National Institute for Health and Clinical Excellence

Centre for Public Health

Review decision

Consideration of an update of the public health guidance on 'School based interventions to prevent smoking' (PH23)

1 Background information

Guidance issue date: February 2010

3 year review date: April 2013

2 Process for updating guidance

Public health guidance is reviewed 3 years after publication to determine whether all or part of it should be updated.

The process for updating NICE public health guidance is as follows:

- NICE convenes an expert group to consider whether any new evidence or significant changes in policy and practice would be likely to lead to substantively different recommendations. The expert group consists of selected members (including co-optees) of the original committee that developed the guidance, key experts in the area, and representatives of relevant government departments.

- NICE consults with stakeholders on its proposal for updating the guidance

- NICE may amend its proposal, in light of feedback from stakeholder consultation.

- NICE determines where any guidance update fits within its work programme, alongside other priorities.

However, the review update process for this guidance has differed slightly from the standard CPH process. In addition to informing the guidance update decision, the evidence assessment undertaken by the expert group for this topic also informed a new Evidence Update (EU). The two processes were aligned as a pilot project, to assess the potential for running them together on a more routine basis. Evidence Updates highlight new evidence relating to published accredited guidance. They are based on the scope of the particular guidance they relate to, and provide a commentary on a selection of new articles published since the guidance was issued. They follow a more systematic process for the assessment of new evidence than currently employed routine update reviews, described below.

The Evidence Update will be published at the same time as the update review decision in April 2013.

3 Consideration of the evidence and practice

The guidance was reviewed by an expert panel convened in January 2013. The expert group discussed published and ongoing research of relevance to the current recommendations, informed by literature searches. They also discussed changes to policy, legislation and organisations that might affect the recommendations.

Policy context

The expert group discussed changes to the policy and delivery context for this guidance, which have been substantial. They observed that terms and language used within the guidance document had changed since publication, as a result of changing responsibilities and structures for public health, healthcare commissioning and delivery, the education system, school management and the curriculum.

Literature searches, selection and appraisal

Literature searches were conducted for papers published between November 2008 and October 2012. The original search strategies for the effectiveness

and qualitative evidence review were re-run. Records were sifted and appraised by the NICE team against original inclusion criteria, using CPH methods for critical appraisal. The resulting final set of 33 papers (see appendix 1) were discussed by the expert group, who were asked to consider:

- *Is there significant new evidence that would change the existing recommendations?*
- *Is there significant new evidence that could inform new recommendations?*
- *Are the recommendation still relevant and useful?*
- *Could the recommendation be amended to improve implementation?*
- *Will changes in policy or practice affect the recommendations?*

Summary of new evidence

Of the 33 papers, 9 were identified by the panel as being of direct relevance to the guidance update review decision, for further assessment and discussion about their potential impact on the existing recommendations. These discussions are summarised below. In addition to these papers, the panel identified a further 10 studies relevant to the topic and guidance to include in the Evidence Update which were not directly relevant to updating the recommendations, but contained evidence relevant to the general area or additional detail.

Recommendations

Recommendation 1: Organisation-wide or 'whole school' approaches

The panel identified an updated Cochrane review on school smoking interventions, reported by Carson et al (2011) as relevant to this recommendation. An earlier version of the review had been considered by the original guidance. Favourable to whole-school approaches, the panel noted that the findings of this review do not change the conclusions of the previous Cochrane review on this topic, but strengthened the evidence based as it contained more studies and further evidence.

The expert panel agreed that Carson et al (2011) and other papers discussed provided broad support for the current recommendation. There was no other evidence identified which was relevant to this recommendation, so the expert group suggested that there was no reason to update it.

Recommendation 2: Adult-led interventions

The updated Cochrane review on school smoking interventions (Carson et al 2011) included some adult-led community interventions, concluding that there was *"some evidence to support the effectiveness of community interventions in reducing the uptake of smoking in young people".* It also highlighted a weak evidence base, with some methodological issues. The expert panel noted this, commenting specifically on issues with assessment and comparators in this area. They concluded that at present the evidence remained unclear.

