Drug misuse prevention: targeted interventions

Evidence review 2

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1 Introduction

The National Institute for Health and Care Excellence (NICE) was asked by the Department of Health in England to produce guidance on drug misuse prevention. This guidance will update a previous NICE guideline on interventions to prevent substance misuse (PH4) as set out in the review decision (2014).

The scope defines what this guideline will and will not cover. The guideline will focus on children, young people and adults who are

- most likely to start misusing drugs
- already experimenting with drugs or who misuse drugs occasionally.

As the guideline will focus on those either most likely to start using drugs or those already experimenting with drugs, 10 groups known to be at higher risk of drug misuse were identified. Specific at-risk groups were searched for to ensure the review reflected the scope and to ensure that the work was manageable in the time available. These at-risk groups are:

1. people who have mental health problems
2. people involved in commercial sex work or who are being sexually exploited
3. people who are lesbian, gay, bisexual or transgender
4. people not in employment, education or training (including children and young people who are excluded from school or are regular truants)
5. children and young people whose parents use drugs
6. looked after children and young people
7. children and young people who are in contact with young offender teams but not in secure environments (prisons and young offender institutions)
8. people who are considered homeless
9. people who attend nightclubs and festivals
10. people who are known to misuse drugs occasionally / recreationally.

The at-risk groups were identified from scoping searches, crime statistics, stakeholder comments and an initial sift of the evidence. The groups were identified from the text in the final scope, as shown in box 1.

Box 1. Identification of at risk groups

Groups 1 to 4 were identified to include groups of children, young people and adults who are

at risk of starting to use drugs. This includes those who:

- have mental health problems (group 1)
- are involved in commercial sex work or are being sexually exploited (group 2)
- are lesbian, gay, bisexual or transgender (group 3)
- are not in employment, education or training (including children and young people who are excluded from school or are regular truants) (group 4).

Groups 5 and 6 (children and young people whose parents use drugs; looked after children and young people) were identified to cover other groups of children and young people who are at risk of starting to use drugs.

Groups 7 and 8 (children and young people who are in contact with young offending teams but not in secure environments; people who are considered homeless) were identified to ensure consistency with the previous NICE guideline (Substance misuse interventions for vulnerable under 25s) and also reflected findings from scoping searches and stakeholder comments.

Group 9 (people who attend nightclubs and festivals) was identified to reflect settings included in the scope ('Social environments where drugs may be available such as nightclubs, pubs, festivals and music venues'), crime statistics and stakeholder comments.

Group 10 (people who are already experimenting or using drugs occasionally) was identified from an initial sift of the evidence that demonstrated that potentially relevant papers may not have been included without it.

It was considered whether black and minority ethnic (BME) groups in the UK should be included as a specific at-risk group. Based on stakeholder comments, crime statistics and initial scoping searches, it was decided that BME groups should not be included as a specific at-risk group, however, studies of BME groups would be included in the evidence review if the study focused on one of the at-risk groups (e.g. people from BME groups who have mental health problems).

To support the development of the guideline, NICE has undertaken 2 reviews of the best available evidence on drug misuse prevention. The first evidence review (evidence review 1) assesses the effectiveness of interventions aimed at the identified at-risk groups while this

second evidence review (evidence review 2) focuses on the acceptability of targeted interventions.

The key activities identified in the scope were:

- Group-based skills training or information provision using lessons, talks and activities (for example, targeted refusal skills training in schools and colleges).
- One-to-one skills training, information provision and advice given as part of planned outreach activities (for example, for young people at festivals).
- One-to-one skills training, advice and information provided using peer education initiatives (for example, with gay men in nightclubs).
- Opportunistic skills training, advice and information provision (for example, provided by youth workers).
- Using targeted print and new media (for example, magazines, websites, social media, text messages) for different groups at risk of drug misuse to influence social norms or enhance skills and provide information and advice.
- Family-based programmes providing structured support for children and young people at risk of drug misuse (including motivational interviewing for parents or carers and parental skills training).
- Group-based behaviour therapy for children and young people who are at risk of drug misuse (focusing on coping mechanisms, problem-solving and goal setting).
- Parental skills training for parents or carers of children who are at risk of drug misuse (focusing on stress management, communication skills, helping children develop problem-solving skills and setting behavioural targets).

2 Methods

This review was conducted according to the methods set out in Developing NICE guidelines: the manual (NICE 2014).

2.1 Review questions

Review question 2:

a. How acceptable are drug misuse prevention interventions that people currently receive?

b. What drug misuse prevention interventions and support do people feel might be more effective?

Evidence relating to the effectiveness of targeted interventions is presented in evidence review 1.

2.2 Searching, screening, data extraction and quality assessment

The review protocol in appendix 2B outlines the methods for the review, including the search protocols and methods for data extraction, quality assessment and synthesis.

2.2.1 Searching

A systematic, step-wise search of electronic databases and websites was conducted to identify relevant peer-reviewed and grey literature published from January 1995. Searches took place between June and October 2015. These searches sought to identify material for both evidence review 1 and evidence review 2.

In brief: an initial systematic review search was followed up by citation searching to identify primary evidence. Focused database, website and “named programme” searches were then used to address other potential gaps in the evidence. In particular the database searches at step 4 were targeted towards finding additional evidence for evidence review 2 (see appendix 2A). Citation searching of included studies was undertaken to identify further relevant material.

The reviewers also checked the reference lists of the evidence review undertaken during the development of PH4 and a subsequent evidence update.

The reviewers also considered references identified by members of the Public Health Advisory Committee (PHAC) as well as references provided by stakeholders via a call for evidence in August 2015.

Following the external review of evidence review 1 (see section 2.2.5 in evidence review 1), additional checks were made to the search strategies and they were found to be robust.

2.2.2 Screening

All references identified through the database and website searches were screened on title and abstract against the inclusion and exclusion criteria set out in the protocol. Key criteria include:

Inclusion criteria	Exclusion criteria
Language, settings and study type	
English language studies published in 1995 or later	
Studies conducted in Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, UK or the USA	Studies undertaken in workplaces or custodial settings
Controlled intervention studies (e.g. randomized controlled trials), observational before-and-after studies, or systematic reviews including such study types For systematic reviews: • Conduct a systematic search of at least 2 electronic databases • Screen identified references against pre-specified review question or inclusion/exclusion criteria • Conduct quality assessment of included studies • At least 80% of included studies to meet the other inclusion/exclusion criteria for this review	
Populations	
Studies of interventions which are targeted at 1 or more of the 10 groups of interest	Studies relating to pregnant women (covered in other NICE guidance, including NICE guidance on Pregnancy and complex social factors [CG110])
Interventions	
Studies describing interventions that prevent or	Studies relating to the treatment of drug

delay drug use, or that prevent escalation of drug use in terms of frequency, volume and diversification of drugs used	dependence or misuse or disorder Studies of interventions to promote safer injecting **or** preventing overdose **or** preventing relapse Studies of universal interventions or interventions which involve universal screening Interventions related to law enforcement or restricting the supply of drugs.
Outcomes	
Studies which report relevant outcomes (e.g. drug use, intention to use drugs, knowledge and awareness, and personal and social skills)	

All titles and abstracts were concurrently screened against the inclusion and exclusion criteria for both evidence review 1 and 2. A random sample of 10% of titles and abstracts was screened by 2 reviewers independently, with differences resolved by discussion. Inter-rater agreement across both evidence reviews at this stage was 91.3%. References identified as potentially relevant through title and abstract screening were then retrieved as full-text papers. In the case of studies where there was any uncertainty from the abstract if the study was relating to the treatment of drug dependence or misuse or disorder, the full text was ordered. All papers were then screened against the inclusion and exclusion criteria set out in the protocol.

Again, a random sample of 10% of papers was independently assessed by 2 reviewers; inter-rater agreement across both evidence reviews at this stage was 90.4%. Any differences in screening decisions were resolved by discussion with recourse to a third reviewer when necessary. All papers excluded based on the full-text are listed in appendix 2E along with the reasons for their exclusion.

2.2.3 Data extraction

Data from each study included in the review were extracted into evidence tables by 1 reviewer with all data then checked in detail by a second reviewer. Study authors were not contacted for missing outcome data because of the time available to complete this evidence review. Evidence tables for each included study can be found in appendix 1A.

2.2.4 Quality assessment

Each included study was quality assessed by 1 reviewer and then checked for accuracy by another reviewer. Any differences in quality grading were resolved by discussion. Qualitative

studies were appraised using the NICE public health qualitative methodology checklist and quantitative studies were assessed with the Effective Public Health Practice Project (EPHPP) quality assessment tool. Where available, data were also extracted from intervention studies identified for inclusion in evidence review 1. These studies had already been quality assessed using either the Cochrane Effective Practice and Organisation of Care Group (EPOC) risk of bias tool or the Effective Public Health Practice Project (EPHPP) quality assessment tool depending on their design. All tools are recommended in either Developing NICE guidelines: the manual (NICE 2014) or Methods for the development of NICE public health guidance (third edition) (NICE 2012); complete versions of these checklists are available in appendix 2C. Each study was assigned an overall quality rating as follows:

++ All or most of the checklist criteria have been fulfilled, and where they have not been fulfilled the conclusions are very unlikely to alter.

+ Some of the checklist criteria have been fulfilled, and where they have not been fulfilled, or are not adequately described, the conclusions are unlikely to alter.

- Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Evidence statements

Evidence statements were drafted in line with Developing NICE guidelines: the manual (NICE 2014). The statements will be used to link any recommendations to the evidence. Decisions for rating the strength of evidence within each evidence statement was a judgement made by the NICE technical team, based on the quality, quantity and consistency of the evidence.

All of the evidence statements from this evidence review, evidence review 1, the cost effectiveness review and the health economic modelling are presented in the paper Evidence statements from all reviews. The paper also includes overarching statements from evidence review 1 which summarise the evidence across the at-risk groups.

2.2.5 External expert review

An external review of evidence review 1 was undertaken by Professor Steve Pilling and colleagues at the National Collaborating Centre for Mental Health, University College, London in March 2016. External expert review is an optional part of the NICE process (see

NICE Manual section 10.1). A number of changes were made to evidence review 1 and evidence review 2 as a result of this process. These included:

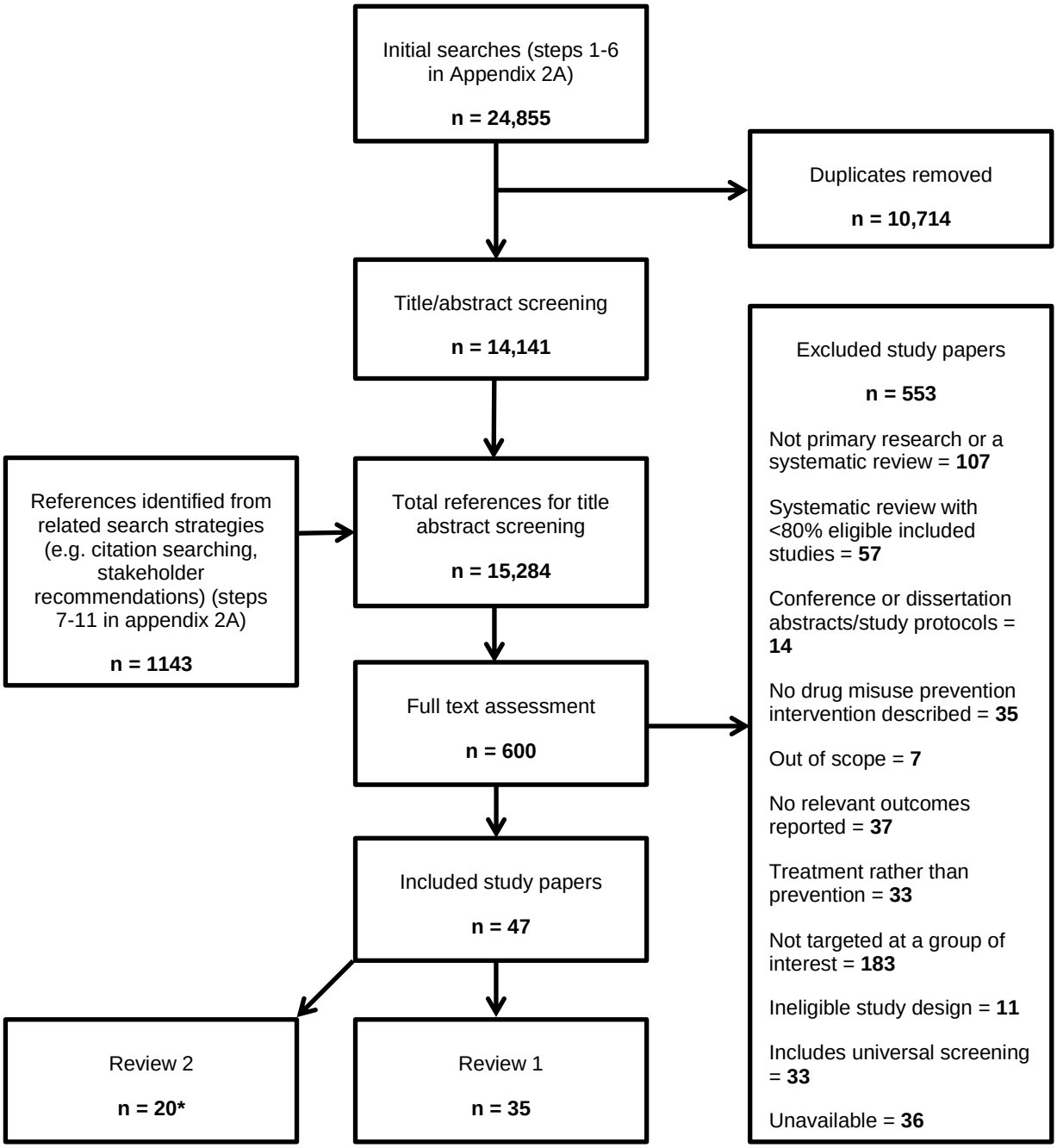
- Including more information on the search rationale, processes and supporting checks (see appendix 2A).
- Including more information on the selection of the at-risk groups (see section 1 Introduction).
- Including more information on synthesis decisions taken with the Public Health Advisory Committee (PHAC) (se section 3.2.1 Synthesis and presentation of results and appendix 3C).
- Appending supporting papers provided to the committee on the review inclusion criteria (see appendix 3A)
- Including the rationale for not undertaking meta-analysis (see appendix 3C to evidence review 1) and appending tables provided to PHAC to support synthesis and analysis of results (see appendix 3B).

3 Results

3.1 Flow of literature through the review

Database and website searching identified 24,855 references. A further 1143 references were identified through strategies such as citation searching and PHAC recommendations. Duplicates were removed leaving a total of 15,283 references to be screened on title and abstract. The full texts of 600 items were then requested for more detailed assessment. A total of 35 study papers reporting on 32 studies met the inclusion criteria for evidence review 1 and 20 studies are included in this second evidence review. Of these 20 studies, 12 are unique to evidence review 2 while 8 were also included for evidence review 1. The flow of literature through the reviews is summarised in figure 1.

Figure 1: Flow of literature through the review



**12 unique studies were identified for inclusion in evidence review 2 plus 8 study papers that were also included in review 1.*

3.2 Characteristics of the included studies

Twenty studies met the inclusion criteria for this evidence review. Most evidence was found for group 8 (people who are considered homeless; 4 studies), group 9 (people who attend

nightclubs and festivals; 4 studies), and group 10 (people who are known to use drugs occasionally/recreationally; 8 studies).

The review did not identify any eligible studies which evaluated the acceptability of interventions targeted at group 1 (people who have mental health problems), group 2 (commercial sex workers or those being sexually exploited), group 4 (people not in education, employment or training), and group 5 (children and young people whose parents use drugs).

Most of the studies that are unique to evidence review 2 used a qualitative design, with data collected primarily through focus groups and semi-structured interviews. Eight experimental studies from review 1 that evaluated the effectiveness of targeted interventions also reported participant satisfaction data and thus are included again in review 2. The overall quality of the included studies was mixed with 8 studies rated as moderate [+] in quality, 8 studies rated as weak [-] in quality and only 2 studies rated as high [++] in quality.

