Targeting the Homeless: Would Medically Supervised Injection Centres Significantly Reduce Harm for Intravenous Drug users in Liverpool?

By Misha Gray

"Addiction should never be treated as a crime. It has to be treated as a health problem. We do not send alcoholics to jail in this country. Over 500,000 people are in our jails who are nonviolent drug users."

Ralph Nader, American political activist and independent presidential candidate

http://thinkexist.com/quotes/ralph_nader/

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Many thanks to Dr Joseph O'Neill and Dr James Dillon for their continued effort in organising a very insightful and eye opening SSM. I appreciate their willingness to discuss certain issues around homelessness and the asylum system in detail.

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I also thank Pat Prescott from the North Liverpool Community Drugs team for organising one of the patient interviews and for explaining the drug treatment service in Liverpool in simple terms.

LEARNING OBJECTIVES

1) Appreciate the extent, the range, and the diversity of the homeless population in Liverpool.

2) Explore the health problems and the services available for the homeless in Liverpool.

3) Gain some insight into the daily life of a homeless person in Liverpool.

ABSTRACT

Introduction
Somebody is defined as homeless if there is no accommodation that they are entitled to occupy or if they have accommodation but it is not reasonable for them to continue to occupy this accommodation. The homeless population have high rates of drug abuse, alcohol abuse and mental health problems. Despite the increased need, they suffer from inequalities in healthcare provision.
A significant problem for the homeless population is drug abuse, specifically heroin injection. This is associated with blood borne viruses, overdoses, injection site problems and many other social issues. Medically Supervised Injection Centres (MSICs) are designed primarily to reduce the harm of injection through the supervision of clients injecting their pre-obtained drugs in a clinical environment. Many MSICs are in existence around the world, yet the UK currently has none.
Aim
To evaluate whether MSICs would significantly reduce harm for intravenous drug users, specifically the homeless in Liverpool.
Method
A literature search of "injecting rooms", "homeless population" AND "intravenous drug user" was performed on many online databases. I also visited numerous drugs services in Liverpool and Chester and interviewed people with drug problems.
Results / Discussion
According to available evidence, MSICs attract high risk populations including the homeless, improve safety of injection, reduce morbidity and mortality associated with overdose and act as referral centre for other drug services including dependence treatment. There is no evidence to suggest that such centres will increase local rates of crime and public nuisance. There is currently no evidence to suggest that MSICs affect rates of blood borne virus infection.
Recommendations
- Implement a pilot medically supervised injection centre in Liverpool, specifically targeting the homeless drug injecting population.
- Ensure that the MSIC can act as a centre for referral to other drug treatment centres .
- Monitor the characteristics of clients, safety of injections, rates of overdose, prevalence of blood borne viruses and referrals.
- Review the effectiveness of the centre after at least 18 months, and depending upon the results, consider introducing such a scheme to other cities in the UK.

INTRODUCTION

Homelessness

The homeless are commonly misconceived to be rough sleepers only. The 1996 housing act defines someone as homeless if there is no accommodation that they are entitled to occupy or if they have accommodation but it is not reasonable for them to continue to occupy this accommodation.[1] Ambiguity surrounding the phrase "not reasonable" in the latter point means that statistics on the prevalence of homelessness are very difficult to record accurately.

Definition of Homelessness[1]

According to the 1996 Housing act a person is homeless if:

- There is no accommodation that they are entitled to occupy; or
- They have accommodation but it is not reasonable for them to continue to occupy this accommodation

Many asylum seekers therefore fall under this definition of homelessness. The book 'Homelessness: a Primary care response' breaks down the homeless population into subgroups, giving us a more accurate idea of what constitutes homelessness:

- "Rooflessness" – rough sleepers, victims of fires etc.
- "Houseless" – temporary accommodation eg shelters, refuges or hostels
- "Insecure / impermanent tenures" – staying with friends, squatters, tenants under notice to quit
- "Intolerable housing circumstances" – eg overcrowded, substandard, living with threats to personal safety
- "Concealed" – involuntary sharing of accommodation with another household as they cannot secure separate housing

In 2000, 172 760 households in the UK were recorded by their local council as being legally homeless, equating to roughly 415 000 people.[2] However, this statistic does not take into account the homeless people who did not apply to the council or who are not eligible for accommodation; otherwise known as the "hidden homeless".

