Smoking cessation interventions and services

Systematic reviews

Public Health Internal Guideline Development
August 2017

National Institute for Health and Care Excellence
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Introduction

The systematic reviews presented in this report were conducted to support the development of the NICE Guideline on Smoking cessation interventions and services. The guideline will replace NICE's guidelines on brief advice and referral for smoking cessation (PH1) and smoking cessation services (PH10). It will update some of the existing recommendations in those guidelines.

Given the enormous body of research evidence about smoking cessation interventions it was decided that a 'stepped approach' to evidence identification would be employed. This structured approach involved a set of 'steps' to provide evidence to inform committee decisions as to whether subsequent elements of the searching (and reviewing) were necessary to provide evidence to contribute to the recommendations that committee would subsequently develop.

Details of committee membership and declarations of interests can be found in Appendix A.
**Methods**

The approach undertaken is described further in the detailed review protocols in Appendix B. A detailed protocol for the systematic searching process is reported in Appendix C.

The process resulted in the NICE Public Health Internal Guideline Development technical team conducting several systematic reviews, initially focusing on Cochrane systematic reviews that could be used to answer the questions. These could be added to by

- non-Cochrane systematic reviews (if, for example, the non-Cochrane systematic review more closely related to the review protocol or was more current).
- a review of individual primary studies.

Where the PHAC identified gaps in the published evidence for any questions then expert testimony was sought in accordance with Developing NICE guidelines; the manual.

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

**Review questions**

**RQ1** Is very brief advice from a community, health or social care professional effective and cost effective?

**RQ2** Is brief advice from a community, health or social care professional effective and cost effective?

**RQ3** Is behavioural support (delivered to a person or a group) effective and cost effective?

**RQ4** Are nicotine replacement therapy (established therapies, for example patch, gum or spray or newer, licensed e-cigarettes) or bupropion, on their own or combined with behavioural support, effective and cost-effective?

**RQ5** Is digital media in smoking cessation interventions effective as an adjunct to very brief or brief advice, behavioural support, or pharmacotherapy?

**RQ6** What advice and referral options are appropriate for people using consumer e-cigarettes?

**Searching**

Evidence identification methods employed an iterative approach, developed over a series of discrete steps taking into consideration evidence identified in progressive stages (see Appendix C, stepped approach to evidence identification).

This approach is in line with 'Developing NICE Guidelines: the Manual' (NICE 2014) which states, ‘*A flexible approach will allow evidence to be identified both systematically and in the most efficient manner*’.

Search strategies (see Appendix C) used all the elements of a comprehensive search strategy including combining appropriate free text and index terms. A wide range of bibliographic databases were searched, and these were supplemented by citation chasing, searches of a wide range of organisational websites, extensive grey literature sources, a call for evidence and the expert knowledge of committee..

Re-run searches were carried out in Feb 2017 for new and updated Cochrane reviews only.

**Including and excluding studies**

For each research question covered in the stepped approach the following stages were undertaken:
• All references from the searches were screened on title and abstract against the
pre-specified inclusion criteria set out in the protocols.

• A random sample of titles and abstracts was screened by two reviewers
independently, with differences resolved by discussion.

• Full-text screening was carried out by two reviewers independently, with
differences resolved by discussion.

• Reasons for exclusion at full paper stage were recorded (see Appendix E).

• Each included study was data extracted and quality assessed by one reviewer,
with all data checked in detail by a second reviewer. Any differences were
resolved by discussion.

Critical appraisal
Included studies were rated individually to indicate their quality, using quality
assessment tools appropriate to the study design. R-AMSTAR was used to assess
the quality of included systematic reviews, and the NICE checklist for quantitative
studies was used to rate trials. These quality checklists are recommended in
Developing NICE Guidelines: the manual (NICE 2014). Each included study was
assessed by one reviewer and checked by another. Any differences in quality
grading were resolved by discussion. The tools used to assess the quality of studies
are included in Appendix G and a summary of the quality assessment results of all
included studies is included in Appendix H. The quality ratings used were:
• ++ 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.