Two of the 20 studies included in this review were conducted in the UK with most evidence coming from the USA. The majority of studies were conducted among samples of children and young people. Seven studies focused on cannabis use (all of which were also included in review 1) and another 7 studies addressed the use of 'club drugs' such as ecstasy and other amphetamine-type stimulants. Six studies focused on the use of any drug.

The narrative findings reported in this review and associated evidence tables reflect the phrasing that is reported in the study papers. The final evidence statements use the terminology used in the UK. The included studies are summarised in table 1.

Table 1. Included studies and relevant population groups

Study	Relevant population group/s
Baer et al. (2007)	Group 8 (People who are considered homeless)
Braciszewski et al. (2014)	Group 6 (Looked after children and young people)
Branigan and Wellings (1999)	Group 9 (People who attend nightclubs and festivals)
Carlson et al. (2004)	Group 10 (People who are known to use drugs occasionally/recreationally)
Chinet et al. (2007)	Group 9 (People who attend nightclubs and festivals)
D'Amico et al. (2009)	Group 8 (People who are considered homeless)
Elliott et al. (2014)	Group 10 (People who are known to use drugs occasionally/recreationally)
Goldbach and Steiker (2011)	Group 3 (People who are lesbian, gay, bisexual or transgender)
Hudson et al. (2009)	Group 8 (People who are considered homeless)
Kurtz et al. (2013)	Group 9 (People who attend nightclubs and festivals)
Lynsky et al. (1999)	Group 7 (Children and young people who are in contact with young offender teams)
Nanin et al. (2006)	Group 3 (People who are lesbian, gay, bisexual or transgender)

Study	Relevant population group/s
Norberg et al. (2014)	Group 10 (People who are known to use drugs occasionally/recreationally)
Rudzinski et al. (2012)	Group 10 (People who are known to use drugs occasionally/recreationally)
Shrier et al. (2014)	Group 10 (People who are known to use drugs occasionally/recreationally)
Tait et al. (2015)	Group 10 (People who are known to use drugs occasionally/recreationally)
Walker et al. (2011)	Group 10 (People who are known to use drugs occasionally/recreationally)
Walton et al. (2013)	Group 10 (People who are known to use drugs occasionally/recreationally)
Wenzel et al. (2009)	Group 8 (People who are considered homeless)
Wood et al. (2010)	Group 9 (People who attend nightclubs and festivals)

Additional information on review inclusion and exclusion criteria is presented in appendix 3A. Studies that were excluded because they did not address one of the 10 identified at-risk groups focused on

- 'Delinquent' youth (not explicitly in contact with criminal justice system or not in education)
- Gang members (not explicitly in contact with criminal justice system)
- High school athletes
- Specific ethnic minority groups
- Specific genders, e.g. interventions for teenage girls, mother-daughter interventions.
- Universal school programs.

The committee and NICE technical team agreed that Screening, Brief Intervention, and Referral to Treatment (SBIRT) studies would not be included in the review. This is because untargeted screening is usually an inherent part of the SBIRT intervention and it would not be appropriate for the committee to make recommendations on interventions that are not targeted at people from at-risk groups.

Studies related to the treatment of drug dependence/misuse/disorder were excluded from the review as they are outside the scope of the guideline. The committee and NICE technical team agreed that studies that clearly described the treatment of drug use rather than prevention or harm reduction should be excluded from the review. For some studies it was difficult to determine whether the intervention was aiming to treat or prevent drug use. If it was difficult to determine from a study paper whether the intervention was aiming to treat or prevent drug use, the study paper was assessed by at least 2 reviewers and a consensus decision was made as to whether it should be included. If a consensus decision could not be reached, the study was assessed by a third reviewer.

The committee and NICE technical team agreed that people who are dependent on drugs are using them more frequently than occasionally or recreationally. Studies that explicitly reported including people dependent on drugs were therefore not included for group 10 (people who are known to use drugs occasionally or recreationally). The NICE technical team did not interpret drug dependency scores reported in the studies to identify whether dependent drug users were included, however, any studies that explicitly reported the inclusion of dependent users were excluded.

3.2.1 Synthesis and presentation of results

The review methods, approach and lists of included study papers were discussed with the committee at its first meeting (PHAC meeting 1) in November 2015. It was agreed at PHAC meeting 1 and confirmed at PHAC meeting 2 that the results should primarily be presented by at risk group. This was because the committee believed the at-risk groups to be very different from each other and it anticipated recommending different interventions for the different groups. The committee did recognise that the at-risk groups were not necessarily exclusive and some people may belong to more than one group, however, it did not consider it appropriate to combine risk groups due to the differences between groups. Additional analysis by activities listed in the scope was also included. The committee subsequently agreed at PHAC meeting 2 that evidence statements should be split by outcome (drug misuse; intention to use drugs; personal and social skills related to drug misuse; knowledge of drugs and their risks). This approach has resulted in a large number of evidence statements. When the evidence review was first presented to the committee, the committee noted that the nature of the available evidence made it difficult to synthesise.

3.3 Review question 2a: How acceptable are drug misuse prevention interventions that people currently receive? Review question 2b: What drug misuse prevention interventions and support do people feel might be more effective?

The study findings for these review questions are presented below by at-risk population. Separate evidence statements are presented to address sub-question 2a (the acceptability of interventions) and sub-question 2b (more effective interventions and support). This review refers to each intervention using the terminology used by the study authors. Further details of the methods and results reported in each study are presented in the evidence tables in appendix 1.

3.3.1 People who have mental health problems

No studies were identified.

Evidence Statement 1: Acceptability of interventions for preventing or reducing drug misuse in people with mental health problems

No relevant evidence was identified.

Evidence Statement 2: Views on more effective interventions for preventing or reducing drug misuse in people with mental health problems

No relevant evidence was identified.

3.3.2 People involved in commercial sex work or who are being sexually exploited

No studies were identified.

Evidence Statement 3: Acceptability of interventions for preventing or reducing drug misuse in people involved in commercial sex work or who are being sexually exploited

No relevant evidence was identified.

Evidence Statement 4: Views on more effective interventions for preventing or reducing drug misuse in people involved in commercial sex work or who are being sexually exploited

No relevant evidence was identified.

3.3.3 People who are lesbian, gay, bisexual or transgender

Two studies (Goldbach and Steiker 2011 [+]; Nanin et al. 2006 [-]) evaluated the acceptability of interventions for preventing or reducing drug misuse in people who are lesbian, gay, bisexual or transgender (LGBT). The studies included in the review for this group are summarised in table 2.

Table 2. Summary of included studies for people who are lesbian, gay, bisexual or transgender.

Study	Participants and country	Intervention/study parameters	Relevant outcomes	Quality
Goldbach and Steiker, 2011 Qualitative focus group study	8 young people attending a community drop-in centre for LGBT youth (USA)	Adaptation of an existing drug misuse prevention programme, *Keepin' it Real,* to make it more culturally relevant for LGBT youth	Perceptions of drug misuse prevention curriculum Suggested adaptations to drug misuse prevention curriculum	+
Nanin et al. 2006 Cross-sectional study	971 gay and bisexual men from areas around New York City (USA)	3 public health poster campaigns discouraging use of crystal methamphetamine among gay and bisexual men	Exposure to poster campaigns Reactions to poster campaigns	-

Goldbach and Steiker, 2011 [+] explored how a group of 8 LGBT-identifying young people aged 14 to 17 interpreted an existing drug prevention programme, *Keepin' It Real* (KiR), and then adapted the curriculum to make it more culturally relevant for their peer group. The KiR program teaches critical thinking skills, communication skills, conflict resolution and drug refusal skills. This study was part of a wider project to adapt KiR for use among specific populations including adolescents living in a low-income housing site and young people attending alternative high schools. A grounded theory approach was used to guide 2 focus groups plus sessions to adapt the KiR workbook. Thematic analyses of the focus groups and adaptation sessions identified several key themes.

<u>Gender neutrality</u>

Participants stressed the need for gender neutrality in the language used in the workbook and a conscious effort was made to avoid using gender-specific names and pronouns in their adaptations. It was important to participants that the KiR scenarios could be generalised to the spectrum of gender identity as well as sexual orientation.

Areas of commonality and difference

While participants acknowledged that LGBT youths may experience increased stresses compared to their heterosexual peers – and this may lead some to alcohol or drug use – they were keen to emphasise that many issues they faced were common to all young people. The authors detected that participants may be sensitive to differences between them and their straight counterparts, or to the perception that others believed that they were significantly different.

"I don't agree with the blanket statement that gay people have more problems. But that is typically a big thing [that people say]. *You have a lot of the problems that the straight community has, but you also have the problems that the straight community puts on you, like, what you are. It just creates more problems for you. I mean, you don't know what's going on with other people, they could have a lot more problems than you, but there's just a lot more frequent problems in the gay community. I mean, that's just why they would use more* [drugs], *they have continuous stress."*

Participants consequently identified content within the KiR curriculum that they felt did not require adaptation.

Preoccupation with sex

The authors observed that participants discussed sex and made references to sexual acts in their workbook adaptations much more frequently than other population groups who participated in a wider project to adapt KiR. The authors concluded that it was likely that these LGBT-identifying youth considered sex and sexual identity a core component to their life experience.

Preoccupation with the assumed lifestyle of adult gay and lesbian people

The authors noted participants' preoccupation with adult gay lifestyles and a perception that drug use (and other high risk behaviours) happen in adult gay situations. Adult substance use was often incorporated into the participants' adapted workbook scenarios, even when the scenario wasn't specifically related to substance use.

There are limitations to generalising this study's findings to the wider LGBT youth population as only 8 participants were involved in the study. As the youths were not required to disclose their sex or sexual orientation, it was not possible to make any comparisons between different subgroups; for example, gay males and lesbian females.

Nanin et al, 2006 [-] measured exposure and reactions to 3 public health advertising campaigns which sought to discourage use of crystal methamphetamine among gay and bisexual men in New York City. A cross-sectional sample of 971 gay and bisexual men were asked whether they had seen any of the 3 campaign slogans: "*Buy Crystal, Get HIV For Free"*; *"Crystal meth: nothing to be proud of"*; and *"Crystal: It's dangerous. Know the risks"*. Of the 61.8% of respondents who reported seeing any of the campaigns, 58.4% agreed with the statement that the advertisements made them think about not starting to use crystal methamphetamine or cutting down on their use. Subgroup analyses indicated that white men and HIV negative men were significantly more likely ($p<0.05$) to agree with this than their non-white and HIV positive counterparts. 75.9% of respondents indicated that they were glad someone was doing something about crystal methamphetamine use in the gay community. Again, white and HIV negative men were significantly more likely ($p<0.05$) to respond positively than non-white and HIV positive men. 38.7% of respondents agreed with a statement that the campaigns made them want to talk to their friends/partner about their use of crystal methamphetamine, although the phrasing of this question does not make it clear whether the advertisements would prompt discussions about the positive or negative aspects of the drug. Non-white men were significantly more likely ($p<0.05$) to agree with this statement than white men. 36.1% of the sample agreed that the campaigns made them want to get help to stop using crystal methamphetamine or avoid starting to use it. Agreement was significantly higher ($p<0.05$) among men who did not identify themselves as practising unprotected sex compared with those who did. There was some evidence that the campaigns may have had unintended consequences as 11.9% of respondents indicated that the advertisements made them want to start using crystal methamphetamine or use it more. These responses were significantly higher ($p<0.05$) among those reporting recent use of crystal methamphetamine with sex.

This study had a large sample size and a high response rate of 84.4%. However, subgroup comparisons should be interpreted with caution as the univariate analyses did not control for potential confounders. As all 3 campaigns were disseminated simultaneously, it was not possible to analyse respondents' reactions to each individual campaign.

Evidence Statement 5: Acceptability of public health advertising campaigns for preventing or reducing crystal methamphetamine misuse among men who identify as

gay or bisexual

There was weak evidence from 1 cross-sectional study[1] [-] that 75% of gay and bisexual men aged 18 and older who had seen anti-crystal methamphetamine advertising campaign (posters) were positive that that someone was doing something about the use of this drug in the gay community. 58.4% indicated that the campaigns made them think about not starting to use crystal methamphetamine or cutting down on their use, 38.7% agreed that the campaigns made them want to talk to their friends/partner about their use of crystal methamphetamine, and 36.1% reported that the campaigns made them want to get help to stop using crystal methamphetamine or avoid starting to use it. There was some evidence that the campaigns may have had unintended consequences as 11.9% of respondents indicated that the advertisements made them want to start using crystal methamphetamine or use it more.

Applicability: The evidence is only partially applicable to preventing or reducing drug use in the UK because this study was undertaken in the USA and specifically targeted the use of crystal methamphetamine. However, an intervention of this type may be feasible in a UK-based setting. The evidence is only partially applicable to people who are lesbian, gay, bisexual or transgender (LGBT) as the study described an intervention targeted specifically at gay and bisexual men.

[1] Nanin et al. (2006) [-]

Evidence Statement 6: Views on more effective interventions for preventing or reducing drug misuse in young people who identify as lesbian, gay, bisexual or transgender (LGBT)

There was moderate evidence from 1 qualitative focus group study[1] [+] that an existing skills-training prevention programme could be adapted to make it more acceptable for LGBT-identifying young people aged 14 to 17. Adaptation themes included the importance of gender neutrality, areas of difference and commonality with heterosexual peers, incorporation of topics of sex and sexual identity, and addressing an interest in perceived adult lifestyles.

Applicability: The evidence is only partially applicable to preventing or reducing drug use in the UK because this study was undertaken in the USA, however, an adapted intervention of this type may be feasible in a UK-based setting. It is unclear if the evidence is applicable to all people who identify as lesbian, gay, bisexual or transgender (LGBT) as the study only

included young people and participants did not report their sexual orientation.

[1] Goldbach and Steiker (2011) [+]

3.3.4 People not in employment, education or training (including children and young people who are excluded from school or are regular truants)

No studies were identified.

Evidence Statement 7: Acceptability of interventions for preventing or reducing drug misuse in people not in employment, education or training

No relevant evidence was identified.

Evidence Statement 8: Views on more effective interventions for preventing or reducing drug misuse in people not in employment, education or training

No relevant evidence was identified.

3.3.5 Children and young people whose parents use drugs

No studies were identified.

Evidence Statement 9: Acceptability of interventions for preventing or reducing drug misuse in children and young people whose parents use drugs

No relevant evidence was identified.

Evidence Statement 10: Views on more effective interventions for preventing or reducing drug misuse in children and young people whose parents use drugs

No relevant evidence was identified.

3.3.6 Looked after children and young people

One study (Braciszewski et al. 2014 [+]) evaluated the acceptability of interventions for preventing or reducing drug misuse in looked after children and young people. The study included in the review for this group is summarised in table 3.

Table 3. Summary of included studies for looked after children and young people.

Study	Participants and country	Intervention/study parameters	Relevant outcomes	Quality
Braciszewski et al. 2014 Qualitative focus group study	23 foster care staff, administrators and foster parents from an agency serving foster youth in a metropolitan area (USA)	Discussion of the feasibility and acceptability of 2 potential interventions adapted from programmes commonly used in non-foster care populations	Participants' views on the acceptability and feasibility of interventions Participants' suggestions for tailoring interventions to meet the needs of youth in foster care	+

Braciszewski et al. 2014 [+] conducted 3 individual focus groups with 23 foster care staff, administrators, and foster parents at an agency that served foster children in a metropolitan area in the Northeast USA. Participants gave feedback on the acceptability of 2 interventions adapted from approaches commonly used in non-foster care populations: brief motivational interviewing (MI) to be conducted by trained alumni of foster care, and screening, brief intervention, and referral to treatment (SBIRT) conducted by trained case managers or health care workers. Participants were also asked to design a hypothetical intervention using their own experiences of foster youth's needs and culture. Focus group transcripts were thematically analysed using a grounded theory approach with 3 key themes of trust, disclosure, and relevance identified:

Trust and connections

All 3 groups discussed concerns about the brevity of the proposed interventions as they believed that there would be insufficient time for foster youth to develop a relationship with the person delivering the intervention:

"…they're not going to trust who's ever talking to them, and I mean even like with professionals it takes a long time for a lot of these kids to really open up and really verbalize [sic] *what they're going through."*

Participants also expressed concern that abruptly ending an alliance between foster youth and the interventionist could be damaging as these youth often make significant attachments with mentor-type figures only for that person to quickly exit their lives:

"…the one thing, for certain, that they don't have, at this moment, is a grounded, permanent, adult connection. The idea of introducing them to somebody…And we know that…we're going to terminate that connection? That's…not where we want to go. We're thinking about kids who already have attachment issues…So, if our best case scenario is a connection will be made and we're going into it knowing that that connection will not be sustained, I guess that gives me pause to have concern about that…for this population of kids."

