▶ Interventions to reduce substance misuse among vulnerable young people.

[UK] National Institute for Health and Care Excellence

Evidence Update April 2014

In this evidence update, the National Institute for Health and Care Excellence assess new evidence relevant to its earlier public health guidance on interventions to reduce substance misuse among vulnerable young people.

SUMMARY The National Institute for Health and Care Excellence (NICE) have selected and summarised recent research relevant to their public health guidance published in 2007 on interventions to reduce substance misuse in vulnerable young people. Although this *Evidence Update* does not replace existing NICE guidance or represent changes to official recommendations for practice, it is intended to help NICE determine whether the guidelines will need to be updated.

ORIGINAL GUIDANCE

The original guidance said it was concerned with vulnerable and disadvantaged children and young people aged under 25 who are at risk of misusing substances, including: whose family members misuse substances; with behavioural, mental health or social problems; excluded from school and truants; young offenders; looked-after children; homeless; involved in commercial sex work; from some black and minority ethnic groups.

The report made five recommendations.

1 Local strategic partnerships should develop and implement a strategy to reduce substance misuse among vulnerable and disadvantaged people aged under 25, as part of a local area agreement. This strategy should be:
• Based on a local profile of the target population developed in conjunction with the regional public health observatory. The profile should include their age, factors that make them vulnerable and other locally agreed characteristics.
• Supported by a local service model that defines the roles of local agencies and practitioners, the referral criteria and referral pathways.

2 This recommendation is for practitioners and others who work with vulnerable and disadvantaged children and young people in the NHS, local authorities and the education, voluntary, community, social care, youth and criminal justice sectors. In schools this includes teachers, support staff, school nurses and governors. They should:
• Use existing screening and assessment tools to identify vulnerable and disadvantaged children and young people aged under 25 who are misusing – or who are at risk of misusing – substances. These tools include the Common Assessment Framework and those available from the National Treatment Agency.
• Work with parents or carers, education welfare services, children's trusts, child and adolescent mental health services, school drug advisers or other specialists to provide support (schools may provide direct support) and refer the children and young people, as appropriate, to other services (such as social care, housing or employment), based on a mutually agreed plan. The plan should take account of the child or young person's needs and include review arrangements.

3 The same (see recommendation 2 above) set of practitioners and others should:
• Offer a family-based programme of structured support over two or more years, drawn up with the parents or carers of the child or young person and led by staff competent in this area. The programme should include at least three brief motivational interviews each year aimed at the parents/carers; assess family interaction; offer parental skills training; encourage parents to monitor their children's behaviour and academic performance; include feedback; continue even if the child or young person moves schools.
• Offer more intensive support (for example, family therapy) to families who need it.

4 Practitioners trained in group-based behavioural therapy should:
• Offer the children group-based behavioural therapy over one to two years, before and during the transition to secondary school. Sessions should take place once or twice a month and last about an hour. Each session should: focus on coping mechanisms such as distraction and relaxation techniques; help develop the child's organisational, study and problem-solving skills; involve goal setting.
• Offer the parents or carers group-based training in parental skills. This should take place on a monthly basis, over the same time period described above for the children. The sessions should: focus on stress management, communication skills and how to help develop the child's social-cognitive and problem-solving skills; and advise on how to set targets for behaviour and establish age-related rules and expectations for the children.

5 Practitioners trained in motivational interviewing should offer one or more motivational interviews, according to the young person's needs. Each session should last about an hour and the interviewer should encourage them to:
• discuss their use of both legal and illegal substances;
• reflect on any physical, psychological, social, education and legal issues related to their substance misuse; and
• set goals to reduce or stop misusing substances.

THE EVIDENCE UPDATE

The 30 most relevant articles published between 2006 and 2013 were assessed by an expert group; 16 were selected for inclusion in the update as high quality studies or reviews whose findings might suggest a change in practice.

Identifying and supporting young people aged under 25 who are misusing or at risk of misusing substances

Interventions for young people at risk of delinquent or criminal behaviour

One review was identified as relevant. It covered nine studies which assessed early interventions for young people at risk of being involved in crime or delinquency, but not using drugs or alcohol to the point where their use could have been diagnosed as misuse or dependence. The review suggested that individual – but not group – motivational interviewing was effective at reducing substance use and improving behavioural outcomes, with several sessions being more effective than single sessions. NICE did not expect this finding to result in changes to the guidelines, as the evidence base is small and limited.