Research to recommendations
Table 1 below maps the recommendations against the research questions and
evidence statements that are generated in the systematic reviews. Note that
recommendations 22–28 on stop smoking services do not relate to a specific
research question, and no evidence was sought for them. The committee advised
that there would be no suitable research evidence available, and these
recommendations were made on the basis of expert testimony.

Table 1: Table mapping recommendations to evidence statements and review
questions

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Evidence statement</th>
<th>Review question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–7</td>
<td>ES1, ES2, ES3</td>
<td>RQ1, RQ2</td>
</tr>
<tr>
<td>8–19</td>
<td>ES4, ES5, ES6, ES7, ES8, ES9, ES10</td>
<td>RQ3, RQ4</td>
</tr>
<tr>
<td>17, 19</td>
<td>ES11, ES12, ES13</td>
<td>RQ5</td>
</tr>
<tr>
<td>20, 21</td>
<td>ES14</td>
<td>RQ6</td>
</tr>
<tr>
<td>22–28</td>
<td>ES15</td>
<td>No RQ</td>
</tr>
</tbody>
</table>
**Results**

**Flow of literature through the review**

The flow of literature through the reviews is summarised in Figure 1.

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**Figure 1:** Flow of literature through the review

Eighteen reviews or studies were included, although some reviews helped to address more than 1 review question. For details of reviews excluded at ‘full text’ stage see Appendix E.
Advice

**Very brief advice (less than 30 seconds) & Brief advice (10 minutes or less)**

Review questions

Is very brief advice from a community, health or social care professional effective and cost effective?

Is brief advice from a community, health or social care professional effective and cost effective?

Evidence review

**Very brief advice**

No published evidence was identified that used the classification of very brief advice or described similar interventions that provided support or referral in under 30 seconds.

**Brief advice**

Two Cochrane reviews provided evidence for this review question. The reviews focused on current smokers, some of whom were motivated to quit. Both reviews excluded trials that exclusively included pregnant women. Characteristics of the included reviews are presented in Error! Reference source not found. and further details are in Appendix D2.

<table>
<thead>
<tr>
<th>Table 2: Brief advice – Characteristics of included reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author, year, title</strong></td>
</tr>
<tr>
<td>Rice et al. 2013. Nursing interventions for smoking cessation.</td>
</tr>
<tr>
<td>Stead et al. 2013. Physician advice for smoking cessation.</td>
</tr>
</tbody>
</table>

Stead et al (2013 [++] ] focused on the effectiveness of brief advice delivered by physicians or by physicians supported by other healthcare workers to their patients. This review found that brief advice ([defined as advice (with or without a leaflet) during a single consultation lasting less than 20 minutes plus up to one follow-up visit] increased quit rates compared with no advice [or usual care] - (17 trials, RR 1.66, [CI 1.42 to 1.94]).

Rice et al (2013 [++] ] focused on brief advice delivered by nurses. This review found that brief advice (single 10 minute session with 1 follow-up visit) increased quit rates but this was not significant compared with no advice or usual care (7 trials, RR 1.27, [0.99 to 1.62]).

Evidence statements

1. No published evidence was identified that described the effectiveness of very brief advice that was less than 30 seconds. [ES1]

Applicability: No published evidence was identified
2. There is strong evidence from a single review showing that brief interventions (single consultation lasting less than 20 minutes plus up to one follow-up visit delivered by physicians) increase quit rates when compared with a control intervention and this was statistically significant (17 trials, RR 1.66, [95%CI 1.42 to 1.94]). [ES2]

**Applicability:** There are no obvious limits to the applicability of this evidence as the majority of the studies were conducted in UK settings though the indirectness of the intervention (longer than 10 minutes) would lessen confidence in the findings.

3. There is strong evidence from a single review showing that brief interventions (single consultation lasting 10 minutes or less with a single follow-up visit delivered by nurses) do not increase quit rates when compared with a control intervention (7 trials, RR 1.27, [95%CI 0.99 to 1.62]). [ES3]

**Applicability:** There are some limits to the applicability of this evidence as the majority of the studies were conducted in non-UK settings. The different context of healthcare service organisation in these countries may affect the delivery of specific interventions.