A second paper, Conner & Higgins (2010), focused on "implementation intention manipulation" – assisting young people to plan how, where, and when to refuse the offer of a cigarette. The panel observed that whilst the study had a high loss to follow-up rate, it looked promising and new evidence on such approaches would be relevant at future updates. A UK-based trial is currently underway that promises to develop the evidence for this intervention.

Two papers published since PH23 dealing with the Smoke-free Class Competition (SFC) - one Cochrane review and an RCT -were discussed in detail by the panel. Findings from an additional meta-analysis (Isensee & Hanewinkle) were not considered, as the panel felt it was of poor methodological quality.

The SFC has been widely implemented throughout Europe and has been promoted by the European Union. In it, classes with young people generally between the ages of 11 to 14 years commit to being smoke free for a six month period. They self-report regularly on their smoking status; if 90% or more of the class reports itself as non-smoking at the end of the six months,

the class goes into a competition to win prizes. Those in the classes with lower smoking rates at the end of the project (usually the end of one school year) receive awards.

The chair commented that a number of issues around this intervention have been raised in recent literature, around effectiveness, equity issues, and negative or unintended consequences of the intervention. A number of methodological concerns have also previously been raised. The intervention was considered during the development of PH23 but not recommended.

The first paper, an RCT study reported by Isensee et al (2012) conducted in a rural area of Germany over a 19 month period, attempted to address the problems of pupils from different economic backgrounds. Although it found no effect for those who described themselves as current or non-smokers at baseline, it did note an effect of intervention among experimental smokers at 12 months – fewer in the intervention groups progressed to more established smoking - and asserted that this was a favourable outcome of the intervention. However, the panel felt that methodological issues around bias, including self-reported outcome measures, made this study difficult to interpret. Secondly, Johnston et al (2012) report a Cochrane review that looked more broadly at incentives for preventing smoking in young people, but focused mostly at SFC studies. It concluded there was no high quality evidence that incentives prevent young people from starting to smoke, although it noted that there were currently few studies and they were of variable quality.

Three further studies (Faggiano et al 2012; Gabrhelik et al 2012a; Gabrhelik et al 2012b) looked at the “Unplugged” intervention, which is used in schools in various parts of Europe. The panel noted a reported positive effect at 15 months for Unplugged when delivered to a population in the Czech Republic (Gabrhelik et al 2012a), but no significant effect at 18 months when used in Austria, Belgium, Germany, Greece, Italy, Spain, and Sweden (Faggiano et al 2012). Further analysis by Gabrhelik et al 2012b), suggested the programme

was useful for specific groups of students (including “at risk” girls) who were at high risk of initiating smoking. They suggested that additional efforts are needed to prevent smoking among adolescent females, perhaps through the use of gender specific messages. A range of methodological limitations were discussed by the panel.

In discussion, the panel expressed concerns that changes to funding and governance arrangements for schools in England might make relatively inexpensive interventions such as SFC attractive to commissioners, despite the limited / no evidence of effectiveness.

The expert panel identified three papers (Isensee & Hanewinkle 2012, Isensee 2012 and Johnston et al 2012) that raise further issues with an intervention considered – but not recommended – during the development of PH23. In light of changes to funding and governance arrangements for schools, and the requirement for schools and local authorities to demonstrate achievement in this area, the panel felt that this recommendation (and evidence around the SFC intervention) could usefully be reviewed and updated. Other papers provided support for existing recommendations, and some evidence about the advantages of targeting specific, at risk groups, but the panel agreed this evidence was not sufficient to warrant further update.

Recommendation 3: Peer-led interventions

The panel identified two papers offering further detail on the peer-led ASSIST intervention, recommended in the current version of PH23. Firstly, Mercken et al (2012) conducted a secondary analysis on the results of an RCT on ASSIST, concluding that ASSIST was particularly effective with female students, and those from poorer areas. The authors also suggested that their findings provided support use of a social networking approach. Secondly, Hollingworth et al (2012) used data from the same RCT study on ASSIST to inform a simple cost-effectiveness analysis of the intervention. The panel felt that the first study provided support for the current recommendation, and

some additional information around inequalities suggesting that the intervention did not exacerbate them and perhaps had the potential to help mitigate their effects. The second study was also seen as useful in regard to this recommendation because it gave additional information on the cost of ASSIST.

