

## Appendix A: Summary of evidence from surveillance

### 2019 surveillance of Needle and syringe programmes (2014) NICE guideline PH52

#### Summary of evidence from 2019 surveillance

Studies identified in searches are summarised from the information presented in their abstracts.

Feedback from topic experts who advised us on the approach to this surveillance review, was considered alongside the evidence to reach a final decision on the need to update each section of the guideline.

2018 surveillance summary	Intelligence gathering	Impact statement
<a href="#"><u>Recommendation 1 Consult with and involve users, practitioners and the local community</u></a>		
No relevant evidence was identified.	No topic expert feedback was relevant to this section.	<b>No new evidence was identified which may change current recommendations</b>
<a href="#"><u>Recommendation 2 Collate and analyse data on injecting drug use</u></a>		
Collating data	Topic expert feedback indicated that Public Health England (PHE) no longer has a needle exchange	Recommendation 2 advises regular collation and analysis of data from a range of sources to build

<p>A modelling study(1) based on survey data of people who inject drugs (PWID) (n=838) explored whether including the use of a new parameter, multiple sterile syringes per injecting episode, further improves individual-level syringe coverage measures. This was compared with 2 other measures of coverage, based on syringe stockpiling. Predictors of multiple syringe use and insufficient coverage (less than 100% of injecting episodes using a sterile syringe) using the new measure, were tested in logistic regression. The ability of the measures to discriminate key risk behaviours was compared using ROC curve analysis. The analysis suggested that the new measure was no better at discriminating injecting risk behaviours than the existing measures.</p>	<p>activity monitoring system available nationally. Concern was expressed about the collection of evidence from needle exchanges in England. An approach was recommended to collect data using 'Pharmoutcomes', a database which manages the contracts for the provision of these services. This allows for detailed analysis of data, which provided evidence of the rise of injecting steroid use by image and performance enhancing drug (IPED) users. It was considered useful in identifying trends and risks in injecting drug use. A stronger recommendation for the use of a system like this was suggested but no published evidence was provided.</p> <p>However, additional topic expert feedback stated that PHE does have existing sentinel surveillance through the unlinked anonymous monitoring survey included in <a href="#">People who inject drugs: infection risks, guidance and data</a>.</p> <p>Data is also available via the national drug treatment monitoring system.</p>	<p>reliable local estimates of drug misuse statistics. While topic expert feedback advocated a more systematic approach to collecting data, this is already taking place through the PHE sentinel surveillance and the current recommendation includes PHE in the range of sources for data. Data is also available via the national drug treatment monitoring system.</p> <p>The new evidence indicating no additional value in measuring the number of sterile syringes per injecting episode is consistent with NICE guideline PH52, which does not include this parameter in recommendation 2 to record 'Number and percentage of people who had more sterile needles and syringes than they needed (more than 100% coverage).</p> <p><b>New evidence is unlikely to change guideline recommendations.</b></p>
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### Recommendation 3 Commission both generic and targeted services to meet local need

<p><b>Low dead space syringe (LDSS) provision</b></p> <p>A secondary analysis(2) (n=2,174) of data from the UK 2014/2015 Unlinked Anonymous Monitoring Survey of PWID calculated the percentage of</p>	<p><b>Low dead space syringe provision</b></p> <p>A topic expert highlighted a qualitative study(4) (n=23) which explored the acceptability of detachable LDSS among PWID(n=23) and</p>	<p><b>Low dead space syringe provision</b></p> <p>New qualitative evidence indicating the acceptability and perceived benefits of detachable LDSS is consistent with recommendation 3, which</p>
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<p>syringes used in the past month that were LDSS. Results indicated that people who injected into their groin were less likely to use LDSS. Exclusive LDSS use was associated with lower prevalence of hepatitis C virus (HCV) among PWID who started injecting recently. Polydrug use was negatively associated with LDSS use.</p> <p><b>Prison needle exchange services</b></p> <p>A prospective cohort study(3) (n=267) examined drug injecting prevalence and practice during imprisonment and explored, via questionnaires, prisoners' views on prison needle exchange. In total, 64% of PWID were injecting until admission into prison. The majority intended to stop injecting in prison (93%), almost a quarter due to the lack of needle exchange provision (23%). Yet when hypothetically asked if they would continue injecting in prison if needle exchange was freely available, a third of participants (33%) believed that they would. Injecting cessation happened on prison entry and appeared to be maintained during the sentence.</p>	<p>staff(n=13) who work to support them. The results indicated that detachable LDSS are likely to be acceptable, with a preference for a gradual introduction of detachable LDSS in which PWID are given an opportunity to try the new equipment alongside their usual equipment.</p> <p><b>Specific groups of people</b></p> <p>Topic experts highlighted that PH52 did not consider the provision of needle exchange equipment to prisons and suggested its inclusion, but no evidence was cited.</p> <p>Further expert feedback highlighted the growing concern of transmission of sexually transmitted infections and blood-borne viruses (BBVs) through chemsex and suggested reviewing evidence on equipment to people at risk through this activity. Evidence was cited (5,6) showing increased transmission but not covering interventions such as equipment provision.</p> <p>A systematic review(5) (27 studies) synthesised available UK prevalence data for sexualised drug use, including 'chemsex' and the use of chemsex drugs in an undefined context in men who have sex with men (MSM). Prevalence estimates varied between MSM attending sexual health clinics and HIV-positive MSM inpatients.</p> <p>Further data(6) from an unlinked anonymous survey explored injecting and non-injecting drug use by sexual behaviour among PWID in England,</p>	<p>advises offering, and encouraging the use of, low dead space injecting equipment. Additional evidence indicating that exclusive LDSS use may be associated with lower prevalence of HCV, among PWID who started injecting recently, is also consistent with recommendation 3.</p> <p><b>Prison needle exchange services</b></p> <p>The guideline committee identified a gap in UK-based research on the effectiveness and cost-effectiveness of prison-based needle and syringe programmes. Only 1 relevant study was identified in the surveillance review. This reported that not providing sterile needles may increase risks associated with injecting for prisoners who continue to inject. However, providing such equipment also risked prolonging injecting for other prisoners who currently cease injecting on account of a lack of NSP provision. The evidence is unlikely to impact on the guideline until the findings are substantiated by further, higher quality studies.</p> <p>PHE guidance in the prison setting is unlikely to impact on the PH52, since it does not cover the effectiveness of NSP programmes specifically.</p> <p><b>Other Specific groups;</b></p> <p>Although NSP services for the specific groups of homeless people and those participating in sexualised drug use were highlighted by topic expert feedback, the surveillance review did not identify any evidence on the effectiveness of interventions for these groups to impact on the</p>
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	<p>Wales and Northern Ireland. Drug use was found to differ by gender and sexual orientation.</p> <p><b>Prison needle exchange services</b></p> <p>The PHE report <a href="#">Substance misuse treatment in secure settings: statistics 2016 to 2017</a> covers</p> <ul style="list-style-type: none"> <li>● outcomes of alcohol and drug treatment services in secure settings in England</li> <li>● the profile of adults and young people accessing alcohol and drug treatment services in secure settings.</li> </ul> <p>The report and accompanying tables present statistical analysis of treatment data from 1 April 2016 to 31 March 2017. Treatment centres in prisons and secure settings across England submitted the data to PHE. This includes some data on injecting behaviour but there is a lack of data specifically on needle and syringe programmes (NSP) services in prisons.</p> <p>PHE guidance <a href="#">Improving testing rates for blood-borne viruses in prisons and other secure settings</a> recommends that blood-borne virus testing be offered on an ‘opt-out’ basis in prison settings. In this approach, prisoners are offered the chance to be tested for BBVs infection near reception and at several time points thereafter by appropriately trained healthcare staff. However, it should be noted that this guidance applies to all people in prison and is not restricted to PWID.</p>	<p>guideline. New evidence on sexualised drug use was limited to data on prevalence and drug use patterns, and is unlikely to impact on guideline recommendations. Further research will be considered at the next review point.</p> <p>See also <a href="#">recommendation 6</a> for evidence and impact assessment of combined opioid substitution therapy and NSP.</p> <p><b>New evidence is unlikely to change guideline recommendations.</b></p>
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## Recommendation 4 Monitor services