**Recommendations**

1. At every opportunity, ask people if they smoke and advise them to stop smoking in a way that is sensitive to their preferences and needs. [2018]

2. Discuss how to stop smoking with people who want to quit (see the National Centre for Smoking Cessation and Training (NCSCT) programmes). [2018]

3. Encourage people to discuss their use of personally purchased nicotine replacement products. [2018]

4. Refer people who want to stop smoking to a local specialist stop smoking service. [2018]

5. If people opt out of a referral to a local specialist stop smoking service, offer them pharmacotherapy and brief advice.

6. If people are not ready to stop smoking:
   - make sure they understand that stopping smoking reduces the risks of developing smoking-related illnesses or worsening conditions affected by smoking
   - ask them to think about adopting a harm reduction approach (see NICE's guideline on smoking: harm reduction)
   - encourage them to seek help to quit smoking completely in the future
   - record the fact that they smoke and ask them about it again at every opportunity. [2018]
7. Encourage people being referred for elective surgery to stop smoking before their surgery. Offer to refer them to the local specialist stop smoking service. [2018]

Rationale and impact

Why the committee updated the recommendations

To continue helping more people to stop smoking, healthcare practitioners working in primary care and the community need to provide them with information, encouragement and support whenever they see them. This is particularly important for people from more disadvantaged groups who have much lower than average stop smoking rates. They are also more likely to have respiratory, heart or other chronic conditions related to, or made worse by, smoking.

The committee confirmed that advice and referral is effective in helping people to stop smoking. So the committee agreed that recommendations on referring people to specialist stop-smoking services or offering them other types of support were still relevant.

Impact of the recommendations on practice

The recommendations will reinforce current best practice and many organisations will not need to change practice.

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

The committee agreed that quit rate was the most important outcome as it was a reliable proxy for all the benefits accrued after a smoker quits. This includes the reduction in risk to tobacco-related illnesses and the morbidity and mortality associated with these. For people with tobacco-related illness there is an increased benefit in terms of greater risk reduction, lessening of symptoms, fewer hospital admissions etc.

For people with other medical conditions, stopping smoking can reduce the risk of complications associated with those conditions, increase treatment options (for example in HIV), and reduce delays in recovery after surgery.

From a population health aspect the committee noted that one of the largest risk factors for starting smoking is having a parent who smokes so any increase in quit rates in one generation will have a carry-on benefit in terms of further reducing the number of people who take up smoking in the next generation. There is an additional benefit from reduced exposure to second-hand smoke.

The quality of the evidence

The committee noted the lack of published evidence despite several searches at different levels outlined in the protocol. No expert testimony was sought as the committee agreed that best practice dictates that very brief advice would always be given when a prescription is offered. As advice is also given if pharmacotherapy is declined, the committee also noted that the recommendation to discuss treatment options with smokers would cover the elements of very brief advice.

Benefits and harms

Very brief advice was considered useful by the committee as a means of checking smoking status and signposting to more support such as specialist stop smoking service as required. This is consistent with existing recommendations in Stop smoking services to ask about smoking status and readiness to quit at every
opportunity, The committee noted that there is a need for all clinical and public health professionals to accept that enquiring about smoking status and signposting to more support is a normal, routine part of their daily practice. This indicates that there is a pre-requisite for these professionals to be knowledgeable about local publicly funded stop smoking services to be able to provide the correct advice.

The risk with asking about smoking status at every opportunity is that smokers may feel bombarded with advice and this may have an effect on the subsequent interactions with the individual. The committee noted that there was potentially greater harm associated with not giving appropriate advice. These include missing opportunities to reinforce the ‘stop smoking’ message and also the opportunity to tailor the advice to the individual. There is also the potential that if advice is not provided then the person may seek advice from alternative sources that may not be able to signpost to local stop smoking services.