The expert panel agreed although the identified papers provided support for the current recommendation and some limited evidence about the need to tailor aspects of intervention for specific population sub-groups, the evidence did not warrant further update of this recommendation.

Recommendation 4: Training and development

The study reported by Hollingworth et al (2012) described above provided some additional information relevant to this recommendation, insofar as it reported on a sensitivity analysis suggesting that privately contracted trainers were the most expensive way of delivering the intervention, and that costs could also go down over time as the intervention is delegated from senior to more junior teachers.

Some limited evidence relevant to this recommendation was identified, however the panel did not feel it was sufficient to warrant an update to the recommendation at this time.

Recommendation 5: Co-ordinated approach

The updated Cochrane review on school smoking interventions (Carson et al 2011) included some interventions that might be considered 'co-ordinated' with activities across community and other areas. As described above, however the panel noted that there were issues with assessment and comparators in this area and that the evidence was not clear.

The three papers relating to the 'Unplugged' intervention (Faggiano et al 2012; Gabrhelik et al 2012a; Gabrhelik et al 2012b) also provided some evidence for co-ordinated approaches that tie in with activity around alcohol and other substances. The panel felt that although the support here was limited, it could be useful to examine additional evidence on this at a later

update, or to consider combined approaches for tobacco, alcohol and other substances in separate guidance.

Some limited evidence relevant to this recommendation was identified, however the panel did not feel it was sufficient to warrant an update to the recommendation at this time.

Cost effectiveness analysis

One study was discussed by the panel that provided additional cost effectiveness information relevant to PH23. Hollingworth et al (2012) used data from an RCT study on ASSIST to inform a simple cost-effectiveness analysis of the intervention, providing additional data on cost. The paper also suggests that delegating the delivery of ASSIST to appropriately trained teaching staff would be a more cost effective approach than using specialised trainers.

The expert group did not feel there was any evidence to indicate the need to update the cost effectiveness analysis at this time.

Research recommendations

The panel felt that one of the two papers on the ASSIST intervention - Mercken et al (2012) - provided some limited evidence in areas identified in research recommendations 1 and 6 in PH23 as being in need of further research: The impact of factors such as gender and socioeconomic group on the effectiveness of interventions to prevent smoking in school aged children. This study provided some support for the effectiveness of ASSIST with girls from families in lower socioeconomic groups.

However, despite this additional evidence the panel was content that all the research recommendations in PH23 remained current.

4 Implementation and post-publication feedback

The NHS Information Centre for Health and Social Care published national statistics on smoking, drinking and drug use among young people in 2011 in

July 2012. It shows a sustained decline in the proportion of school pupils who have tried smoking, with 25% of pupils surveyed reporting having tried smoking at least once. This figure is lower than at any time since the survey began in 1982, when more than half of pupils (53%) had tried smoking.
In 2011, 5% of pupils smoked regularly (at least once a week). The prevalence of regular smoking among 11 to 15 year olds has halved since its peak in the mid-1990s – 13% in1996. Once other factors are controlled for, girls were more likely than boys to be regular smokers, and Afro-Caribbean pupils were less likely than those from other ethnic groups to smoke regularly. Regular smoking was also associated with drinking alcohol, drug use, truancy and exclusion from school.

Feedback from the NICE implementation team highlights concerns in the field about the potential impact of changing funding and management landscape for schools on work to prevent smoking,

5 Related NICE guidance

The following NICE guidance is related to PH23:

Related NICE guidance in development:

- Tobacco - harm-reduction approaches to smoking NICE public health guidance. Publication expected May 2013
- Smoking cessation in secondary care – acute, maternity and mental health services NICE public health guidance. Publication expected November 2013

Related published NICE guidance:

- Social and emotional wellbeing - early years NICE public health guidance 40 (2012)
- Tobacco NICE Local government public health briefings 1 (2012)
- Smokeless tobacco cessation - South Asian communities NICE public health guidance 39 (2012)