No relevant evidence was identified.

Topic expert feedback indicated that PHE no longer has a needle exchange activity monitoring system available nationally. Concern was expressed about the collection of evidence from needle exchanges in England. An approach was recommended to collect data using 'Pharmoutcomes', a database which manages the contracts for the provision of these services. This allows for detailed analysis of data, which provided evidence of the rise of injecting steroid use by IPED users. It was considered useful in identifying trends and risks in injecting drug use. A stronger recommendation for the use of a system like this was suggested but no published evidence was provided.

However, additional topic expert feedback stated that PHE does have existing sentinel surveillance through the unlinked anonymous monitoring survey included in [People who inject drugs: infection risks, guidance and data](#).

Data is also available via the national drug treatment monitoring system.

In the [National intelligence network on drug health harms briefing](#), PHE indicated its commitment to supporting the recording of information from NSPs and other harm reduction interventions and there may be a national initiative to collect more

During guideline development the committee discussed the need for a national monitoring system to systematically gather and aggregate data on people who use needle and syringe programmes. It heard that PHE's Needle Exchange Monitoring System was not well used. The committee did not consider any evidence to allow a judgment on this matter. Topic expert feedback indicates the need to monitor NSPs to gain intelligence on changes in drug use.

No impact on the guideline is anticipated, as this area falls more directly within the remit of PHE, as covered by its sentinel surveillance, than within NICE guideline PH52.

**New evidence is unlikely to change guideline recommendations.**

	complete NSP data in the future, including for reporting to the World Health Organisation.	
<b><u>Recommendation 5 Develop a policy for young people who inject drugs</u></b>		
No relevant evidence was identified.	No topic expert feedback was relevant to this section.	<b>No new evidence was identified which may change current recommendations.</b>
<b><u>Recommendation 6 Provide a mix of services</u></b>		
<p><b>Combined opioid substitution therapy (OST) and NSP</b></p> <p>An updated Cochrane review(7) (21 published and 7 unpublished studies; including 2 case-control studies, 3 cross-sectional studies, 20 prospective cohort studies, 2 retrospective cohort studies and 1 serial cross-sectional survey) assessed the effects of needle syringe programmes and OST, alone or in combination, for preventing acquisition of HCV in PWID. The results showed that OST is associated with a reduction in the risk of HCV acquisition, and the association was stronger in studies combining OST and NSP. High NSP coverage was associated with a reduction in the risk of HCV acquisition in studies in Europe, but not when studies from Europe and North America were combined.</p>	<p>Topic experts highlighted recent evidence(7–9) on NSP and OST and that multiple infectious disease models have highlighted the importance of NSP in reducing HCV re-infection. The evidence is included in the surveillance summary.</p>	<p><b>Combined OST and NSP</b></p> <p>NICE guideline PH52 (recommendations 7 and 9) advises that services offering OST also make needles and syringes available to their service users. Recommendation 3 also advises that services aim to increase the proportion of people who have more than 100% coverage. Recommendation 6 also advises that a mix of the different levels of service are provided to meet local needs.</p> <p>New systematic review and observational study evidence indicates that current OST and high coverage needle and syringe provision coverage can avert substantial HCV and HIV transmission in the UK. Other potential beneficial outcomes appear to be reduced SSTIs and reduced criminal activity.</p>

An accompanying analysis and economic evaluation(8) (9 datasets, n=14,734 observations) found that in a pooled analysis, PWID currently using OST had significantly reduced odds of HCV infection.. When examining the effects of combined harm reduction interventions, the risk of new HCV infection was significantly lower among those on full harm reduction, defined as receiving OST and at least 100% NSP coverage, compared to those on minimal harm reduction. The costing analysis found that NSP services are highly likely to be cost-effective at almost any willingness to pay threshold and are, in fact, cost-saving in some settings, despite some uncertainty in total outputs. The cost-effectiveness estimates did not reflect the considerable additional savings achieved from averting other health problems associated with injecting drug use, including HIV and other infections.