Disclosure: empathy and connections

Participants in all 3 groups discussed the high likelihood that foster youth would be unwilling to disclose alcohol or drug use, especially to a service provider or case manager. One potential reason might be a fear that the interventionists would lack understanding or empathy for their background:

"They're not going to say [anything] *because Dr Bob doesn't know where* [they've] *been, he only knows what* [their] *chart says…It's another person in a white coat telling* [them] *that* [they've] *got to stop doing drugs or stop drinking alcohol."*

Participants also recognised that foster youth may not disclose alcohol or drug use due to perceived or real consequences within the system:

"There's always going to be that fear that it will go to the social worker and everybody's going to know what they're doing and then, what they're going to have to deal with after."

Due to concerns about confidentiality and power relations, participants suggested that foster care staff should not act as the interventionist as this could create barriers to client honesty about substance use or other forbidden behaviour:

"…not specifically their case manager, because they wouldn't want to divulge that information that they're smoking that much…I think that it would just be all these thoughts in their head that they wouldn't really divulge the correct information."

Relevance and creativity

Participants agreed that interventions needed to be engaging, relevant and creative in order to affect substance use. Information about substance use or MI language could be helpful if the conversation wasn't forced or mandatory:

"Yeah, I think that's [engaging the youth in rethinking their substance use] *the best thing. You think they're not listening while they're texting or talking to their friend, but it stays in their head."*

One participant suggested that texting was a culturally preferred way to communicate with foster youth:

"…most kids want you to text them. They don't really want to talk to you face-to-face all the time…they want the help, but 'send me a text message'. You have to find some way that you're going to relate to them".

Staff felt that presenting foster children with population-level statistics about alcohol and drug use was generally ineffective but felt that this information could be very useful if tailored suitably:

"We do…go over all the statistics, although it would be a better impact if it was individually-based that included their risk."

The study's small sample size and limited sample representativeness (participants were exclusively female) restrict the extent to which its findings can be generalised. Furthermore, no foster youth were included in the focus groups so the findings may not reflect this group's own views on the acceptability of interventions targeted at them and their peers. The study's analytical methods were only briefly reported.

Evidence Statement 11: Acceptability of brief motivational interviewing and SBIRT interventions for preventing or reducing drug misuse in looked after children

There was moderate evidence from 1 qualitative focus group study[1] [+] among foster staff and parents that there may be barriers to foster children engaging with interventions that use a brief motivational interviewing or SBIRT (screening, brief intervention, and referral to treatment) approach to prevent or reduce drug misuse. Staff and parents were of the view that there may be insufficient time for foster children to form a relationship with the person delivering the intervention as well as negative consequences of abruptly ending that relationship once the intervention was complete. Staff and parents were also of the view that foster children may not disclose drug use to service managers or case workers due to their fear of potential consequences as well as a perceived lack of empathy and understanding on the part of the person delivering the intervention. The views of children in foster care were not considered in this study.

Applicability: The evidence is only partially applicable to the UK as this study was conducted in the USA, however, adapted interventions of this type may be feasible in UK-based settings.

[1] Braciszewski et al. (2014) [+]

Evidence Statement 12: Views on more effective interventions for preventing or reducing drug misuse in looked after children

There was moderate evidence from 1 qualitative focus group study[1] [+] among foster care staff and parents that adaptations could be made to brief motivational interviewing

approaches to prevent or reduce drug misuse to potentially make them more appropriate for foster children. The participants were of the view that interventions should be made engaging, relevant and creative in order to affect substance use among foster children. Participants proposed that foster care staff should not deliver interventions due to concerns about confidentiality and power relations. Participants were of the view that providing information about substance use could be helpful if it was tailored to the individual and discussions were not forced or mandatory. Text messaging was proposed as a culturally preferred way to communicate with foster children. Foster children's views were not considered in this study.

Applicability: The evidence is only partially applicable to the UK as this study was conducted in the USA, however, adapted interventions of this type may be feasible in UK-based settings.

[1] Braciszewski et al. (2014) [+]

3.3.7 Children and young people who are in contact with young offender teams but not in secure environments

One study (Lynsky et al. 1999 [-]) evaluated the acceptability of an intervention for preventing or reducing drug misuse in children and young people who are in contact with young offender teams but not in secure environments. This review question does not include studies of children and young people in prisons or young offender institutions. The study included in the review for this group is summarised in table 4.

Table 4. Summary of included studies for children and young people who are in contact with young offender teams but not in secure environments.

Study	Participants and country	Intervention/study parameters	Relevant outcomes	Quality
Lynsky et al. 1999 Uncontrolled before and after study (also included in review 1)	209 young people convicted of a civil or criminal offence related to alcohol or controlled substances (USA)	Skills training and information (Youth Alternative Sentencing Program)	Participants' perceptions of the intervention	-

Lynsky et al. 1999 [-] looked at the effectiveness and acceptability of the Youth Alternative Sentencing Program (YASP), an intervention for 209 young people aged 12 to 19 who were in the county juvenile court system and convicted of a civil or criminal offence related to alcohol or controlled substances. The YASP intervention consisted of visiting a morgue and trauma centre, and attending group workshops. The workshops used an Alcoholics Anonymous or Narcotics Anonymous approach and provided skills training in decision making, coping and goal setting. Participants also completed a reflective essay as part of the programme. Through the analysis of participants' evaluation forms, reflective essays and comments made during workshops, the study authors noted several themes:

Tone

The authors noted that participants thought the programme was going to involve adults 'lecturing' them and were surprised to learn that it did not:

"*…I figured it would be another meeting where some adults nagged at you for a few hours about how drugs and alcohol are bad for you. To my surprise, I realized* [sic] *that these people were really trying to help me. They weren't preaching, but explaining to me that I had choices, they weren't telling me not to drink, but telling me I had the choice whether or not I wanted to drink."*

Impact

Some participants indicated that the programme had changed their life:

"It's hard for me to say this, but I'm glad I got caught, it stopped me from getting to [sic] *involved in a life of drugs. I just hope I never have to see a loved one die because of their own abuse or someone else stupid enough to drink and drive. Doing drugs is definitely in my past and I'm concentrating on my future."*

Awareness of consequences

Participants made references to an increased awareness of the consequences of their actions. They realised that the dead and injured patients they encountered on the visit to the trauma centre or coroner's office could have been them or one of their loved ones:

"*I used to think I was invisible* [sic] *and that nothing could ever happen to me, but after this program* [sic] *my thoughts have changed. I realized* [sic] *anything is possible and anything could happen."*

It is not clear how many participants provided feedback about the intervention nor how the authors analysed their comments in order to identify themes. The authors state that their data collection tools were not fit for purpose.

Evidence Statement 13: Acceptability of an intervention combining group information sessions and skills training for preventing or reducing cannabis misuse in children and young people who are in contact with young offender teams but not in secure environments

There was weak evidence from 1 uncontrolled before and after study[1] [-] that young people aged 12 to 19 in the juvenile court system gave positive feedback about a group information and skills training intervention aimed at reducing cannabis use. Feedback themes included a greater awareness of the consequences of cannabis use, surprise that the intervention did not involve being lectured by adults and comments that the intervention had changed their life. The skills training focused on decision making skills and coping skills.

Applicability: The evidence is only partially applicable to preventing or reducing drug use in the UK because this study was undertaken in the USA and specifically targeted cannabis use. However, an intervention of this type may be feasible in a UK-based setting.

[1] Lynsky et al. (1999) [-]

Evidence Statement 14: Views on more effective interventions for preventing or reducing drug misuse in children and young people who are in contact with young offender teams but not in secure environments

No relevant evidence was identified.

3.3.8 People who are considered homeless

Four studies (Baer et al. 2007 [+]; D'Amico et al. 2009 [-]; Hudson et al. 2009 [+]; Wenzel et al. 2009 [-]) evaluated the acceptability of interventions for preventing or reducing drug misuse in people who are considered homeless. The studies included in the review for this group are summarised in table 5.

Table 5. Summary of included studies for people who are considered homeless.

Study	Participants and country	Intervention/study parameters	Relevant outcomes	Quality
Baer et al. 2007	127 young people with	Brief motivational intervention	Participant satisfaction	+

RCT (also included in review 1)	unstable housing (USA)			
D'Amico et al. 2009 Qualitative interviews and focus group study [linked to Wenzel et al. 2009 (see below)]	20 young women staying in homeless shelters plus 9 community experts/service providers (USA)	Participant feedback was used to develop a targeted intervention for preventing alcohol and other drug (AOD) use, HIV risk behaviours, and victimisation through intimate partner violence	Feedback about what would help young homeless women avoid using drugs Suggestions for content of the drug misuse component of a prevention intervention delivered in homeless shelters	**-**
Hudson et al. 2009 Qualitative focus group study	24 drug-using homeless young people (USA)	Focus groups were used to explore participants' perspectives on the power of drugs in their lives, the preferred types of drugs used, barriers to treatment, and strategies to prevent drug initiation and abuse	Feedback about ways to discourage homeless youth from initiating drug use Feedback about ways to encourage homeless youth to cease drug use	**+**
Wenzel et al. 2009 Qualitative focus group study [linked to D'Amico et al. 2009 (see above)]	31 young female residents of homeless shelters (USA)	Participant feedback was sought on a pilot intervention that aimed to prevent alcohol and other drug (AOD) use, HIV risk behaviours, and victimisation through intimate partner violence	Views about the intervention Suggested changes to the intervention Factors that would encourage other women to participate	**-**

Baer et al. 2007 [+] compared a brief motivational intervention (brief MI) with treatment as usual in 127 young people aged 13 to 19 (average age 17.9) with unstable housing who had had at least 1 binge drinking episode or 4 episodes of illicit drug use in the 30 days prior to starting the study. The study authors defined 'stability' as living in one place for the prior 30 days with the anticipation of being housed there in the following 30 days. The brief MI group received up to 4 sessions within 4 weeks. The sessions included information about patterns and risk related to substance use, which was provided as personalised feedback. Participants could choose topics that they wished to discuss, including drug use frequency, perceived norms for substance abuse, consequences related to substance abuse (such as getting into fights, neglecting responsibilities, missing a day of work or school), symptoms of substance dependence, personal goals, motivation for change, and social influences. Counsellors aimed to be non-confrontational and only provided advice about risk reduction

with participants' permission. No further details were given for what the treatment as usual group received. The authors reported that the young people allocated to the brief MI group evaluated the intervention positively. On a scale of 1 to 5 (1=not at all to 5=completely), participants indicated that their counsellor understood them (mean 4.5, SD=0.58) and was very supportive of them (mean 4.6, SD=0.3). Most participants said that they would recommend the session to a friend (mean 4.4, SD=0.89). Although 66 people were allocated to the brief MI group, it is not clear how many provided satisfaction data. Study power was not reported and it is not clear if the allocation sequence was randomly generated.

D'Amico et al. 2009 [-] sought to develop a targeted intervention for homeless young women that would target the use of alcohol and other drugs (AOD) as well as the prevention of HIV risk behaviours and victimisation through intimate partner violence. To develop content for the programme, researchers conducted semi-structured interviews with 20 young women aged 18 to 25 who were staying in a sample of 9 homeless shelters. They also conducted focus groups with 9 'community experts' who were recruited based on their work in shelter settings or other work for the benefit of homeless women. The interviews with homeless women aimed to elicit their views on alcohol and other drug (AOD) use and support that may help them and their peers to avoid using AOD. The focus groups were used to gather feedback from providers about the kinds of prevention activities that may help reduce AOD use by homeless young women. The analysis of the homeless women's responses identified several themes relating to the prevention of drug misuse:

<u>What would help young homeless women to avoid using AOD</u>

Participants gave suggestions about sources of both formal and informal support that may be helpful including role models, mentors and counselling as well as support from family where available. Participants also indicated that young women's values may be an important factor in helping them to avoid AOD use:

"You see these people, and it's like, I don't want to turn out that way, ever."

"If I didn't have my baby, I'd still be doing whatever I was doing before I had her."

Analysis of the focus group participants' responses identified the following themes for consideration by developers of the intervention:

<u>Many young women see these problems as normative</u>

"AOD use, violence and sexual risk-taking seem normal; so talking about how this is NOT normal would be helpful"

<u>You need to empower young women so they will learn</u>

Respondents indicated that women should be given resources and taught how to use services:

"What would help them is allow them to set their own goals."

Use a harm reduction approach

Participants felt that it would be helpful to present options for women to choose from:

"We can't expect them to stop on the spot, but can start the process."

"Permission goes a long way…people are capable of making the right decisions if they feel that they have it [permission]*."*

Cognitive behavioural techniques were also suggested as a specific thing that a prevention programme in a shelter might use to reduce AOD use.

The facilitator needs to be non-judgemental – the issues transcend cultures

"You have got to do something else, something non-confrontational; use a non value-laden approach; don't point a finger at them."

"You just have to create an environment that makes it safe for them to share."

Barrier to women's successful transition to adulthood

Barriers noted by participants included a lack of housing and health care, poor decision-making skills, and attention to personal safety. Low self-worth and working to survive day-by-day were emphasised as contextual factors that may make it harder for homeless women to mature emotionally and negotiate service systems.

A successful transition to adulthood

A successful transition should be benchmarked differently for non-homeless women with help given to assist them make better decisions and care for themselves:

"They need to know it's not just their case manager caring for them, they have to care about themselves."

The authors concluded that findings from the interviews and focus groups supported the value of an intervention that used a non-confrontational and non-judgemental method when presenting information, especially when challenging normative beliefs; using motivational interviewing techniques in discussing sensitive issues including AOD use; and providing women with knowledge and conducting skills training. The response rate was not reported and the study authors provided limited information on the characteristics of the focus group participants. It is not clear how data collected during the focus groups and interviews were analysed in order to identify the themes reported above.

Wenzel et al. 2009 [-] piloted an intervention that was developed through the research conducted by D'Amico et al (2009; described above). The intervention called 'The Power of YOU' was presented to focus groups of 31 homeless young women aged 18 to 25 (mean 21.3, SD=2.2) in order to seek their feedback on the programme's content and delivery. Two out of 7 focus groups tested participants' reactions to the alcohol and other drug (AOD) use component of the intervention. The precise number of women attending these 2 groups was not reported; however, the authors state that between 3 and 7 women tested each programme component. The 2 AOD sessions comprised an introduction to the material; provision of graphic normative feedback on AOD use and discussions about why women may overestimate their peers' substance use; discussion of reasons why people may engage in AOD use, as well as triggers and learning how to avoid triggers; role plays to help participants practice skills (no further details provided); and finally a discussion of resources in the community. Participants were also provided with a colour brochure containing information from the session that they could keep and use as a resource in future. The focus groups were immediately followed by 20-30 minute feedback sessions in which participants discussed their views about the intervention. They then completed a self-administered questionnaire which measured their satisfaction with the programme as well as their recall of key information presented during the session. Content analysis of the feedback sessions identified the following themes:

What participants liked about the AOD discussion group and made them feel comfortable

The authors reported that women found the normative information helpful (*"Made me aware of how many people out of 100 use and how many don't"*) and that the discussion of internal and external triggers helped participants identify high-risk situations in which they might be more likely to use alcohol or drugs. The authors indicated that women enjoyed the moderators' role playing of how to handle high-risk situations as well as sharing their own role-play examples. Participants also indicated that they liked the session moderators (*"The way they worked, attitudes, made us feel comfortable"*), the brochure, and the assurances of confidentiality (*"Like the way what we say won't be spread around"*).

What participants didn't like about the AOD discussion group

Many women expressed initial doubts and raised questions about the normative information presented during the sessions (*"I thought the stats were pretty low from what I was expecting, especially with the drug use"*). For example, some women expressed the belief that every homeless woman uses alcohol and drugs. Although many participants thought the proportions of women using AOD were not as "low" as was stated during the sessions, after discussion with the moderators about how their immediate environment and the influence of

their peers might shape their perceptions, they agreed that their original estimates (e.g. 90-99%) were too high.

