, pains in the chest may be present, or a general feeling of being unwell.

ACTION:

Immediate medical attention; call an ambulance.

Tetanus, Wound Botulism, Necrotising Fasciitis

Although each of these infections start from local wounds, they can spread very rapidly and can be readily fatal.

These infections could be introduced via injecting technique or via contaminated drugs. Increasingly, pockets of deaths have been associated with batches of contaminated drugs, and agencies have undertaken work to rapidly notify injectors to reduce the risk.

These and other anaerobic bacteria thrive in low oxygen environments. Risky injecting behaviour is therefore going to include:

- injecting into muscles,
- skin-popping,
- injecting cocaine, as this reduces oxygen in the area,
- missed hits
- excessive citric acid use

Symptoms:

Initial symptoms may appear at the injection site and take the form of a local infection. This could be inflammation (ie abscess, cellulitis, fasciitis or myositis) at an injection site. There may not be a great deal of local swelling, causing injectors to ignore the infection. local

inflammatory reaction has varied considerably. Some cases have experienced only minimal pain and swelling at an injection site, usually the buttock, thigh or upper arm, while others have presented with severe local symptoms and signs, including extensive swelling, pain, oedema (peau d'orange appearance), erythema (rash) with a purplish hue and blackening/blistering at the centre. Some have had evidence of extensive necrosis and occasionally necrotising fasciitis has featured.

In truth, any wound could *potentially* be problematic and it will always to err on the side of caution if a client presents with an injecting wound that is swollen, inflamed, or shows other signs of an infection, especially if it appears 'different' to anything that they have had before..

Clients can be immunised against Tetanus, and clients, especially should be encouraged to take up this service to reduce risk of this infection.

Once the infection has become established it releases toxins in to the bloodstream and as the load of these infections increase, their effects can be fatal. Key symptoms for clostridium and tetanus are given below:

TETANUS:

The key symptoms include tightening of the jaw, rigidity in the abdomen, increasingly severe muscle spasms, fits and difficulties in breathing, swallowing and loss of speech.

Wound Botulism (Clostridium)

The key feature is afebrile (non-feverish) descending (develops in a top to-bottom fashion), flaccid (weakness of muscles) paralysis. Patients with botulism typically present with difficulty speaking, seeing and/or swallowing. They may have double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, and muscle weakness. If untreated, paralysis may progress to the arms, legs, trunk and respiratory muscles. There is usually no fever, no loss of sensation and no loss of awareness. There may also be autonomic signs with dry mouth, fixed or dilated pupils, and cardiovascular, gastrointestinal and urinary autonomic dysfunction. If onset is very rapid, there may be no symptoms before sudden respiratory paralysis occurs, which may be fatal. Recovery can take months. **Clinicians should suspect botulism in any patient with an afebrile, descending, flaccid paralysis.**

Necrotising Fasciitis ("flesh eating bacteria")

This relatively rare disease can be fatal if left untreated. From a local wound, surround tissue will decay away. Symptoms of necrotizing fasciitis include increasing redness and swelling and extreme pain at the wound or injection site accompanied by a fever. The flesh around the site of infection begins to decay and looks as if it had been "eaten" away. Since this infection is fatal, early treatment with antibiotics is crucial to survival, although even appropriate therapy does not prevent death in all cases. Wounds must be kept impeccably clean.

Local Health Issues

Bruising

Bruising may be visible on pale skin as blue, yellowish or black discolouration. It is caused by blood leaking below the surface of the skin.

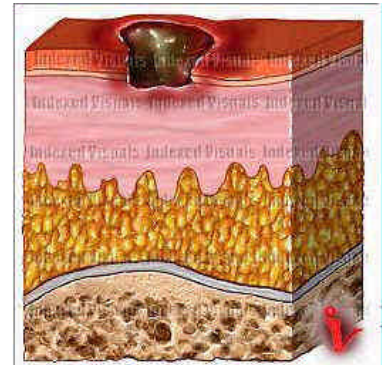
Bruising is not an inevitable aspect of injecting. With good injecting technique, bruising can be largely avoided. This is a good thing, as it means injecting sites will heal more quickly. Bruising also makes it more difficult to see veins, and increases problems with injecting.

Bruising may be caused by several aspects of injecting.

Bruising	
Potential cause	Solutions
<p>Vein has ruptured Small veins in the hand and feet are prone to rupturing, as are newly formed superficial veins and varicosed veins.</p>	<ul style="list-style-type: none"> • Avoid small, superficial and varicosed veins • Use smallest possible needle for the site • Pierce vein cleanly, don't fish around for site • Check needle is in, not through the vein by pulling back the plunger once the needle is in. • Remove tourniquet before depressing plunger • Keep needle stable while removing tourniquet • Inject small quantities if using smaller veins • Inject slowly • Inject with the flow • Do not "boot" or "flush" the needle. • Remove the needle slowly.
<p>Blood has leaked from puncture wound into surrounding tissue.</p>	<ul style="list-style-type: none"> • Using a clean pad, apply pressure to the injecting site for a few minutes after injecting. • Do not use alcohol swabs for applying pressure as these will slow healing and increase extent of bruising.
<p>Liver function is impaired The liver is partly responsible for cleaning blood and bruising can become more evident and last longer if liver function is impaired.</p>	<ul style="list-style-type: none"> • Refer to specialist health services
<p>Recent treatment for thrombosis Blood clots are usually treated with an anti-coagulant such as Warfarin; users may refer to this as rat-poison. It thins the blood, which can increase bruising around injecting site, and mean sites bleed extensively.</p>	<ul style="list-style-type: none"> • Refer back to medical services for attention.

Ulcer

Ulcers are painful areas of broken skin. With repeated injecting into a site, blood flow can become disrupted. This is especially true when injecting has reduced flow or damaged valves in the lower legs. Damage to the circulation in and around the groin for example will reduce flow through the lower legs. This leaves tissue slower to repair itself and more at risk of infection. Further injections or injury to the site cause holes that are very slow to heal. In turn these can become infected, and require further treatment.



The healing of ulcers may be hampered by personal and environmental factors such as diet, hygiene and homelessness. Treatment will be required via a primary health team. Injections should not be made near the site.

ACTION:
Refer to treatment services.

Phlebitis

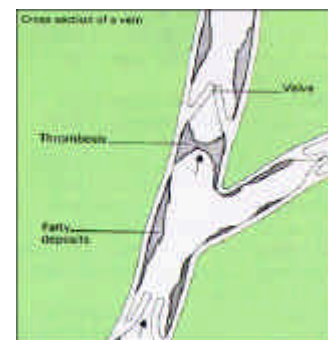
Phlebitis is irritation of the lining of the vein. The inside of the vein should be smooth, but during injection it may become damaged and roughened. The needle puncturing the vein inevitably causes some damage. Additional irritation may be caused by contaminants in the injected drug, the effects of acidifiers, or reaction to the injected drug. Injecting against the blood flow and “booting” or “flushing” the syringe increases turbulence in the vein and can increase damage.

Other blood cells encounter the roughness and some will become attached to the roughened vein lining, forming clots in the vein.

The vein may be reddened or inflamed, and may be visible as a red “trackmark” through the skin.

The incidence of phlebitis can be reduced through observing cleanliness throughout the injection process. Only a small amount of acidifier should be used. The injection of potential irritating substances such as crushed tablets and temazepam capsules should be avoided.

If left untreated, phlebitis can lead to clots forming thromboses in the deeper veins of the arms and legs. These can go on to cause pulmonary embolisms.

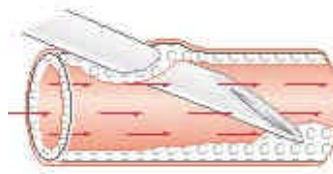


ACTION:
Refer to treatment services.

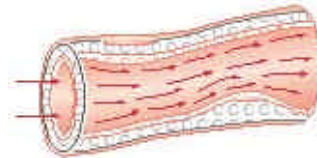
Damage to veins

Phlebitis and other damage to veins can lead to veins becoming blocked and collapsing. This has the effect of reducing blood flow through the surrounding area, leaving the area more prone to ulcers and infections. It also means that the site can no longer be used for injection and other sites will be needed.

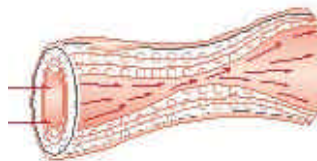
Blood supply may return through other superficial veins, which may become larger and more prominent to cope with the flow. They are however fragile, and should not be used for injecting as they are prone to rupturing or becoming damaged.



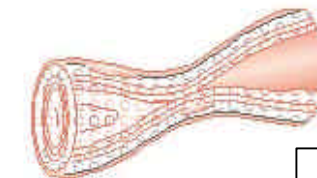
1. Injection damages the inside lining of the vein – repeated injection at the same site increases the likelihood of problems.



2. Clots form in the turbulent blood around the site.



3. As the vein becomes narrower the turbulence increases and clots form more quickly.



4. Finally, the sides of the vein heal together and the vein collapses as the scar tissue draws the sides together.

Deep vein thrombosis

A deep vein thrombosis is a blood clot that has formed in one of the deep veins in the body. They are most likely to occur in the femoral vein amongst people injecting in the groin. The thrombosis may wholly or partially block the vein, causing blood flow back up the leg to be impeded.

The leg may become swollen, and discoloured. While the thrombosis remains in place, the lack of blood flow to the tissue may cause pain in the limb, ulceration, and eczema.

If the thrombosis becomes detached, it can travel through the veins and the heart to the lung and cause a pulmonary embolism.

It is essential that injectors, especially groin injectors, presenting with symptoms of a DVT are referred to hospital immediately. An ambulance should be called, and the person discouraged from exercising the limb, as this can dislodge the clot.



ACTION:
Refer to treatment services.

From *The Safer Injecting Handbook*, HIT

Cellulitis

Cellulitis is an inflammation in the skin. It is painful, and the affected area may become swollen with fluid. On pale skin it may appear red.

