Needle and syringe programmes for injecting drug users:

Synopsis of the evidence and economic modelling

This synopsis summarises the findings of two reviews, one of effectiveness and cost-effectiveness evidence[1] and one of qualitative evidence[2], relating to the optimal provision of needle and syringe programmes (NSPs). It also reports the results of an additional economic evaluation[3] of the impact of interventions related to NSPs on HCV and HIV transmission among IDUs. These reports are available on the NICE website at:

http://www.nice.org.uk/guidance/index.jsp?action=folder&o=40959

Overall this work sought to address the following four research questions:

1. What level of coverage of needle and syringe programmes (NSPs) is the most effective and cost-effective?
2. What types of NSPs are effective and cost effective?
3. Which additional harm-reduction services offered by NSPs are effective and cost effective?
4. Are NSPs delivered in parallel with, or alongside, opiate substitution therapy (OST) effective and cost-effective?

[1] Jones et al., 2008. A review of the effectiveness and cost-effectiveness of needle and syringe programmes for injecting drug users

[2] Cattan et al., 2008. Injecting Equipment Schemes for Injecting Drug Users: Qualitative Evidence Review

[3] Vickerman et al., 2008. Assessing the cost-effectiveness of interventions linked to needle and syringe programmes for injecting drug users: An economic modelling report

Within these key questions, the following subsidiary questions were considered:

- The level of coverage and optimum mix of services required according to local demographics, geography and patterns of drug use.
- The impact that the provider, site and size of setting can have on effectiveness and cost effectiveness.
- Whether availability (opening times) and accessibility influence effectiveness and cost effectiveness, and whether different services are required in urban versus rural areas or for different groups (and for different people within those groups).
- The impact that the type of injecting equipment supplied can have on effectiveness and cost effectiveness.
- Whether the provision of additional harm-reduction equipment such as filters, mixing containers and flushing water increases effectiveness and cost effectiveness.
- Whether a returns policy on used equipment ('one-for-one exchange' or 'returns always required') increases effectiveness and cost effectiveness.
- Any adverse consequences of needle and syringe programmes.
- Whether the staff skill mix, their level of training and competence influences the effectiveness and cost effectiveness of services.
- Whether the availability of additional harm-reduction services increases the effectiveness and cost effectiveness of services.
- Whether the format of advice and information influences effectiveness and cost effectiveness.
- Whether services that promote – or refer people to – a range of additional support services are more effective and cost effective.
- Whether effectiveness and cost effectiveness varies according to the diversity of the population.
- How people who inject drugs view services that supply injecting equipment, what motivates them to use such services and what experiences they have of those services.
- How the families and friends of people who inject drugs and the wider public view services that supply injecting equipment.
- Whether it is effective and cost effective to encourage people who inject (or used to inject) drugs to deliver injecting equipment to their peers.

The review of effectiveness and cost-effectiveness (Jones et al, 2008) identified 10 systematic reviews and meta-analyses, 24 primary studies and 13 economic evaluations for inclusion. The qualitative review (Cattan et al, 2008) identified 40 studies for inclusion, 38 of which used interviews and 17 of which used ethnographic or observation methods. Each study was graded (++, + or -) based on the quality of its design and execution, according to NICE methodology checklists.

A *de novo* economic evaluation (Vickerman et al, 2008) was also undertaken based on a dynamic model of HCV and HIV transmission. The impact on effectiveness and cost-effectiveness were assessed in two settings with contrasting HCV prevalence.

Full details of the methods and the references to cited studies can be found in the main reports.

Question 1: What level of coverage of needle and syringe programmes (NSPs) is the most effective and cost-effective?

Research-based definitions of coverage are usually concerned with the number of syringes distributed per injector per injection. One cross-sectional study (CS-) and three cost-effectiveness analyses (one CEA- and two CEA+) were identified which addressed the question of levels of individual coverage among IDUs. One cross-sectional study identified that high levels of individual coverage among IDUs was associated with safer injection risk behaviours. However, NSP participants who were homeless, reported recent heroin injection or crack cocaine use, or were not in treatment had lower levels of syringe coverage. Evidence from two CEAs, one conducted in the USA (CEA-) and the other in the Ukraine (CEA+), indicated that in terms of HIV prevention, increasing individual levels of coverage among IDUs was cost-effective. One CEA conducted in the USA (CEA+), found that cost-effective allocation within a multi-site NSP required that sites were located where the density of IDUs was highest, and that the number of syringes exchanged per client was equal across sites, which could be achieved by increasing opening hours.