Participants' suggestions for adaptations and additional materials

Following participant feedback, the moderators demonstrated a role play first in order to model how women might handle a challenging situation and thus increase participants' comfort levels when performing their own role play scenarios. The authors report that many participants asked for discussions about the specific challenges of being homeless (*"Being in the streets is not a comfort zone")* and resources for obtaining housing. The authors therefore developed a housing resource guide that complemented the brochure and the information presented during the sessions.

The authors reported that overall feedback about the intervention content and the brochure was positive. Satisfaction scores from the self-administered questionnaires ranged from 3.9 to 5.0 (1=completely disagree to 5=completely agree) indicating participants' agreement with statements that the discussions and group leaders were helpful, the information was useful and understandable, and the style and length of the discussions were appropriate. Precise data were not reported. The authors reported that participants did not feel judged and they appreciated having an opportunity to discuss the issues covered by the programme. Consistent with the authors' expectation that the MI approach would be well received, respondents indicated that moderators made them feel comfortable so they wanted to participate. Participants in all 3 sessions (AOD, HIV risk behaviour and intimate partner violence) indicated that the intervention would be valuable for their friends; they reported that the welcoming nature of the programme and the importance of the topics would be sufficient to encourage other young women to participate.

Participants in this study self-selected; the observed levels of engagement and positive feedback may have been lower in a more systematic, random sample. Most of the evaluative comments were collected via face-to-face feedback sessions with a moderator so there is a possibility that participants may have given more favourable feedback than via the anonymous self-administered questionnaire. However, the findings from the self-administered questionnaire are only briefly described. The authors also note that the intervention does not include a focus on lesbian and bisexual women who are disproportionately represented among homeless youth.

Hudson et al. 2009 [+] conducted focus groups with 24 drug-using homeless young people aged 17 to 25 to explore their perspectives on the power of drugs in their lives and strategies to prevent drug initiation and abuse. A semi-structured interview guide was used to capture

participants' views on substance use as well as ways to engage homeless youth in creative activities such as animation, development of videos, drawing, and poetry. Constant comparative methodology was used to guide the analysis of participants' responses with several key themes identified:

Ways to discourage youth from initiating drug use

Participants suggested that young people should be engaged in a range of activities to discourage them from becoming interested in drugs:

"If you can get them to concentrate…If you're busy, there's no time to do drugs"

Others thought that support in dealing with employment was important; 1 participant thought that a temporary service (not described any further) would be important while another participant stated that the creation of jobs would help young people living on the streets.

One participant suggested that activities such as sport could be a way to assist homeless young people in 'handling their situations'. Another suggested that allowing young people to hang out somewhere and giving them something to do would be a good thing. Another suggested playing in a band.

An area that received a lot of attention was the use of art, music, or film to create messages that might dissuade young people from becoming interested in starting drug use. For several participants, personally reaching out to their peers was considered important:

"Have them interview us…bring them to us…let us talk to them and let them know what drugs can do to them."

One participant commented that an even more powerful approach would be to show 'future youth' what life was like by means of films or documentaries:

"Take them down to Skid Row [an area of Los Angeles with a large homeless population] *and tell them everything that happens out there, let them see it for themselves…once they see it, that will…ring…in their head.*

Ways to get youth to stop using drugs

Participants said a variety of factors, including their family, decreasing interest, and realisation of their problem, could contribute to young people reducing their drug use. For several participants, there were special circumstances that enabled them to 'clear drugs from their lives', even if temporarily:

"*…I am doing this because of my baby…with my daughter. I didn't care about anything…this time I wanted to do it myself…I sobered up on my own…change comes from the person."*

Other participants commented that there were conditions that were critical for programmes to be successful. For example, youth should be responsible for making the decision to seek help:

"If I want to change, it got to be me. I'm not going to let someone else make the decisions. I got to make it for myself."

"Don't force yourself to do a program [sic] *if you know it is not going to work…some places help, but you have to want the help. If they can come to you and talk about their problems, that is the first step…admit they are in a situation that they need help to get out of it…"*

Participants felt that facilities that created a 'home base' with various activities could be useful in aiding the reduction of drug use:

"You really need to have a place where youth can go and feel like hey, this is home for me here."

Some participants felt that constructing a trusting environment free of regulations and full of likeminded individuals could stop them and their peers from using drugs and alcohol:

"Furthermore, there should not be rules for when youth needed to return at night and make sure programs [sic] *for their needs."*

The authors stated that the generalisability of their findings was limited by their convenience sample drawn from a single geographic location. Questions from the semi-structured interview guide were not reported so it is not clear how participants' responses were prompted.

Evidence Statement 15: Acceptability of a brief motivational intervention to prevent or reduce drug misuse among young people who are considered homeless

There was moderate evidence from 1 RCT[1] [+] that a brief motivational interviewing (MI) intervention was acceptable to young people aged 13 to 19 who were defined as unstably housed. Participants randomised to the intervention group received up to 4 sessions of MI that covered self-selected topics such as drug use frequency, perceived norms for substance abuse, consequences related to substance abuse, symptoms of substance dependence, personal goals, motivation for change, and social influences. On a scale of 1 to 5 (1=not at all to 5=completely), participants indicated that their counsellor understood them (mean=4.5, SD=0.58) and was very supportive of them (mean=4.6, SD=0.3). Most participants said they would recommend the session to a friend (mean=4.4, SD=0.89).

Applicability: This evidence is only partially applicable to the UK as the study was conducted

in the USA although an intervention of this type may be feasible in a UK-based setting. There are limitations to generalising the study's findings to all homeless people as the study sample was restricted to young people aged 13 to 19.

[1] Baer et al. (2007) [+]

Evidence Statement 16: Acceptability of a skills training intervention to prevent or reduce alcohol and other drug (AOD) misuse among young women who are considered homeless

There was weak evidence from 1 qualitative study[1] [-] that a skills training intervention was enjoyable and generally positively received among a sample of homeless young women aged 18 to 25, with satisfaction scores ranging from 3.9 to 5.0. Participants found the provision of normative information and discussion of triggers helpful. The participants liked the session moderators, brochures and assurances of confidentiality. Details of the skills training was not provided.

Applicability: This evidence is only partially applicable to the UK as the study was conducted in the USA although an intervention of this type may be feasible in a UK-based setting. There are limitations to generalising the study findings to all homeless people as the study sample was restricted to young women aged 18 to 25.

[1] Wenzel et al. (2009) [-]

Evidence Statement 17: Views on more effective interventions for preventing drug misuse among young women who are considered homeless

There was weak evidence from 1 qualitative focus group study[1] [-] and 1 qualitative focus group and interview study[2] [-] that participants felt the following adaptations to an existing skills training intervention could improve the intervention for young women who are considered homeless: providing resources, for example, on housing[1,2]; formal and informal support from role models, mentors, counsellors, and family[2]; providing normative data on drug use[2]; using a harm reduction approach based on cognitive behavioural techniques[1]; using a non-judgemental facilitator[1]; supporting women to make better decisions and taking care of themselves[1]. Details of the skills to be covered in the training were not reported.

Applicability: This evidence is only partially applicable to the UK as both studies were conducted in the USA although an intervention of this type may be feasible in a UK-based setting. There are limitations to generalising the studies' findings to all homeless people as the study samples were restricted to young women aged 17 to 25.

[1] Wenzel et al. (2009) [-]

[2] D'Amico et al. (2009) [-]

Evidence Statement 18: Views on more effective interventions for preventing the initiation of drug misuse in young people who are considered homeless

There was moderate evidence from 1 qualitative focus group study[1] [+] that 24 drug-using homeless young people aged 17 to 25 suggested a range of ways to discourage youth from initiating drug use. These included supporting youth with employment as well as engaging them in activities such as sport and using art, music or film to create messages that might dissuade young people from becoming interested in initiating drugs. Participants also indicated that exposing young people to the realities of drug misuse (for example, by arranging for them to speak to homeless drug-users) would be a powerful approach to preventing drug initiation.

Applicability: This evidence is only partially applicable to the UK as the study was conducted in the USA. There are limitations to generalising these studies' findings to all homeless people as the study sample was restricted to young people aged 17 to 25.

[1] Hudson et al. (2009) [+]

Evidence Statement 19: Views on more effective interventions for reducing drug misuse in young people who are considered homeless

There was moderate evidence from 1 qualitative focus group study[1] [+] that 24 drug-using homeless young people aged 17 to 25 indicated a number of elements that should be incorporated into strategies to reduce drug misuse. Participants indicated that young people themselves should be responsible for making the decision to seek help and that creating a home base with various activities could be useful in aiding the reduction of drug misuse. Participants felt that constructing a trusting environment free of regulations and full of likeminded individuals could stop them and their peers from using drugs.

Applicability: This evidence is only partially applicable to the UK as the study was conducted in the USA. There are limitations to generalising these studies' findings to all homeless people as the study sample was restricted to young people aged 17 to 25.

[1] Hudson et al. (2009) [+]

3.3.9 People who attend nightclubs and festivals

Four studies (Branigan and Wellings, 1999 [-]; Chinet et al. 2007 [-]; Kurtz et al. 2013 [-]; Wood et al. 2010 [-]) evaluated the acceptability of interventions for preventing or reducing drug misuse in people who attend nightclubs and festivals. The specific types of venues and events attended by study participants (for example, raves) are described in the narrative below. The studies included in the review for this group are summarised in table 6.

Table 6. Summary of included studies for people who attend nightclubs and festivals.

Study	Participants and country	Intervention/study parameters	Relevant outcomes	Quality
Branigan and Wellings 1999 Mixed methods study (cross-sectional surveys + qualitative interviews)	196 people who attended nightclub and dance events (UK)	The London Dance Safety campaign, an intervention involving information dissemination to address recreational drug use in dance music venues	Acceptability of the campaign materials	-
Chinet et al. 2007 Cross-sectional study	302 people who attended dance music events (Switzerland)	A sample of dance music event attendees were surveyed on their attitudes toward prevention of substance use and harm reduction measures	Opinions of the need for prevention and harm reduction measures	-
Kurtz et al. 2013 Mixed methods study (longitudinal 'natural history' study + qualitative focus groups)	28 young people who were multidrug users from the 'club scene' (USA)	Focus groups were conducted to explore changing patterns of substance use observed over the course of the parent 'natural history' study	Reasons for changes in drug use and other health/social indices over course of the study Experiences of study participation	-
Wood et al. 2010 Mixed methods study	149 people, implied to be recreational drug users who attend nightclubs (UK)	Drug Idle, an outreach concept to educate recreational drug users and their friends on the potential for toxicity from recreational drugs	Participant feedback and suggestions for adaptations of the concept	-

Branigan and Wellings, 1999 [-] explored the acceptability of the harm minimisation approach used in the London Dance Safety campaign, an intervention to disseminate information via posters and booklets to address recreational drug use in the city's 'dance venues'. Ten thousand posters were displayed across the London public transport network while 150,000 'Vital Information Pack' (VIP) booklets were distributed in city nightclubs within a 3 month period. The authors state that the selected nightclubs were representative of

'different music and style genres of London in 1997.'Rather than containing strict admonitions to avoid drug use, the posters and booklets aimed to provide dance club attendees with accurate information to allow them to make informed choices and minimise the risk associated with drug use in clubs. In post-campaign surveys of 178 club-goers (age range not reported), a high proportion of respondents indicated that they liked the poster designs and approach, thought the campaign approach was a good idea, and would keep the VIP. The authors reported that survey findings were supported by views expressed in qualitative interviews with 18 regular club-goers; overall, opinions about the campaign philosophy were described as positive and this seemed to be attributable to its realistic tone and honest, non-judgemental style:

"*I think it's a brilliant idea. I think it's the first time that any drug campaign has the right thrust. Rather than telling people not to take drugs, it's accepting that they do, tells them how to do it properly and tells them how to help their mates out, and not be stupid about it and not die."*

The authors report that some concerns were raised about the mass media approaches used during the campaign, reflecting a belief that those outside the target audience might find the campaign materials offensive:

"*It's gotta be something that's targeted at a much more specific audience, which either is going to come into contact with it* [drugs] *or has come into contact with it* [drugs], *rather than a mass audience where people aren't informed and might be shocked by it* [poster]."

It is not clear how participants were sampled and selected nor what the response rate was. Participant characteristics were not reported nor were methods for collecting and analysing the qualitative interview data.

Chinet et al. 2007 [-] surveyed 302 people aged 16 to 46 attending 6 dance music events in a French-speaking region of Switzerland to assess their attitudes towards the prevention of substance use and harm reduction measures. The authors report that the 6 events included various examples of the dance music scene and included clubs and open-air raves that played 'both pure dance music and mixed styles.' Respondents seemed to be particularly receptive to harm reduction measures such as the presence of emergency staff and free water on site at dance music events. On a scale of 0 to 3 (0=not at all important; 3=very important), the mean score for the importance of emergency staff presence was over 2.5, the mean score for the availability of free water was over approximately 2.3, and the mean score for the provision of information was over 2.0. The importance of providing access to counselling appeared slightly less important. Precise means were not reported. When party drug users (n=146; party drugs not defined) were asked about their intention to use pill testing if it were available, 27.4% indicated that they would never use it, 31.1% said they

would use it systematically before taking a pill, and 41.6% reported that they would not use it unless they did not know the substance, the dealer or both. Participants' perceptions of prevention measures varied according to their level of drug use. For example, those defined as 'poly-regular users' (daily users of multiple drugs) felt it more important to have free water available than those who only used alcohol and cannabis or those who were 'poly-occasional light users' (using up to 3 party drugs a maximum of once weekly) ($F=6.27$, $p<0.001$). 'Poly-regular users' and 'poly-occasional heavy users' (defined by having used more than 3 party drugs or having used drugs more frequently) considered it more important to have the opportunity to talk to someone at a prevention stand compared to 'poly-occasional light users' or those who only used alcohol and cannabis ($F=7.91$; $p<0.001$).

The survey response rate was high (85-100% of individuals arriving at events completed the survey upon entrance) and the sample was likely to be representative of dance music event attendees in that area. Items on the data collection survey were not comprehensively reported so it is not clear exactly what was meant by prevention measures such as 'information' and 'counselling'. It is not clear which statistical methods were used to compare responses between different subgroups of drug-users.

Kurtz et al. 2013 [-] conducted a natural history study with a sample of 444 regular attendees of 'large recognised nightclubs' aged 18 to 29 who were defined as regular poly-users of club and prescription drugs. Participants completed a standardised demographic, behavioural, health history and social risk assessment (approximately 2 hours) at baseline followed by 1 hour assessments at 6, 12 and 18 months post-baseline. Despite the absence of a formal intervention to prevent or reduce drug use among participants, large effect sizes were observed for reductions in club and prescription drug use over 18 months. The authors used qualitative focus group methods to investigate whether study participation itself – particularly the detailed assessments – were a factor in bringing about the changes in behaviour observed throughout the course of the natural history study. A sample of 28 individuals were selected from the cohort of participants who had completed the 18 month follow-up assessment. Eight focus groups (approximately 1 hour long) were held to explore the benefits and drawbacks of participation in the club scene, motivations for study enrolment, experiences of study participation, and reasons for any changes in drug use or other behaviours over the course of the study. A constructivist-oriented grounded theory approach was used to identify several key themes:

<u>Initial motivation</u>

Participants 'almost universally' reported that they had not been contemplating behaviour change at study enrolment. Initial motivators for participation included the monetary incentives, an interest in research, or curiosity. Some stated that they would have been unlikely to participate in the study had it been framed as an intervention, largely because they were unaware of their problematic drug use at the point of study entry.

Assessment as a tool for self-reflection

Nearly 70% of participants indicated that participating in the assessments prompted self-reflection on their level of drug use and the act of calculating and expressing answers to the survey items "turned on a light" for them. The growing self-awareness tended to be focused in 2 key areas: recognition of the amount of drug use that a participant was engaging in over time, and making connections between drug use and health or social problems.

"When you start getting numbers down, like 'I've done this many pills', and then after you start thinking like how much money you've spent, and like in the end…'I've gotten into pretty big trouble'"

Insight into drug-related problems

Several participants mentioned that the tool provided them with insights into specific health and social problems and their associations with drug use. It was these insights that acted as a motivation to change. Examples included family and relationship problems, employment and school responsibilities, legal issues, money issues, and the lack of supportive social networks. Many expressed a general dissatisfaction with the "superficial" relationships they were able to form within the club scene, and reported general feelings of isolation and lack of communications with others.