A further modelling study(9) of the same data from 3 UK sites aimed to estimate the impact of existing high coverage needle and syringe provision (defined as obtaining more than one sterile needle and syringe per injection reported) and OST on HCV transmission among PWID. Results showed that current OST and high coverage needle and syringe provision coverage can avert substantial HCV transmission in the UK.

A systematic review of reviews(10) (13 systematic reviews, 133 unique studies) examined the evidence on the effectiveness of NSP for PWID in

A further implication of the new evidence is that in high coverage settings, other interventions are needed to further decrease HCV prevalence, which is consistent with recommendation 6 to provide a mix of services. In low coverage settings, sustained scale-up of both OST and NSP is implicated, as advised in recommendation 3.

The totality of new evidence reinforces the current recommendations and no impact is anticipated.

#### Immediate access to OST

Limited new evidence from a feasibility RCT indicates that immediate access to OST via specialist primary care is not superior to advice and case management in an NSP context, and is therefore unlikely to impact on NICE guideline PH52, which does not recommend immediate access.

**New evidence is unlikely to change guideline recommendations.**

reducing blood-borne infection transmission and injecting risk behaviours. The results showed that NSP was effective in reducing HIV transmission and IRB among PWID, while there were mixed results regarding a reduction of HCV infection. Full harm reduction interventions provided at structural-level and in multi-component programmes, as well as high level of coverage, were more beneficial.

A systematic review(11) (15 studies) assessed the effectiveness of structural-level NSPs to reduce HCV and HIV infection among PWID. Included studies had to document biomarkers (HIV or HCV) coupled with structural-level NSP, defined by a minimum 50% coverage of PWID and distribution of 10 or more needles/syringe per PWID per year. The results indicated that NSP as a structural-level intervention reduced population-level infection.

A systematic review(12) (12 studies, 12,000 person years of follow up) assessed the association between NSP and HIV transmission. Exposure to NSP was associated with a significant reduction in HIV transmission. NSP was just one component of a programme of interventions to reduce both injecting risk and other types of HIV risk behaviour.

A systematic review of reviews(13) (25 reviews) examined the effectiveness of harm reduction interventions in relation to HIV transmission, HCV transmission and injecting risk behaviour (IRB). Interventions included NSP; the provision of injection paraphernalia; OST; information, education and counselling; and supervised

injecting facilities. Results indicated that that harm reduction interventions can reduce IRB, with evidence strongest for OST and NSP. However, there was comparatively little review-level evidence regarding the effectiveness of these interventions in preventing HCV transmission among **PWID**.

A secondary analysis(14) (n= c.8000) of multiple cross-sectional surveys examined the impact of scale-up in coverage of a combination of NSP and OST HCV transmission among PWID. Results showed a decline in HCV incidence, per 100 person-years, during increases in the coverage of OST and IEP, and decreases in the frequency of injecting and sharing of injecting equipment. Individual-level evidence demonstrated that combined high coverage of needles/syringes and OST were associated with reduced risk of recent HCV.

A modelling study(15) tested whether observed decreases in HCV incidence post-2008 could be attributed to intervention scale-up, including OST and NSP with some increases in HCV treatment. The model incorporating observed intervention scale-up agreed with observed decreases in HCV incidence among PWID between 2008 and 2015, suggested that HCV incidence in Scotland decreased by 61.3%.

A modelling study(16) investigated the impact of scaling-up OST and high coverage NSP (100% NSP-obtaining more sterile syringes than you inject) on HCV prevalence among PWID. For 40%

chronic HCV prevalence, scaling-up OST from 0% to 20% with 100% NSP coverage reduced HCV prevalence by 13% after 10 years. This potentially increased to a 24/33% relative reduction at 40/60% coverage. Reductions in HCV prevalence were predicted to be modest and would require long-term sustained intervention coverage.

#### Criminal activity risks

A cross-sectional study(17) (n=1,760) examined health risks and criminal activity in a population of NSP participants by comparing those identified as current OST users to (i) those identified as former OST users and (ii) those with no OST experience. Results showed that NSP participants who were currently on OST had significantly reduced health risks and criminal activity than former users or those with no OST experience.

#### Skin and soft tissue infections

A cross-sectional survey(18) (n=1,876) examined the association between the uptake of injecting equipment (IE) and OST on skin and soft tissue infections (SSTIs) among PWID, and the injecting behaviours associated with having had an SSTI. Results showed that people with high combined IE-OST uptake and medium combined IE-OST uptake had significantly lower odds of having had an SSTI compared to those with low combined IE-OST uptake.

<p><b>Immediate access to OST</b></p> <p>A feasibility RCT(19) (n=100) investigated whether offering PWID immediate access to OST via specialist primary care increased numbers in OST at 3 months, compared with offering advice and case management in an NSP context. Results indicated that uptake of OST at 3 months and opioid use were not significantly different between groups. There was no evidence of an effect compared with intensive case management.</p>		
<p><b><u>Recommendation 7 Provide people with the right type of equipment and advice</u></b></p>		
<p><b>Uptake of paraphernalia</b></p> <p>A cross-sectional study(20) based on a voluntary anonymous survey of PWID (n=2,037) examined the factors associated with paraphernalia sharing; in particular, whether uptake of filters, spoons and sterile water from NSPs is associated with a reduction in the sharing of these items. Results indicated that uptake of paraphernalia was associated with safer injecting practice. Self-reported uptake of paraphernalia in an average week during the previous 6 months was associated with significantly reduced odds of sharing paraphernalia.</p>	<p><b>Low dead space equipment</b></p> <p>Experts were aware of emerging evidence on the use of LDSS. Two studies were cited(2,4). A qualitative study(4) (n=23) which explored the acceptability of detachable LDSS among PWID(n=23) and staff(n=13) who work to support them. The results indicated that detachable LDSS are likely to be acceptable, with a preference for a gradual introduction of detachable LDSS in which PWID are given an opportunity to try the new equipment alongside their usual equipment.</p>	<p><b>Low dead space equipment</b></p> <p>Recommendation 7 advises that NSP providers offer low dead space equipment according to the needs of PWID. New evidence on LDSS supports the gradual implementation of low dead space equipment, offered alongside existing equipment and supported by training and education. This is consistent with PH52 and no impact is anticipated.</p> <p><b>Uptake of paraphernalia</b></p> <p>New evidence from survey data indicates that uptake of paraphernalia from NSPs is associated with safer injecting practice. This is consistent with</p>