Cellulitis may not have a clearly defined edge, and the extent of the inflammation may spread.

Cellulitis is caused by infection or irritation. This may be the result of a reaction to the drug injected, infection caused by dirty equipment, unhygienic technique or contaminants in the blood. It can also be the result of a missed hit, where drugs have been injected into tissue surrounding the vein rather than the vein itself.

By improving injecting technique and observing good hygiene procedures, it should be possible to reduce the incidence of cellulitis.



ACTION: Refer to treatment services.

Abscess

Abscesses are where infection has developed within tissue. The infection is localised, and a ball of pus develops in the infected area within a capsule of inflamed tissue.

Symptoms of an abscess include:

- Raised skin surface,
- Localised heat,
- Tenderness and pain
- Redness of the skin on pale skin
- Pus formation
- Surface of skin looking "stretched."
- Foul smell if pus is being discharge



Abscesses can grow quite large and, if left untreated can result in serious complications. If the abscess bursts it can discharge the pus into the blood stream leading to systemic blood poisoning (septicaemia).

Where an abscess is suspected, the injector needs to be directed to medical treatment which will include having the abscess drained and possibly packed, and treatment with antibiotics. Injectors with abscesses should be discouraged from attempting to lance and drain abscesses themselves. If done incorrectly, and without the use of antibiotics, there is a high risk of systemic infections developing.

ACTION: Refer to treatment services.

It is important to stress to clients the advantages and importance of early treatment. A small abscess treated early will respond better to antibiotics. A larger one will need to be lanced and drained. After this stage surgery may be required to open up the site, clean it and then pack and close it. Abscesses that are larger still will require major surgery, a stay in hospital, long-term healing and permanent scarring.

Abscesses typically contain anaerobic bacteria – that is bacteria that thrive in low-oxygen environments. Anaerobic bacterial infections respond better to treatment with the antibiotic *metronidazole*. Unfortunately metronidazole interacts badly with alcohol and so patients who are treated with this drug but who also drink will need to be made aware of this problems and other solutions explored.

Scarring:

Repeat injections can lead to scarring at the area. This will appear as an area of hardened white scar tissue.

Scarring can be painful and disfiguring; it appears to be one of the primary problems experienced by anabolic steroid users. Scarring can be reduced by:

- Rotating sites
- Giving sites time to heal fully
- Using a blue needle and injecting smaller volumes
- Using a fresh needle for each injecting and a separate needle for drawing up
- Not swabbing after injections.

Ch.10

Harm Minimisation

10: Harm minimisation

Injecting drug use is an inherently risky activity. Workers cannot and should not suggest that all this risk is avoidable. Workers can however work with injecting drug users to identify risky behaviour and attempt to reduce this risk.

Drug-related risk behaviour exists along a series of continuums. Using drugs is more risky than not using drugs; injecting drugs is more risky than other forms of administration. Certain injecting practices increase the risks; others may reduce these risks.

Providing information and resources to injecting drug users can have several aims. It can increase awareness of risk, and explore opportunities for safer methods of use. It can ensure that people who inject drugs are aware of the risks and have both the information and resources to reduce those risks. Working to reduce the potential harm inherent in injecting drugs is one part of a wider risk reduction strategy, that looks at the many other areas of risk that may be present.

10.1 A hierarchy of harm reduction

Ultimately, the best way to reduce injecting-related harm is to stop injecting. For injectors who do not want to or feel unable to take such a step, other measures can be adopted to reduce the risk of injecting-related harm. None of these measures can, however, wholly do away with the risks.

Below is a “hierarchy of harm reduction.”

- Is stopping use of substances an option?**
- Is there scope to move to prescribed drugs from street drugs?**
- Is moving from injecting to rectal, smoking or oral an option?**
- Prevention of sharing equipment**
- Prevent and treat wounds**
- Improve technique**

Cessation of use, done safely, removes risk.

If total abstinence is not achievable, desired or appropriate at the present time, then a move to prescribed drugs, from street drugs would substantially remove the problems associated with street drugs.

Where cessation or substitute prescribing is not an option, a move away from injecting to other, less damaging routes would reduce harm. While other routes such as snorting, smoking or rectal still bring risks, these may be less damaging than injecting.

If none of the above options is pursued, then harm reduction in relation to injecting needs to be explored. The key priorities here are to reduce the risk of BBV transmission, through stopping sharing equipment, and to improve health and well being through improving injecting technique and treating wounds.

Needle exchanges can have two roles: a primary role is to improve injecting technique, reduce sharing, and identify injected-related harm, and refer to treatment. A key additional role is to signpost away injectors towards other treatment services with a view of reducing and ceasing use.

The key balancing act is to ensure that the signposting in to other aspects of treatment does not deter people from accessing needle exchange. For example if there is too much pressure to access treatment, then this may discourage people from using needle exchange.

Prerequisites of Harm Reduction

In order for any harm reduction to be taken on board, all three sides of the triangle to the right will need to be in place. A motivation to change behaviour needs to be present, alongside an understanding of what behaviours are risky. Finally, the tools and opportunity to implement risk reduction strategies also needs to be present.

For example, a client may **want** to avoid sharing equipment (motivation), may **know** that sharing needles brings with a risk of HIV but may be incarcerated and so does not have **opportunity** to access clean needles.

If an injector is struggling to implement a harm reduction intervention, then it will often be worth exploring which side of the triangle above is missing and concentrate efforts in that area,



Limits of Harm Reduction

Workers also need to balance the potential benefit of advice and information against the potential risk of the action.

As a general framework, the checklist below is intended to help ensure that workers are working to an effective harm reduction agenda. They will help ensure that an intervention is appropriate and relevant to the client.

- Is the client injecting at present?**
- Is the client intent on starting/continuing to inject?**
- Is a move towards substitution/abstinence an option?**
- Does the client understand the nature of the risk?**
- Does the client have the resources to implement any harm reduction strategies put forward?**
- Is there a genuine prospect of reducing harm through this intervention?**
- Would greater harm take place if a service were withheld.**

If the worker is satisfied that the above criteria have been met, then it will be appropriate to provide needle exchange. But if the above test is not fulfilled, then very careful consideration or review should take place before provision of needle exchange takes place.

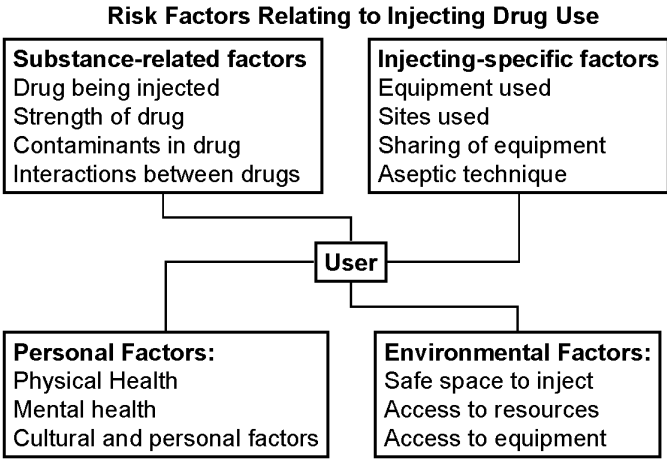
In some cases, it may be that the proposed action is so inherently dangerous that organisations feel it would be inappropriate to give harm reduction information and feel that attempting to discourage the practice is the only responsible course of action.

Agencies may develop policy and practice that limits the information that they give on certain dangerous activities such as groin or neck injecting.

10.2 Sources of risk for Injecting Drug Users

A person injecting drugs may be exposed to multiple risk factors. Some of these are directly related to the process of injecting, while others are related to other factors.

It is clearly insufficient to furnish a person who injects drugs with clean equipment. While this may attenuate some of the risks attached to drug use, it leaves many other areas of potential risk.



The aim for needle exchange workers and their clients should be, therefore, to undertake a holistic audit of injecting-related risk factors and to then work to reduce these. This will require a comprehensive assessment to be undertaken, which allows areas of risk to be identified and addressed.

Common risk indicators for injectors		
Identified risk factor	Rationale	Action
Environmental		
NFA/street homeless	No private space or hygienic space to inject; Reluctance to carry quantity of works/sharps bins;	Referral and assistance with housing; Promoting personal hygiene when injecting; Identifying safer places to inject; Encouraging client to carry adequate supply of needles and sharps bin;
Night-shelter/dorm	May not have private/safe space to inject; May face eviction for use on premises;	Assistance in obtaining more appropriate housing; Work with housing providers on drug policy; Ensure safe disposal of works
Own flat/house	Using on own – heightens risk of undetected overdose	Harm reduction work around overdose,
Substances-specific		
Using cocaine/crack	Local damage at injection site Frequent injections – effects where off quickly and compulsion to use may be strong. Increases likelihood of sharing or reuse of works Damage to injecting sites	Rotation of sites, Ensure access to sufficient clean equipment, Good health care to protect existing sites, Support move away from injecting.
Using concentrated methadone amps (50mg/1mL)	May cause damage to veins and tissue surrounding injecting sites	Rotation of sites, Health care and treatment to look after existing sites Dilute concentrated ampoules when moving from IV to IM injection Move from IV to IM injection
Injecting combination of depressants	Risk of overdose	Education about risks
Injecting combination of stimulants	Risk of overdose	Education about risks