The homeless population suffer from large health inequalities within the UK resulting in health, social and financial costs to society every year. A study published in 2002 found that the life expectancy of rough sleepers was 42; less than half that of the general population.[3] Despite the increased need for healthcare, many homeless people suffer from different barriers to accessing the services they require. Such barriers include difficulty in registering with a GP, poor interaction between primary care and other services, difficulty for the homeless person to keep to appointment times due to the chaotic nature of their daily lives and inability of the homeless themselves to prioritise their own health due to other more immediate issues such as nutrition and accommodation.[4]

It is well established that homelessness is strongly associated with drug abuse, mental health problems and alcohol abuse.[5] Individuals commonly present with more than one of these issues at any

one time; this is called a dual diagnosis.[6] Other common health problems of homeless people include injury, infections and dental problems.[7] However, the largest health problem in this population is intravenous drug use, usually heroin,[8] which is the homeless person's most common reason for attending primary care.[2] It is difficult to obtain precise data on heroin misuse due to its illegality and its association with homelessness. However, a London study of homeless found that 39% were dependent on heroin.[9]

Substance abuse

According to WHO, substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs.[10]

However, there are many other definitions of substance abuse, including " any pattern of substance use that results in repeated adverse social consequences related to drug-taking - for example, interpersonal conflicts, failure to meet work, family, or school obligations, or legal problems."[11]

Substance dependence

According to ICD-10, somebody suffers from substance abuse if they fulfil the following criteria:

- A strong desire or sense of compulsion to take the substance;
- Difficulties in controlling substance-taking behaviour in terms of its onset, termination, or levels of use;
- A physiological withdrawal state when substance use has ceased or have been reduced;
- Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses;
- Progressive neglect of alternative pleasures or interests because of substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects;
- Persisting with substance use despite clear evidence of overtly harmful effects[12]

Heroin abuse

Heroin has the highest addictive potential of all drugs and is associated with the highest morbidity and mortality.[8] The main risks of this drug is through the injecting itself; problems such as contracting blood borne viruses, bacterial or fungal infection and tissue damage.[13] Rates of overdose are especially high in the UK, with consistently the highest rates of drug related deaths in Europe.[14] The strong addictive property of the drug leads to many other social problems, including crimes commited by addicts, loss of their home and relationship breakdown. Drug abuse is shown to have serious impact on wellbeing of family members, which equates to approximately 300,000 people, many of whom are children.[15] Case history 1 shows a typical account of heroin addiction causing somebody's life to spiral out of control.

Case History 1

Lee, 45

Lee is a daily injector of heroin and also has a methadone script. He now injects into his leg veins due to his arms having too many "lumps and bumps" from previous injections. He progressed from smoking at 16 to cannabis and then onto harder drugs at the age of 18.

Initially injecting small amounts, he gradually became tolerant and needed higher and higher doses.

"If you get your hands on a large sum of money, you don't think in the long term and you spend it all then and there on your fix; you become greedy"

As the cost of his daily habit started to rise, he started to borrow money from friends and relatives. Once they became fed up of loaning him money that he wouldn't return, he started to sell possessions in his house and also resorted to crime. As well as alienating him socially, the heroin made him preoccupied about only one thing when he woke up; where he was going to get his next fix.

"Nothing else matters – you stop caring about yourself and you're always living on the edge"

Soon, he was spending £500 a day on his addiction and was funding this through investment fraud. He was then imprisoned for 18 months, where, despite the availability of drugs, he managed to become abstinent. However, he could not sustain his abstinence once he was released. He felt that his was due to his worries about housing and his failure to get any support from the council at discharge.

"When you're on heroin it doesn't matter if you don't own a Porsche, you have this vivid dream state where you feel like you own one and you don't care. Heroin keeps you young at heart."

Lee wants to quit and to get a job, but feels it is hard due to his criminal conviction.