Further economic analyses were undertaken to evaluate the effects of increasing the coverage of syringe distribution among IDUs from its current level in two English cities. Using new unpublished data linking syringe coverage levels to individual syringe sharing in seven cities in England, a threshold analysis was conducted to examine how costly interventions to increase/maintain high levels of syringe coverage (>100%) would need to be in order to be cost-effective. For the low HCV, very low HIV population, the results of the analysis suggested that interventions to increase syringe coverage could be cost effective if the associated intervention costs are modest, given a societal cost perspective. In the population with high HCV and low HIV prevalence, the results suggested that interventions to increase coverage could still be cost-effective, but the associated intervention costs would have to be lower. The model projections also suggested that, although increasing the coverage of syringe distribution could reduce the transmission of HIV and HCV, the impact on HCV is much smaller. To substantially reduce the transmission of HCV, other interventions are needed such as to increase the recruitment on to OST or HCV treatment.

Although not directly concerned with coverage, two qualitative studies (both US Qual+) examined programme implementation from the point of view of stakeholders and providers. These provided useful data on models of NSP formation and delivery. Features of a successful

NSP included: flexibility in process and management models; knowledge; coalition building and community involvement; strong leadership; staging debate with sensitivity to political and cultural norms; access to resources; use of research; and overcoming fear.

Evidence statements

There is evidence from one poor quality (-) cross-sectional study to suggest that higher syringe coverage is associated with lower levels of injection risk behaviours among IDUs who participated in NSPs, including sharing needles and syringes, sharing cookers and syringe re-use. IDUs who are homeless, report recent heroin injection or crack cocaine use, or are not in treatment have lower levels of syringe coverage. (Eff[4] 6.1a).

There is evidence from two CEAs (one +; one -) to suggest that intervention coverage may be increased to higher levels at a low cost per HIV infection averted. (Eff 7.1b). There is evidence from one moderate quality (+) CEA to suggest that cost-effective allocation within a multi-site NSP requires that sites are located where the density of IDUs is highest and that the number of syringes exchanged per client is equal across sites. (Eff 7.1c).

Additional economic analyses of the possible increased impact that could be achieved if NSPs could increase the coverage of their syringe distribution found that in a population with low and high HCV prevalence, effective interventions to increase syringe coverage could be cost effective if the associated intervention costs are modest, given a societal cost perspective. However, in the population with higher HCV prevalence, intervention costs have to be lower. The model projections also suggested that increasing the coverage of syringe distribution will be insufficient to substantially decrease the transmission of HCV, and that other interventions need to be done in parallel (Summary of EcM[5]).

There is evidence from one moderate quality (+) US study that the features of a successful NSP include: flexibility in process and management models; knowledge; coalition building and community involvement; strong leadership; staging debate with sensitivity to political and cultural norms; access to resources; use of research; overcoming fear. (Qual[6] 3.2a).

[4] Eff = Evidence statement drawn from review of effectiveness (Jones et al., 2008)
[5] EcM = Evidence drawn from economic modelling (Vickerman et al., 2008)
[6] Qual = Evidence statement drawn from review of qualitative evidence (Cattan et al., 2008)

Question 2: What types of NSPs are effective and cost-effective?

Few studies examined how different types of approaches to the distribution of injecting equipment impact on effectiveness and cost-effectiveness. However, based on the literature identified we were able to examine effectiveness across the following areas: 1) accessibility of NSPs based on studies of geographical proximity and impact of distance on sharing behaviours; 2) distribution of injecting equipment in different settings including community site, pharmacies, hospitals, vending machines, and prisons; 3) different polices on the return and distribution of needles and syringes (e.g. one-for-one exchange); and 4) prison-based NSPs.

1) Availability and accessibility

Two cross-sectional studies (both CS-) found that IDUs living in close proximity to NSPs were more likely to utilise NSP services and report lower levels of injection risk behaviours.