Behaviour change as an individual decision

Behaviour change was described repeatedly as an individual decision with participants generally agreeing that each person needs to come to the conclusion about change for themselves. Many expressed a need to "figure it out on my own", and explicitly objected to self-help groups, feeling that this approach would not work for them.

The authors concluded that there was evidence that the assessments played a key role in reducing risky behaviours over the course of the original study. They reported that the intervention-type effects of the assessments were attributed by participants to the friendly, non-judgemental field staff of same-age peers; the thorough and detailed assessments; and

an emerging self-awareness of problems related to substance use based on their responses to assessment items.

The authors acknowledge that their sample may not have been representative of a wider population of club-goers because the study eligibility criteria required regular, recent use of both club and prescription drugs. While data from the focus groups indicate that changes in drug use may be attributable to the assessments used in the natural history study, the original study lacked a control group and thus the effects of the assessments cannot be robustly evaluated.

Wood et al. 2010 [-] developed Drug Idle, an educational outreach event to educate recreational drug users and their friends about the risks of toxicity from recreational drugs and how to manage someone who becomes unwell after taking drugs. One hundred and forty-nine people (age range not reported) attended 3 Drug Idle events during which time the concept was developed and adapted in response to participant feedback. Participant characteristics were not reported but it is implied that attendees were recreational drug users who attend nightclubs or other late night venues. The initial event comprised 3 distinct sessions: firstly, an interactive quiz in which 4 volunteers selected from the audience answered questions on a range of topics including common symptoms of recreational drug toxicity and complications of 'poly' drug use; secondly, a choice of 3 parallel 'breakout' workshops which allowed participants to interact directly with a panel of experts including toxicologists and law enforcement representatives; and finally, a session in which the audience could ask the expert panel any questions related to recreational drugs. Feedback from the first event indicated that participants did not like the format of selecting audience volunteers for the interactive quiz; this section was therefore adapted for subsequent events so that questions were put to the whole audience by the host. Following the first 2 events, it was decided that only 1 of the breakout workshops was required: this session was called 'How to manage an unwell individual' which focused on demonstrating and practising the recovery position as well as advice about when to call for help. The finalised concept therefore consisted of the revised interactive quiz, the 'How to manage an unwell individual' workshop, and an 'Ask the panel anything' question and answer session. Of the 85 participants who answered an item relating to the overall evaluation of the Drug Idle concept, 100% felt the event was useful. 96.0% (n=72) felt the duration of the event was appropriate, 2.7% (n=2) felt that it was too long, and 1.3% (n=1) felt that it was too short. 98.8% (n=85) reported that they would recommend future events to friends, while 1.2% (n=1) respondent indicated that they would not recommend it to friends because it would potentially identify them as a recreational drug user. 100% of the 81 attendees who responded to the item about

the interactive quiz felt that the quiz questions were appropriate. 98.2% (n=56) felt comfortable asking questions during the 'Ask the panel anything' session.

Response rates across the 3 events were 59.0%, 42.9% and 79.1% respectively. Not all participants answered all of the survey items. Sampling and recruitment methods are not reported nor are participant characteristics; it is therefore difficult to assess how representative the sample were of a wider population of nightclub-goers who use recreational drugs.

Evidence Statement 20: Acceptability of a harm minimisation approach used in a mass media campaign to address recreational drug misuse among dance music nightclub attendees

There was weak evidence from 1 mixed methods study[1] [-] that the harm minimisation approach used in a mass media campaign (including posters and information booklets) was acceptable to an audience of people who attend dance music nightclubs (age of participants not reported). A high proportion of participants indicated that they liked the design of the campaign materials and were engaged by the realistic, non-judgemental approach. Participants expressed some concern that those outside the target audience may find the campaign content offensive and that targeting specific audiences would be required to avoid this

Applicability: While this study was conducted in the UK, it is difficult to assess its applicability to all people who attend nightclubs as the sample characteristics are not reported. It is not clear whether the evidence is applicable to people who attend festivals as well as those who attend dance music nightclubs.

[1] Branigan and Wellings (1999) [-]

Evidence Statement 21: Acceptability of prevention and harm reduction measures at dance music events among people misusing drugs at such events

There was weak evidence from 1 cross-sectional study[1] [-] that people aged 16 to 46 attending dance music events including clubs and open-air raves were particularly receptive to harm reduction measures such as the presence of emergency staff and free water on site at such events. The importance of providing access to counselling appeared slightly less important. When party drug users were asked about their intention to use pill testing if it were available, 27.4% indicated that they would never use it, 31.1% said they would use it systematically before taking a pill, and 41.6% reported that they would not use it unless they

did not know the substance, the dealer or both. Participants' perceptions of prevention measures varied according to their level of drug use.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in Switzerland, however it is feasible that similar types of prevention and harm reduction measures could be implemented in a UK-based setting. It is not clear whether the evidence is applicable to people who attend festivals as well as those who attend dance music events such as clubs and open-air raves.

[1] Chinet et al. (2007) [-]

Evidence Statement 22: Acceptability of self-administered health and social risk assessments in preventing or reducing drug misuse among people who regularly attend nightclubs and misuse both club and prescription drugs

There was weak evidence from the qualitative focus group component of 1 mixed methods study[1] [-] that undertaking a detailed assessment of substance use and other risk behaviours may prompt reductions in drug misuse among clubbers aged 18 to 29 who misuse both club and prescription drugs but who were not previously contemplating change. Assessments may have intervention-type effects such as prompting self-reflection on levels of drug use, increasing awareness of the link between drug use and health and social problems (such as problems with family and school or employment responsibilities), and motivating changes in substance use among individuals not previously contemplating change.

Applicability: This evidence is only partially applicable to the UK as the study was conducted in the USA. There are limitations to generalising the study's findings to a wider population of people who attend nightclubs or festivals as the study sample was restricted to young people aged 18 to 29 who regularly use both club and prescription drugs.

[1] Kurtz et al. (2013) [-]

Evidence Statement 23: Acceptability of an educational outreach event in preventing or reducing the risk from recreational drug toxicity among people who attend nightclubs and other late night venues

There was weak evidence from 1 mixed methods study[1] [-] that an educational outreach event that comprised information about drugs, a practical workshop on managing drug toxicity, and a question-and-answer session with drug experts, was acceptable to an audience of recreational drug users and their friends who attend nightclubs and other late

night venues (age of participants not reported). 100% participants felt the event was useful, 96% felt the duration of the event was appropriate, and 98.8% would recommend the event to a friend.

Applicability: While this study was conducted in the UK, it is difficult to assess its applicability to all people who attend nightclubs as the sample characteristics are not reported. It is also not clear whether the evidence is applicable to people who attend festivals as well as those who attend nightclubs and other late night venues.

[1] Wood et al. (2010) [-]

Evidence Statement 24: Views on more effective interventions for preventing or reducing drug misuse in in people who attend nightclubs and festivals

No relevant evidence was identified.

3.3.10 People who are known to use drugs occasionally/recreationally

Eight studies (Carlson et al. 2004 [-]; Elliott et al. 2014 [+]; Norberg et al. 2014 [+]; Rudzinski et al. 2012 [++]; Shrier et al. 2014 [+]; Tait et al. 2015 [+]; Walker et al. 2011 [+]; Walton et al. 2013 [++]) evaluated the acceptability of interventions for preventing or reducing drug misuse in people who are known to use drugs occasionally/recreationally. The studies included in the review for this group are summarised in table 7.

Table 7. Summary of included studies for people who are known to use drugs occasionally/recreationally.

Study	Participants and country	Intervention/study parameters	Relevant outcomes	Quality
Carlson et al. 2004 Qualitative focus group + interview study	30 people who reported ecstasy use in the past year (USA)	Focus groups explored participants views' on the barriers to preventing ecstasy use	Perceived risks and barriers to prevention of ecstasy use among young people	-
Elliott et al. 2014 RCT (Also included in review 1)	317 university students who reported cannabis use in the month preceding baseline (USA)	eTOKE, a web-based assessment and feedback intervention	Satisfaction with intervention Utility of intervention	+
Norberg et al. 2014 RCT	174 people who had used ecstasy at least 3 different times in past 90	E-Checkup, a motivational enhancement therapy intervention	Satisfaction with intervention	+

(Also included in review 1)	days (Australia)			
Rudzinski et al. 2012 Mixed methods study (RCT + qualitative interviews) (RCT included in review 1; Fischer et al. 2013)	62 university students reporting high-frequency cannabis use (Canada)	An orally-delivered cannabis brief intervention **or** a written cannabis brief intervention	Experiences of participating in the interventions Perceptions re: the format and contents of the interventions	**++**
Shrier et al. 2014 Before and after study (Also included in review 1)	22 young people using marijuana 3 times or more a week (USA)	MOMENT, an intervention combining motivational interviewing with text messages	Intervention acceptability	**+**
Tait et al. 2015 RCT (Also included in review 1)	160 people who reported use of amphetamine type stimulants in the past 3 months (Australia)	Breakingtheice, a web-decisional balance and behaviour change intervention	Participant feedback about the content and effectiveness of the intervention	**+**
Walker et al. 2011 RCT (Also included in review 1)	310 young people who reported use of cannabis on at least 9 days out of previous 30 (USA)	Motivational enhancement therapy with optional cognitive behaviour therapy	Participant feedback about the intervention and their counsellor	**+**
Walton et al. 2013 RCT (Also included in review 1)	328 young people who reported cannabis use in the last year (USA)	Therapist-based brief intervention	Participant ratings of the intervention and its constituent sessions	**++**

Norberg et al. 2014 [+] compared motivational enhancement therapy (E check-up) with education only in 174 people (average age 23 to 24) who had used ecstasy at least 3 different times in the previous 90 days. The E check-up consisted of 1 motivational interview, combined with personalised feedback and education, that lasted 50 minutes. Participants and therapists reviewed a booklet on ecstasy use patterns, motivation to reduce use, risk perception, confidence in resisting use, options for social support for reducing use, commitment and action. They discussed personalised feedback based on results from a baseline assessment. Therapists created change plans with participants who reported an interest in reducing ecstasy use, and participants who were not interested were encouraged to monitor their use to avoid increases. Participants were given a diary to track their ecstasy

use and could take the booklet and form with their personalised feedback on home. The education only group reviewed the same booklet as the E check-up group. In the education only group, therapists answered any questions within 15 minutes with an approach consistent with motivational interviewing. Therapists were encouraged not to evoke change talk or plan for change. Participants were allowed to take the booklet home with them. Participants' acceptance of the intervention rationale was measured immediately after their allocation was revealed; no statistically significant between-group differences in participant ratings of credibility and expectancy for their assigned intervention were detected. When followed up 4 weeks post-baseline, respondents who had received the E check-up intervention reported higher satisfaction than those in the education only control group (mean 26.33 vs 24.45, *d*=0.5, p=0.004).

It is not clear if participants were adequately protected against contamination, as the same therapists delivered the E check-up and education only interventions. Participant satisfaction was measured on an 8-item scale yet only mean satisfaction scores are reported. It is not clear why certain items such as 'confidence in recommending intervention to friends' were assessed before the intervention took place and not at follow-up.

Walker et al. 2011 [+] compared motivational enhancement therapy combined with optional cognitive behaviour therapy with an educational feedback control combined with optional cognitive behaviour therapy and with a delayed feedback control in 310 young people in 9th to 12th grade (equivalent to ages 14 to 18, average age 16) who had smoked cannabis on 9 or more days in the previous 30 days. Participants in the motivational enhancement therapy and educational feedback groups received 2 sessions of 45 to 50 minutes each, 1 week apart. In the motivational enhancement therapy intervention, participants discussed cannabis use, concerns about use, the role of cannabis in their current life and in the future, pros and cons of use, and self-efficacy. They also reviewed a personal feedback report. In the educational feedback group, participants were shown PowerPoint presentations on current research and facts about cannabis. After either the motivational enhancement therapy or educational feedback sessions, participants were offered 4 optional cognitive behaviour therapy sessions of 50 minutes each, covering goal setting, cannabis refusal skills, enhancing social support and increasing pleasant activities, planning for emergencies, and coping with relapse or setbacks. Only 10 to 13% of participants had at least 1 cognitive behaviour therapy session. The delayed feedback group did not undergo a baseline assessment or intervention for the first 3 months. After 3 months, participants in the delayed feedback group could choose to receive motivational interviewing or the educational control. Questionnaires were completed by participants following each session and feedback was generally very positive; 92% of respondents indicated that that they were satisfied with their

session and 95% reported being satisfied with their counsellor. There were no between-group differences in satisfaction ratings with the exception that those in the educational feedback control were more likely to endorse the usefulness of free information about cannabis. The authors concluded that overall, satisfaction data indicated that participants in both groups felt the sessions were positive experiences and the educational feedback group controlled for nonspecific therapeutic factors.

It is unclear if allocations were concealed and whether knowledge of allocated interventions was prevented during the study. The data collection tool for measuring participant satisfaction was not described nor were the methods for analysing between-group differences in satisfaction ratings.

Shrier et al. 2014 [+] looked at the effectiveness of motivational interviewing using an ecological momentary approach with text messages (MOMENT) in 22 people aged 15 to 24 (average age 19) who were using marijuana 3 times per week or more. Participants recorded marijuana use and motivation to reduce use in daily diaries. They were also prompted to complete 'momentary reports' at random times, 4 to 6 times a day, stating their desire to use marijuana, who they were with, their affective state, and marijuana use since the previous report. After completing daily diaries and momentary reports for 1 week, participants received a 1 hour motivational enhancement therapy session on marijuana use and history, goals, motivation for reducing use, social and emotional triggers, and ways to manage triggers. One week later, participants received another 1 hour motivational enhancement therapy session, covering a plan for reducing use, self-efficacy, and coping strategies. Participants completed daily diaries and momentary reports for 2 weeks after the second motivational enhancement session, which was 4 weeks after the study started. During these 2 weeks, participants also received messages via a personal digital assistant if they reported the presence of a top 3 trigger for marijuana use in their momentary reports, or if they had reported any use in their daily diaries. The messages used empathetic language and their content was influenced by motivational interviewing techniques. Three months after the start of the study, participants completed another 2 weeks of daily diaries and momentary reports, without receiving messages. Participants reported that the audio computer-assisted self-interview (ACASI), timeline follow-back (TLFB), and mobile device were easy to use and the instructions were clear and understandable. Participants reported that they read the mobile messages and the messages motivated them not to use. Participants indicated that they felt comfortable with participation and found the study interesting, motivating, and helpful. They tended to be neutral or disagree that the study was burdensome. The authors stated that the free text comments were favourable and provided one example:

"I became more aware of what triggers my urge to smoke and how often they lead to me actually doing it."

The study authors did not report how missing data were accounted for and 36% of participants left the study before the first assessment.

Rudzinski et al. 2012 [++] sought to explore the qualitative experiences of young, high frequency cannabis users who participated in a randomised controlled trial of newly-developed brief interventions. The main trial (reported in full in a separate paper) compared a brief intervention on cannabis use with a brief intervention on general health in 134 people (average age 21) who had been active cannabis users for at least 1 year and who had used cannabis on at least 12 days in the previous 30 days. Some participants received the intervention orally (n=25 in brief intervention on cannabis use, n=25 in brief intervention on general health group) and some received the intervention in a written format (n=47 in brief intervention on cannabis use, n=37 in brief intervention on general health group). All of the interventions were fact-based with some motivational components. The interventions on cannabis use covered cannabis-related health risks and suggestions to modify the risks. The interventions on general health consisted of information on nutrition, stress and exercise, and suggestions to modify health risks. The oral interventions were delivered face-to-face by a psychologist in 1 session of 20 to 30 minutes. The written interventions were an 8-page booklet containing images and text. Face to face interviews were conducted 3 months after completion of the brief interventions in order to explore participants' experiences, perceptions and reflections on the sessions they received. Rational action theory guided the analysis of responses provided by individuals who had been allocated to either the orally-delivered cannabis brief intervention (CBI-O) or the written cannabis brief intervention (CBI-W).