Interventions for people at risk of misusing substances

Three pieces of evidence are discussed in this section. One was a trial involving just over 700 pupils at UK state secondary schools,

aged between 13 and 16, who on a psychological test scored as at above average risk of using substances. Pupils who both agreed themselves and whose parents agreed, were assigned at random either to a control group offered the standard curriculum drug education, or to two sessions of a 90-minute intervention involving educational, motivational and cognitive-behavioural therapy components. The group who received the intervention reduced their frequency of drug use, while the control group did not, and the difference remained after two years. They also used fewer drugs, while the control group used more, with the difference also remaining after two years. The intervention did not seem to be any more or less effective depending on the pupils' personality types or whether they had already begun using drugs. NICE concluded that the study shows that interventions targeted at people with personalities that make them more likely to use drugs can be effective at reducing how often and how many drugs they use. Nonetheless, it is not expected to affect the guidelines, because the study was targeted at young people in the general population, with only a psychological test determining that they were at higher risk of using substances.

The second relevant piece of evidence was a review of interventions aimed at children who have at least one parent with a substance misuse problem. Eight studies were found that fit the criteria and were of good quality, mostly of school-based interventions with two being family-based and one community-based. The programmes being studied were between eight and 14 weeks long, and typically featured one 90-minute weekly session, often aiming to teach how to cope with emotions and solve problems, as well as drugs and addiction information and family relationship skills. In many of the reviewed studies, the children were below 12 years old and unlikely to be using drugs or alcohol. Reviewers found the evidence on the effects of preventative interventions for these children unclear, and for this reason NICE did not expect it to affect the guidelines.

The final piece of evidence for this section was a review of interventions aimed at preventing children under 18 with mental health problems from misusing drugs or alcohol. The authors of the review found few trials that fit their criteria. Even extending the criteria to include adults, or children at high risk but without mental health problems, resulted in relatively few good quality studies. The studies there were had inconclusive results, perhaps partly due to relatively few participants. Due to a lack of conclusive effects, NICE did not expect this review to affect their guidance.

Family-based support for young people aged 11–16 years at high risk of substance misuse

Family-based support for Hispanic young people

One study featured a trial of a family intervention, called Familias Unidas, aimed at preventing problem behaviour – including alcohol, tobacco and cannabis misuse – in Hispanic young people who were already assessed as having at least mild problems in their conduct, aggression or attention. For those allocated to the intervention, the young people's parents were given nine sessions of a two-hour group intervention, followed by ten one-hour family visits, and later four one-hour booster sessions. A control group were instead referred to existing local services for young people with behavioural problems. Thirty months after the beginning of the trial, both groups of adolescents reported having used substances more than when the trial began, but the level of use in the intervention group had increased by significantly less than in the control group.

Another study also examined the Familias Unidas intervention, this time for Hispanic young people who had been involved in behavioural problem such as assaults, fighting, substance use and so on. Again the intervention featured group sessions for the parents while the control group were simply referred to existing young people's services. Those in the intervention group reduced their illicit drug use after a year, and alcohol dependence also decreased, while drug use and alcohol dependence among the control group increased.

NICE's evaluation of these two studies is that they suggest family-based support lasting six months can lead to reductions in illicit drug use and alcohol dependence, and also increased use of condoms during sex, and that these benefits may be related to improvements in family functioning. This might lead to a change in the guidance, which currently recommends that family programmes last at least two years.

Multidimensional family therapy

One relevant study is featured that examines Multidimensional Family Therapy, comparing it to group therapy with peers. Participants were young people in Florida between 11 and 15 years old who had been referred to outpatient substance misuse treatment. They were given two 90-minute sessions of group therapy or Multidimensional Family Therapy, which involved therapists meeting with the young people alone, the parents alone, and/or young people with their parents. Multidimensional Family Therapy was completed by almost all the young people assigned to it, compared to the less than three-quarters who completed group treatment. While both treatments lead to fewer young people reporting substance use problems one year later, multidimensional therapy achieved this result more quickly, and also led to greater increases in abstinence from substance use, and fewer days of use.

Although the evidence was assessed by NICE to suggest that family-based therapy can reduce substance misuse quicker than group therapy, and perhaps be more likely to lead to abstinence, the study is unlikely to affect the guidance, owing to a small sample size, the fact that the study was only at a single site, and concerns that the results might not apply equally to populations different from those in the study, who were predominantly African-American or Hispanic young people from low-income urban families.