Barriers to NSP use, identified in one UK (Qual+) and three US studies (one Qual++ and two Qual+), included fear of public exposure, either to police, co-workers, neighbours or family members and associated issues of shame. Women and professionals were particularly concerned about exposure. Location, queues and opening hours were also identified as potential barriers to NSP use. Convenience or otherwise of NSPs was important to IDUs and could influence decisions on whether to obtain equipment from them or from street sellers or secondary exchange. In one US study (Qual++), IDUs stated that buying equipment from sellers was quicker and easier than obtaining it from a fixed site NSP and a UK study (Qual++) similarly reported that IDUs would rather buy equipment from fellow users than fixed site NSPs. Three UK-based studies (one Qual++ and two Qual+) identified that situational factors, such as the immediate availability of a syringe when drugs are available, could play a more important role than the availability of an NSP.

2) Setting

Two RCTs and five observational studies examined a variety of outcomes among IDUs depending on their main source of needles. None of the studies identified were based in the UK. Two RCTs, one (RCT+) that compared pharmacy sales only with NSP exchange plus pharmacy sales and one (RCT++) that compared a hospital- and a community-based NSP, reported no effect of setting on injection risk behaviours. However, participants who attended the hospital-based NSP had improved access to inpatient and outpatient services compared to those attending the community-based NSP. Findings from five observational studies were inconsistent and difficult to interpret, but three studies (both CS-) demonstrated that mobile van

sites and vending machines may attract younger IDUs and IDUs with higher risk profiles. Six qualitative studies, including five studies from the UK, focused on NSP provision through pharmacies. Pharmacies were rated more highly than agency-based NSPs by IDUs for accessibility in terms of opening hours and location (all UK based; one Qual++, two Qual+). However, agency-based NSPs were rated higher for receiving advice and information (UK Qual+), and, for some IDUs, there was felt to be less risk of shaming (due to negative staff attitudes and/ or embarrassment and exposure) at agency-based NSPs. Female IDUs were more likely than male IDUs to have negative feelings about pharmacy-based NSPs (UK Qual+). Pharmacists were largely willing and committed to providing pharmacy-based NSPs (UK Qual++, UK Qual+, USA Qual+), but expressed business-related concerns about running a NSP; for example they worried about negative effects on other customers (UK Qual++, UK Qual+, USA Qual+).

In a Canadian study, fixed site NSPs were found to be preferred by providers because of the feasibility of providing a range of services in addition to NSP (Qual +). However, fixed site NSPs could attract local opposition or be viewed negatively by IDUs when based in some types of parent organisations such as AIDS-related organisations (Qual +). Mobile NSPs were thought to increase accessibility for clients but could not offer the full range of services.

3) Syringe dispensation policies

Three cross-sectional studies (all CS-) that examined the impact of different syringe dispensation policies on injection risk behaviours among IDUs found that syringe dispensation policies had a limited impact on behavioural outcomes such as sharing but had some impact on syringe re-use.

In two Canadian studies that reported on exchange policy (both Qual+), one-for-one exchange policies dominated, particularly in more recently established programmes (Qual+). Policies became more lenient over time as increased access to needles (needles as objects of 'prevention' rather than 'risk') became the main focus of the programme and as relationships were formed between providers and clients.

4) Prison-based NSPs

Four studies were identified that examined the role of needle exchange in prisons. In two uncontrolled before and after studies (both UBA-) the needle exchange intervention consisted of

a vending machine in two evaluations and in a third evaluation social workers from an NGO exchanged sterile syringes and equipment. Reductions in syringe sharing and HIV incidence were found.

One qualitative study (Qual+) examined two NSPs in two prisons in Germany in which anonymity was seen as important by IDUs. Anonymity was dependent on the mode of delivery: the NSP that used a vending machine was more popular than the one that used hand-to-hand exchange. NSPs were more likely to be accepted by prison staff if they played an active part in planning and decision making processes. Another study (Qual++) found support among prisoners (both IDUs and non-IDUs) for NSPs but also opposition, again from both IDUs and non-IDUs. Perceived benefits of NSPs were reduction in infection; perceived risks were safety and increased drug consumption.