Abstinence vs. Harm reduction

The choice between two different healthcare approaches to drug dependence; abstinence and harm reduction remains a hotly debated topic. While the abstinence approach seeks to stop the patient's drug consumption altogether, harm reduction accepts that for many this is not immediately possible, and so instead aims to minimise the amount of harm caused by the drug use. Examples of this would be needle exchange programs, which seek to minimise the harms associated with injecting drugs, and opioid maintenance prescriptions such as methadone, which try to reduce the risks associated with obtaining illegal drugs.

Harm Reduction[16]

Harm reduction is a term that defines policies, programmes, services and actions that work to reduce the:

- health;
- social; and
- economic

harms to:

- individuals;
- communities; and
- society

that are associated with the use of drugs.

Studies show that most drug users need stability in wider social issues such as housing before they can start to overcome their addiction, suggesting that harm reduction is a more realistic and effective option.[17] Time and time again, harm reduction strategies have shown empirically to reduce the burden of drug use, yet there is still criticism of them.[4] Case history 2 shows a patient who has experienced many of the different services available to drug users in Merseyside, but is still a heroin user.

Case History 2

Mickey, 48

Mickey injects heroin 2/3 times a day, but is also currently prescribed methadone. He also consumes 10 units of alcohol a day.

" I prefer natural drugs like cocaine, heroin and cannabis, but methadone is synthetic so I don't really like taking it"

Mickey's heroin dependence started to get out of hand while he was studying at university, and forced him to drop out. He has been a drug service user for over 20 years, during which he has repeatedly had short periods of abstinence followed by relapse. Currently, he gets bad withdrawal symptoms; muscle aches, stomach cramps and diarrhoea and must get a fix early in the morning to prevent this.

He was previously scripted for methadone years ago, but never took it and instead sold it. He had heard that it was very addictive and had bad withdrawal effects. He has also tried subutex, which he struggled to get used to.

He was also previously prescribed injectable morphine for 4 years until the local drugs policy changed. He felt this was the most effective treatment. He feels that services over the past 20 years have changed significantly.

"social workers used to be really enthusiastic and enjoy their jobs, but now it's like we're put on a conveyor belt and we are just numbers to them"

Lee admits that his current methadone prescription has given him stability and has helped him to *"kick the crime"*. He also regularly gets clean needles and citric acid from his local chemist. He wants to come off heroin and methadone as he is "tired" of it. He feels he needs something to occupy his time to distract him.

Medically supervised injection centres

Another example of a harm reduction strategy is medically supervised injection centres (MSICs), also known by other names such as Drug Consumption Rooms. These are clinical and hygienic rooms, where drug users can bring and inject their own drugs under the supervision of nurses.[18] The main aim is to reduce high risk injecting while the hope is that the centre will act as a referral centre, through which intravenous drug users will access other services such as treatment for dependency.

Medically Supervised Injection Centres

The main functions of the site:

• Supervision by nursing staff of self injection of illicit drugs. However, this does not entitle staff to help drug users inject drugs.
• Open from morning to late evening to accommodate drug users who inject up to three times a day.
• Full range of resuscitation equipment (including intramuscular naloxone – an antidote) is available to nursing staff.
• Ideally should form part of wider health promotion activities such as needle exchange, safer injecting advice, and training to prevent overdoses.
• Alert users to other treatment services.
• Ongoing liaison with local business, housing, and police services.[18]

However, like many other harm reduction strategies, the idea has received strong disapproval from certain bodies such as the UN's International Narcotics Control Board saying that it "contravenes the most fundamental principle of the international drug control conventions".[19] There are also worries about such centres increasing local crime rates, increasing drug consumption and that the local government would be seen as condoning drug use.

Though the idea of supervised injection has existed for decades, legislation has often limited the activities of these centres. The first official MSIC opened in Berne, Switzerland in 1986. Since then, many more have opened across Switzerland, Germany, Netherlands and Spain.[14] There are also single centres which have undergone extensive research in Sydney, Australia and Vancouver, Canada.[20] In 2006 an independent working group recommended pilot schemes of MSICs in the UK,[14] but the Home Secretary at the time rejected this. Given the continuing health and social problems facing intravenous drug users in the UK, and the inequalities in healthcare service provision for homeless people, such centres may provide much benefit in the UK.

Aim of the study

Over the past months, I have visited many of the services for drug users within Merseyside and have interviewed several drug users about the current standard of care *(see appendix 2)*. Using this and appraising evidence from MSICs around the world, this study aims to find out whether MSICs would significantly reduce harm to the intravenous drug using population, specifically the homeless in Liverpool.