<u>Experiences of cannabis brief interventions</u>

69.4% (CBI-O=18, CBI-W=25) of the analysis sample believed they had undergone changes regarding their cannabis use. 48.4% felt they underwent changes in their actions around cannabis use and 22.6% reported that they underwent developments in their thinking/attitude about cannabis use. In contrast, almost two thirds of those who claimed "no change" felt that the information presented by the intervention was already known to them or did not concern them.

Among those who reported changes, 15 (CBI-W=5, CBI-O=10) participants mentioned that they believed they had reduced their cannabis use to some degree since undergoing the BI. Changes occurred due to setting cannabis use goals, restricting particular times for use, and removing oneself from use situations:

"I have changed my behavior [sic] *slightly; I've tried to reduce the amount. […] Especially I've tried to reduce daily smoking and […] I pretty much try my best not to smoke during weekdays […] and only smoke on weekends. […] Inconsistently... but it's improving so I'm just reducing the amount"*

Other participants reported that some of the concrete and simple suggestions provided by the psychologist delivering the CBI-O (e.g. "maybe you should wait a few hours longer in the day before you smoke" or "maybe you should give yourself a non-smoking day") made behaviour change seem possible:

"Just knowing that there are [...] like sort of an approved of idea or something made me feel like [...] I could take smaller steps in […] a helpful way"

Beyond simply reducing their use, more than half of respondents started engaging in what were perceived to be healthier smoking practices suggested in the brief interventions. Safer use techniques (e.g. bongs, vaporisers, and edible cannabis) were mentioned by several participants. 41.9% (CBI-W = 16, CBI-O = 10) reported that they had learned about the risks of deep inhalation/breath-holding and tried to avoid its extensive use:

"Well it made me cut back I only smoked cannabis after that probably 12 days out of like the 3 months I guess that it had been, and I stopped […] using deep inhalation techniques because I was told they were bad for you"

Several participants reflected that the interventions had raised their awareness of the dangers of dual use of cannabis and tobacco:

"One thing that stood out to me […] was how mixing the pot and the tobacco is like even kinda worse. […] So I take a lot of what I call poppers, which is like a little bit of cigarette and then the weed on top. And I started taking a lot less of them"

Several individuals who received a cannabis BI (n = 7) reported passing on some of the content of the intervention to their friends and fellow cannabis smokers. Another effect of the experimental BIs was that the process helped participants reflect on the true extent of their use. 5 individuals [CBI-W = 5] described that the BI process alerted them to their high levels of cannabis use. Coming explicitly face-to-face with this reality was disconcerting, yet also served as a catalyst for behavioural change in some:

"I didn't think I smoked as much as I actually do. I thought it was more rare but then when I actually put it down on the calendar it sort of was more black and white… like wow I do smoke quite often […] before then I usually would have weed on me and now I just don't carry it. So if I don't have it I won't smoke it kind of thing"

<u>Perceptions regarding the format and content of cannabis brief interventions</u>

Most respondents (85.5%, CBI-W = 30, CBI-O = 23) thought that the brief interventions were helpful for them or could be useful for others. All 23 participants who received a CBI-O intervention stated that they saw the sessions as 'definitely helpful'. Across both groups, participants provided various reasons for enjoying the interventions, such as: it was short, convenient, informative, straightforward, unbiased, nonthreatening, non-patronising, and non-judgmental:

"I think really again just having the facts and numbers right in front of you. You can hear a million times that it's bad for you but seeing numbers and how it actually affects you and the fact that this is documented I think it really brings it home, to me at least. And I think it could be very beneficial to other people as well"

However, for some, the brief interventions were not perceived as effective. Half of the sample provided suggestions to make the intervention more efficient, in terms of both content and format. Many of those who received the written version of the cannabis brief intervention expressed a desire for a more interactive, 'attention grabbing' format to present the information, stressing the importance of being able to ask questions, as well as calling into question the utility of using printed pamphlets:

"Personally I kinda feel like booklets are outdated and the message would be more effectively […] put out there if it was sort of different kinds of social media. You know if people had like little short You Tube clips—this is just what I think—you know what I mean, or magazine ads or subway ads I feel like those kinds of things are more effective because fliers are so easy to throw away. It's easier not to read them then to read them and unless they have some kind of cool graphic I mean it's just another flier like a "don't do drugs" flier"

The most common suggestion for improvement involved tailoring the information to the particular individual receiving the brief intervention, by providing specific, individualised, and concrete advice. Several respondents suggested changing the language used to present the information. Specifically, the information booklet was criticised for being too formal, using language that people who smoke cannabis do not use:

"It was just kind of like a […] old teacher kinda lecturing about things they don't understand. […] It just didn't seem like something worth paying attention to"

Instead, the following were proposed:

"Maybe present the same information but change up the tone a little bit. Make it seem like it was a real person writing it, maybe someone who's been through it"

"Someone […] who had like stopped using cannabis was there to talk about it as like an example"

84.3% of participants in the main trial went on to participate in the 3 month follow-up interviews with no significant between-group differences in retention rates detected. The authors note that those with negative experiences may have been less likely to attend the follow-up interview. Collecting feedback data 3 months after the interventions may have created recall problems while face to face data collection may have introduced social desirability bias. The sample included participants who had received the 2 control interventions (general health brief interventions as opposed to cannabis-specific brief interventions) yet these findings are not reported or compared with experiences of those in the experimental groups.

Walton et al. (2013) [++] compared a therapist-based brief intervention with a computer-based brief intervention and with enhanced usual care in 328 young people aged 12 to 18 (average age 16) who had used cannabis in the previous year. The therapist-based brief intervention was provided face to face by a researcher with a computer to prompt content. The computer-based brief intervention used an interactive animated program with touch screens, where a virtual buddy guided participants through animated role-plays and provided audio feedback. The enhanced usual care control group received brochures of warning signs of cannabis problems, resources (such as treatment and suicide hotlines) and cannabis information websites. At post-test, 77.4% participants rated the brief interventions as 'liked' or 'liked a lot' with no significant differences between the interventions. 82.6% participants rated at least one section of the intervention 'very or extremely helpful'. The most well-liked sections were reviewing the reasons to change cannabis use and the role-plays.

The reporting of participant satisfaction was not comprehensive; responses were not summarised for every item nor were between-group differences. It is assumed that all participants who received a brief intervention went on to complete the self-administered satisfaction questionnaire but this is not explicitly stated.

Elliott et al. 2014 [+] compared a web-based assessment and feedback intervention (eToke) with assessment only in 317 young people aged 18 to 23 (average age 19) who had used marijuana in the last month. The web-based assessment and feedback intervention was a self-directed educational program that lasted from 20 to 45 minutes. It provided participants with personalised feedback on drug use norms and annual expenses, health information and resources, and tips to decrease use. Of the 149 participants who responded to the evaluation questions about eToke, only 84 (56%) remembered completing it. On a scale of 0 to 4 (0=not at all useful to 4=very useful), participants found the feedback on norms (mean 2.24, SD=1.23) and expenses (mean 2.27 SD=1.24) most useful. Lower utility ratings were given to the sections on ways to decrease use (mean 1.28, SD=1.16) and campus resources

(mean 1.08, SD= 1.26). Responses also indicated that participants liked the online format (mean 3.42, SD=0.86) and found it easy to use mean 3.34, SD=0.75). However, respondents indicated that they were not likely to recommend eToke to friends (mean 1.67, SD=1.27).

It is unclear how the trial's allocation sequence was generated and whether allocation was concealed. The participants were psychology student volunteers; caution should be taken when generalising the findings to wider populations of cannabis users.

Tait et al. 2015 [+] compared a web-based decisional balance and behaviour change intervention (breakingtheice) with a waiting list control in 160 people (average age 22) who reported use of amphetamine type stimulants such as methamphetamine and ecstasy, and/or non-medical use of prescription stimulants in the past 3 months. The web-based intervention consisted of 3 fully automated modules that were based on motivational interviewing and cognitive behavioural therapy principles. In the first module, participants explored areas that are affected by use of amphetamine type stimulants, for example, relationships and finances. The second module covered pros and cons of use using a decisional balance approach. The third module covered behaviour change, including setting goals, actions on specific dates, strategies to help with cravings, refusal skills, how to manage a 'slip', and an action plan for high risk situations. Most respondents (22/35; 63%) indicated that the intervention had reduced their adverse drug effects. The majority of participants (30/35; 86%) indicated that they would recommend the website, 86% (30/35) endorsed online delivery, 91% (32/35) rated the site as easy to use, and 91% (32/25) were satisfied with the programme. The authors stated that participants' free text responses identified the use of fictional case stories as an engaging approach. The main reported criticisms of the intervention included the assumption that people wanted to change their behaviour and the lack of information on potential benefits of drug use (for example, the use of amphetamine type stimulants to control the symptoms of Attention Deficit Hyperactivity Disorder). The most frequently cited negative reactions to the intervention were concerns about privacy (16/35 participants; 46%) and boredom (7/35 participants; 20%).

It is unclear whether allocation was adequately concealed and whether knowledge of the allocated interventions was adequately prevented during the study. There was a reasonably high loss to follow up and relatively low levels of engagement within the intervention group; it is possible that those who were lost to follow up may have had more negative experiences with the intervention.

Carlson et al. 2004 [-] conducted focus groups and interviews with 30 ecstasy users aged 18 to 31 (average age 22.4) to discuss the increased use of ecstasy in diverse settings as

well as the increasing diversity of users, perceived risks, and barriers to prevention among young people. A grounded theory approach was used to guide the analysis of participants' responses:

Perceptions of risk and barriers to prevention

The authors noted that convincing young people that there are significant health risks associated with ecstasy use is a major challenge to prevention efforts. Participants seemed much more open to harm reduction approaches, rather than what they perceived as "war on drugs" messages, for example:

"When you think about drugs from a government standpoint, it's different. I wouldn't listen to it as much as if a person like a social worker was tellin' me about it face-to-face, kind-of a 'cool' person"

To minimise perceived risks of ingesting something unsafe, participants reported trying to obtain ecstasy from trusted friends or from people who have tried a particular 'brand' before. Two participants stated that they look on various websites such as DanceSafe to verify the contents of particular brands they have purchased.

Participants wanted general information on the risks of ecstasy use so they could make their own informed decisions about using it in the future:

"I'm sure you read the Time magazine article. That seemed to be an honest approach to MDMA, and that made me believe it more. I had more respect for that guy in that article than anything I've ever see because it was a fair representation."

The authors concluded that without understanding ecstasy use from the perspective of active users, prevention and/or intervention approaches are unlikely to be successful.

The study is limited by its small convenience sample which comprised only white, heterosexual participants; the findings may not be generalizable to a wider population of recreational ecstasy users. Data collection methods were only very briefly reported with no description of either the focus group content or interview guides.

Evidence statement 25: Acceptability of motivational enhancement therapy for preventing or reducing drug misuse in people who are known to use drugs occasionally/recreationally

There was moderate evidence from 2 RCTs[1,2] [+[1,2]] that motivational enhancement therapy interventions were generally acceptable to people who use ecstasy[1] and cannabis[2]. In 1

RCT[1] targeting cannabis use among young people aged 14 to 18, 92% of respondents indicated that that they were satisfied with their session and 95% reported being satisfied with their counsellor. However, there were no significant differences in satisfaction ratings between participants who had received the motivational enhancement therapy intervention and those in the control group who had received an educational feedback intervention except that those in the control group were more likely to endorse the utility of free information about cannabis. In 1 RCT[2] targeting ecstasy use, respondents (average age 23 to 24) who received the intervention reported higher satisfaction than those in the education only control group (*d*=0.5, p=0.004) although there were no significant between-group differences in participant ratings of credibility and expectancy for their assigned interventions at pre-test. Some participants in 1 study also received cognitive behaviour therapy[1].

Applicability: The evidence is only partially applicable to the UK as the studies were conducted in the USA[1] and Australia[2] although it is feasible that interventions of this type could be implemented in a UK setting. One study only focused on cannabis use among young people while the other focused solely on ecstasy use; this may limit their generalisability to wider populations of people who use drugs occasionally/recreationally.

[1] Walker et al. 2011

[2] Norberg et al. 2014

Evidence statement 26: Acceptability of brief motivational enhancement therapy with mobile self-monitoring and responsive text messaging for preventing or reducing drug misuse in people who are known to use drugs occasionally/recreationally

There was moderate evidence from 1 before and after study[1] [+] that brief motivational enhancement therapy with mobile self-monitoring and responsive text messaging was generally acceptable to young people aged 15 to 24 who use cannabis. Participants reported that the study instruments (such as tools for recording the days on which they had used cannabis) and mobile devices were easy to use and the instructions were clear and understandable. Participants reported that they read the text messages and the text messages motivated them not to use cannabis. Participants indicated that they felt comfortable with participation and found the study interesting, motivating, and helpful. They tended to be neutral or disagree that the study was burdensome.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in the USA although it is feasible that an intervention of this type could be implemented in a UK setting. The study was conducted among a sample of young people who use cannabis 3

times a week or more which may limit its generalisability to a wider population of people who use drugs occasionally/recreationally.

[1] Shrier et al. (2014) [+]

Evidence statement 27: Acceptability of different types of brief interventions for preventing or reducing drug misuse in people who are known to use drugs occasionally/recreationally

There was moderate evidence from a qualitative sub-study[1] [++] of 1 RCT that oral and written cannabis brief interventions were generally acceptable to high frequency cannabis users (average age 21). 85.5% thought the brief interventions were helpful for them or could be useful for others, and 69.4% believed they had undergone changes regarding their cannabis use. Participants cited various reasons for enjoying the interventions, describing them as short, convenient, informative, straightforward, unbiased, non-threatening, non-patronising, and non-judgmental. Several elements of the interventions were identified as helping participants to change their cannabis use including: increased awareness of healthier smoking practices, increased awareness of the risks of dual use with tobacco, and setting cannabis use goals. However some participants did not perceive the interventions to be effective with half of the sample providing suggestions to improve their content and format. Some participants who had received the written version of the brief intervention questioned the utility of providing information via printed pamphlets and criticised the formal language used in the materials.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in Canada although it is feasible that an intervention of this type could be implemented in a UK setting. The study was conducted among a sample of young, high frequency cannabis users which may limit its generalisability to a wider population of people who use drugs occasionally/recreationally.

[1] Rudzinski et al. (2012) [++]

Evidence statement 28: Acceptability of brief interventions for preventing or reducing drug misuse in people who are known to use drugs occasionally/recreationally

There was moderate evidence from 1 RCT[1] [++] that brief interventions were generally acceptable to young people aged 12 to 18 who use cannabis. 77.4% participants rated the brief interventions as ‘liked’ or ‘liked a lot’ with no significant differences between groups who received a therapist-based intervention and those who received a computer-based

intervention. 82.6% participants rated at least one section of the intervention 'very or extremely helpful'. The most well-liked elements of the interventions were the section on reviewing the reasons to change cannabis use and the role-plays. Some participants in the study also received optional cognitive behaviour therapy.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in the USA although it is feasible that an intervention of this type could be implemented in a UK setting. The study was conducted among a sample of young people who had used cannabis in the previous year which may limit its generalisability to a wider population of people who use drugs occasionally/recreationally

[1] Walton et al. (2013) [++]

Evidence statement 29: Acceptability of web-based assessment and feedback for preventing or reducing drug misuse in people who are known to use drugs occasionally/recreationally

There was weak evidence from 1 RCT[1] [+] that participant satisfaction with a web-based assessment and feedback intervention for young people aged 18 to 23 who use cannabis was mixed. Only 56% of respondents remembered completing the intervention. Participants found the sections about norms and cannabis-related expenses the most useful while lower utility ratings were given to the sections on ways to decrease use and local resources. Responses indicated that participants liked the intervention's online format and found it easy to use. However, respondents indicated that they were not likely to recommend the intervention to friends.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in the USA although it is feasible that an intervention of this type could be implemented in a UK setting. The study was conducted among a sample of young university students who use cannabis which may limit its generalisability to a wider population of people who use drugs occasionally/recreationally.