Evidence statements

1) Availability and accessibility

There is evidence from two poor quality (-) cross-sectional studies to tentatively suggest that close proximity to NSPs can lead to greater utilisation of NSP facilities, resulting in reduced syringe sharing. (Eff 6.2a).

None of the economic evaluation studies identified, examined the impact of availability or accessibility on the cost-effectiveness of NSPs. In addition, because of limitations with the effectiveness evidence, further cost-effectiveness modelling for this topic was not undertaken.

There is evidence from one good quality (++ rating) UK study, one good quality (++ rating) US study, one moderate quality (+ rating) UK study, two moderate quality (++ rating) US studies and one poor quality (- rating) UK study to suggest that convenience or otherwise (specifically opening hours, location and queues) of NSPs are very important to IDUs and can influence decisions on whether to obtain equipment from them or from street sellers or secondary exchange. (Qual 3.3c).

There is evidence from two good quality (++ rating) studies, one of which is from the UK, and seven moderate quality (+ rating) studies, two of which are from the UK, to suggest that IDUs are not a homogeneous group: there are different cultures, some of whom disapprove of others' drug using behaviours and some of whom are more affluent than others. Fear of being caught and publicly exposed as a drug user (to police (USA studies), neighbours or family (UK studies))

is a prominent theme and can impact upon use of NSPs and other services, with some IDUs preferring secondary syringe exchange for this reason (Qual 3.3d).

2) Setting

There is evidence from two RCTs, one good quality (++) and one moderate quality (+), to suggest that NSP setting does not impact on injection risk behaviours. The evidence from six poor quality observational studies is inconsistent; however there is evidence from three poor quality (-) cross-sectional studies that mobile van sites and vending machines may attract younger IDUs and IDUs with higher risk profiles. (Eff 6.2b).

There is evidence from one good quality (++) RCT to suggest that providing hospital-based NSP services may increase accessibility to outpatient services among IDUs attending NSPs. (Eff 6.2c).

None of the economic evaluation studies identified, examined the impact of setting on the cost-effectiveness of NSPs. In addition, because of limitations with the effectiveness evidence, further cost-effectiveness modelling for this topic was not undertaken.

There is evidence from two good quality (++) UK studies and three moderate quality (+) studies, two of which are from the UK, that pharmacy-based needle and syringe programmes are popular with injecting drug users. Pharmacies were rated more highly than drug agency based NSPs for accessibility in 3 UK studies; although in another 2 UK studies, embarrassment, negative staff attitudes or fear of exposure led to negative feelings about pharmacy based NSPs, particularly in women. Agency based NSPs were rated more highly than pharmacies for advice and information (Qual 3.3b).

3) Syringe dispensation policies

There is evidence from two moderate quality (+) and one poor quality (-) cross-sectional studies to suggest that syringe dispensation policies have a limited impact on behavioural outcomes such as sharing but some impact on syringe re-use. (Eff 6.2d).

None of the economic evaluation studies identified, examined the impact of syringe dispensation policies on the cost-effectiveness of NSPs. In addition, because of limitations with the effectiveness evidence, and because NSPs in England do not have a restricted syringe dispensation policy, further cost-effectiveness modelling for this topic was not undertaken.

None of the qualitative studies identified, examined the views of IDUs towards different syringe dispensation policies.

4) Prison-based NSP

There is evidence from one moderate quality (+) systematic review that prison-based syringe exchange may be feasible in small prisons, but there is insufficient evidence to determine the effectiveness of these programmes on a larger scale. (Eff 5.1d). There is limited evidence from two poor quality (-) uncontrolled before and after studies to tentatively suggest that the provision of vending machines in prisons does not have adverse effects on HIV and HCV seroconversion and reduces syringe sharing and other injection risk behaviours. (Eff 6.2e).

None of the economic evaluation studies identified, examined the cost-effectiveness of prison-based NSPs. In addition, because of limitations with the effectiveness evidence, and limited applicability of the model to this setting, further cost-effectiveness modelling for this topic was not undertaken.