Family-based support for newly homeless young people

One relevant study was found for this category, which compared the effects of a family intervention compared to standard care for young newly homeless people in California. Participants were 150 young people, typically 15 years old and Hispanic or African-American, who had recently spent at least two nights away from home but had the potential to return home. Just under 70 families were given five weekly sessions of around two hours, with both the young person and their parent receiving cognitive-behavioural based training. Just over 80 families were in the control group, given standard care or referral to other services. One year after the trial began, young people who received the family intervention drank alcohol less often, and used illicit drugs other than cannabis less often, compared to the control group, although they used cannabis more often than the control group – in fact, use increased in the intervention group and decreased in the control group. NICE judged the study unlikely to affect their guidelines, due to the contradictory results and because they thought the population might not be relevant to the UK context.

Interventions for young people in foster care

The featured trial in this category assessed an intervention that aimed to reduce substance misuse and delinquency among girls around 12 years old who were in foster care in the USA, most of whom had experienced physical and/or sexual abuse, and almost all of whom had experienced neglect. For those assigned to the intervention group, the girls and their carers were given six sessions of group therapy during the school holidays, then two hours per week of training and support during the school year. Those assigned to the control group were given existing standard services or referral to therapy. Compared to the controls, girls in the intervention group smoked tobacco and cannabis use less often, but there were no significant reductions in drinking or socialising with peers judged to be delinquent. Mixed results led to the study being considered unlikely to result in any changes to the guidance.

Motivational interviewing for young people aged under 25 who are problematic substance misusers

Motivational interviewing for young people who are HIV positive

The study assessed in this category, of an intervention called Healthy Choices, was aimed at young people aged between 16 and 24 who had HIV and were behaving riskily, meaning that they had a substance use problem, were having unprotected sex, or not sticking

fully to their HIV treatment. Whilst the control group were just given standard treatment, the intervention group were also given four one-hour motivational interviewing sessions focussing on these risky behaviours. After just over a year, the proportion of people in the intervention and control groups drinking alcohol or smoking cannabis did not differ significantly, although the intervention group had drank less in the previous week. Rates of cannabis smoking in the previous week did not differ. NICE judged that the evidence suggests motivational interviewing might lead to young people with HIV who behave riskily drinking alcohol less, but not using cannabis less. The study had some limitations including a small sample size. Because of these limitations, and because it was unclear if findings would translate to the UK population, it was considered unlikely to affect guidance.

Motivational interviewing for young people in a juvenile correctional facility

Again one study was identified, which looked at interventions for American teenagers serving sentences of between four and 12 months in the youth criminal justice system, who had drank heavily or drank alcohol and used cannabis regularly in the year before their sentence. The two interventions to be compared were motivational interviewing and relaxation training, and the participants were typically male, aged on average 17 and one third were Hispanic, one third African-American and one third white. The study took place at one correctional facility, where the normal substance misuse treatment was eight weeks of twice-weekly one-hour group psychoeducation sessions. Trial participants were able to undergo this standard treatment, but were also given either 90 minutes of motivational interviewing or relaxation therapy, and an extra one-hour booster session two weeks before they were released.

Three months after they were released, those given motivational interviewing drank fewer average drinks per day, had fewer heavy drinking days and also used cannabis on fewer days, compared to those given relaxation training – although there was no difference in drinks per drinking day. Further examination showed that for teenagers with low levels of depression, the motivational interviewing did result in significantly fewer drinks per drinking day, but there was no difference for those who had high levels of depression. A similar effect was found for cannabis use, which was reduced after motivational interview among the less depressed teenagers but not among the more depressed. NICE's conclusions were that the study suggested motivational interviewing can be better than standard care at reducing drinking among young people in correctional institutions, and that this is consistent with existing NICE guidance that vulnerable and disadvantaged problem substance users under 25 should be given at least one session of motivational interviewing.

Topics not covered by the original guidance

Community nursing care during prenatal and infant years and subsequent substance misuse problems

The evidence considered for this section was a very long-term study of pregnant first-time mothers, mostly African-American, in 1990 and 1991. To qualify, the women had to meet at least two of three conditions: being unmarried; unemployed; or with less than 12 years education. The women in the intervention group were visited at their homes by nurses on average seven times whilst they were pregnant and another 26 times in the first two years of the child's life. The nurses aimed to improve the pregnancy and then the health and development of the child by promoting improved parental care, and also to help improve the lives of the parents through family planning, job searching and education.