Cost effectiveness and resource use

No review of cost effectiveness evidence was undertaken. Instead, a bespoke model was developed which explored the threshold at which interventions are cost effective and assessed the cost effectiveness of a range of interventions identified in the effectiveness reviews.

This topic area was covered in the overall health economic modelling by one study, which delivered brief advice exclusively and in combination with pharmacotherapy. Both options were. Both options were cost effective and potentially cost saving to both NHS and local authorities against a ‘do nothing alternative’. However, brief advice and pharmacotherapy in combination was cost-saving and more effective compared with brief advice alone. The committee noted that very brief advice would always be offered at the initial discussion, at each opportunity after that and when prescriptions are offered so, there is no additional cost associated with doing this.

Other factors the committee took into account

The committee considered that the National Centre for Smoking Cessation and Training (NCSCT) was the best source for evidence-based advice to give to smokers. The NCSCT has identified the competencies (knowledge and skills) needed to effectively help smokers to stop smoking and also conducts research into the behavioural support given to smokers in the UK. To this end, the NCSCT has developed training, assessment and certification programmes based upon these competencies and also provides resources for commissioners, managers and practitioners.

Interventions to aid smoking cessation

Behavioural support alone

Review question

Is behavioural support (delivered to a person or a group) effective and cost effective?

Evidence review

Nine Cochrane reviews and one non-Cochrane systematic review provided evidence for this review question. The interventions examined were as follows:

- Individual support (Cahill et al. 2010; Lancaster et al. 2017; Mdege & Chindove 2014)
- Group support (Stead & Lancaster. 2017)

For the behavioural support topic (RQ3) 2 reviews focused on named behavioural approaches: stage-based (trans-theoretical model) (Cahill et al 2010) and motivational interviewing (Lindson-Hawley et al 2015). In addition, 1 review focused on individual counselling (Lancaster et al 2017) and 1 review focused on group behavioural therapy (Stead & Lancaster 2017). The remaining reviews on this topic considered any type of behavioural approach or advice and placed the focus on deliverer or setting: Carr & Ebbert 2012; Huibers et al 2007; Rice et al 2013; Stead et al 2013; Mdege & Chindove 2014.

All reviews included smokers, some of whom were motivated to stop smoking. All reviews excluded trials that included only pregnant women. Many of the include reviews covered mixed settings though were predominantly in primary care, secondary care/smoking cessation clinics and community settings. A number of reviews had a setting-specific focus: community pharmacy (Mdege & Chindove 2014), dental care (Carr & Ebbert 2012), primary care (Huibers et al 2007) and primary/secondary care (Rice et al 2013; Stead et al 2013). Characteristics of the included reviews are presented in Table and further details are in Appendix D3.