There is evidence from one good quality (++) qualitative study that prison-based NSPs may find support but also opposition, both among IDUs and non-IDUs. There is evidence from one moderate (+) quality qualitative study that anonymity was seen as important by IDUs in relation to prison-based NSPs (Qual 3.3e).

Question 3: Which additional harm-reduction services offered by NSPs are effective and cost-effective?

Few studies were identified that directly examined the effectiveness of additional harm reduction services offered by NSPs. However, it was clear from the literature that few NSP services only distributed sterile needles and syringes; in fact the large majority were linked into wider HIV prevention services including outreach, distribution of harm reduction materials and counselling and testing.

Two RCTs and five observational studies were identified that addressed the provision of additional services offered by NSPs beyond needle and syringe distribution. Two RCTs (both RCT-) examined interventions to encourage IDUs into drug treatment, and one cohort study (CT+) compared users and non-users of NSP-based health care services. All of the studies identified were based in Canada and the USA. In one RCT (RCT-), strength-based case management was found to support drug treatment entry among IDUs who were seeking treatment. However, the primary outcome reported was based on IDUs entering into treatment within seven days, and therefore the impact of the intervention on treatment retention was not clear. A second RCT (RCT-) found that motivational interviewing (MI) had no impact on the treatment interest and enrolment of NSP participants. A cohort study (CT+) that examined the provision of a range of health care services delivered alongside an NSP found that the intervention reduced emergency department use among IDUs who utilised these services compared to those who did not. None of the economic evaluation studies identified examined the cost-effectiveness of additional harm reduction services offered by NSPs.

Additional economic analyses was undertaken to model the impact of 1) the use of counselling and active case management to improve recruitment into OST of IDUs attending NSPs and 2) increasing the recruitment of HCV infected IDUs in HCV treatment through NSPs. The data used to model the possible impact of counselling and active case management was from a US RCT described above and data on recruitment into HCV treatment was taken from an unpublished study that was not identified for inclusion in the review of effectiveness and cost-effectiveness.

The results from the analysis suggested that the intervention to increase OST participation rates was likely to be cost-effective. In all scenarios (i.e. location and level of recruitment), the intervention was shown to be the dominant option, that is, less costly and more effective compared with baseline. Indeed, the results showed the higher the recruitment rate to OST, the lower the cost and the greater the number of QALYs gained. The cost thresholds for increasing

recruitment to HCV treatments showed that the scope for interventions to be cost-effective was reasonably high. For example, within a willingness to pay threshold of £20,000 per additional QALY, an intervention which increased recruitment to HCV antiretroviral treatment from approximately 0% to 5% could cost up to an additional £1,078 per IDU in the high HCV prevalence setting and £560 in the low HCV prevalence setting. In addition, the model projections also suggested that increasing the recruitment of IDUs on to HCV treatment could substantially reduce the incidence of HCV, with a 20% decrease in incidence predicted after 20 years if 10% of HCV chronically infected IDUs are treated each year.

Additional harm reduction interventions provided by NSPs were valued by IDUs, specifically in relation to increased access to drug treatment and other services, HIV testing and medical care, and advice and information. In a US study (Qual++) around two thirds of IDUs either used NSPs for services other than needle provision or were aware of these services. A Canadian study (Qual+) with stakeholders and providers concluded that mobile sites, while increasing accessibility, were not appropriate for providing additional harm reduction interventions. In a UK study (Qual++) of pharmacy-based NSPs, while most IDUs did not want to engage in a long conversation with pharmacy staff, some did or would value advice from them, although not specifically about drug misuse. Some interviewees suggested that pharmacies should keep leaflets on drug misuse or give advice on safer injecting, while others felt that their information needs were met elsewhere by GPs, drug workers and other drug users. There was insufficient detail of respondents given to determine whether attitudes to receiving information were associated with any IDU or staff characteristics. In another UK study (Qual+), when questioned, the majority of IDUs said they had never asked the pharmacist for advice regarding their drug use.

Secondary exchange

Three cross-sectional studies (all CS-) and one cohort study (CT+) examined secondary distribution of needles and syringes to IDUs. Two studies found that IDUs who exclusively obtained their needles from NSPs were less likely to engage in high risk injection behaviours than those who obtained them via secondary distribution (where one person distributes syringes at the NSP on behalf of others). However these studies also found that IDUs who obtained needles via secondary distribution engaged in high risk injection behaviours less than IDU who did not use NSPs.