<p><b>Supervised consumption rooms</b></p> <p>A systematic review(21) (75 studies) examined the benefits and harm of supervised consumption rooms (SCRs). A narrative synthesis of study findings indicated that consumption rooms were efficacious in attracting the most marginalised PWID, promoting safer injection conditions, enhancing access to primary health care, and reducing the overdose frequency. SCRs were not found to increase drug injecting, drug trafficking or crime in the surrounding environments. SCRs were found to be associated with reduced levels of public drug injections and dropped syringes. However, heterogeneous study designs precluded quantitative meta-analysis, and geographical indirectness limit the impact of the results. The included study designs were not reported in the abstract.</p> <p>A further 2 non-systematic reviews of SCRs(22,23) found potential benefits of providing supervised drug consumption facilities to include improvements in safe, hygienic drug use, especially among high-risk drug users, increased access to health and social services, and reduced public drug use and associated nuisance. No evidence was found to suggest that the availability of safer injecting facilities increases drug use or frequency of injecting. The services did not result in higher rates of local drug-related crime.</p>	<p>A secondary analysis(2) (n=2,174) of data from the UK 2014/2015 Unlinked Anonymous Monitoring Survey of PWID calculated the percentage of syringes used in the past month that were LDSS. Results indicated that people who injected into their groin were less likely to use LDSS. Exclusive LDSS use was associated with lower prevalence of HCV among PWID who started injecting recently. Polydrug use was negatively associated with LDSS use.</p> <p><b>Supply of needle and syringe equipment</b></p> <p>Topic experts were aware of a market selling needle and syringe equipment online, particularly to IPED users, and suggested having a recommendation about the provision of information by these services. No evidence was cited on this.</p> <p>Provision of bins and collecting needles was highlighted as an ongoing problem for needle exchange services, and ways of addressing public concern with needle disposal are needed. This could include working with other agencies when “hotspots” of needle finds are identified. It was suggested that the guideline include a recommendation about this, but no evidence was cited.</p> <p>Another concern expressed was the secondary distribution of needle exchange equipment. This is considered to be a particular problem where a small number of needles are provided without a bin</p>	<p>recommendation 7 to provide PWID with needles, syringes and other <a href="#">injecting equipment</a> according to their needs.</p> <p><b>Supervised consumption rooms</b></p> <p>Recommendation 7 advises provision of equipment to PWID, and to encourage PWID to use other services as well, which include SCRs. New review evidence indicates the potential value of SCRs but was limited by indirectness to the UK, because the studies were conducted in settings with different drug use patterns. No further eligible evidence was identified to support the widening of the guideline scope to include recommendations on equipment provided via SCRs, although this was advocated by some expert feedback. The Government’s <a href="#">stated position</a> is that there is no legal framework for the provision of drug consumption rooms in the UK and there are no plans to introduce them.</p> <p>No impact on the guideline is anticipated.</p> <p>See also <a href="#">recommendation 6</a> for evidence and impact assessment of combined OST and NSP.</p> <p><b>New evidence is unlikely to change guideline recommendations.</b></p>
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	<p>(for example a dealer provides needles with steroids in a gym).</p> <p><b>Supervised consumption rooms</b></p> <p>Further expert feedback suggested widening the scope of the guidance to consider equipment provided as part of the service of supervised consumption rooms.</p> <p>Topic expert feedback highlighted a review(23) of SCRs which is included in the evidence summary.</p> <p>Feedback from PHE indicated that there is international evidence that drug consumption rooms can be effective at addressing problems of public nuisance and reducing health risks in a very specific set of circumstances (for example where open drugs scenes present a significant risk to public health). There is a risk that such facilities would be at the expense of other, more relevant, evidence-based drug services for local areas.</p> <p>The Government's position was stated to be that there is no legal framework for the provision of drug consumption rooms in the UK and there are no plans to introduce them.</p> <p><b>Detached and outreach services</b></p> <p>Expert feedback indicated that the recommendation about detached and outreach services as a possible way of reaching hard to reach groups (for example street sex workers) was based on limited evidence. An assessment of any further research was recommended, particularly in</p>	
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	<p>relation to the injecting of novel psychoactive substances among homeless people.</p>	
<p><b><u>Recommendation 8 Provide community pharmacy-based needle and syringe programmes</u></b></p>		
<p><b>Community Pharmacy</b>  A systematic review(24) (14 studies, n=7,035) assessed the effectiveness of pharmacy-based NSPs on risk behaviours, HIV and HCV prevalence and economic outcomes among PWID. For sharing-syringe behaviour, pharmacy-based NSPs were significantly better than no NSPs. For safe syringe disposal and HIV/HCV prevalence, the evidence for pharmacy-based NSPs compared with other NSP or no NSP was unclear, as few of the studies reported this and most of them had a serious risk of bias.</p> <p><b>Naloxone</b>  An online survey study(25) (n=1,317) aimed to assess pharmacists' level of support for overdose prevention, barriers and facilitators for naloxone supply and knowledge about naloxone administration. Pharmacists were willing to receive training about naloxone and provide naloxone with a prescription. Fewer (40.8%) were willing to supply naloxone over-the-counter. Positive attitudes towards harm reduction were associated</p>	<p>No topic expert feedback was relevant to this section.</p>	<p><b>Community Pharmacy</b>  PH52 recommendation 8 advises provision of community pharmacy-based NSPs. The new systematic review evidence indicating superiority of pharmacy-based NSPs over no NSPs for sharing syringe behaviour is consistent with this. The evidence for safe syringe disposal and HIV/HCV prevalence is unclear. The PH52 advice to ensure community pharmacy staff have received health and safety training, in relation to BBVs, needle stick injuries and the safe disposal of needles, syringes and other injecting equipment remains valid.</p> <p><b>Naloxone</b>  PH52 recommendation 8 advises ensuring staff providing level 2 or 3 services (see recommendation 6) are competent to provide advice about the full range of drugs that people may be using. In particular, they should be able to advise on how to reduce the harm caused by injecting and how to prevent and manage an overdose.</p>