Injecting stimulants and depressants	Risk of overdose; effects of stimulant wear off more quickly and leave user at risk of overdose on depressants; Dependency on opiate or benzodiazepine can develop	Education about risks
Injecting tablets	Increased risk of vein damage Increased risk of infection Risk of vein blockage	Education about risks, Filtering solution Move to less dangerous models of use
Injecting Anabolic steroids	Site injuries – abscesses Liver damage Hormonal imbalance	Education about injecting technique Liver function tests Education, blood tests, specialist clinics
User-specific		
Under 16	Vulnerable, may be legal issues, May not understand terms, Moral and ethical dilemmas	Assess competence of child, Ensure organisations has policy on working with u-16 and work to the policy.
Learning difficulties	May not understand terms, May have difficulty remembering complex information,	Ensure terms are explained clearly and without using jargon, Work with client to ensure that they understand information and advice Develop accessible resources Develop pictorial resources and resources for speakers of other languages.
Low literacy skills	May not be able to read and understand leaflets, literature or other resources	
Speaker of other languages	May not fully comprehend verbal or written information presented in English.	
Mental health issues	May be engaging in risk taking behaviour, self-harming, suicidal or parasuicidal behaviour.	Support and referral to Mental Health services. Assess re. appropriateness of providing equipment

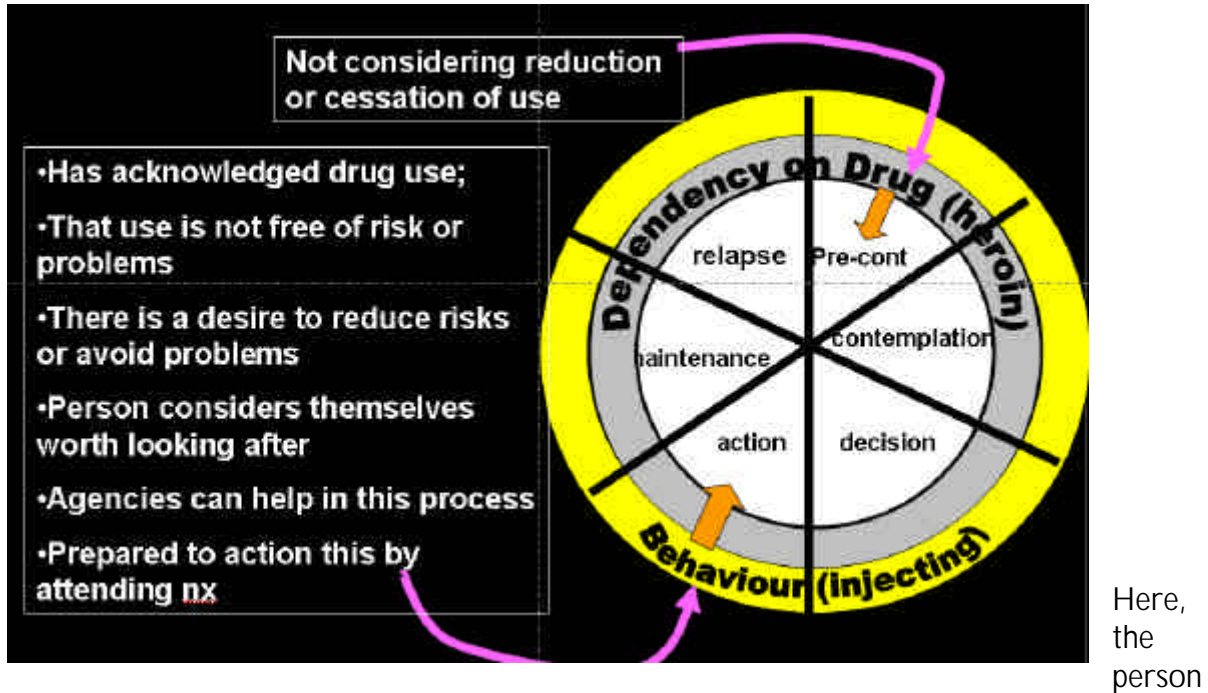
Poor physical state	More susceptible to infections and illnesses, Personal hygiene may increase risks of infection,	Support, Referral to primary care services, Education
Recent relapse/release from prison	Tolerance to drugs may have decreased so an increased risk of overdose.	Education, support
Process		
Sharing works	Risk of transmission of HIV or Hep B/C.	Education and training to improve technique; Ensure access to clean equipment; Address other reasons for sharing; Explore referral for testing Hep B vaccination
Sharing other paraphernalia	Risk of other infections.	
Front or back loading	Damage to sites from reusing equipment.	
Non-sterile injecting technique		
Using lemon juice or vinegar	Non-sterile – risk of infections, Risk of damage to retina	Discourage use of these acidifiers and explore safer alternatives
Injected by others	Harder to ensure that preparation and equipment is prepared safely and equipment is clean, May use inappropriate sites, No control over technique, Legal issues	Why is client being injected by others? May be unable to inject self, but intends to continue injecting: injecting training and education to achieve this; May wish to stop injecting; worker assists this.
Using dangerous sites: (groin, neck, etc.)	Risk of serious injury, Risk of death	Where possible identify less dangerous sites; Explore options for discontinuing injection; Attempt to reduce risk of injecting behaviour
Unsafe disposal	Risk of works being reused by others Risk of harm to public Risk of harm to staff	Ensure that sharps bins are used and equipment is disposed of safely, Many need to lead to suspension of services.

Re-using equipment	Increased risk of infection or reinfection. Increased damage to injecting sites	Education, highlight risks, Ensure adequate supply of clean equipment, Explore cleaning works
Equipment Specific		
Large syringes	Increased volume causes more damage to site. Large syringes contraindicated for IM injections. Increased OD risk.	Ensure not being used IM injections. Education. Ensure large volume is injected slowly to reduce damage.
Long needles	Increases damage to site, Increased risk needle passing through veins when used IV, Use of deep veins – increased risk of complications	Education; ensure that equipment is correct for intended purposes. If long needles are being used for deeper veins, attempt to identify safer sites.
Fine needles	Risk of needles snapping when used for IM use. Larger amount of tissue damage due to pressure of injected mixture.	Education; ensure that equipment is appropriate for intended use
Refusing sharps bins	Unsafe disposal practises Risk of harm to public	Ensure that client has access to sharps disposal and encourage use of sharps bins.
Large number of syringes and needles	Passing on works to other people Frequent injecting – increases risk of damage to sites and OD	Assessment – why so many items needed. If equipment being redistributed, encourage those people to attend services directly. Injecting frequently: rotate sites and Education/Harm reduction information Infrequent attendance at services: encourage to attend for site and health checks
More needles than syringes	Possibly reusing barrels Poor injecting technique	Health education and harm reduction information
Large number of sterets	Trying to clean equipment, Use on sites after injecting impedes healing, encourages bruising and bleeding.	Identify use; harm reduction information
Large number of condoms	May be engaged in sex work	Information about STD's and sexual health; referral to services for sex workers

10.3 Harm Reduction within the Cycle of Change:

Often, when injectors attend needle exchange but are not discussing other options such as substitutes or cessation of use, they would be considered “precontemplative” within the “cycle of change.”

However, there’s another way of looking at this, as illustrated below:



may not be considering stopping but they are engaging with a harm reduction intervention. This in turn requires at least an acknowledgment of drug use and of drug related harm.

Would could realistically argue that such acknowledgement was the start of a process of movement from a wholly precontemplative state to one of contemplating change. So needle exchange, delivered well, can not only reduce harm while use is taking place. It should also offer a chance to promote change.

Ch.11

Assessing and Recording

11.1 Monitoring:

Needle exchanges have frequently under-monitored their work. In order to provide a low-threshold, accessible and anonymous service, many exchanges routinely only record very basic information such as gender and approximate age, along with equipment collected.

Given the amount of additional work that exchanges undertake, including advice work and referral, it seems likely that record keeping by exchanges will need to be adapted. Such record keeping serves a number of purposes including:

- Case management: allows workers to ensure that the needs of clients are recorded, action plans identified and follow-up is monitored;
- Service review: this can help identify the needs of clients, additional services required, and can be used to argue for funding and resources;
- Protection against litigation: record of work undertaken, advice given or referrals made could be essential if a client suffers harm and they or another party takes legal action against an exchange.

Monitoring systems will need to be developed for:

- Stock monitoring
- Daily activity records logging:
 - Age, gender, ethnicity, stock in and out
- Client case notes where there is ongoing work with clients
 - Assessments, advice, referral
- Critical incident records
 - Needle-stick, fatalities, violent incidents

11.2 Assess or not to Assess

If in the grand scheme of things, Needle Exchange remains a contentious intervention, within the Needle Exchange world, little provokes controversy as much as the issue of assessment and record keeping.

Needle Exchange was intended to be an “accessible” “low threshold” service. In order to maximise interventions, it was important that people could access services anonymously, and with as few barriers as possible put in the way.

However, there is a tension between providing an accessible, anonymous service and providing a safe, effective and accountable service.

In practice some assessment and record keeping will be required – and probably in the near future become mandatory – in order to run a needle exchange safely and effectively.

A balance needs to be struck between seeking and recording essential information required for an effective exchange, and providing an accessible low threshold service.

The NTA [2003] stressed this point, saying:

“A comprehensive assessment is not required, especially if it constitutes a barrier to service utilization”

Accessing Tier 1 or 2

Input: equipment, literature, verbal messages exclusively repeating literature

Recording: basic monitoring for statistical purposes

Accessing Tier 1 or 2

Input: tailored advice, harm reduction information beyond literature, guidance on use of equipment, suggestions regarding attendance at other agencies

Recording: basic monitoring for statistical purposes; brief notes recording information or advice provided

Accessing Tier 2 or 3

Input: structured advice, referral to agencies, blood testing, vaccinations, detailed harm reduction or wound treatment

Recording: basic monitoring for statistical purposes; full client identification and case notes reflecting interventions

The box above looks at the level of intervention applicable at each level of needle exchange. When IDUs are solely engaging to collect and return equipment, then it will be feasible to undertake such work with minimal information collected.

Once workers engage with any more in-depth interventions, more and more assessment and record keeping will be required, and there is less and less scope for delivering an anonymous service.

It is important to stress that the need to ask and record personal client information will be essential to deliver an enhanced service, to meet a client’s best interest.