Secondary syringe distribution was important for provision of additional equipment (e.g. filters) particularly as many IDUs did not realise that sharing these items is a high risk activity. Secondary distribution relieved the fear of exposure in two US studies (both Qual+) and was mentioned as being preferred to direct NSP use by IDUs (UK Qual++) and particularly female IDUs (US Qual+). Motivations for becoming a secondary exchanger were either altruism or economic gain (US Qual++, Qual+). Secondary exchangers obtained clean needles from a variety of sources including NSPs and these exchanges tended to take place within existing social networks. Collective exchangers were found in one study from the Netherlands to be more aware of high risk behaviours such as sharing needles and to make more effort to maintain health and injection-related hygiene than individual exchangers (Qual+). They were found in one US study to be more highly organised (Qual+), and in two US studies to distribute other harm reduction materials (e.g. bleach and condoms) as well as needles and syringes (Qual++, Qual+). In one study secondary exchange co-ordinators were involved with the NSP's outreach, fundraising and education efforts (Qual++). In the other study (Qual+) that presented some demographic details of participants, no differences were seen between secondary exchangers and recipients. In one qualitative study (Qual+), although most secondary exchange co-ordinators provided associated equipment such as filters, some re-used this equipment due to lack of awareness of associated risks.

In one study (US Qual-), use of IDUs as staff at NSPs was found to increase engagement of clients with the NSPs, although the recruitment and training of peer staff was said to be time consuming. A cross-sectional study (CS-) found higher levels of NSP utilisation among homeless, young IDUs who primarily spent time in an area containing a trained peer-run secondary exchange location (where clean injecting equipment and paraphernalia were distributed by peer leaders who had received training in NSP and HIV test counselling and with additional support from a local community-based agency) than those from a neighbouring area without such a peer-run facility.

Evidence statements

Additional services

There is evidence from one moderate quality (+) RCT to suggest that strength-based case management delivered via NSPs may support drug treatment entry among clients who request drug treatment. There is evidence from one poor quality (-) RCT to suggest that MI has no impact on the treatment interest and enrolment of NSP participants. (Eff 6.3a).

There is evidence from one moderate quality (+) cohort study to suggest that the provision of NSP-based health care services may decrease emergency department utilisation. (Eff 6.3b).

None of the economic evaluation studies identified examined the cost-effectiveness of additional harm reduction services offered by NSPs. Additional economic analyses suggest that programmes which encourage participation in OST (such as strengths-based case management) are likely to be cost-effective if they are effective in increasing recruitment, even if this increase is modest. The results of these analyses also suggested that scope exists for interventions to increase the number of IDUs receiving HCV treatment to be cost-effective (Summary of EcM).

There is evidence from three good quality (++) and one moderate quality (+) study to suggest that a range of harm reduction interventions (referrals to drug treatment and other services; HIV testing; medical care) in addition to needle and syringe programmes were accessed and valued by IDUs (Qual 3.4b).

Secondary exchange

There is evidence from one moderate quality (+) cohort study and one poor quality (-) cross-sectional study to suggest that IDUs who exclusively obtain their needles from NSPs are less likely to engage in high risk injection behaviours than those who obtain them via secondary distribution. However, there is evidence from two poor quality (-) cross-sectional studies to suggest that IDUs who obtain needles via secondary distribution engage in high risk injection behaviours less than IDUs who do not obtain any needles, directly or indirectly, from NSPs. (Eff 6.3c).

None of the economic evaluation studies identified, examined the cost-effectiveness of secondary distribution.

There is evidence from three good quality (++) studies, one of which is from the UK, and six moderate quality (+) studies, one of which is from the UK, that secondary syringe exchange is a valued method for obtaining clean syringes because it is convenient and relieves the fear of exposure. (Qual 3.4c).

Question 4: Are NSPs delivered in parallel with, or alongside, opiate substitution therapy (OST) effective and cost-effective?