METHOD

Online literature searches were performed using "supervised injection", "homeless population" AND "intravenous drug use". Websites and databases searched were: MEDLINE, SCOPUS, the Lancet, FADE library, the National Library for Health, Google, and the homeless charity websites CRISIS, SHELTER and HOMELESS LINK *(see appendix 1)*.

Articles were included if they were less than 8 years old (after the first MSIC opened in Australia), and if they contained the following characteristics:
Population - Intravenous drug users,
Intervention – Attending a medically supervised injecting centre,
Outcome – Any measure of harm, approval, or treatment outcome.

RESULTS

A multitude of studies were found for the single injection sites in Vancouver[21] and Sydney[22], possibly due to the controversy surrounding their introduction. A recent report from the European Monitoring Centre for Drugs and Drug Addiction reviews studies conducted on MSICs across Europe.[23]

Characteristics of MSIC users

While the European MSICs generally attracted older clients, the MSIC in Vancouver found that clients were a younger age. However, all studies showed that many people attending the facilities were from high risk groups or from groups which were considered difficult to reach such as the homeless, public injectors and people who had had a previous overdose.

The main reason for drug users not attending the MSIC in Sydney was that they preferred to inject in the privacy of their own home. These characteristics show that MSICs would be very effective at targeting the homeless population. The majority of clients in the centres were injecting heroin or cocaine, often in combination with one another; Vancouver only had 40% of clients injecting heroin alone.

However, a study in Vancouver found that needling help with injections was inversely associated with attendance, therefore suggesting that perhaps the people in most need (ie those who were injecting hazardously) were not being reached.

Access and usage of MSICs

Rates of usage depended upon the size of the facility. In Sydney, there were 15,861 supervised injections in 18 months, while the centre in Vancouver had up to 600 injections per day. A study of users in Germany and Switzerland found that many clients were regular users of the service, usually using the centre five times a week. Outcome in drug users was shown to be affected by opening hours; a Dutch centre which was only open 8 to 9 hours a day had much less of an impact than a Spanish centre which was open 24 hours with overnight accommodation.

In Europe, a centre's success was also affected by its proximity to where most clients were buying their drugs. There were worries about whether MSICs would bring more drug users into the local area, but in European centres 80-90% of clients were from the local vicinity.

Hygiene and safety of injection

The top priority of these centres was to provide an immediate health benefit by minimising risks associated with injection of the drug. In Sydney, 1/8th of clients were referred for injection advice,

while 30% in Vancouver received education from on-site nurses. Many injectors who had previously had trouble injecting now reported that they no longer needed help for injection, with 50% of respondents in Sydney reporting that they were now injecting less riskily.

A study in Geneva found a significantly decreased rate of passing on used syringes, while Vancouver showed reduced syringe sharing, reduced syringe reuse and increased use of sterile water and alcohol swabs since the site had opened.

Morbidity and mortality rates

There is limited data on long term trends of blood borne virus prevalence; however, rates in Sydney had not changed in the 18 months since the MSIC had been opened. This may be due to the prevalence being so low already that an intervention is unlikely to significantly affect the trends in such a short period of time. However, there was increased notification of HIV and hepatitis C virus.

As yet there has not been a single death from overdose at an MSIC. In Vancouver, 60% of overdoses were successfully managed on site. German cities where there were multiple centres found a decrease in mortality and morbidity from overdose. A large decrease in rates of overdose in Sydney was attributable to a local shortage in supply of heroin, therefore masking any impact that the centre could have had. Despite this, the MSIC in Sydney calculated that it was preventing 4 deaths a year, while the German cities with many MSICs calculated that they had prevented 10 deaths a year. In addition, patients admitted to hospital from an overdose were ten times less likely to stay overnight if they had overdosed at one of the centres.[24]

Referral from MSICs to other services

One of the longer term aims of MSICs is to integrate with other drug services and to help coordinate a treatment plan tailored to the needs of the client. There was a big range in referral rates across the different centres; 34% of clients in Germany were using the MSIC as an entry point into the local drug help system, while only 9% were from referred from a centre in Spain. Vancouver's facility had over 800 clients being referred every 3 months, 40% of whom were going onto addiction treatment. In Sydney, a quarter of users went on to additional services, with 11% being referred to dependence treatment. This may be an underestimate as many referrals were made orally, yet clients in the interview for the study could only be recorded as being referred by the researcher if they had the referral letter with them.