<p>with significantly greater willingness to supply naloxone with a prescription. Few pharmacists were confident they could identify appropriate patients (34.1%) and educate them on overdose and naloxone use.</p>		<p>New evidence indicates pharmacists' willingness to receive training about naloxone, and to supply naloxone with a prescription. However, the evidence suggests a lack of confidence in educating PWID about overdose and naloxone use. This is consistent with the guideline advice to ensure training and competency in providing advice.</p> <p>See recommendation 9 for further discussion of NSPs providing naloxone.</p> <p><b>New evidence is unlikely to change guideline recommendations.</b></p>
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### Recommendation 9 Provide specialist (level 3) needle and syringe programmes

<p><b>Effectiveness of NSP provision</b></p> <p>A systematic review(26) (6 observational studies, n=2,437) examined the association between NSP use and HCV prevention in PWIDs.</p> <p>The odds ratio results indicated no significant association, while the hazard ratio indicated a harmful effect of NSP provision. However, the meta-analysis was limited by substantial heterogeneity and moderate to large inconsistency was observed for both models, and concerns over confounders were noted. Other limitations included the use of an aggregate data approach for the</p>	<p><b>Hepatitis testing</b></p> <p>Topic expert feedback advised that the recommendation on hepatitis testing could be strengthened given improvements in testing (particularly blood spot testing) and treatment and the new treatment for hepatitis C in particular has been greatly improved since the last report. No studies were cited, but a topic expert suggested a cross reference to the relevant section of Department of Health and Social Care's <a href="#">Drug misuse and dependence: UK guidelines on clinical management</a></p>	<p><b>Effectiveness of NSP provision</b></p> <p>New systematic review evidence indicating an unclear impact of NSP use on HCV prevention was limited by small sample sizes, heterogeneity, inconsistency and potential confounding, and is therefore unlikely to impact on PH52 recommendation 9 to provide specialised NSPs. See also the evidence summary under <a href="#">recommendation 6</a> for further evidence on NSP alone or in combination with OST. The totality of new evidence reinforces the current recommendations and no impact is anticipated.</p>
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<p>meta-analysis, inability to test for publication bias and the possibility of information bias from self-reported injection status and NSP attendance.</p> <p><b>Provision of naloxone</b></p> <p>A retrospective association study(27) (n=2,500) aimed to examine the association between characteristics of participants and overdose reversals with a community-based naloxone distribution programme. It also aimed to identify predictors of obtaining naloxone refills and using naloxone for overdose reversal. Participants who had witnessed an overdose or used heroin or methamphetamine had higher odds of obtaining a refill and reporting an overdose reversal. Community members most likely to engage with a naloxone programme and use naloxone to reverse an overdose were found to be active drug users.</p> <p><b>Adjunctive psychoeducation</b></p> <p>An RCT(28) (n=120) aimed to examine the effectiveness of adjunctive brief skill-based HIV prevention psychoeducation in improving HIV-related high-risk behaviours among clients of two NSP centres. The intervention group received two brief sessions of skill-based HIV prevention psychoeducation added onto routine a NSP, while the control group received routine services. The two groups were followed in months one and three. Compared to the control group, the intervention group showed significantly more reduction in high-risk injecting behaviours including average number</p>	<p><b>Provision of naloxone</b></p> <p>Experts also advised consideration of new evidence in relation to issuing naloxone. Guidance from PHE and the Department of Health and Social Care was highlighted on naloxone in response to the rise in drug-related deaths and evidence in relation to its role in preventing deaths:</p> <p><a href="#">Public Health England Providing take-home naloxone for opioid overdose</a></p> <p><a href="#">Department of Health and Social Care (2017) drug misuse and dependence: UK guidelines on clinical management</a></p> <p>No additional evidence was cited.</p>	<p>See also for evidence and impact assessment of combined OST and NSP.</p> <p><b>Hepatitis testing</b></p> <p>PH52 recommendation 9 advises offering, or helping people to access, testing and treatment for hepatitis B, hepatitis C and HIV. Additionally recommendation 6 advises that services should be coordinated to ensure testing for hepatitis B and C and other BBVs is readily available to everyone who uses an NSP. Topic expert feedback indicates that the recommendations could be strengthened given improvements in testing. However, no evidence was cited by experts or identified in the surveillance review to support strengthening the wording of the recommendations, which are likely to remain valid. A cross reference will be made to <a href="#">Department of Health and Social Care guidance</a> to align with current national advice.</p> <p>PH52 recommendation 9 also advises offering comprehensive harm reduction services, including advice on safer injecting practices. The new evidence on indicating the need for HCV prevention interventions for PWID seeking addiction treatment is consistent with this, to reduce risky injecting practices among PWID who are aware of positive HCV status.</p> <p><b>Provision of naloxone</b></p> <p>In developing PH52, the guideline committee was aware of plans to make naloxone more available for treating opiate overdose. However, it was not</p>
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of daily injections, number of injections during the last month, and number of times using syringes used by another person.

A feasibility RCT(29) (n=99) aimed to develop and test a psychosocial intervention to reduce BBV risk behaviours and increase transmission knowledge among PWID. The intervention comprised a three-session, manualised, psychosocial, gender-specific group intervention delivered by trained facilitators and BBV transmission information booklet plus treatment as usual, compared to an information booklet plus treatment as usual alone. Feedback questionnaires, focus groups with participants who attended at least one intervention session and facilitators assessed the intervention's acceptability. Results indicated that the intervention was acceptable to both participants and facilitators. At 1 month post intervention, no increase in injecting in 'risky' sites (for example groin, neck) was reported by participants who attended at least one session. PWID who attended at least one session showed a trend towards greater reduction in injecting risk behaviours, a greater increase in withdrawal planning and were more confident about finding a vein. The statistical significance of these results was not reported in the abstract, and a full RCT was not considered feasible, because only 19% of participants attended all 3 intervention sessions.

possible to make a recommendation due to the status of the drug at that time, which was unregulated for NSP provision, and the lack of evidence of the effectiveness of provision in the NSP context. In advising consideration of naloxone provision, topic experts highlighted new PHE guidance on take-home naloxone. No further evidence was identified in the surveillance review in the NSP context. A cross reference will be made to [Department of Health and Social Care guidance](#) to align with current national advice.