If an organisation does not wish to seek more detailed information it will need to restrict the interventions that it can offer. There are a collection of reasons for this:

- A worker cannot be sure that they are offering appropriate tailored advice unless there has been a level of assessment
- It is not possible to do effective follow-up without some note-taking
- Colleagues cannot do follow up unless they can refer to notes
- Workers cannot demonstrate that they acted professionally without notes and records

Even if workers are not undertaking in-depth work, monitoring is hugely important. For example, any needle-exchange should be able to comment on how many injectors they see who inject in the groin. They need to be able to explore if this figure is increasing. They should

be confident that the equipment that they give out matches this prevalence. Without assessment and monitoring none of this is possible.

11.3 When and Where to Assess

Assessment of a client is one of the most important aspects of effective work with injecting drug users. In some settings, such as Pharmacy Exchanges, this is by necessity quite restricted. However, wherever possible, the assessment should be as comprehensive as is practical.

For many drug using clients, contact with a needle exchange will be the only contact with drug services that the user has. Such contact therefore provides an opportunity to identify problems and issues, suggest referrals and offer advice and support which would not happen anywhere else or with anyone else.

The following assessment areas are, as a result, quite extensive. There is no expectation that this should all take place on the first contact or in one go. However, workers should be working towards gathering as much of this information as possible as soon as is possible.

A comprehensive assessment will look at a wide range of different issues. Some are directly related to injecting behaviour, and others are related to other aspects of the client's situation. These issues may all have an impact on the client's health and general well-being and so will need to be addressed.

Having collected the information, it is equally important that the worker examines and acts upon it, and that it doesn't simply become material for statistics.

Setting

The worker should think about where and when assessment is going to take place. In order to undertake a comprehensive assessment, requirements may include:

- Private space
- Somewhere reasonably comfortable,
- Sufficient time for an unrushed assessment
- A client who is neither so discomforted by withdrawal nor so intoxicated
- Worker competent to undertake detailed assessment.

Arenas which would not be conducive to undertaking a comprehensive assessment include:

- Street settings
- Mobile provision
- Pharmacy provision
- Satellite exchange in hostel/day centre

Arenas where a comprehensive assessment should be possible:

- Fixed site needle exchange,
- Drug project
- Medical centre

11.4 Anonymous or Confidential?

The benefit of offering an “anonymous” service has long been held sacrosanct by some needle exchanges. The key benefit is the belief that some clients will be reluctant to engage with needle exchange unless it was anonymous.

In practice this is not evidence based or especially desirable. As discussed above, without some level of assessment and record keeping, a service needs to restrict the services that it can offer. So by maintaining people in “no-name” services, one cannot engage fully and effectively with a client.

Perhaps the solution is to worry less about “anonymity” and focus more on “confidentiality.” Within the former, the organisation doesn’t ask or record the identity of the person. With the latter, this information may be sought and recorded but is not shared without need, unless there are specific circumstances.

It will always be important to explain to a service user what information is being sought, why, and how it will be recorded and used. In doing so, the worker should be able to assuage fears about confidentiality and explore how the information can be beneficial to the client.

Making this distinction clear should enable most clients to engage with a confidential service, even if it is not an anonymous service.

Confidentiality Policy

The worker should explain at the outset what level of confidentiality the client is entitled to. Typically, workers are not able to offer complete and unlimited confidentiality. In certain circumstances such as concern about serious harm to self or others, child protection issues and a limited number of other legal situations, workers may be obliged to share information with external agencies including the police.

Confidentiality usually rests at an organisational level rather than an individual level. So information disclosed to an individual worker will normally be shared with others within the organisation. This should be made clear to the client.

It may be beneficial to a client if a worker is able to share information with other key agencies. This may assist in accessing treatment or other services. Such information sharing will require the **informed consent** and should not take place unless this has been obtained in writing. Disclosure of such information without such consent may constitute an offence under Civil Law.

Many organisations would ask a client to sign a form that allows them to share information with other agencies on the client's behalf. Sometimes these forms specify that only specific information can be shared or only with certain named agencies.

Such an information sharing information could be agreed at this point or at a later point if more appropriate.

11.5 Question Areas

Name:

Some form of identifier will be needed; this may be full name, or first name. Preferred names and nicknames could be included.

Age/DOB

This is important, especially when working with younger users. If it indicates that a client is under 16, the worker will need to assess the client using agreed organisational guidelines for distributing injecting equipment to under-16s

Sex

In part, this information is useful for monitoring purposes.

Workers should also be familiar with specific drug and injecting relating issues that affect women and assess accordingly.

Ethnicity

Injectors from minority ethnic groups under-utilise needle exchange provision. It is important therefore to monitor who is, and is not using a service.

Current situation:

An overview of a client's current situation is important as it allows the worker to assess what factors may assist or worsen the client's well-being. It also enables the worker to identify other agencies who may be key players in developing the client's care plan.

Housing

Some clients will be permanently housed; others will be in temporary or insecure accommodation and others will be street homeless. In part this is important as it provides a route for referring homeless clients towards housing services.

It is also important as clients in different housing settings will have different resources available to them and workers need to take this on board when giving clients advice, information or equipment.

Financial/employment

Some clients will be in paid employment; others will be self-employed, engaged in the sex industry, selling street papers, engaged in criminal activity or begging. Others will be in receipt of benefits. These factors will have an impact on the risks that the client faces, and may indicate appropriate referral and support strategies.

Legal

Legal problems may act as a barrier to accessing services. Identifying outstanding legal problems is therefore important. Alternatively, clients may be engaged with Criminal Justice services, be unwilling to discuss their current drug use with workers from these services.

Drug Use

It is important to get a clear picture of all drug use, not just drugs that are being injected. This can highlight risks such as interactions between drugs and risk of overdose.

Gaining a clear picture of a drug user's drug history is important as it helps identify changes, patterns or key areas of risk. The worker can also work with the client to identify what the client wants to do regarding their drug use and advise accordingly.

Drugs Used - ever:

This looks at all drugs that the client has ever used. It provides an overview of the client's drug using career and, with prompting can highlight where drug use increased or reduced, and why.

Drug Used - last four weeks:

Looks at recent drug use. There may be drugs used in the last four weeks that haven't been used in the last seven days. So although they won't be picked up in the next question, will still be relevant.

Drugs Used - last seven days:

Will look at present drug use. It may also highlight changes that have taken place recently, indicating chaotic drug use, binges, episodes of crisis or a move towards reducing.

Quantity and frequency:

It is important to distinguish between drugs that have been used infrequently or in small quantities and those that are used frequently and in large quantities.

Method of use:

This will highlight which drugs are currently and have in the past been injected. It will also demonstrate whether the person is or is not a current injector.

Injecting behaviour

Sites used:

Identifies all the sites that are currently being used. It may be appropriate to use a sketch of the body to mark current injecting sites.

Condition of sites used:

The client should be asked about the condition of the injecting sites that they are using. This allows workers to ascertain the health of the sites and identify problems that may need attention. Workers are not in a position to diagnose problems, and so whenever they are concerned about a client's health, should refer on to specialist services.

Often, clients will, unprompted, show injecting sites on hands and arms, and this allows the worker to make a more objective assessment. However, if it is appropriate or necessary to view other sites, such as the groin, this should ideally be done by a nurse or doctor only.

Condition of potential site unused:

As well as looking at sites that are being used, it is also important to look at sites that are not being used. These can indicate that a client could be rotating sites more effectively or using less dangerous sites.

Safe injecting technique

Workers often assume that clients have a good knowledge about injecting and injecting technique. While some do, many do not. Workers need to have the confidence to ask

questions and to challenge behaviour. Workers must not assume that clients are making informed choices about their injecting behaviour.

Equipment

Workers should find out what equipment is being used, and how it is being used. They should ensure that the most appropriate equipment is being used and in the safest manner possible.

Preparation and administration:

Thorough assessment of how drugs are being prepared for injection can highlight points at which problems may occur. Using the systematic approach outlines above provides a useful structure for working through the process with the client and making suggestions for improving technique.

Sharing of paraphernalia

One of the key aims of needle exchange provision is to reduce the spread of blood-borne infections through the sharing of injecting equipment. It is important to explore this in detail and look at the various points where infection can take place.

Engagement with services

The client may or may not be engaged with a variety of other services. It is important to establish if the client has contact with the following, as appropriate:

- GP
- Primary health care services
- Drug support agency
- Drug Treatment
- Mental health services
- Legal and criminal justice
- Housing
- Other (e.g. Liver Unit, Support Groups etc.)

The worker should also establish at this (or other appropriate) time if the client is willing to consent to information being shared between the worker and identified key agencies

Health

An assessment should look at the client's current physical and mental health. Where workers are at all concerned that there may be either physical or mental health issues, they should refer on to services trained and qualified to make a more detailed assessment.

Physical Health

Drug users, especially those who inject drugs, may experience a range of health problems. Many of these have very minor initial symptoms. However, if left untreated, these problems can become life threatening. A thorough health assessment can give an early indication of these problems, and enable early treatment to start.

Workers should also identify if the client has experienced recent episodes of overdose.

Mental health

Assessment of mental health is also important. Users are more likely to experience mental health problems than the wider community. These problems are likely to be greater where

certain drugs (e.g. cocaine, amphetamines) or where other problems such as homelessness are also present.

Detection of mental health problems during assessment allows referral to appropriate support services.

Special needs, disabilities etc.

Some injecting drug users will have special needs. Users may have low literacy skills, may not speak English as a first language. Some may have learning difficulties. Other problems, like auditory or visual impairment, or physical disabilities may also be present.

These factors can affect a client's ability to read and understand written literature, understand explanations or instructions, or access services.

It is important that workers are aware of such restrictions and adapt any messages given accordingly.

Other Factors:

The worker should also identify other relevant information, such as a client's ability and skills as a peer educator, ability to deliver resuscitation in emergencies, or other related skills and abilities, status as parent or carer, presence of children, and so on.