All studies found that regular users in particular used the MSIC as a link to a wider access of care. Other referrals were for the local health clinic, housing services and other social issues. The centre in Vancouver found that there was increased uptake into detox programs, especially amongst regular clients.

Public use, nuisance and crime rates

Many criticisms of MSICs have focussed on the worries about increasing crime rates, and increased public nuisance. Studies in Sydney found fewer local sightings of public injection and 80% of clients at a Dutch MSIC reported injecting publicly less often. Furthermore, 30% of clients at German centres directly attribute their decreased public usage to the local MSIC. In terms of sightings of discarded syringes, Dutch studies found an overall decrease, while a study in Switzerland found a mild increase

and a study in Sydney found an increase after 18 months of opening the site. These increases were attributed by the researchers to a coincidental increase in rates of cocaine injection and a previous local shortage of heroin respectively.

All literature on injection centres agrees that there are no increases in theft, robbery or any other acquisitive crime attributable to the centres. Other than a few minor reports of increased loitering around the centres, there is no evidence to back up the claim that MSIC increase rates of crime. Approval ratings from local residents near the Sydney MSIC increased from 68% to 78% while disapproval rates fell rapidly from 36% to 17%.

Cost effectiveness and cost benefit

A study of the Sydney MSIC conducted a cost benefit analysis and calculated that the cost benefit was 1.20 to 1.97. An analysis of cost effectiveness was performed on the site in Vancouver,[25] which took into account the decrease in needle sharing, the increased safe needle practice and the increased referral to methadone. Even conservative estimates calculated that the centre would save $18 million and add 1175 life years in 10 years. However, this analysis does not take into account the cost of residential care, which is significantly more expensive than methadone treatment.

NEEDS AND SERVICES WITHIN LIVERPOOL

According to "health and homelessness report"[26], Liverpool has the 4th highest homeless population in the northwest. In the year 2005/2006, 2917 people applied to their local council as homeless, but only 847 of these were accepted. There appears to be only one GP practice enhanced to deal with homeless people, with a non-registered clinic, and a specialist nurse who links with other services and outreach programmes. This practice has 533 registered homeless people, 195 of whom are reported as drug users. This number does not take into account the homeless drug users who failed to apply to the council, and who have not registered with this practice.

The Mersey Care NHS Trust generally deploys a harm reduction strategy involving methadone prescriptions and needle exchange services. Specialist community drugs teams have centres in different areas of the city including HMP Liverpool. Here, drug users undergo a detailed assessment and are assigned a key worker who helps them to devise a care plan suitable for the individual's needs. In the case of heroin users this can entail advice on injection, needle exchange, health checks or methadone replacement. There is also the Kevin White Unit, which offers an in-patient detox service, which was rated as "good" by the Healthcare Commission.[27] However, homeless people have found it difficult to get referred here, as there is a requirement for patients to have a stable home to go to afterwards, to help them during the first months of abstinence..

There are also many organisations and charities which work together to help the homeless drug using population. An example of this is the Lighthouse project, which offers a needle exchange service during a drop-in centre session, popular with homeless people. However, the homeless report has also outlined shortcomings in Liverpool's health services. Homeless people found that mainstream services were alienating and hostile to them. Also, many people still found that they were getting rejected from GPs for merely being homeless. Complaints about drug and alcohol services included waiting times, difficulty in getting appointments and the interaction between hospital services and drugs services. Case history 3 shows that Liverpool's policy of readily prescribing methadone has attracted drug users from other areas.

Case History 3

Seamus, 37

Seamus feels his heroin addiction was the result of a gradual process, starting with him trying to 'fit in' with the gangs around his estate by taking solvents, glue and gas with them. This progressed into cannabis, valium, alcohol and ecstasy by the time he'd reached his 20s. His drug use led him into a hectic lifestyle, where he would be in and out of relationships, looking for friend's houses to sleep at and committing crime. He first tried heroin when he was in jail but didn't start using it regularly until after he was released.