#### Adjunctive psychoeducation

Recommendation 9 advises that specialist NSPs should offer (or help people to access) psychosocial interventions. The new RCT evidence indicating the added value of adjunctive psychoeducation in reducing BBV risk behaviours, including brief skill-based HIV prevention, is consistent with this advice and is unlikely to impact.

**New evidence is unlikely to change guideline recommendations.**

## Recommendation 10 Provide equipment and advice to people who inject image- and performance-enhancing drugs

<p>No relevant evidence was identified.</p>	<p>Topic experts highlighted that there is new evidence indicating that IPED users are taking a variety of drugs and using different injecting techniques. These include both recreational drug use and adding human growth hormone and peptides. NSPs in some areas of the UK were considered to be saving money by restricting access to equipment for steroid users. There is also concern from people working in this field of extended cycles of steroid use and not completely stopping between cycles. However no studies on the impact of NSPs were cited.</p> <p>One expert cited the PHE report <a href="#">Shooting Up: infections among people who inject drugs in the UK</a> (2016). The report found that uptake of the hepatitis B vaccine is much lower among IPED users than PWID overall. Around one in 20 of those who inject IPED were identified as having hepatitis C.</p>	<p>Although topic expert feedback indicated emerging evidence on IPED users, only limited prevalence data was identified in this area and the lack of evidence on the effectiveness of NSPs for IPED users means there is unlikely to be any impact. Further evidence will be considered at the next surveillance review.</p> <p><b>New evidence is unlikely to change guideline recommendations.</b></p>
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### Research recommendations

How can needle and syringe programmes encourage specific groups of people who inject drugs to use the service effectively? Examples include: those who have recently started injecting; women; sex workers; ex-

prisoners; people who are homeless; people who occasionally inject drugs; and people who inject novel psychoactive drugs

**Prison needle exchange services**

A prospective cohort study(3) (n=267) examined drug injecting prevalence and practice during imprisonment and explored views on prison needle exchange. In total, 64 per cent of PWID were injecting until admission into prison. The majority intended to stop injecting in prison (93%), almost a quarter due to the lack of needle exchange provision (23%). Yet when hypothetically asked if they would continue injecting in prison if needle exchange was freely available, a third of participants (33%) believed that they would. Injecting cessation happened on prison entry and appeared to be maintained during the sentence.

The PHE report [Substance misuse treatment in secure settings: statistics 2016 to 2017](#)

Reports data on

- outcomes of alcohol and drug treatment services in secure settings in England
- the profile of adults and young people accessing alcohol and drug treatment services in secure settings

The report and accompanying tables present statistical analysis of treatment data from 1 April 2016 to 31 March 2017. Treatment centres in prisons and secure settings across England submitted the data to PHE. This includes some data on injecting behaviour but there is a lack of data specifically on NSP services in prisons.

PHE guidance [Improving testing rates for blood-borne viruses in prisons and other secure settings](#) provides data on blood-borne virus testing offered on an 'opt-out' basis in prison settings. In this approach, prisoners are offered the chance to be tested for BBVs infection near reception and at several time points thereafter by appropriately trained healthcare staff.

**Prison needle exchange services**

The guideline committee identified a gap in UK-based research on the effectiveness and cost-effectiveness of prison-based needle and syringe programmes.

Limited observational study evidence identified in the surveillance review reported that not providing sterile needles may increase risks associated with injecting for prisoners who continue to inject; however, providing such equipment potentially risked prolonging injecting for other prisoners who currently cease injecting on account of a lack of NSP provision. The evidence is unlikely to impact on the guideline until the findings are substantiated by further higher quality studies.

PHE Prison surveillance data provides some evidence on injecting behaviour but there is a lack of data specifically on NSP services in prisons.

PHE guidance [Improving testing rates for blood-borne viruses in prisons and other secure settings](#) covers blood-borne virus testing offered on an 'opt-out' basis in prison settings.

Evidence encouraging other specific groups of PWID to use the service effectively remains limited.

The research recommendation will be reviewed at the next surveillance point.

		<b>New evidence is unlikely to change guideline recommendations.</b>
<p>What are the most effective and cost-effective ways of delivering needle and syringe programmes to:</p> <ul style="list-style-type: none"> <li>● young people aged under 18</li> <li>● users of image- and performance- enhancing drugs?</li> </ul>		
<p>No relevant evidence was identified.</p>	<p>Topic experts highlighted that there is new evidence indicating that IPED users are taking a variety of drugs and using different injecting techniques. These include both recreational drug use and adding human growth hormone and peptides. Some areas were considered to be saving money by restricting access to equipment for steroid users. There is also concern from people working in this field of extended cycles of steroid use and not completely stopping between cycles. However no studies were cited. One expert cited the PHE report <a href="#">Shooting Up: infections among people who inject drugs in the UK</a> (2016). The report found that uptake of the hepatitis B vaccine is much lower among IPED users than among PWID overall. Around one in 20 of those who inject IPED were identified as having hepatitis C.</p>	<p>Although topic expert feedback indicated emerging evidence on IPED users, only limited prevalence data was identified in this area and the lack of evidence means there is unlikely to be any impact. The research recommendation will be reviewed at the next surveillance point.</p> <p><b>New evidence is unlikely to change guideline recommendations.</b></p>

What type of behaviour-change interventions delivered by needle and syringe programmes are effective in promoting safer drug use practices and reducing the incidence of overdose (apart from providing needles, syringes and other [injecting equipment](#))?

New evidence was found on [psychoeducational interventions](#)

No topic expert feedback was relevant to this section.