Assessment should not be a one off process, but part of an ongoing process of assessment and review

Ch.12

Beyond and away from Injecting

12.1 Beyond injecting:

Needle exchanges are, for many drug users the first and maybe the only point of contact with treatment agencies. Consequently, needle exchanges represent an important point of contact with agencies, needle exchanges need to consider what they are able to offer beyond syringe exchange provision.

As discussed earlier in the “Harm Reduction” section, workers need to explore how they can reduce harm while the client is continuing to inject, but also explore the scope for reducing wider harm – for example through cessation of injecting.

The following is a range of ‘exchange plus’ interventions that can be considered:

Alternatives to Injecting

Interventions such as alternative routes – rectal, smoking and snorting could be explored. For others, referral in to other treatment modalities – prescribing or detox – could be an option.

Reducing Induction in to Injecting

Interventions such as the “Break the Cycle” campaign have sought to try and reduce the extent to which existing injectors induct new injectors in to injecting. The idea is that by getting older injectors to review how they act around new and non-injectors, they could reduce or delay the initiation in to injecting.

BBV Services

Provision of a range of BBV related services could include:

- Counselling and testing services for BBVs
- Support and advice services for people with BBVs
- Immunisation against Hep B
- Immunisation against tetanus

Wound care:

Given the poor attendance and throughcare that may be an issue in other primary care settings, it may be beneficial to offer wound-care via needle exchanges. Such a service could include dressings and dressing changes, prescribing for minor infections where feasible, and treatment of minor infections.

User groups:

Active user involvement in the provision of exchange services is a prerequisite to ensure that local need is being met. Needle exchanges can host and support user groups that can look at self-help, peer support and risk reduction via peers in community settings, amongst a range of other concerns and issues.

Drug-related death interventions:

Training and support can help ensure that peers are able to intervene appropriately and effectively during overdoses to preserve life and reduce avoidable deaths. Provision of such training through exchanges can ensure that the most at-risk are reached via such

interventions.

Women-only provision

As women under-use exchange provision and other drug services, women-specific provision may provide a safer, more accessible service.

Services for people engaged in sex work

Dedicated services for people engaged in sex work can provide an accessible, safer environment for this vulnerable client group. This service could be linked to other provision such as support around STDs, safe sex work, and related interventions.

Services for Stimulant Users

A small number of services are distributing equipment to reduce the risks to stimulant users, especially crack smokers. Some of the items are currently not lawful for distribution (such as pipe stems and gauzes) but they may be a useful strategy for bringing crack users in to contact with agencies and reducing the risks of BBVs associated with pipe use and sharing.

PED clinics:

Clients using Performance Enhancing Drugs may under-use needle exchange; as many such clients will also be working, day-time services may be less accessible, and evening provision may be more useful.

Additional services that could be explored for PED users include:

- Blood pressure testing and recording
- service offering lipid profile,
- liver function test,
- blood count to prevent the risk of blood clots
- blood work on natural test levels + oestrogen so that impact on endocrine system without getting anabolic steroid use onto medical records – (PED users report that it is discriminatory in getting further treatment for sports injuries etc).

Housing, legal and benefit input:

Larger fixed-site exchanges can usefully host a range of additional services on a peripatetic basis, such as legal surgeries, benefit surgeries, or a venue or housing assistance. Such interventions can help maximise access to these essential services.

Ch. 13

Policy and Law

13: Policy and Law

13.1 Policy

Organisations need to have clear guidelines about where and when works are distributed, what works are distributed, and what "injecting information" is given.

The injecting of drugs is an inherently dangerous activity. Failure to tell people this potentially leaves workers open to litigation, should accident or injury occur.

There is no safe way to inject street-heroin, tablets, capsules, or other non-injectables. When giving information, workers should be clear that they cannot teach a safe way to inject these substances, and advise clients as such.

Some Exchanges will not give any advice about injecting tablets or temazepam, other than to say that injury is almost inevitable and to offer advice about hygiene and reducing the risks of infection. Such policy should be discussed on a county or Borough wide basis, so that agencies do not give out contradictory messages.

13.2 Under sixteens

The distribution of injecting equipment to young people under the age of sixteen is a complex area, and should only be undertaken by workers trained and skilled in assessing and responding to the needs of young people. Workers who get requests for injecting equipment from young people under sixteen should refer them on to an agency skilled to assess and work with them.

Agencies seeking to engage with young people will need to assess their level of competency as detailed by the "**Fraser Guidelines**" (formerly known as "*Gillick Competence*") and whether or not there is a need to make a referral to Social Services as a child at risk.

A young person who is aged 16 or 17 is deemed sufficiently mature to engage with medical or other treatment interventions, by virtue of the **Family Law Reform Act 1969: Section 8.1, which says:**

"a child of 16 or 17 may consent to surgical, medical or dental treatment...where a minor has given consent no parent/guardian consent is required."

However, especially in the context of injecting drug users, agencies should still undertake a stringent assessment of the child's competence and understanding of the risks prior to such interventions. There may still be a role for the involvement of Social Services who may have a statutory duty to assist the child, if the risks to them are considerable.

In the case of children who are less than 16 years of age, the issues are more complex and will need to address:

- Is it appropriate for this child to receive injecting equipment and/or advice
- Should the child's parents or carers be involved

- Should a referral be made to the Area Child Protection Committee (ACPC)

According to the precedent established by *Hewer v. Bryant*:

“The legal right of a parent ends at the 18th birthday, and even up till then, it is a dwindling right which the courts will hesitate to enforce against the wishes of the child, the older he is. It starts with a right to control and ends with little more than advice.” [Lord Denning: *Hewer v Bryant* [1969] 3 All ER 578 at 582]

This ruling was further clarified by the well-known case of *Gillick v West Norfolk and Wisbech HA* [1986]. This case related to provision of contraception by GPs to children, and has been widely used afterwards as a framework for other interventions concerning children. The ruling in *Gillick* stated:

“it will be a question of fact whether a child seeking advice has sufficient understanding of what is involved to give a consent valid in Law. Until the child achieves the capacity to consent, the parental right to make the decisions continues save only in exceptional circumstances. Emergency, parental neglect, abandonment of the child or inability to find the parent are examples of exceptional situations justifying the doctor proceeding to treat the child without parental knowledge and consent, but there will arise no doubt, other exceptional situations in which it will be reasonable for the doctor to proceed without the parent’s consent.”

[Lord Scarman, ruling in *Gillick*.]

Implications of *Gillick*, from HAS [1996]:

Lord Fraser, one of the lawlords ruling on *Gillick*, specifically addressed the issue of contraception with under-aged girls and these became enshrined as the “Fraser Guidelines.” It should be stressed that these guidelines are distinct from the precedent set by *Gillick*, and although the two become elided, they are separate entities. *Gillick* (the ruling) explores the child’s capacity to consent; the Fraser Guidelines emerged as interpretation of how the ruling in *Gillick* should be applied with regards to contraception. Since then the guidelines have been interpreted (shoe-horned?) to apply in other settings, notably needle exchange.

While this model has been endorsed by organisations including Drugscope, most notably in the document: **“Needle exchange for young people under 18 years old: a framework for providing needle exchange to young people”** [*Drugscope 2005*]¹

Needle exchange workers should proceed cautiously before advising children on injecting or providing equipment. The child will need to be carefully assessed by a worker who has sufficient understanding both of injecting and of child development. This may mean that specialist workers with extensive experience of work with young people will need to undertake the assessment rather than generic exchange workers.

Workers will need to ascertain:

1 That the young person will understand the advice

To meet this criteria, the worker should be able to demonstrate that the child had sufficient age and maturity to understand the risks and possible consequences of the

¹ <http://www.drugscope.org.uk/NR/rdonlyres/287C0689-AA51-444D-A14E-AA1C0CAB7081/0/needle.pdf>

activity, and was sufficiently mature to understand and apply harm reduction interventions.

This will require extensive discussion and ask the child to reflect back on information to ensure adequate comprehension. If there is concern that the child is not able to understand the risks and advice in a meaningful way, it will probably not be appropriate to provide exchange services without involving parent, carers, or other appropriate adults.

2 that the young person cannot be persuaded to inform his or her parents or to allow them to be informed that the young person is seeking drug advice or treatment in respect of substance use and/or abuse

Workers should explore if contact with parents or carers is feasible, and should actively pursue this as an option. Where necessary this may include facilitating this process with parents, perhaps by mediation or other such provision.

3 that the young person is very likely to to begin or to use continue using substances with or without the advice or treatment

It will be important that the young person is currently injecting and it is highly unlikely that, if the child is not currently injecting, it will be appropriate to provide equipment to facilitate the start of injecting. Other options, such as cessation of use or other methods of administration should be actively explored.

In order to confirm that the child is currently injecting, a medical examination may be required. While it will be easy to inspect arms for evidence of injecting, some young people may be using the femoral vein. Any such inspection should be undertaken by nursing staff in a safe environment, ideally with a same-sex witness present.

4 that, unless the young person receives advice or treatment on the use of substances, his or her physical or mental health or both are likely to suffer

In a situation where a child is currently an injector, is determined to continue injecting, then workers should be able to demonstrate that the child is exposed to greater risk if services are not provided, and risk is reduced by providing the service. The nature of the harm reduced, and strategies for monitoring the situation should be incorporated.

5 that the young person's best interest require the adviser to give advice and/or treatment without parental consent

Workers will need to demonstrate how the intervention – provision of advice and/or injecting equipment is meeting the child's best interest. If other interventions, such as involving social services or parents/carers would better serve the child's best interest then these measures should be pursued instead of or alongside provision of injecting provision.

The lower the age of the child, the more difficult it will be to demonstrate competence or that the intervention is in the child's best interest. In such circumstances the options must include:

- involvement of parents or carers if it would NOT put the child at greater risk and/or
- referral to Social Services.

If workers are satisfied that the tests of competence are met, it will be appropriate to provide exchange services without parental involvement, but this does not preclude an obligation to refer the case to social services.