[1] Elliott et al. (2014) [+]

Evidence statement 30: Acceptability of a web-based decisional balance and behaviour change intervention for preventing or reducing drug misuse in people who are known to use drugs occasionally/recreationally

There was moderate evidence from 1 RCT[1] [+] that a web-based decisional balance and

behaviour change intervention was generally positively received by people (average age 22) who use amphetamine type stimulants. 86% participants indicated that they would recommend the website, 86% endorsed online delivery, 91% rated the website as easy to use and 91% were satisfied with the programme. 63% indicated that the intervention had reduced their adverse drug effects. The use of fictional case stories was identified as an engaging approach. The main reported criticisms of the intervention included the assumption that people wanted to change their behaviour and the lack of information on potential benefits of drug use. The most frequently cited negative reactions to the intervention were concerns about privacy and boredom.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in Australia although it is feasible that an intervention of this type could be implemented in a UK setting. The study was conducted among a sample of people who use amphetamine type stimulants which may limit its generalisability to a wider population of people who use other drugs occasionally/recreationally.

[1] Tait et al. (2015) [+]

Evidence statement 31: Views on more effective interventions for preventing or reducing drug misuse among people who are known to use drugs occasionally/recreationally

There was moderate evidence from a qualitative sub-study[1] [++] of 1 RCT that adaptations could be made to oral and written cannabis brief interventions to make them more acceptable to high frequency cannabis users (average age 21). Half of participants suggested improvements to both the content and the format of the interventions to make them more effective. The most common suggestion was to tailor information to the person receiving the intervention by providing specific, individualised, and concrete advice. Many participants who had received the written version of the brief intervention indicated a desire for information to be provided in a more interactive and attention-grabbing format. They also stressed the value of being able to ask questions. The printed materials provided in the written version of the intervention was felt to be an outdated method of providing information with some participants suggesting that the formal tone and language should adapted to make it more relevant for young people who use cannabis.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in Canada although it is feasible that an intervention of this type could be implemented in a UK setting. The study was conducted among a sample of young, high frequency cannabis

users which may limit its generalisability to a wider population of people who use drugs occasionally/recreationally.

[1] Rudzinski et al. (2012) [++]

Evidence statement 32: Views on more effective interventions for preventing or reducing drug misuse among people who are known to use drugs occasionally/recreationally

There was weak evidence from 1 qualitative focus group and interview study[1] [-] that there are barriers to prevention among people aged 18 to 31 who use ecstasy. Convincing people that there are significant health risks associated with ecstasy was identified as a challenge with participants seeming more open to harm reduction approaches than what they perceived as “war on drugs” messages. Participants wanted general information on the risks of ecstasy use so they could make their own informed decisions about using it in the future.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in the USA. The study was conducted among a sample of young, white, heterosexual ecstasy users which limit its generalisability to a wider population of people who use drugs occasionally/recreationally.

[1] Carlson et al. 2004

3.3.11 Comparison with scope activities

Table 8 shows which studies included in the review addressed activities identified in the scope. No studies looked explicitly at skills training for parents or carers of children, so this is not presented in the table. Motivational interviewing studies did not fall under any of the specific activities identified in the scope, but are clearly within the scope.

Table 8. Summary of activities in included studies

Study	Intervention assessed for acceptability or suggested as relevant	Intervention characteristics as outlined in the scope						
		Group-based skills training or information	1 to 1 skills training and information – peer educators	1 to 1 skills training and information – planned outreach	Opportunistic skills training and information	Targeted print and new media – social norms, skills and information	Family based support for children and young people	Group-based behaviour therapy* for children and young people
Baer et al. (2007)	Brief motivational intervention	No	No	No	No	No	No	No
Braciszewski et al. (2014)	Suggested intervention - motivational interviewing and screening, brief intervention and referral to treatment (SBIRT)	No	No	No	No	Yes	No	No
Branigan and Wellings (1999)	Information provision via poster campaign and booklets.	No	No	No	No	No	No	No
Carlson et al. (2004)	Suggested intervention – harm reduction methods (no examples provided)	No	No	No	No	No	No	No
Chinet et al. (2007)	Suggested intervention – harm reduction methods e.g. emergency staff, free water, information provision, access to counselling.	No	No	No	No	No	No	No
D'Amico et al. (2009)	Suggested intervention – motivational interviewing, providing information, skills training.	Unclear[1]	Unclear[1]	Unclear[1]	Unclear[1]	No	No	No
Elliott et al. (2014)	Web-based educational program	No	No	No	No	Yes	No	No
Goldbach and Steiker (2011)	Adapting Keepin' it Real (skills training and information)	Yes	Unclear[2]	No	No	No	No	Yes
Hudson et al. (2009)	Suggested intervention – sport and art, music or film, speaking to	No	No	No	No	No	No	No

Study	Intervention assessed for acceptability or suggested as relevant	Intervention characteristics as outlined in the scope						
		Group-based skills training or information	1 to 1 skills training and information – peer educators	1 to 1 skills training and information – planned outreach	Opportunistic skills training and information	Targeted print and new media – social norms, skills and information	Family based support for children and young people	Group-based behaviour therapy* for children and young people
	homeless drug users.							
Kurtz et al. (2013)	Health and social risk assessment.	No	No	No	No	No	No	No
Lynsky et al. (1999)	Group information sessions and skills training	Yes	No	No	No	No	No	No
Nanin et al. (2006)	Poster campaigns	No	No	No	No	No	No	No
Norberg et al. (2014)	Motivational enhancement therapy	No	No	No	No	No	No	No
Rudzinski et al. (2012)	Brief interventions (oral or written, general health or cannabis focused)	Unclear[1]	No	No	No	No	No	No
Shrier et al. (2014)	Motivational interview, text messages	No	No	No	No	Yes	No	No
Tait et al. (2015)	Web-based intervention	No	No	No	No	Yes	No	No
Walker et al. (2011)	Motivational enhancement therapy with optional cognitive behaviour therapy (unclear if group or 1 to 1)	No	No	No	No	No	No	No
Walton et al. (2013)	Therapist-based brief intervention	No	No	No	No	No	No	No
Wenzel et al. (2009)	Skills training with information. Suggested intervention – including family members, cognitive behavioural techniques.	Yes	No	No	Yes	No	Yes	Yes
Wood et al. (2010)	Educational outreach - information and skills training.	Yes	No	No	No	No	No	No
* Includes group-based skills training								

Study	Intervention assessed for acceptability or suggested as relevant	Intervention characteristics as outlined in the scope						
		Group-based skills training or information	1 to 1 skills training and information – peer educators	1 to 1 skills training and information – planned outreach	Opportunistic skills training and information	Targeted print and new media – social norms, skills and information	Family based support for children and young people	Group-based behaviour therapy* for children and young people
[1] Not clear if intervention was delivered in group sessions or one-to-one. [2] The videos were made 'by kids for kids', however, it is not clear if children were used as educators on the videos.								

3.3.11.1 Group-based skills training or information provision using lessons, talks and activities (e.g. targeted refusal skills training in schools and colleges)

Three studies assessed the acceptability of group-based skills training or information provision interventions (Lynsky et al. 1999 [-]; Wenzel et al. 2009 [-]; Wood et al. 2010 [-]). Participants in all 3 studies rated the interventions positively. Participants in 1 study suggested using group-based skills training or information provision to prevent or reduce drug misuse (Goldbach and Steiker 2011 [+]).

Participants in 1 study suggested adapting an existing intervention by providing information on housing for young women who are considered homeless (Wenzel et al. 2009 [-]).

Skills training and information provision was assessed in a further study (Rudzinski et al. 2012 [++]) and suggested as an intervention in 1 further study (D'Amico et al. 2009 [-]), however, it was not clear whether this was on a group or 1 to 1 basis.

Evidence Statement 33: Acceptability of group-based skills training or information provision

There was weak evidence from 2 qualitative focus groups studies[1,2] [+[1],-[2]], 1 uncontrolled before and after study[3] [-], and 1 mixed methods study[4] [-] that group-based skills training or information provision is acceptable to participants. The skills training consisted of critical thinking skills[1], communication skills[1], conflict resolution skills[1], drug refusal skills[1], decision making skills[3], coping skills[3], goal setting[3], and how to manage an unwell individual[4]. One study did not report further details of the skills training provided[2].

Applicability: The evidence is only partially applicable to the UK as 3 of the 4 studies were conducted in the USA[1,2,3], however, an intervention of this type may be feasible in a UK-based setting.

[1] Goldbach and Steiker (2010) [+]

[2] Wenzel et al. (2009) [-]

[3] Lynsky et al. (1999) [-]

[4] Wood et al. (2010) [-]

Evidence Statement 34: Views on more effective group-based skills training or

information provision

There was weak evidence from 1 qualitative focus group study[1] [-] that participants felt that providing information on housing would improve group-based skills training and information interventions for young women who are considered homeless. No further details of the skills training was provided.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1] Wenzel et al. (2009) [-]

3.3.11.2 One-to-one skills training, advice and information provided using peer education initiatives (e.g. with gay men at nightclubs)

No studies explicitly assessed the acceptability of one to one skills training, information provision and advice using peer educators. An approach based on skills training and information was suggested in 1 study, but it is not clear if this was with peer educators, or whether it was one to one or group based (D'Amico et al. 2009 [-]). One study assessed the acceptability of an intervention that used videos developed 'for kids by kids', however, it is not clear if children appeared as educators on the videos (Goldbach and Steiker, 2011 [+]).

No studies were identified that suggested adaptations or new interventions of one to one skills training, advice and information provided using peer education initiatives.

Evidence Statement 35: Acceptability of one-to-one skills training, advice and information provided using peer education initiatives

No relevant evidence was identified.

Evidence Statement 36: Views on more effective one-to-one skills training, advice and information using peer education initiatives

No relevant evidence was identified.

3.3.11.3 One-to-one skills training, information provision and advice given as part of planned outreach activities (e.g. for young people at festivals)

No studies were identified that explicitly assessed the acceptability of one to one skills training, information provision and advice as part of planned outreach activities. One study assessed the acceptability of an educational outreach event in people who attend nightclubs, however, this was not done on a 1 to 1 basis (Wood et al. 2010 [-]). In another study, participants suggested using skills training and information, but it was not clear if this was on a one to one or group basis (D'Amico et al. 2009 [-]).

No studies were identified that suggested adaptations or new interventions of one to one skills training, information provision and advice given as part of planned outreach activities.

Evidence Statement 37: Acceptability of one-to-one skills training, advice and information given as part of planned outreach activities

No relevant evidence was identified.

Evidence Statement 38: Views on more effective one-to-one skills training, advice and information given as part of planned outreach activities

No relevant evidence was identified.

3.3.11.4 Opportunistic skills training, advice and information provision (e.g. provided by youth workers)

One study assessed the acceptability of opportunistic skills training, advice and information provision interventions (Wenzel et al. 2009 [-]). Participants in the study rated the intervention positively.

Participants in the same study suggested adapting an existing intervention by providing information on housing for young women who are considered homeless (Wenzel et al. 2009 [-]).

Participants in another study suggested that foster parents should not provide interventions to children and young people in foster care, however, this was not specific to skills training and information provision (Braciszewski et al. 2014 [+]). In another study, participants suggested using skills training and information, but it was not clear if this was on an opportunistic basis (D'Amico et al. 2009 [-]).

Evidence Statement 39: Acceptability of opportunistic skills training, advice and information provision

There was weak evidence from 1 qualitative focus group study[1] [-] that opportunistic skills training, advice and information provision is acceptable to participants. The study did not report further details of the skills training provided.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1] Wenzel et al. (2009) [-]

Evidence Statement 40: Views on more effective opportunistic skills training, advice and information provision

There was weak evidence from 1 qualitative focus group study[1] [-] that participants felt that providing information on housing would improve group-based skills training and information interventions for young women who are considered homeless. No further details of the skills training was provided.

Applicability: The evidence is only partially applicable to the UK as the study was conducted in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1] Wenzel et al. (2009) [-]

3.3.11.5 Using targeted print and new media (e.g. magazines, websites, social media, text messages) for different groups at risk of drug misuse to influence social norms or enhance skills and provide information and advice

Two studies reported on the acceptability of web-based interventions (Elliot et al. 2014 [+]; Tait et al. 2015 [+]). A study of a web-based assessment and feedback intervention reported mixed participant satisfaction and that participants were not likely to recommend the intervention to their friends (Elliott et al. 2014 [+]). A study of a web-based decisional balance and behavioural change intervention was generally well received, although participants reported that they had concerns over their privacy and were bored during the intervention (Tait et al. 2015 [+]).

Two studies reported on the use of text messages (Braciszewski et al. 2014 [+]; Shrier et al. 2014 [+]). One study found that motivational interviewing with text message reminders was generally acceptable to young people (Shrier et al. 2014 [+]) and the other study reported

that participants felt text messages are a culturally relevant way to communicate with young people (Braciszewski et al. 2014 [+]).

Two additional studies reported on the acceptability of mass media poster campaigns (Branigan and Wellings 1999 [-]; Nanin et al. 2006 [-]), however, these were not targeted and did not use new media.

Evidence Statement 41: Acceptability of web-based interventions

There was moderate evidence from 2 RCTs[1,2] [+[1,2]] that web-based interventions are somewhat acceptable to participants. The evidence showed that some participants were unlikely to recommend the interventions to their friends[1], and that they found the interventions boring[2].

Applicability: The evidence is only partially applicable to the UK as one of the studies was undertaken in the USA[1] and the other in Australia[2], however, an intervention of this type may be feasible in a UK-based setting.

[1] Elliott et al. 2014 [+]

[2] Tait et al. 2015 [+]

Evidence Statement 42: Acceptability of text messages

There was moderate evidence from 1 before and after study[1] [+] that text messages are generally acceptable to young people.

Applicability: The evidence is only partially applicable to the UK as the study was undertaken in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1] Shrier et al. 2014 [+]

Evidence Statement 43: Views on more effective use of targeted print and new media

There was moderate quality evidence from 1 qualitative focus group study[1] [+] that text messages would be a culturally relevant way to communicate with young people.

Applicability: The evidence is only partially applicable to the UK as the study was undertaken in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1] Braciszewski et al. (2014) [+]

3.3.11.6 Family-based programmes providing structured support for children and young people at risk of drug misuse (including motivational interviewing for parents or carers and parental skills training)

None of the studies explicitly assessed the acceptability of family-based programmes that provide structured support for children and young people at risk of drug misuse. Participants in 1 study suggested involving family members in future interventions for young females who are considered homeless (Wenzel et al. 2009 [-]).

Evidence Statement 44: Acceptability of family-based programmes providing structured support for children and young people at risk of drug misuse

No relevant evidence was identified.

Evidence Statement 45: Views on more effective family-based programmes providing structured support for children and young people at risk of drug misuse

There was weak evidence from 1 qualitative focus group study[1] [-] that participants felt family members should be included in future interventions for young females who are considered homeless.

Applicability: The evidence is only partially applicable to the UK as the study was undertaken in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1] Wenzel et al. (2009) [-]

3.3.11.7 Group-based behaviour therapy for children and young people who are at risk of drug misuse (focusing on coping mechanisms, problem-solving and goal setting)

One study assessed the acceptability of group-based behaviour therapy for children and young people (Wenzel et al. 2009 [-]). The intervention was generally well received and participants reported that it was enjoyable.

One study suggested that existing group-based behaviour therapy interventions for young people who are gay, lesbian, bisexual or transgender could be improved through taking a gender neutral approach and including discussions on differences and similarities with heterosexual peers, sex and sexual identity, and perceived adult lifestyles (Goldbach and Steiker 2011 [+]).

Evidence Statement 46: Acceptability of group-based behaviour therapy for children and young people at risk of drug misuse

There was weak evidence from 1 qualitative focus group study[1] [-] that interventions with group-based behaviour therapy for children and young people were generally well received and that participants found them enjoyable.

Applicability: The evidence is only partially applicable to the UK as the study was undertaken in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1] Wenzel et al. (2009) [-]

Evidence Statement 47: Views on more effective group-based behaviour therapy for children and young people at risk of drug misuse

There was moderate evidence from 1 qualitative focus group study[1] [+] that participants felt existing group-based behaviour therapy interventions for young people who are gay, lesbian, bisexual or transgender and at risk of drug misuse could be improved by taking a gender neutral approach, including discussions on differences and similarities with heterosexual peers, sex and sexuality, and perceived adult lifestyles.

Applicability: The evidence is only partially applicable to the UK as the study was undertaken in the USA, however, an intervention of this type may be feasible in a UK-based setting.