**Adjunctive psychoeducation**

Recommendation 9 advises that specialist NSPs should offer (or help people to access) psychosocial interventions. The new RCT evidence indicating the added value of adjunctive psychoeducation in reducing BBV risk behaviours, including brief skill-based HIV prevention, is consistent with this advice and is unlikely to impact. The research recommendation will be reviewed at the next surveillance point.

**New evidence is unlikely to change guideline recommendations.**

What types of injecting equipment (including low dead-space syringes), paraphernalia and non-injecting equipment (for example, crack pipes or foil) effectively and cost effectively reduce the harm associated with injecting drug use?

New evidence was identified on [LDSS and uptake of paraphernalia](#)

Experts were aware of emerging evidence on the use of low dead space equipment. However, no studies were cited.

**Low dead space syringes**

Recommendation 7 advises that NSP providers offer low dead space equipment according to the

		<p>needs of PWID. New evidence on LDSS supports the gradual implementation of low dead space equipment, offered alongside existing equipment and supported by training and education. This is consistent with PH52 and no impact is anticipated.</p> <p><b>Uptake of paraphernalia</b></p> <p>New evidence from survey data indicates that uptake of paraphernalia from NSPs is associated with safer injecting practice. This is consistent with recommendation 7 to provide PWID with needles, syringes and other <a href="#">injecting equipment</a> according to their needs.</p> <p><b>New evidence is unlikely to change guideline recommendations.</b></p>
<p>Do needle and syringe programmes have any unintended consequences:</p> <ul style="list-style-type: none"> <li>● Do they increase the uptake, frequency and length of injecting drug use?</li> <li>● Does the provision of disposal facilities (for example, drop-boxes) affect the amount of drug-related litter in an area?</li> <li>● Do they have a negative impact on the local community, for example, in terms of crime rates or the fear of crime?</li> </ul>		
No relevant evidence was identified.	No topic expert feedback was relevant to this research recommendation.	<b>No new evidence was identified which may change current recommendations.</b>

## Gaps in the evidence

There is a lack of evidence about how many people inject drugs within different subgroups. This includes a lack of evidence about the number of young people who inject drugs and the number of people who inject image and performance enhancing drugs.

No relevant evidence was identified.

Expert feedback highlighted the growing concern of transmission of sexually transmitted infections and BBVs through 'chemsex' and suggested reviewing evidence on equipment to people at risk through this activity. Evidence was cited (5,6) showing increased transmission but not covering interventions such as equipment provision.

A systematic review(5) (27 studies) synthesised available UK prevalence data for sexualised drug use, including 'chemsex' and the use of chemsex drugs in an undefined context in MSM. Prevalence estimates varied between MSM attending sexual health clinics and HIV-positive MSM inpatients.

Further data(6) from an unlinked anonymous survey explored injecting and non-injecting drug use by sexual behaviour among PWID in England, Wales and Northern Ireland. Drug use was found to differ by gender and sexual orientation.

New evidence on sexualised drug use was limited to data on prevalence and drug use patterns, and is unlikely to impact on guideline recommendations. Further research will be considered at the next review point.

There remains limited evidence on the effectiveness or cost-effectiveness of NSPs for these groups.

There is a lack of evidence about the injecting behaviours of different subgroups of young people and users of image and performance enhancing drugs. There is also a lack of evidence on how these groups use needle and syringe programmes and the effectiveness and cost-effectiveness of providing needle and syringe programmes to these groups.

No relevant evidence was identified.

Topic experts highlighted that there is new evidence indicating that IPED users are taking a variety of drugs and using different injecting techniques. These include both recreational drug use and adding human growth hormone and peptides. Some areas were considered to be saving money by restricting access to equipment for steroid users. There is also concern from people working in this field of extended cycles of steroid use and not completely stopping between cycles. However no studies were cited.

One expert cited the PHE report [Shooting Up: infections among people who inject drugs in the UK](#)

The annual report describes trends in the extent of infections and associated risks and behaviours among people who inject drugs in the UK. The data from the 2016 report showed that uptake of the hepatitis B vaccine is much lower among IPED users than other PWID. Around one in 20 of those who inject IPED were identified as having hepatitis C. The source data is from the unlinked anonymous monitoring surveys of infections and risk among PWID. This annual cross-sectional survey is co-ordinated by PHE, with support from

There is ongoing annual data from PHE report [Shooting Up: infections among people who inject drugs in the UK](#) describing the extent of infections among PWID in the UK, including young people who inject drugs and people who inject PIED. However, there remains limited evidence on the effectiveness or cost-effectiveness of NSPs for these groups.

	Public Health Wales and Public Health Agency Northern Ireland. It is targeted at those who inject psychoactive drugs. There is an additional biennial survey of people who inject image and performance enhancing drugs.	
<p>There is a lack of UK-based research on how best to target and tailor needle and syringe programmes to meet the needs of particular groups (such as young people who inject drugs, people who inject image- and performance-enhancing drugs and people who have recently started injecting drugs). For example, there is a lack of data on the effectiveness of using any of the following approaches with these groups: needle and syringe vending machines, specialist clinics, outreach or detached schemes.</p>		
No relevant evidence was identified.	No topic expert feedback was relevant to this area.	There remains limited evidence in this area.
<p>There is a lack of evidence on how people who inject drugs perceive needle and syringe programmes and what encourages or discourages them from using the services. This may be particularly true for occasional users and use of image- and performance-enhancing drugs.</p>		
No relevant evidence was identified.	No topic expert feedback was relevant to this area.	There remains limited evidence in this area.
<p>There is a lack of evidence on how to prevent people who are at high risk of injecting drugs (for example, those who smoke drugs) from moving from non-injecting to injecting drug use. This includes a lack of information about their needs and views.</p>		