Agencies working in a statutory capacity will be obliged, where they feel that the child is exposed to significant risk, to make a referral to Social Services. Voluntary sector organisations may not have this statutory obligation, but most would voluntarily adhere to the same practice, and make such a referral if they felt that the child was at risk of significant harm.

Section 47 of the Children's Act 1989:

Obliges Local Authorities to investigate where a child is thought to be suffering, or to be at risk of suffering significant harm; and to ensure that sufficient action is taken to protect that child from further risk of harm.

Degree of risk (from Working together under the Children act:1989)

- neglect
- physical injury
- emotional
- sexual
- abuse

In any such situations it may be useful to discuss the case on a 'hypothetical' basis with the ACPC, and see if they would wish to have the case referred to them.

It is essential that good records be kept of any such assessment and referral; these should detail the process of assessment and the reasons for decisions taken.

In settings such as pharmacy exchanges, it will not be appropriate for children to receive exchange services. Where a pharmacist is concerned that a customer is a child, and in the absence of evidence to the contrary, the most appropriate course of action will be refer the customer to a fixed site needle exchange where a full assessment can be undertaken by competent staff.

13.3 Needle Exchanges and the Law

The law, current practice and available guidance regarding needle exchange provision is, in places, contradictory and confusing. The following guidance is intended to highlight some areas of confusion and clarify the legal position.

13.3.1 Relevant Law

Several pieces of legislation have implications for the provision of legal exchange services. These include the Misuse of Drugs Act (1971), the Drug Trafficking Offences Act (1986) and the Medicines Act (1968), Waste Handling Regulations, The Criminal Justice and Police Act 2001, Health and Safety and Civil law considerations.

13.3.2 Supplying Paraphernalia

Section 9a of the MDA (inserted by Drug Trafficking Offences Act 1986, s.34) created two new summary offences;

- (a) supplying or offering to supply articles (other than a hypodermic syringe) for the purpose of administering a controlled drug, where the administration of the drug will be unlawful; and
- (b) supplying or offering to supply articles to be used in the preparation of a controlled drug for unlawful administration.

This piece of legislation was amended in August 2003 following recommendations from a large number of agencies and the ACMD. The amendment, Misuse of Drugs (amendment) (No.2) Regulations 2003 (SI No: 1653/2003) states:

(1)...any of the persons specified in paragraph (2) may, when acting in their capacity as such, supply or offer to supply the following articles:

- (a) a swab**
- (b) utensils for the preparation of a controlled drug**
- (c) citric acid [ascorbic acid since added]**
- (d) a filter**
- (e) ampoules of water for injection, only when supplied or offered for supply in accordance with the Medicines Act 1968 (4) and of any instrument which is in force thereunder.**

7(2) The persons referred to in Section (1) are:

- (a) a practitioner**
- (b) a pharmacist**
- (c) a person employed or engaged in the lawful provision of drug treatment services.**

Further interpretation of the Amendment is provided by Home Office Circular HOC35/2003; the following interpretations draw on this and correspondence between KFx and the Home Office Drugs Legislation and Enforcement Unit.

Implications and interpretation:

Prior to its amendment, Section 9a meant that people were be committing an offence if they supplied a range of equipment knowing that it was to be used for the preparation or administering of a controlled drug, where such use would be unlawful. The amendment described above changes this legal situation as follows:

Who is covered by the amendment?

Circular HOC35/2003 expands on the persons authorised to supply the listed paraphernalia as follows:

- (i) Medical practitioners (e.g. doctors, dentists and vets)
- (ii) Pharmacists; and
- (iii) Persons employed or engaged in the lawful provision of drug treatment services (i.e. this should include nurses and employees of needle exchange schemes).

In verbal and written responses to questions from KFx the Home Office Drugs Legislation and Enforcement Unit stated that this list of authorised persons was not a comprehensive list and said that "if housing workers or pharmacy assistants or any other category of workers are engaged in providing drug treatment then they *should* be covered." [emphasis added].

However, distribution by people outside these settings would remain an offence and this would include peer-to-peer supply or workers who could not argue that they were to some extent working within a capacity of providing some form of drug treatment.

Action Points:

- Workers outside of 'typical' drug settings who wish to undertake any form of paraphernalia distribution should be adequately trained and be working within an agreed policy and practice framework;
- Such activity and policy framework could usefully be reported to the local DAT to ensure that they are aware of the provision of such services;
- Clients should not be encouraged to undertake peer-to-peer supply of the listed paraphernalia, and advised that such supply would be illegal

Paraphernalia covered by the amendment:

Swabs

The provision of swabs by authorised persons is now deemed lawful, although there is some debate as to the usefulness of these items.

Utensils for the preparation of a controlled drug:

Circular 35/2003 attempts to clarify this clause saying "which would include articles such as spoons, bowls, cups, dishes.)

In a written answer the DLEU says "*paragraph 2(b) gives some examples of "utensils" used for the preparation of a controlled drug but it does not exclude other types of equipment which could be described as a utensil.*"

So other paraphernalia used in preparation (but presumably NOT consumption) would be considered acceptable in this context.

Citric acid for the preparation of heroin:

The amendment makes the distribution of citric acid legal provided that the distribution is undertaken by authorised bodies. Following lobbying, this was extended to cover Ascorbic Acid.

For further information about the distribution of acidifiers, readers should consult:
<http://www.exchangesupplies.org/>

Water for Injection

The distribution of Water for Injection without prescription was made lawful in July 2005 by SI 2005 No.1507 The Medicines for Human Use (Prescribing) (Miscellaneous Amendments) Order 2005.

It says: "(2) In the table in Part II of Schedule 5 to the POM Order (Exemptions from the restriction on supply), after paragraph 3, insert the following new paragraph:

- Persons employed or engaged in the provision of lawful drug treatment services.
- Ampoules of sterile water for injection containing not more than 2 mg of sterile water.
- The supply shall be only in the course of provision of lawful drug treatment services."

This amendment makes the distribution of ampoules of water of 2ml or less lawful, but distribution of larger volumes would not be lawful under the medicines Act. At the time of writing (March 2006) the only licensed product available in the UK is a 2ml glass ampoule distributed by Exchange Supplies. They are seeking a license for their 1.4ml plastic ampoule but this is not yet forthcoming.

Filters for the filtering of controlled drugs for injection

The distribution of filters by authorised bodies is now deemed lawful.

Prohibited items:

Items that remain prohibited would include but is not limited to:

- Tourniquets
- Foil used for smoking heroin
- Pipes, bongs etc for smoking cannabis.
- Crack pipes

13.3.3 Exemptions

Persons are able to distribute hypodermic syringes, as these are explicitly exempt under the terms of the s.9A of the MDA 1971. This is not restricted to the persons specified above, and so peer-to-peer supply of needles is not an offence.

There is no legal restriction on who may supply needles and syringes. However, it is important to ensure that workers undertaking the distribution of injecting equipment are trained and competent to do so. The giving of advice or equipment by untrained staff creates risk both for service users and for staff.

Sharps bins (Sin bins) are not prohibited either as they are not used for either the preparation or administration of substances.

11.3.4 Incitement:

Section 19 of the MDA makes it an offence to incite another to commit an offence under any provision of the Act. One would need to be careful not to be seen therefore, to be encouraging or condoning actions that would be an offence under the Act. An example of this would be if a worker explained how to prepare amphetamine powder for injection. This may be interpreted as "producing a controlled drug," as it is "producing" a class A drug from a class B drug. As such the worker would need to be sure that, while explaining how to do so safely, they did not encourage the process.

13.3.5 Possessing Paraphernalia

The possession of clean, unused paraphernalia is not a criminal offence under the Misuse of Drugs Act 1971. While supplying paraphernalia may be an offence, possession is not.

However, when the equipment has been used and has detectable traces of controlled drug on or in it, then this can mean that charges of possession - for the controlled drug, not the paraphernalia could be brought.

In this context, traces of cannabis in a pipe or traces of heroin in a syringe could constitute "possession." While the latter example is at least theoretically possible, it is generally accepted that it would not be in the public interest to discourage injecting drug users from carrying used needles in a sharps bin, and using needle exchanges, so prosecutions for traces in needles are rarely if ever pursued.

13.4 Possession, Section 8, Antisocial Behaviour & Outreach:

Needle Exchanges will need to ensure that they work within the requirements of Section 8 of the Misuse Of Drugs Act 1971, which obliges organisations to prevent certain drug related activity on site. The legislation obliges those concerned in the management to use reasonable means readily available if they are aware of the following activities:

- Production of controlled drugs, supply of controlled drugs, preparation of opium and the smoking of cannabis or opium.

Supply on site

The issue of supply is probably the most pertinent to needle exchanges; where a needle exchange was aware that supply of controlled drugs – including peer to peer supply – was taking place, there would be a legal obligation to act. If other measures cannot stop the activity, then the organisation would have to consider exclusion from the premises, police involvement or other measures as required.

Supply off site

Where supply takes place off site, then the organisation is not committing an offence under section 8. However, when it takes place in the vicinity of exchanges, it can damage the project's reputation and may even result in closure action under the Antisocial Behaviour Act 2003 (see below). It also creates an unsafe environment for service users, and so all service users should be aware that such supply in the vicinity of the exchange may result in enforcement action.

Where it is known supply is taking place but is not taking place near the exchange, workers and organisations face moral rather than legal choices. There may be situations where workers feel obliged to report supply activity to the police especially if children, young people or others are exposed to significant risk.

Possession - clients

If clients bring controlled drugs on site with them, it is they, not the organisation who commit an offence. The organisation has no legal obligation to exclude the person, or to remove drugs from them. If they handle the drugs in a way that puts others at risk, for example leaving them unattended, or displaying them to others, then action would need to be taken to prevent this behaviour. Otherwise, exchanges can continue to engage with clients lawfully even if the client is known to be in possession of a controlled drug.