When the children were 12, the study assessed the effect of this intervention on their smoking, drinking and cannabis use, achievement in education, behavioural problems and arrests. Children of the mothers who had received home visits were less likely to have smoked, drank or used cannabis in the previous 30 days – 2% had done so – than those of mothers in the control group who received no home visits – 5%. For educational achievement, there was a relative improvement in the intervention group compared to controls only for children from poor families; between the whole groups there was no significant difference. The other outcomes measured, including arrests and behavioural problems, were not affected. NICE judged the results as suggesting that intensive community nursing support for expectant and new mothers can result in the long term in lower smoking, drinking and cannabis use by their children, and that this evidence in favour of early intervention may result in changes to guidance.

Interventions for young people at risk of dropping out of education

In this category the evidence consisted of a study on the effectiveness of a drug prevention program called Reconnecting Youth – a school-based class that lasts half an academic year. Nine schools from urban areas in the USA took part in the trial. Their 14–17-year-old pupils were offered a total of 79 lessons on self-esteem, decision making, personal control and interpersonal communication. The pupils were selected from among lists of those identified as at high risk of dropping out, a judgement based on being in the top quarter of pupils for truancy, the bottom half for academic achievement, or having been referred specifically by staff. Just under half the pupils on the programme actually attended at least half of the classes, others moved to different schools or could not attend the lessons because of conflicting timetables or because it was felt that they needed to concentrate on their academic achievement.

Immediately after the intervention, and again six months later, the pupils' levels of substance misuse, academic achievement, and other emotional and behavioural outcomes were measured. No important changes were found immediately after the intervention, but by six months later the group who received the intervention actually performed significantly worse on three outcomes: bonding with 'conventional' peers (which was higher in the control group), bonding with high-risk peers (which was higher in the intervention group), and positive social weekend activities (higher in the control group). The authors of the study noted that the intervention had a negative effect overall, perhaps as a result of the unintended consequences of grouping together high-risk young people. NICE concluded that this evidence will most likely not affect guidance, but serves as a reminder that interventions must be evaluated fully before being implemented.

Interventions for young people who are homeless

Current guidance has no specific recommendations regarding interventions specifically for young homeless people. NICE examined a systematic review of such interventions. The review featured 11 studies of young people (mostly male, and aged between 10 and 24) which generally investigated individual rather than group interventions, and were usually conducted in shelters or drop-in centres. Reviewers judged most studies to be of poor quality, with the best four studies being of fair quality. The studies usually tested for a reduction in drug and alcohol use, and some also measured mental health, emotional problems, education, employment and homelessness. The interventions tested included: intensive case management, which showed some positive effects on employment and social stability; brief motivational interviewing, which had no significant effect on drug or alcohol use; and cognitive-behavioural interventions, which were associated with improvements in homelessness, psychological distress and substance misuse. Overall, the findings were mixed, with no clear successes. Combined with the poor quality of many of the studies, these mixed results led to NICE judging the evidence inconclusive and unlikely to affect guidance.

Peer support to reduce substance misuse

This study assessed an intervention called Towards No Drug Abuse, comparing the success of the intervention when it was peer-led with the existing non-peer led version. 75 classes of Californian children participated in the study. Some were allocated to the conventional Towards No Drug Abuse programme, some to the peer-led variant, and others to a standard-prevention control group. Participants were on average 16 years old and typically Hispanic. The two interventions both involved 12 sessions over around four weeks. For the peer-led version, peer leaders were chosen by the pupils and then given an hour's training in managing the group discussion and dynamics.

Tobacco, alcohol, cannabis and cocaine use were assessed at the beginning of the study and one year after the intervention. The conventional programme was not associated with changes in use of any of these substances. The peer-led version was associated

with lower cannabis and cocaine use than among the controls, but also pupils offered this intervention *increased* their use of these two drugs if their peers did the same. NICE concluded that the intervention does not generally affect substance misuse, and that the study is unlikely to result in changes to guidance.

General youth development programmes for young people at risk of substance misuse

Again one piece of evidence was considered for this section, this time a study from the UK of the oung People's Development Programme – a Department of Health-funded programme for 13–15-year-olds considered at risk of teenage conception, substance misuse or exclusion from school. The trial aimed to match the 27 sites implementing the programme with 27 similar sites that could serve as a comparison. Almost 2400 teenagers started the programme, but under two-thirds completed the assessment that came nine months afterwards, and just over 40% completed the 18-month assessment, and even fewer in the comparison group.

At the 18-month stage, the intervention was associated with more teenage pregnancies, but no differences in cannabis use or drunkenness. One explanation for the increase in teenage pregnancy may be that the intervention brought together people who engaged in or approved of more risky behaviours. Given the lack of reductions in cannabis use or drunkenness and the increase in teenage pregnancies, NICE did not expect this study to lead to changes to guidance.

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