One uncontrolled before and after study, one cohort study and two qualitative studies were identified that examined the impact of different levels of harm reduction on HIV and HCV incidence. An uncontrolled before and after study (UBA-) assessed the effects of enrolment in two low-threshold methadone maintenance treatment (MMT) programmes delivered via NSPs. At six-month follow-up, the proportion of participants who were injecting drugs, sharing needles, sharing drug equipment and indirectly sharing (i.e. frontloading or backloading) had declined significantly over the whole cohort. However, within a subgroup of participants who continued to inject during follow-up, only the sharing of injecting equipment declined significantly. In a cohort study of drug users in Amsterdam (CT+), a comprehensive programme of harm reduction, which the authors defined as adequate methadone therapy (≥60mg) and full participation in NSP, contributed substantially to the reduction of the incidence of HIV and HCV among users. However, a statistically significant effect was not seen when either intervention was considered separately. None of the economic evaluation studies identified examined the cost-effectiveness of NSPs delivered in parallel with, or alongside OST.

There was very little information identified about how OST and NSPs were used together by IDUs in the review of qualitative evidence. In one study (UK Qual+), of IDUs receiving a methadone prescription, approximately half collected it from the same pharmacy from which they collected injecting equipment. In another study (UK Qual++), IDUs expressed preferences for different types of methadone and IDUs reported that a 'total service' from the pharmacy would include both dispensing methadone and providing needles. Both studies mentioned the need for privacy and one study also mentioned the need to not be kept waiting when taking supervised oral methadone.

Evidence statements

There is evidence from one poor quality (-) uncontrolled before and after study to suggest that participation in low-threshold MMT programmes delivered via NSPs can reduce injection risk behaviours among drug users (Eff 6.4a).

There is evidence from one moderate quality (+) cohort study to suggest that the combination of methadone treatment and full participation in NSPs reduces the incidence of HIV and HCV among drug users (Eff 6.4b).

None of the economic evaluation studies identified examined the cost-effectiveness of NSPs delivered in parallel with, or alongside OST. In addition, because of limitations with the effectiveness evidence, further cost-effectiveness modelling for this topic was not undertaken.

In two UK studies (one good quality ++, one moderate quality +), IDUs obtained oral methadone prescriptions from the same pharmacy they used for needle exchange. A need for privacy when collecting needles and taking oral methadone was expressed. (Qual 3.5a).

Overall Conclusions

- There is limited evidence to determine the optimal provision of NSPs, especially in UK context.
- High levels of individual syringe coverage may be linked to lower levels of sharing, but there is limited evidence to determine which levels are optimal. Economic analyses suggest that interventions to increase individual coverage are cost effective if intervention costs are modest. Further research is needed to determine the effectiveness and cost-effectiveness of intervention strategies that aim to increase the number of IDUs with high levels of coverage (e.g. increasing opening hours).
- IDUs are not a homogeneous group, but a prominent theme in the literature was the fear of being caught or exposed as a drug user, and this may impact on IDU's use of different types of NSPs. Proximity to and aspects such as location and opening hours can be barriers to NSP use and may influence decisions to share or re-use equipment among IDUs.
- There was no evidence identified to suggest that setting or different syringe dispensation policies impact on injection risk behaviours, but pharmacy-based NSPs are popular with UK IDUs.
- Additional harm reduction services are valued by IDUs, but few studies have evaluated their effectiveness or cost-effectiveness. Strengths-based case management delivered via NSPs may support drug treatment entry among clients seeking treatment, and additional economic analyses suggest that this intervention is likely to be cost-effective. In addition, scope exists for interventions to increase the number of IDUs receiving HCV treatment to be cost-effective and to reduce the transmission of HCV.
- Secondary exchange is a valued method among IDUs for obtaining clean syringes. However, IDUs who exclusively obtain their needles from NSPs may be less likely to engage in high risk injection behaviours than those who obtain them via secondary exchange.
- Combination of methadone treatment and NSPs has been shown to reduce the incidence of HIV and HCV infection among IDUs. However, the cost-effectiveness of this approach is not known nor is its value or acceptability to IDUs.
- Results from the economic modelling suggest that it is insufficient to increase the coverage of syringe distribution or the recruitment rate onto OST alone. Multi-faceted interventions are needed to achieve substantial decreases in HCV incidence among IDUs.

References

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