Possession - worker

Workers should, as a rule not come in to possession of a controlled drug. They should not take possession of a client's belongings if it is known or suspected that they may include controlled drugs.

Should a worker come in to possession of a controlled drug, because it has been left unattended or a client has asked for it to be disposed of, the worker can:

- Destroy it if it has been removed from a client or
- Hand it to the police (any controlled drug) or a pharmacist (controlled drugs Schedule 2 and below)
- Returning drugs to clients is only an option if they are prescribed controlled drugs, labelled with the client's name and in original packaging.

In other situations, workers should not return controlled drugs to clients unless there were fears for one's own safety.

Use – on site

Under section 8(d) of the Misuse of Drugs Act 1971, workers are currently NOT obliged to prevent use of drugs other than cannabis on site. There were proposals to extend this piece of legislation to cover all controlled drugs unlawfully held, but this move has been suspended for two years to allow piloting of the Antisocial Behaviour Act 2003 (see below).

As the law stands, could allow injection on site without the worker committing an offence. The client would of course be breaking the law if they were in possession of a controlled drug.

The space that this leaves for agencies means that, in theory at least, a worker could be present and observe a person injecting on site whilst being on the right side of the law. This allows scope for some forms of instructed or supervised injection on site, although the health and safety, policy and civil law issues of this need to be carefully considered.

Street-work:

In street-work, the legal issues related to section 8 will not apply. However, workers will need to consider in what situations they would be prepared to maintain contact and in which situations it would be inappropriate to do so. Although there will not be a legal obligation to report or stop episodes of supply in such settings there may be situations where workers feel that it was appropriate to take such action.

Home visits:

When undertaking home visits, needle exchange workers will not be criminally liable for drug related activity on site under Section 8 as they are not the occupiers or concerned in the management. However, it will rarely be appropriate for workers to remain present if supply is taking place.

Being present when drugs are being used or injected is a difficult question and is one that is primarily governed by safety and policy decisions rather than the law. A worker does not commit an offence by being present when drugs are being injected.

Some workers find that by observing the process they are better able to advise and inform the client.

The decision should be made considering:

- Do the worker and the client feel comfortable?
- Is it safe for both parties?
- Is it productive?
- Does it fit within organisation policy and guidance?

If at any point a worker feels that it is no longer safe or appropriate they should disengage, and or seek assistance as required.

Anti Social Behaviour Act 2003

This piece of legislation gives the police and courts new powers to shut down premises associated with class A drug activity which is linked to nuisance. The process for using the powers is that where police were concerned that a property was associated with production or use or supply of Class A drugs and the property was associated with disorder or serious nuisance the police would be able to issue a Closure Notice and then seek a Closure Order from a magistrates court.

The Closure Notice would restrict access to the property to the owner or people who normally reside there; the Closure order, if granted by a magistrates Court, would allow the property to be sealed for up to three months in the first instance, with the possibility of extension by a further three months.

The powers are intended to be used rapidly - within 48 hours of the decision to issue a closure notice. And while the police are will have a statutory obligation to consult with Local Authorities, there is no similar obligation to consult the owners of the property.

The new powers could in principle be used against drug service providers. The accompanying guidance says that the police should assess very carefully the use of these powers in the case of such services. But given a case where a local service was associated with class A drug activity and nuisance, then there would certainly be scope for a closure order to be sought. An example would be a needle exchange in a city centre setting. If the Exchange's was, for example, associated with a street market for drugs, public use or discards, shoplifting or other nuisance, then it is conceivable that it could be shut down.

In order to work within the new legislation, agencies should develop policy and practice now, to prevent problems at a later date.

Key responses need to include:

- Highlighting through service-user meetings, notices and when joining services, that antisocial behaviour on or near the premises cannot be tolerated and will jeopardise the service;
- Developing and applying sanctions which can be used to discourage antisocial behaviour by service users;
- Liaising with police to agree how the new powers will be used locally and seeking local agreement that drug services, Exchanges and other service providers will be routinely consulted before powers are used against their properties;

13.5 Civil Law

Even where no criminal offences are committed, there is a risk that workers could be tried under Civil Law where a tort (a civil wrong) has been committed. An individual (“the plaintiff”) could bring an action in the civil courts. Some commentators view such actions as unlikely and, in part this is true. However, given the growth in legal work which attempts to secure compensation for personal injury, the possibility of actions being brought under civil law should not be discounted.

Tort is a highly complex area of law, and expert legal advice should be sought on the subject. The following notes can be for guidance only, and cannot offer a comprehensive interpretation of the subject.

What offences could be committed?

One of the key torts that workers should be aware of is **Negligence**. Negligence is interpreted as follows:

Someone is liable in negligence if:

- 1) They owed a “duty of care”
- 2) That duty was breached
- 3) That as a result of this breach the plaintiff suffered damage.

“Duty of care” can depend on several factors, and a court would take these on board before deciding that a duty of care was owed. These factors would include:

- 1) Was the harm reasonably foreseeable
- 2) What was the proximity of relationship between the parties
- 3) Would it be just and reasonable to impose a duty
- 4) Public policy.

In the case of *Donoghue and Stephenson* 1932, Lord Atkin summed up the duty of care as follows:

“you must take reasonable care to avoid acts or omissions which you can reasonably foresee would be so likely to injure...persons who are so closely and directly affected by my act that I ought reasonably

to have them in my contemplation as being so affected."

How might liability arise?

A tort of negligence could arise in a number of ways, most notably through workers giving inaccurate information, distributing unsafe or inappropriate information.

Examples might include a worker giving a service user the wrong size equipment, which subsequently caused injury, or advising the client to use drugs in a manner that was dangerous.

Liability could also arise if, for example, an Exchange failed to store used equipment safely and someone suffered injury as a result.

Who would be liable?

Depending on the circumstances, both employers and employees may be liable according to the situation. In many situations, employers would be vicariously liable for torts committed by their employees. In other words, employers are responsible for the actions of their employees which take place in the course of employment. However, situations could arise where employees would be directly liable, and so it should not be assumed that liability will always rest with the employer.

13.6 Health and Safety

Organisations providing exchange services have a statutory duty to comply with Health and Safety legislation. This will require them to assess and minimise foreseeable risk to staff, service users, and visitors to workplace settings.

Specific issues that will need to be addressed in needle exchange settings will include:

Safe storage of resources:

In all settings, but especially in settings which are used by both injecting drug users and other members of the public, equipment needs to be stored in appropriate settings. This may include stock being stored in lockable storage areas. Equipment integrity should be maintained by avoiding exposure to excessive climate changes.

Layout of exchange space:

Exchange space should be designed to minimise risks of accidents; boxes for the disposal of used equipment should be sited where they can be safely reached by clients, without excessive stretching or reaching.

Labelling:

Equipment or resources that are contaminated should be stored in appropriate, designated storage containers that conform to British Safety standards. They should be stored away from unused equipment.

Overdose training:

Staff may need training and resources to provide assistance in the event of overdose or other critical incidents.

Blood spills and needle stick injuries:

Staff training and protocols will need to be in place to deal with body fluid spills and needle stick injuries. This will require appropriate equipment and this will need to be linked to COSH protocols.

Outreach work:

Risk assessment will need to take place prior to home-visits; safety processes for logging outreach workers have completed shifts safely will be essential.

Managing difficult and dangerous behaviour:

Building audit should take place to ensure that buildings can be safely managed; this may need to include:

- the provision of 'air-locks' to manage access to the building
- provision of personal alarms
- design of rooms to ensure that they are not lockable from the inside
- toilet cubicles can be opened from outside

Staff training may also need to include managing difficult or dangerous behaviour.

Physical and mental wellbeing of staff:

Staff should have access via work to:

- Hepatitis B vaccinations
- Screening for TB if engaging with high-populations
- Updated tetanus vaccinations

Additionally, it should be recognised that exchange work can be exacting on mental wellbeing and managerial staff should be able to provide an adequate level of support through ongoing supervision.

Provision should be put in place to provide support to staff following critical incidents, such as the death of a client.

13.7 Handling and Transporting Waste

Needle exchanges will need to comply with legislation relating to the transport of waste. This will be especially relevant if exchange workers routinely collect full sharps bins in the course of home-visits, outreach work, or as a service to hostels.

Under the Environmental Protection Act 1990 it is unlawful to deposit, recover or dispose of controlled (including clinical) waste without a waste management licence, contrary to the conditions of a licence or the terms of an exemption, or in a way which causes pollution of the environment or harm to human health. Contravention of waste controls is a criminal offence. Section 34 of the Act, places people concerned with controlled (including clinical) waste under a duty of care to ensure that the waste is managed properly, recovered or disposed of safely and is only transferred to someone who is authorised to keep it. Householders are exempt

for their own household waste.

It does not have to be hazardous or toxic to be controlled waste. Failure to register could carry a £5000 fine. Failure to meet your duty of care when transporting waste can carry an unlimited fine.

Sharps bins can be dealt with using the following procedures:

- The organisation will need to be registered in the environment agency's register of waste transporters. This allows the organisation to transport sharps bins or other controlled waste legally.
- No staff member should transport sharps bins outside of the building until they are familiar with the Duty of Care attached to this role. This is as follows:

When you have waste:

- The law says you must stop it escaping from your control. You must store it safely and securely. You must prevent it causing pollution or harming anyone.
- Make it secure. Keep it in a suitable container.
- If you give waste to someone else, check they have authority to take it.

Describe the waste in writing. You must fill in and sign a transfer note for it. You must keep a copy of the transfer note. To save on paperwork, you can write your description of the waste on the transfer note.

Charities and voluntary organisations do not need to be registered as a waste carrier. You must instead be registered in your local environment agency's register of waste transporters. This is free of charge. Otherwise a charge of £114 for the initial three-year period, and £78 for a further three years applies.

For more details go to <http://www.defra.gov.uk/environment/waste/topics/clinical.htm>

13.8 Infection Control Procedures

Where clients are returning needles to an exchange, they should be encouraged to return needles in a sharps bins rather than loose equipment.