### Table 3: Behavioural support – Characteristics of included reviews

<table>
<thead>
<tr>
<th>Author, year, title</th>
<th>Quality</th>
<th>Populations</th>
<th>Intervention</th>
<th>Comparison</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cahill et al. 2010. Stage-based interventions for smoking cessation.</td>
<td>++</td>
<td>13 studies of smokers of any age. Settings were mixed, but included community and primary care.</td>
<td>Stage-based self-help interventions (individual counselling)</td>
<td>Non-staged based control (lower or equal intensity). Non-intervention control or usual care</td>
<td>Quit rate at 6 months after the start of the intervention. Abstinence from smoking after the period of cessation (where reported).</td>
</tr>
<tr>
<td>Carr &amp; Ebbert. 2012. Interventions for tobacco cessation in the dental setting.</td>
<td>+</td>
<td>8 studies of smokers of any age in dental practice settings.</td>
<td>Behavioural cessation interventions delivered by a dentist, dental hygienist, dental assistant or office staff in the dental practice</td>
<td>Usual care or other intervention.</td>
<td>Smoking and tobacco use cessation at least 6 months from the delivery of intervention.</td>
</tr>
<tr>
<td>Lancaster et al. 2017. Individual behavioural counselling for smoking cessation.</td>
<td>+</td>
<td>33 studies of any smokers (excluding pregnant women and trials recruiting only children and adolescents). Settings were mixed, but included community and primary care.</td>
<td>Face-to-face individual counselling sessions (&gt; 10 minutes) with or without further telephone contact for support</td>
<td>Minimal-contact control (usual care, brief advice or self-help materials)</td>
<td>Quit rate at the longest reported follow-up. Sustained abstinence (where available).</td>
</tr>
<tr>
<td>Author, year, title</td>
<td>Quality</td>
<td>Populations</td>
<td>Intervention</td>
<td>Comparison</td>
<td>Outcomes</td>
</tr>
<tr>
<td>---------------------</td>
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</tr>
<tr>
<td>Huibers et al. 2007. Psychosocial interventions by general practitioners.</td>
<td>++</td>
<td>2 studies of smokers of any age in GP settings.</td>
<td>Psychosocial interventions delivered by GPs. At least 2 face contacts and psychological process is central.</td>
<td>Any comparison.</td>
<td>Biochemically validated smoking abstinence rates.</td>
</tr>
<tr>
<td>Lindson-Hawley et al. 2015. Motivational interviewing for smoking cessation.</td>
<td>+</td>
<td>28 studies of any smokers (excluding studies that only recruited adolescents or pregnant women) in mixed settings, including primary, secondary care</td>
<td>Motivational interviewing, (face-to-face or telephone-based) individual or group</td>
<td>Brief advice, a low-intensity intervention, or routine care.</td>
<td>Smoking cessation. Sustained abstinence (where available)</td>
</tr>
<tr>
<td>Mdege &amp; Chindove 2014. Effectiveness of tobacco use cessation interventions delivered by pharmacy personnel: A systematic review</td>
<td>+</td>
<td>2 studies of pharmacy clients who were tobacco users.</td>
<td>Any pharmacy personnel delivered tobacco use cessation intervention (non-pharmacologic).</td>
<td>Usual care, no treatment or other active treatment.</td>
<td>Abstinence from smoking (point prevalence; continuous abstinence) or relapse (time to relapse).</td>
</tr>
<tr>
<td>Rice et al. 2013. Nursing interventions for smoking cessation.</td>
<td>++</td>
<td>35 studies of adult smokers (aged 18+ years; excluding pregnant women only trials). Secondary care settings were predominant.</td>
<td>Advice delivered in an initial session (&gt; 10 minutes, there were additional materials (e.g. manuals) and/or strategies other than simple leaflets, and usually participants had more than one follow-up contact.</td>
<td>Usual care or other intervention.</td>
<td>Smoking cessation (at least 6 months follow-up)</td>
</tr>
<tr>
<td>Stanton &amp; Grimshaw. 2013. Tobacco cessation interventions for young people.</td>
<td>++</td>
<td>18 studies of young people (&lt;20 years; excluding trials only recruiting pregnant women) who smoke at least one cigarette a week for at least 6 months.</td>
<td>Psychosocial interventions and complex programmes (with motivational enhancement) targeting young people through</td>
<td>No intervention, delayed intervention beyond the last date of data acquisition including</td>
<td>Change in smoking behaviour (follow-up of at least 6 months).</td>
</tr>
<tr>
<td>Author, year, title</td>
<td>Quality</td>
<td>Populations</td>
<td>Intervention</td>
<td>Comparison</td>
<td>Outcomes</td>
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</tr>
<tr>
<td>Stead et al. 2013. Physician advice for smoking cessation.</td>
<td>++</td>
<td>15 studies of smokers (excluding trials recruiting pregnant women only. The most common setting for delivery of advice was primary care.</td>
<td>Intensive physician advice (or supported by another healthcare worker).</td>
<td>Control or minimal advice</td>
<td>Smoking cessation (minimum of 6 months follow-up).</td>
</tr>
<tr>
<td>Stead &amp; Lancaster. 2017. Group behaviour therapy programmes for smoking cessation.</td>
<td>++</td>
<td>13 studies of adult smokers (excluding pregnant women).</td>
<td>Group behavioural intervention, such as information, advice and encouragement or cognitive behavioural therapy (CBT) delivered over at least two sessions.</td>
<td>Any comparison.</td>
<td>Abstinence from cigarettes at follow-up at least 6 months after the start of treatment</td>
</tr>
</tbody>
</table>