No relevant evidence was identified.	No topic expert feedback was relevant to this area.	There remains limited evidence in this area.
<p>There is a lack of evidence about the effectiveness (or otherwise) of providing needle and syringe programmes to children and very young people who are injecting drugs. This includes a lack of evidence about their specific needs.</p>		
No relevant evidence was identified.	No topic expert feedback was relevant to this area.	There remains limited evidence in this area.
<p>There is a lack of evidence about the likelihood of children living with people who inject drugs becoming regular injectors themselves.</p>		
No relevant evidence was identified.	No topic expert feedback was relevant to this area.	There remains limited evidence in this area.
<p>There is a lack of UK-based research on how the carers and families of people (including young people) who inject drugs and people who inject image and performance enhancing drugs view needle and syringe programmes. This includes a lack of evidence on how to get them involved with the programmes.</p>		
No relevant evidence was identified.	No topic expert feedback was relevant to this area.	There remains limited evidence in this area.
<p>There is a lack of evidence about related behaviours that may occur among people who inject image and performance enhancing drugs, for example, poly-drug use or increased sexual activity.</p>		
No relevant evidence was identified.	Topic expert feedback highlighted the PHE report <a href="#">Shooting Up: infections among people who inject drugs in the UK</a>	There remains limited evidence in this area, but some data is available from PHE reports on related

	<p>The annual report describes trends in the extent of infections and associated risks and behaviours among people who inject drugs in the UK. The data from the 2016 report includes data on increased sexual activity among people who inject PIED.</p>	<p>sexual behaviour among people who inject PIED. Data on other related behaviours remain limited.</p>
<p><b>There is a lack of UK-based research on the effectiveness and cost-effectiveness of prison-based needle and syringe programmes.</b></p>		
<p><b>Prison needle exchange services</b>  A prospective cohort study(3) (n=267) examined drug injecting prevalence and practice during imprisonment and explored views on prison needle exchange. In total, 64 per cent of PWID were injecting until admission into prison. The majority intended to stop injecting in prison (93 per cent), almost a quarter due to the lack of needle exchange provision (23 per cent). Yet when hypothetically asked if they would continue injecting in prison if needle exchange was freely available, a third of participants (33 per cent) believed that they would. Injecting cessation happened on prison entry and appeared to be maintained during the sentence.</p>	<p>The PHE report <a href="#">Substance misuse treatment in secure settings: statistics 2016 to 2017</a> Reports data on</p> <ul style="list-style-type: none"> <li>● outcomes of alcohol and drug treatment services in secure settings in England</li> <li>● the profile of adults and young people accessing alcohol and drug treatment services in secure settings.</li> </ul> <p>The report and accompanying tables present statistical analysis of treatment data from 1 April 2016 to 31 March 2017. Treatment centres in prisons and secure settings across England submitted the data to PHE.</p> <p>This includes some data on injecting behaviour but there is a lack of data on NSP services in prisons.</p>	<p>The guideline committee identified a gap in UK-based research on the effectiveness and cost-effectiveness of prison-based needle and syringe programmes.</p> <p>Limited observational study evidence identified in the surveillance review reported that not providing sterile needles may increase risks associated with injecting for prisoners who continue to inject; however, providing such equipment potentially risked prolonging injecting for other prisoners who currently cease injecting on account of a lack of NSP provision. The evidence is unlikely to impact on the guideline until the findings are substantiated by further higher quality studies.</p> <p>There remains limited evidence in this area.</p>

There is a lack of UK-based research into the potential unintended consequences of needle and syringe programmes. For example, there is a lack of evidence on whether or not they encourage people to inject more frequently.

No relevant evidence was identified.

No topic expert feedback was relevant to this area.

There remains limited evidence in this area.

There is a lack of standardised outcome measures for needle and syringe programmes in relation to safe injecting practices and the incidence and prevalence of blood-borne viruses, overdoses and wound infections. In particular, there is a lack of information regarding young people who inject drugs and people who inject image and performance enhancing drugs.

No relevant evidence was identified.

No topic expert feedback was relevant to this area.

There remains limited evidence in this area.

There is a lack of evidence on whether drug users who are referred to opioid substitution therapy programmes from needle and syringe programmes continue to attend after the first meeting.

A systematic review and feasibility RCT(29) (n=99) aimed to develop and test a psychosocial intervention to reduce BBV risk behaviours and increase transmission knowledge among PWID. The intervention comprised a three-session, manualised, psychosocial, gender-specific group intervention delivered by trained facilitators and BBV transmission information booklet plus treatment as usual, compared to an information booklet plus treatment as usual alone. Feedback

No topic expert feedback was relevant to this area.

Evidence from a small feasibility RCT indicated that a low proportion of PWID attended more than one NSP intervention session, including psychosocial education. There remains limited evidence in this area.

<p>questionnaires, focus groups with participants who attended at least one intervention session and facilitators assessed the intervention's acceptability. Results indicated that the intervention was acceptable to both participants and facilitators. At 1 month post intervention, no increase in injecting in 'risky' sites (for example groin, neck) was reported by participants who attended at least one session. PWID who attended at least one session showed a trend towards greater reduction in injecting risk behaviours, a greater increase in withdrawal planning and were more confident about finding a vein. The statistical significance of these results was not reported in the abstract, and a full RCT was not considered feasible, because only 19% of participants attended all 3 intervention sessions.</p>		
<p>There is a lack of evidence on the effectiveness of peer interventions that aim to prevent risky injecting practices and encourage people to use needle and syringe programmes.</p>		
<p>No relevant evidence was identified.</p>	<p>No topic expert feedback was relevant to this area.</p>	<p>There remains limited evidence in this area.</p>
<p>There is a lack of evidence to determine whether secondary distribution increases risky injecting behaviour, and whether it increases or decreases the likelihood of people who inject coming into contact with a needle and syringe programme.</p>		
<p>No relevant evidence was identified.</p>	<p>No topic expert feedback was relevant to this area.</p>	<p>There remains limited evidence in this area.</p>

There is a lack of evidence on whether needle and syringe programmes encourage people to switch to safer injecting practices.

No relevant evidence was identified.

No topic expert feedback was relevant to this area.

There remains limited evidence in this area.

There is a lack of evidence about the impact that training needle and syringe programme staff can have on its effectiveness.

No relevant evidence was identified.

No topic expert feedback was relevant to this area.

There remains limited evidence in this area.

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