Clients should take responsibility for depositing equipment into large sharps bins; where equipment is dropped, clients should take responsibility for retrieving this and placing it in sharps bins.

Finding Needles and Syringes:

- Staff should always take care in situations where discarded needles may be encountered, such as when moving soft furniture. Workers should assume that needles will be present; care will be needed when contractors undertake work on exchange premises such as work in undergrowth or drain clearance.

All staff and ancillary staff should deal with used injecting equipment carefully. The following process should be used:

- The worker should take a small sharps bin to where the needle has been found. Surgical gloves should be worn to reduce risk of contamination;
- No attempt should be made to resheath needles.
- Sharps bins should be checked prior to carrying to ensure that they have not been pierced. A pierced sharps bin should be placed in a larger bin prior to transportation.
- Gloves used for handling dropped equipment should be discarded after handling contaminated equipment.

If there is spilt blood in the area, this should be dealt with as described under "Body fluid - spills."

Needlestick Injury:

Infection via a Needlestick injury is relatively unlikely as this is an inefficient route for transmission. This is particularly the case for HIV and HCV; however, this does not preclude the need to take care when handling sharps as there are no vaccinations for these viruses.

- In the event of a prick, scratch or puncture by a needle, the following procedure should be followed immediately:
- Remove the needle somewhere safe where it can be retrieved.
- Squeeze the injury to encourage bleeding for a few minutes, and place under tepid running water;
- Wash and clean the site with iodine or soapy water.
- Dry and apply a plaster or other dressing.
- Those not vaccinated against Hep B should report to their GP or local A&E department for a vaccination within 48 hours.
- A senior worker should be informed and the incident recorded in the Accident Book.
- Support and counselling should be made available to the injured person.

Exchanges should establish a point of contact with the local hospital where assessment and provision of post-exposure prophylaxis can be undertaken. As this is a specialist intervention, and is time-critical it is better that such contact can be identified in advance.

Body-fluid spills:

A spillage kit containing cleaning cloths, cleaning fluids, rubber gloves and plastic bags should be kept available and restocked and staff instructed on the safe cleaning of spillages.

Ch. 14

Community

Issues

14: Community Safety Issues

Needle exchange is part of wider public health provision. The direct provision of advice and equipment to injecting drug users addresses issues related to reducing the spread of blood-borne viruses.

Needle exchanges will also have a role to play in addressing and reducing other public health concerns related to injecting, including injecting in public places and the unsafe discarding of used equipment.

Increasingly, needle-exchange provision is being held accountable for drug-related behaviour in the wider community, especially where this takes place in the vicinity of needle exchanges. Exchanges have, on a number of occasions, found themselves facing high levels of public hostility and, in a handful of situations, found themselves forced to close as a result of this.

It is therefore incumbent on needle exchanges to address behaviour and actions that jeopardise exchange provision. The introduction of new legislation (See the section on the Antisocial behaviour Act 2003) demonstrates the need for agencies to minimise the negative impact that they have on the communities they serve

Supply near premises:

Supply of controlled drugs in the vicinity of needle exchanges can be a substantial problem and it is essential that it is addressed rapidly, robustly and effectively. A range of interventions can assist in this process including:

- Notifying service users and displaying notices that such activities on or near premises cannot and will not be tolerated and may result in further action, including police involvement;
- The appropriate use of CCTV on the outside of premises to supervise 'hotspots.'
- Use of sanctions where required for people repeatedly involved in purchasing or supplying drugs near premises
- Police support and engagement to address visible street markets
- Working with service users to self-police peers and discourage supply near exchanges.

Use in public:

While needle exchanges cannot and should not be held accountable for all public injecting, they will need to develop responses to address this, especially when it takes place near exchanges. Responses to address public injecting could include:

- Notifying service users and displaying notices that such activities on or near premises cannot and will not be tolerated and may result in further action, including police involvement;
- The appropriate use of CCTV on the outside of premises to supervise 'hotspots.'
- Use of sanctions where required for people repeatedly injecting near premises
- Working with service users to self-police peers and discourage use near premises.

- Working with the local authority to 'design out' arenas near exchanges where use takes place
- Liaison with local housing providers to encourage housing policy that does not restrict injecting in supported housing settings
- Support and self-management techniques to assist users in planned use away from exchange – not going to exchanges when in withdrawal and needing to use urgently.
- Police support and engagement to address visible street use.

It should be stressed that the use of 'blue lights' to reduce use in public arenas is an ineffective measure to reduce injecting and should not be utilised. It encourages risk to all parties and does not prevent injecting. For a full analysis of this measure, please consult the briefing "Blue Light Blues," on the KFx website.

Unsafe disposal and the 'returns' issue:

Alongside the distribution of injecting equipment, the safe return of this equipment to exchanges is an important consideration and one that is the focus of increasing attention. Many exchanges are being held to account for low levels of return, especially in areas where public discards a cause for local concern.

Some exchanges have moved to adopting restricted distribution schemes where new equipment is only given out when used equipment is returned. As such a measure may restrict access to clean equipment – and so increase risk, it is highly desirable if other measures can be used to maximise return levels. Strategies to address this could include:

- **Increase in time spent with clients:** This has a number of benefits including more time to ensure that the service user is undertaking safe disposal practices. These changes can also have a benefit to other aspects of the Project's work such as maximizing harm-reduction interventions.
- **Insistence on taking a sharps bin:** by being more insistent about taking sharps bins, service users can be proactively encouraged to utilise bins.
- **Review of counting systems:** counting system can leave exchanges at a disadvantage as it may not be clear how much of their outgoing equipment is being safely disposed of in hostel sharps bins, public bins, or other safe routes. Rather than being unsafely discarded, a substantial proportion of used equipment may actually simply be unaccounted for. By a move to a 'open' returns counting policy, where these other safe discards are included, it is likely that the return rate for an exchange is actually higher than the 'closed' counting system would suggest.

In addition, it is useful if recording system for collections by the local authority or public health differentiate between street discards and house clearances. A substantial proportion of these discards will be attributable to building clearances and it would be useful to differentiate these from street discards.

- **Joint working with police:** It is essential that injectors are confident that possession

of clean equipment or used equipment in a sharps bin does not put them at risk from police action. Through police training, and a clear policy statement from the police, some of these fears may be alleviated. Police feeding in to user groups may go some way to reassuring injectors that responsible handling and disposal of injecting equipment will not put them at risk of police action.

- **Joint working with housing:** The measures that could be explored include:
 - ensuring that floating support workers who undertake visits to IDUs reinforce messages around safe disposal, and where necessary help facilitate this process through ensuring the provision of safe disposal means and removal of full bins. This process can be undertaken in conjunction with the project.
 - Housing Providers need to ensure that their policy and practice does not discourage the responsible use of injecting equipment or sharps bins. This should include the revision of policies that apply sanctions to the presence of paraphernalia, those that include room searches and those that restrict access to sharps bins within the building.
- **User involvement:** Through arenas such as user forums, there is a good opportunity to address the issue of responsible usage. This includes highlighting the importance of a good return rate for all parties, the consequences of irresponsible behaviour and the gains that have been achieved. In addition, the fora can be used to explore why people may not be returning equipment and strategies to overcome this.
- **Information to users:** As well as ongoing dialogue with users through the above forums and one-to-one contact, information can be distributed via information in the exchange packs, via newsletters and, within reason, via noticeboards.
- **Flagging of non-returners:** computerised or paper recording systems allow for persistent non-returners to be flagged. This does not inherently mean that any sanctions need to be applied; rather it is a chance to discuss safe disposal and where necessary facilitate this process.

Appendices

Source Material and Further Reading

Websites

KFx	www.ixion.demon.co.uk
Exchange Supplies	http://www.exchangesupplies.org/
UK Harm Reduction Alliance	http://www.ukhra.org/
Mainliners	http://www.mainliners.org.uk/index1.htm
Safer Injecting Blog	http://www.injectingadvice.com
NNEF	http://www.nnef.org.uk/shared_resources.html
National Treatment Agency	http://www.nta.nhs.uk/
DANOS	http://www.themsc.org/projects/proj_drugs.html
Drugscope	http://www.drugscope.org.uk/

Suppliers

Frontier Medical Supplies	http://www.harmreduction.co.uk/
Orion	http://orionmp.com/
Daniels	http://www.daniels.co.uk/d.NX/home.asp
Exchange Supplies	http://www.exchangesupplies.org/

Literature:

Never Mind the heroin, it's the meth amps that screw you up: Monkey Magazine [Issue 2]

What Works – Safer Injecting Guide: Preston, Armsby: Exeter Drugs Project: 1990

The Safer Injecting Handbook: Preston, A & Derricott, J: Exchange: 1999

A guide to safer injecting: HIT: 2000

The safer injecting briefing: Derricott, Preston & Hunt: HIT: 1999

Injecting leaflet: Mainliners: 1999

The care and treatment of skin and soft tissue infections amongst Injection drug users in the : community setting: Bamberger, J: Undated: Internet file

Safer injection – better vein care: Chicago Recovery Alliance: www.anypositivechange.org

The British National Formulary: 2007

Policy and Guidelines for the provision of needle and syringe exchange services to young people: Aldridge and Preston: Dorset Community NHS Trust: 1997

Wound Botulism in Injecting Drug Users

http://www.hpa.org.uk/infections/topics_az/botulism/woundbot.pdf

Getting Off Right: IDU Safety Manual:

<http://www.harmreduction.org/idu/chapter3.html>

How to do your first glute Injection: <http://www.muscletalk.co.uk/article-glute-injection.asp>

Shooting up. Infections among injecting drug users in the United Kingdom 2006. An update: 2007 : Health Promotion Agency: 2007

Service specification tier 2: Needle exchange and harm reduction: NTA: 2003

The NTA's 2005 survey of needle exchanges in England: NTA 2007