He mainly smoked heroin, but sometimes injected it with others.

"Once you're on heroin, you get lazy. I gave up by work, and I was always a worker. I gave up my family as well."

He felt like he was unable to control his use, though had tried to quit.

"I was always scared of the [withdrawal] symptoms, I'd get shivers, chills, anxiety: It was like the flu but 20 times worse."

He resorted to 'begging, borrowing and burglaries' in order to fund his increasingly expensive addiction. Then, 6 months ago, he had a realisation that he could not go on, spending the amount that he was. He came to Liverpool from Ireland in order to get a methadone script.

"In Ireland, you could wait weeks for a script, but in Liverpool you can get some straight away".

He initially did not want to try methadone because of users being ridiculed back in Ireland.

"We'd call them the 'belly and arse' men, who would hurry to the clinics every morning to get their 'green diesel'"

However, since being put on methadone, he feels that he can at least lead a 'half-normal' life and that the madness has stopped. He is currently waiting to be admitted to Liverpool's detox service; the Kevin White unit. He only wants to return to his family in Ireland once he is off all opioids.

DISCUSSION

The literature appraised in this study shows that Medically Supervised Injection Centres (MSICs) successfully attract a large proportion of the drug using population; especially those thought of as higher risk and harder to reach. There is plenty of evidence to suggest that MSICs provide short, medium and long term benefits to the community: MSICs encourage safer injection, reduce mortality from overdoses and have been shown to successfully act as a centre for referral to other drugs services. There is currently limited evidence to suggest that MSICs affect trends of blood borne virus infection.

There is no evidence supporting the main arguments made against the use of MSICs. Local crime rates have remained the same, while levels of public consumption have decreased. There is also evidence to suggest that MSICs gain high approval ratings in the local community.

It is difficult to apply these results to the UK, as the characteristics of drug users may be substantially different. However, the fact remains that overdose related deaths in the UK remain higher than any other European country, and that MSICs have shown to improve these statistics. A substantial proportion of intravenous drug users in the UK are homeless, who encounter many difficulties in accessing health services. The MSICs would help to break these barriers to accessing healthcare. High satisfaction rates across the studies suggest that relations between drug users and the healthcare services would improve.

There remains a paradox in UK legislation, where housing providers must expel any drug users who inject on their premises. However, these people are being provided with clean needles from the needle exchange service.[20] The introduction of MSICs would help to provide a safe place to inject, away from the public and without fear of being expelled from the premises.

LIMITATIONS

Despite the overwhelming evidence supporting the effectiveness of MSICs, it should be noted that there were limitations to the evidence in the literature. First of all, Vancouver and Sydney could only use observational studies as they were individual centres designed to attract as many injectors as possible. This makes such data difficult to interpret as there are differences between people who attended the MSICs and the people who did not.

The studies in Sydney were only conducted over an 18-month period; not long enough to show many of the medium and long term benefits of the MSIC. Only 30% of clients took part in the questionnaires, which is arguably not adequately representative. On top of this, some questionnaires may have been subject to bias, as clients may not have wanted to disclose some information, because they feared this information could prevent them being accepted into the MSIC. Rates of referral from the centre were also likely to be underestimated, as clients could only be recorded as being referred by the researcher if they had the referral letter with them.

It should also be noted that there was comparatively less research performed in European countries, and so the evidence from these studies is generally less comprehensive.

RECOMMENDATIONS

Despite the limitations, there remains a strong body of evidence supporting the implementation of MSICs within the UK. As a result, the following recommendations have been made:

- Implement a pilot medically supervised injection centre in Liverpool, specifically targeting the homeless drug injecting population.
- Ensure that the MSIC can act as a centre for referral to other drugs services and that other services communicate and interact with the facility in order to provide the best possible care for the most people.
- Monitor the characteristics of clients, safety of injections, rates of overdose, prevalence of blood borne viruses and referrals.
- Review the effectiveness of the centre after at least 18 months, and depending upon the results, consider introducing such a scheme to other cities in the UK.