- Quitting smoking in pregnancy and following childbirth NICE public health guidance 26 (2010)
- Social and emotional wellbeing in secondary education NICE public health guidance 20 (2009)
- Preventing the uptake of smoking by children and young people NICE public health guidance 14 (2008)
- Social and emotional wellbeing in primary education NICE public health guidance 12 (2008)
- Smoking cessation services NICE public health guidance 10 (2008)
- School-based interventions on alcohol NICE public health guidance 7 (2007)
- Workplace interventions to promote smoking cessation NICE public health guidance 5 (2007)
- Interventions to reduce substance misuse among vulnerable young people NICE public health guidance 4 (2007)
- Brief interventions and referral for smoking cessation in primary care and other settings NICE public health guidance 1 (2006)

Related NICE pathways

- Smoking prevention and cessation Last updated September 2012
- Reducing substance misuse among vulnerable children and young people Last updated Dec 2011

6 Stakeholder consultation

In December 2012, a proposal was made to stakeholders to partially update the guidance in light of new evidence, specifically in relation to recommendation 2 and evidence on the Smoke-free Class Competition. A proposal was also made to update the language and terms used in the guidance document on schools, the NHS and Local Authorities to reflect recent changes in systems, structures, and the changed policy and delivery context.

Thirteen Stakeholders responded including Action on Smoking and Health; ASH Cymru (ASH Wales); the Association of School and College Leaders; the

British Heart Foundation; the Department of Health; the Health Improvement & Development Service Portsmouth; Mentor; NHS Hampshire; the Oxford Health NHS Foundation Trust; the Royal College of Nursing; the Royal College of Physicians (RCP); the Solent NHS Trust; and the Staffordshire Local Authority.

Stakeholders expressed general support for the proposed changes. In addition, concerns were voiced about the implementation of an ASSIST programme in Wales – ASSIST is an intervention that was recommended in the original PH23 guidance. However, no new evidence was identified in relation to these concerns, which focused on implementation fidelity, evaluation, and cost effectiveness.

One stakeholder commented that evidence on community based interventions from Carson et al (2011) should update evidence previously cited in PH23 as it showed more support for these intervention types. However, the evidence review originally developed to inform PH23 focused not on community based interventions alone, but on interventions with both school and community components, concluding that "*multi-component interventions incorporating both school and community components appeared to be ineffective"* (compared to usual education).

Another stakeholder commented that guidance on school-based interventions focusing on multiple risk behaviours (smoking, alcohol and drug use) would be helpful, a view that was also expressed by the expert panel. Such interventions are beyond the scope of the present referral, however NICE may wish to consider putting this topic through the CPH topic selection process for future guidance.

7 Equality and diversity considerations

There has been no evidence to indicate that the guidance does not comply with anti-discrimination and equalities legislation.

8 Conclusion

In conclusion, no new evidence has been identified which appears to contradict the existing recommendations. There have been significant changes to the policy and delivery context since the original guidance was published, and some new evidence is available that could add nuance to some of the recommendations, however it is highly unlikely that this would invalidate or change the direction of the current recommendations.

Nevertheless, there is some new evidence that relates to an intervention covered by the original referral and within the original scope, where NICE could partially update and extend the current guidance. Increasing pressure on schools and Local Authorities to provide better value for money and identify efficiency savings may increase the appeal of interventions that are relatively inexpensive to implement, and a clear recommendation from NICE on this intervention would be helpful.

The update process and discussion with the expert panel bought two ongoing research projects to NICE's attention that are relevant to this project: an extension of Conner & Higgins (2010)[1] study of implementation intention, and a study focusing on support and help for families to prevent smoking, alcohol and substance misuse among adolescents[2], both due to report within the next two years. A full search for papers from these projects, and from any other relevant research will be conducted at the time of the next review.

9. Decision

[1] http://www.biomedcentral.com/1471-2458/13/54/abstract
[2] http://www.controlled-trials.com/ISRCTN63550893

The guidance will be partially updated in light of new evidence. New evidence on the “Smoke-free Class Competition” will be reviewed.

In addition to this partial update, the language and terms used within the guidance to refer to roles, structures and functions within schools, the NHS and Local Government will be reviewed and amended where necessary to take account of recent changes.

In line with current CPH methods and processes, the guidance will be reviewed again in 2016 to consider new evidence about the effectiveness of school-based interventions to prevent the uptake of smoking.

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Appendix one: References for included studies

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