[1]Goldbach and Steiker (2011) [+]

3.3.11.8 Parental skills training for parents or carers of children who are at risk of drug misuse (focusing on stress management, communication skills, helping children develop problem-solving skills, and setting behavioural targets)

No studies were identified that explicitly assessed the acceptability of parental skills training for parents or carers of children who are at risk of drug misuse. No studies were identified that suggested adaptations or new interventions of parental skills training.

Evidence Statement 48: Acceptability of skills training for parents or carers of children

No relevant evidence was identified.

Evidence Statement 49: Views on more effective skills training for parents or carers of

children

No relevant evidence was identified.

4 Discussion

4.1 Strengths and limitations of the review

The studies included in this review were generally moderate or poor in quality. Of the 20 included studies, 9 studies were rated as moderate [+] in quality, 9 studies were rated as weak [-] in quality, and only 2 studies were rated as high [++] in quality.

Several limitations are seen across the studies included in this review:

- Poor reporting of data collection tools.

  Survey tools were often poorly described and it was not clear if survey items had been tested for validity and reliability.

- Small and non-representative samples

  The generalisability of study findings was often limited by small and non-random samples. Participant characteristics were poorly reported in several studies making it difficult to assess how generalisable their findings are to wider populations.

- Length of follow up and loss to follow up

  Some studies collected participant satisfaction data several months after the completion of interventions; this may have created recall issues. There is also a risk that those who had more negative experiences of interventions may not have attended follow-up assessments.

- Face to face data collection

  Several studies collected acceptability data in person. This may have increased the risk of social desirability bias whereby participants' responses were influenced by a desire for acceptance or approval from research staff or from other participants (for example, other focus group attendees who may be friends or peers).

- Brief reporting of participant satisfaction

  This review included several experimental studies that had also been included in evidence review 1. These studies were generally moderate in quality with a focus on analysing and presenting quantitative effectiveness data. However, their reporting of participant satisfaction was generally much briefer and non-comparative (i.e. only participants in the intervention group were asked about their experiences of the study).

Further detail of the strengths and weaknesses of individual studies can be found in the evidence tables and the summary of the quality assessment (see appendix 1 and appendix 2D).

As with evidence review 1, an overarching limitation of the review is that 28 items identified through title and abstract screening were unavailable for assessment. While every attempt was made to source these items, it is possible that unobtainable papers contained relevant evidence for inclusion in either this review or evidence review 1.

4.2 Applicability

As noted in the evidence statements, only 2 studies included in the review were conducted in the UK, with most evidence coming from the USA. This may limit the applicability of the findings due to differences to healthcare policy, funding and service delivery. The majority of the studies were conducted among samples of children and young people, which may limit generalisability to older populations. Some studies were conducted among subgroups of the target populations of interest; for example, the study by Nanin et al (2006) was included for group 3 (people who are lesbian, gay, bisexual or transgender) but the focus of the study was solely on gay and bisexual men.

4.3 Gaps in the evidence

No evidence was found for the acceptability of interventions to prevent or reduce drug misuse in the following populations:

- People who have mental health problems,
- People involved in commercial sex work or are being sexually exploited,
- People not in employment, education or training (including children and young people who are excluded from school or are regular truants),
- Children or young people whose parents use drugs.

There was limited evidence for the acceptability of interventions to prevent or reduce drug misuse in all of the other populations included in the review. For example, while 4 studies were identified that assessed the acceptability of interventions to prevent or reduce drug use among group 9 (‘people who attend nightclubs and festivals’) these studies specifically considered people who attend nightclubs and ‘dance music events’ (for example, raves) rather than those who attend festivals.

Table 9. Gaps in the evidence by at risk group

At risk group	Acceptability of drug misuse interventions that people currently receive	Drug misuse prevention interventions and support that people feel might be more effective
People who have mental health problems	Gap	Gap
People involved in commercial sex work or who are being sexually exploited	Gap	Gap
People who are lesbian, gay, bisexual or transgender	Covered in 1 study[a]	Covered in 1 study[b]
People not in employment, education or training	Gap	Gap
Children and young people whose parents use drugs	Gap	Gap
Looked after children and young people	Covered in 1 study	Covered in 1 study
Children and young people who are in contact with young offender teams	Covered in 1 study	Gap
People who are considered homeless	Covered in 2 studies	Covered in 3 studies
People who attend nightclubs and festivals	Covered in 4 studies	Gap
People who are known to use drugs occasionally/ recreationally	Covered in 7 studies	Covered in 2 studies

Note: Some studies looked at both acceptability of drug misuse interventions that people currently received and provided information on drug misuse prevention interventions and support that people feel might be more effective.
'Covered' indicates a study was identified that looked at interventions in the specified at risk group.
'Gap' indicates where no studies were identified for the specified at risk group.

[a] Specifically targeted the use of crystal methamphetamine and only included gay and bisexual men
[b] Only included young people and participants that did not report their sexual orientation

4.4 Comparison with previous reviews

4.4.1 Evidence review 1 for the current guideline

A review of the evidence for the effectiveness of interventions for preventing or reducing substance misuse among specific at risk groups was conducted in late 2015 to inform the recommendations in the updated NICE Public Health guideline on Drugs Misuse Prevention.

The current review found no evidence on the acceptability of interventions, or suggestions for future interventions, for the following at risk groups:

- People who have mental health problems. Evidence review 1 identified evidence for the effectiveness of a brief intervention based on motivational interviewing, skills training, counselling, education or information, and family based approaches in this group.

- People who are commercial sex workers or who are being sexually exploited. Evidence review 1 also did not find any evidence for this group.
- People who are not in employment, education or training. Evidence review 1 also did not find any evidence for this group.
- Children and young people whose parents use drugs. Evidence review 1 identified evidence for the effectiveness of skills training and family-based approaches in this group.

The current review found evidence for the acceptability of interventions and suggestions for future interventions in people who attend nightclubs and festivals, however, no evidence of the effectiveness of these interventions was identified in Evidence review 1.

Evidence was identified in both Evidence review 1 (effectiveness of interventions) and the current review (acceptability of interventions and/or suggestions for future interventions) for the following at risk groups:

- People who are lesbian, gay, bisexual or transgender. Evidence review 1 identified evidence for the effectiveness of motivational interviewing, skills training, and educational videos. The current review identified evidence for the acceptability of a poster campaign and ideas for a future skills training intervention.
- Looked after children and young people. Evidence review 1 identified evidence for the effectiveness of motivational interviewing, skills training, counselling, and family-based interventions. The current review identified evidence for the acceptability of brief motivational interviewing and ideas for future motivational interviewing interventions.
- Children and young people who are in contact with young offender teams but not in secure environments. Evidence review 1 identified evidence for the effectiveness of family-based interventions that incorporated skills training, counselling, information, motivational interviewing, and abstinence based approaches. The current review identified evidence for the acceptability of a skills based training intervention and ideas for a future skills based training intervention.
- People who are considered homeless. Evidence review 1 identified evidence for the effectiveness of brief motivational interventions, skills training, education, and art program interventions. The current review identified evidence for the acceptability of brief motivational interventions and skills training interventions, and evidence for ideas of future skills training interventions.
- People who are known to use drugs occasionally or recreationally. Evidence review 1 identified evidence on the effectiveness of brief interventions, motivational enhancement therapy, motivational interviewing, web-based interventions, skills training, and education.

The current review identified evidence on the acceptability of motivational enhancement therapy, brief interventions, web-based interventions, and skills training interventions. The current review also identified evidence on future brief interventions.

4.4.2 Evidence review for NICE Public Health guidance on Interventions to Reduce Substance Misuse Amongst Vulnerable People (PH4)

A review of the evidence for community-based interventions for reducing substance misuse among vulnerable and disadvantaged young people was conducted in November 2006 to inform the recommendations in the NICE Public Health guideline on Interventions to Reduce Substance Misuse Among Vulnerable Young People (PH4). The inclusion criteria for the PH4 review differed substantially to the current review, as it:

- Only included children and young people up to age 25 years.
- Included groups not identified as target groups in the current review: children and young people generally 'at risk' of substance misuse, pregnant women and institutionalised children and young people, children and young people from black and ethnic minorities, children and young people with behavioural problems or who were aggressive, high sensation seekers, had divorced parents, experienced abuse or considered 'latchkey'.
- Included studies for which drug misuse outcomes were not reported e.g. studies that reported parental outcomes, alcohol use, and tobacco.

The evidence review for PH4 did not identify any evidence on the acceptability of interventions to the target audience of the intervention and their parents or carers, or any evidence of suggestions for future interventions.

4.4.3 NICE evidence update for Interventions to Reduce Substance Misuse Amongst Vulnerable People (Evidence Update 56)

An Evidence Update (Evidence Update 56) on selected new evidence relevant to NICE Public Health guidance on Interventions to Reduce Substance Misuse Amongst Vulnerable People (PH4) was published in April 2014. The Evidence Update did not look specifically at evidence for the acceptability of interventions or evidence of suggestions for future interventions.

The evidence update identified evidence that may have an impact on 2 of the existing recommendations in PH4:

- A programme of family-based support may have beneficial effects including reductions in illicit drug use and alcohol dependence and increased use of condoms during sexual activity. Evidence in the current review suggested future drug misuse prevention interventions in people who are homeless should include family members.
- Intensive community nursing support for mothers during prenatal and infant years may have long-lasting effects on the child, resulting in lower use of tobacco, alcohol and cannabis as well as lower frequency of use when the child is aged 12 years. The current review did not identify any studies of intensive community nursing support for mothers that met the inclusion criteria of the current review.

The titles and abstracts of all studies included in the evidence update for PH4 published in April 2014 were assessed for inclusion in the current review. None of the 16 studies included in the evidence update for PH4 were included in the current review. Three of the studies were included in Evidence review 1, but did not report any information on acceptability of interventions or suggestions for future interventions and so were not included in the current review (Kim and Leve 2011; Milburn et al. 2010; Prado et al. 2012). Of the remaining 13 studies that were not included in the current review, 4 were systematic reviews that did not meet the inclusion criteria of having 80% eligible studies (Altena et al. 2010; Broning et al. 2012; Carney and Myers, 2012; Salvo et al. 2012), 8 were primary studies that did not target 1 of the 10 groups of interest in the current review (Conrod et al. 2010; Hallfors et al. 2006; Kitzman et al. 2010; Murphy et al. 2012; Pantin et al. 2009; Stein et al. 2011; Valente et al. 2007; Wiggins et al. 2009), and 1 was a study of treatment of drug misuse rather than prevention (Liddle et al. 2009).

4.4.4 Advisory Council on the Misuse of Drugs "Prevention of drug and alcohol dependence" report

The Advisory Council on the Misuse of Drugs published a report on Prevention of Drug and Alcohol Dependence in February 2015. The report states that public acceptability of interventions needs to be taken into account, especially for interventions that aim to restrict behaviours. The report argues that the general public are more likely to accept the least intrusive behaviour change interventions and interventions that target the behaviour of others rather than their own behaviour.

The review presents findings from a review by Brotherhood et al. (2013) of specific approaches to drug and alcohol prevention that are likely to be beneficial, have mixed evidence of effectiveness, have unknown effectiveness or are ineffective. Some of the

approaches were not within the scope of this review (for example, those targeted at tobacco or alcohol use).

- Approaches reported to be 'likely to be beneficial' in the Brotherhood et al. (2013) review:
  - Motivational interviewing for multiple substance use. In the current review, motivational interviewing was acceptable to substance users and was suggested as a future intervention.
- Approaches with mixed evidence in Brotherhood et al. (2013) review:
  - Parental programs designed to reduce use of multiple substances. The current review found no evidence on the acceptability of parental programs or suggestions for their use in future interventions.
- Approaches that were reported to be 'ineffective' in Brotherhood et al. (2013) review:
  - No evidence on standalone school-based curricula to increase knowledge about drugs, programs that combine school and community-based interventions, mentoring programs, mass media programmes found in current review.
  - Recreational/diversionary activities and theatre/drama based education. The current review found no evidence on recreational/diversionary activities and theatre/drama based education. There was evidence from 1 study that suggested the use of recreational and diversionary activities in future interventions.

5 Included studies

1. Baer J, Garrett S, Beadnell B et al. (2007) Brief motivational intervention with homeless adolescents: Evaluating effects on substance use and service utilization. Psychology of Addictive Behaviors 21: 582-586
2. Braciszewski J, Moore R, Stout R (2014) Rationale for a New Direction in Foster Youth Substance Use Disorder Prevention. Journal of Substance Use 19(1-2):108-111
3. Branigan P and Wellings K (1999) Acceptance of the harm minimization message in London clubs and underground system. Drugs: Education, Prevention & Policy 6: 389-398
4. Carlson R, Falck R, McCaughan J et al. (2004) MDMA/Ecstasy Use Among Young People in Ohio: Perceived Risk and Barriers to Intervention. Journal of Psychoactive Drugs 36(2): 181-189
5. Chinet L, Stéphan P, Zobel F et al. (2007) Party drug use in techno nights: A field survey among French-speaking Swiss attendees. Pharmacology biochemistry and behaviour 87: 284-289
6. D'Amico E, Barnes D, Gilbert M et al. (2009) Developing a Tripartite Prevention Program for Impoverished Young Women Transitioning to Young Adulthood: Addressing Substance Use, HIV Risk, and Victimisation by Intimate Partners. Journal of Prevention and Intervention in the Community 37(2): 112-128
7. Elliott J, Carey K, Vanable P (2014) A Preliminary Evaluation of a Web- Based Intervention for College Marijuana Use. Psychology of Addictive Behaviours 28(1): 288-293
8. Goldbach J and Steiker (2011) An Examination of Cultural Adaptations Performed by LGBT-Identified Youths to a Culturally Grounded, Evidence-Based Substance Abuse Intervention. Journal of Gay & Lesbian Social Services 23: 188-203
9. Hudson A, Nyamathi A, Slagle et al. (2009) The Power of the Drug, Nature of Support, and their Impact on Homeless Youth. Journal of addictive diseases 28(4): 356-365
10. Kurtz S, Surratt H, Buttram M et al. (2013). Interview as intervention: The case of young adult multidrug users in the club scene. Journal of Substance Abuse Treatment 44: 301-308
11. Lynsky D, Heischober B, Johnston P et al. (1999) Youth Alternative Sentencing Program: A Description and Evaluation of an Alcohol and Marijuana Intervention Program. International Journal of Trauma Nursing 5: 10-16
12. Nanin J, Parsons J, Bimbi D et al. (2006) Community reactions to campaigns addressing crystal methamphetamine use among gay and bisexual men in New York City. Journal of Drug Education 36(4): 297-315

13. Norberg M, Hides L, Olivier J et al. (2014). Brief Interventions to Reduce Ecstasy Use: A Multi-Site Randomised Controlled Trial. Behavior Therapy 45: 745- 759
14. Rudzinski K, McGuire F, Dawe M et al. (2012) Brief intervention experiences of young high-frequency cannabis users in a Canadian setting. Contemporary Drug Problems 29: 49-72
15. Shrier L, Rhoads A, Burke P et al. (2014) Real-time, contextual intervention using mobile technology to reduce marijuana use among youth: A pilot study. Addictive Behaviors 39: 173-180
16. Tait R, McKetin R, Kay-Lambkin F et al. (2015) Six-Month Outcomes of a Web-Based Intervention for Users of Amphetamine-Type Stimulants: Randomised Controlled Trial. Journal of Medical Internet Research 17(4)
17. Walker D, Stephens R, Roffman R et al. (2011) Randomized Controlled Trial of Motivational Enhancement Therapy With Nontreatment-Seeking Adolescent Cannabis Users: A Further Test of the Teen Marijuana Check-Up, Psychology of Addictive Behaviors, 25, 474-484
18. Walton M, Bohnert K, Resko S et al. (2013) Computer and therapist based brief interventions among cannabis-using adolescents presenting to primary care: One year outcomes. Drug and alcohol dependence 132:646-653
19. Wenzel S, D'Amico E, Barnes D et al. (2009) A pilot of a tripartite prevention program for homeless young women in the transition to adulthood. Womens Health Issues 19(3): 193-201
20. Wood D, Who S, Alldus G et al. (2010) The development of the recreational drug outreach educational concept 'Drug Idle'. Journal of Substance Use 15(4): 237-245