EVALUATION

This study is by no means a comprehensive healthcare needs assessment of homeless drug users within Liverpool, and it is therefore currently difficult to quantify the needs of this population. Before the introduction of this pilot scheme, it is therefore recommended that a comprehensive needs assessment of the drug using population should be completed.

Word count = 3262

APPENDIX 1 – Search Strategy

Various websites were used in this search. These were:
- MEDLINE
- SCOPUS
- the Lancet
- FADE library
- the National Library for Health
- Google
- the homeless charity websites CRISIS, SHELTER and HOMELESS LINK

As there was a variation in the search entry form between sites, different search strategies were employed depending upon the number of available resources.

Search terms entered in larger databases such as MEDLINE and SCOPUS were assigned to medical subject headings. These were "Homeless Population" AND "Intravenous drug use". However, this provided an excessive number of hits, and so they were combined with the keywords "Supervised Injection" OR a number a variations such as "Drug Consumption Rooms", "Supervised Consumption", and "Injection Rooms".

On smaller search engines, only the keywords "Supervised Injection" or variations of this were used.

The titles of the search hits were then assessed for relevance and included if they indicated that:
- The population studied were intravenous drug users
- The intervention was attendance at a Medically Supervised Injection Centre
- The outcome was measuring some form of effectiveness, harm, clinical outcome or approval.

These papers were then assessed and relevant papers in the resource section were noted.

It emerged that there were two large bodies of trials emerging from the MSICs in Vancouver and in Sydney. Other results were from European facilities, one of which was a comprehensive review of all injection sites across Europe. Many other studies in Europe were not available in the English language and so were not included in this study.

APPENDIX 2 – Timetable

Week 1	*5th Jan*	Introductory Meeting, including introduction to the issues of homelessness, the asylum process and a presentation on world health
Week 2	*12th Jan*	Visit to Chester, including presentations by Robert Bissett – Chester Aid to the Homeless (CATH), Dr Martin Dennis – GP specialising in homeless and drug users, and Joe McGovern - Aqua House drugs service.
Week 3	*19th Jan*	Journal Club, including my presentation of Sydney's research findings on their injection facility. Basement Drop-In on the Thursday, including interviews with drug users and a meeting with the lighthouse project needle exchange service.
Week 4	*26th Jan*	Visit to Asylum Link, including a meeting with the centre manager. Journal Club.
Week 5	*2nd Feb*	Visit to Charles Thompson Centre, including a meeting with a member of staff with a previous drug problem, meeting with a nurse from the Wirral Harm Reduction Team and a meeting with members of a local housing association – Phoenix Futures. Journal Club. Presentation on drugs by member of FRANK.
Week 6	*9th Feb*	Background reading.
Week 7	*16th Feb*	Scoping.
Week 8	*23rd Feb*	Visit to North Liverpool Community Drugs Team, involving a meeting with the centre manager and interviews with drug users.
Week 9	*2nd Mar*	Visit to Mildmay Hostel, including a meeting with a member of staff and with drug users.
Week 10	*9th Mar*	Literature Search.
Week 11	*16th Mar*	SSM Review Meeting, followed by literature search.
Week 12	*23rd Mar*	Visit to Whitechapel Centre, including a presentation by Julie Prendergast about the centre.
Week 13	*30th Mar*	Appraisal of Literature.
Week 14	*6th Apr*	Appraisal of Literature.
Week 15	*27th Apr*	SSM Review Meeting. Writing up case histories
Week 16	*4th May*	Writing up the introduction.
Week 17	*11th May*	Writing up the methods and results sections.
Week 18	*18th May*	Writing up the conclusions and compiling the references.
Week 19	*25th May*	Completing appendices, abstract and introduction. Hand in

APPENDIX 3 – Useful Contacts and resources

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Dr Martin Dennis
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Robert Bisset
Chester Aid To the Homeless
Watergate House,
85 Watergate Street,
Chester, CH1 2LF
01244 314834

- Nat Wright – Homelessness: a Primary Care Response.
  Provided great insight into the issue of homelessness, and was very easy to read.
- Wright & Tompkins - How can health services effectively meet health needs of homeless people?
  A comprehensive review of many homeless issues, including drug use
- Joseph Rowntree Foundation – Report on Drug Consumption Rooms.
  A very well presented appraisal of the European MSICs.

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