377 Individual counselling
378 Cahill et al (2010 [++]| focused on the effectiveness of staged-based interventions for smoking cessation. This review found that stage-based self-help compared with usual care or assessment only (12 trials, RR of 1.32 [95%CI 1.17 to 1.48]) and stage-based individual counselling compared with any control (13 trials, RR of 1.24 [95%CI 1.08 to 1.42]) were both effective in increasing quit rates. Expert systems, tailored self-help materials (2 trials, RR 0.93 [95%CI 0.62 to 1.39) and individual counselling (2 trials, RR of 1.00 [96% CI 0.82 to 1.22]), appear to be as effective in a stage-based intervention as they are in a non-stage-based form. Lancaster et al (2017 [+] reviewed studies of individual counselling as a face-to-face encounter between a smoking patient and a counsellor trained in assisting smoking cessation. This review found that counselling alone showed significant benefit (27 trials, RR 1.57 [95%CI 1.40 to 1.77) when compared with minimal contact control. In a comparison of more intensive to less intensive counselling interventions (which still involved more than 10 minutes face-to-face contact) (4 trials RR 1.42 [95%CI 0.98 to 2.06]), there was no evidence of benefit from more intensive compared with less intensive counselling.

395 Group counselling
396 Stead & Lancaster (2017 [++]| focused on the effectiveness of group smoking cessation interventions. This review found group-based behavioural programmes were more effective (9 trials RR 2.60 [95%CI 1.80 to 3.76]) than no intervention. The review also found that group based therapy was effective when compared with self-help (13 trials, RR 1.88 (95%CI 1.52 to 2.33]) or brief advice (16 trials RR 1.25}
[96=5% CI 1.07 to 1.46). There was no evidence that group style interventions are more or less effective than intensive individual counselling.

Any other behavioural intervention

Carr & Ebbert (2012 [+]1) assessed the effectiveness of tobacco cessation interventions delivered in dental settings. Evidence from 8 studies suggested that behavioural interventions conducted by oral health professionals can increase tobacco abstinence rates (OR 1.74, (95%CI 1.33 to 2.27)] at six months or longer, but there was evidence of heterogeneity (I² = 51%). Behavioural counselling (typically brief) in conjunction with an oral examination was a consistent intervention component that was also provided in some control groups. An insufficient number of studies were available to determine what specific assistance measures delivered by a dental professional provide additional effectiveness beyond brief advice.

Huibers et al (2007 [++]1) assessed the effectiveness of psychosocial interventions by general practitioners. Only 2 included studies considered smoking and cessation outcomes. There was conflicting evidence on the effectiveness of psychosocial interventions when compared to minimal intervention on smoking behaviour.

Lindson-Hawley et al (2015 [++]1) focused on the effectiveness of trials that make explicit reference to motivational interviewing (MI) principles. In a comparison with brief advice (or usual care) the overall effect of MI across all 28 included trials gave a modestly significant greater effect (RR 1.26 [95% CI 1.16 to 1.36]). There is limited evidence that GPs confer greater benefit than interventions delivered by nurses or counsellors. MI delivered by GPs had a larger effect (2 trials, RR 3.49 [95%CI 1.53 to 7.94]) than counsellors (22 trials, RR 1.25 [95%CI 1.15 to 1.36]). When delivered by nurses the effect was not significant (5 trials, RR 1.24 [95%CI 0.91 to 1.68]). Lastly, interventions delivered in a single session (16 trials, RR 1.26 [95%CI 1.15 to 1.40]) had a similar effect size to multiple session interventions (11 trials, RR 1.20 [95% C 1.02 to 1.42]).

One systematic review was identified that assessed pharmacy personnel-delivered combined smoking cessation interventions for adult smokers (Mdege et al 2014). This review included 2 studies that assessed non-pharmacological interventions, one of which was conducted in the UK. The authors did not conduct meta-analyses due to the heterogeneity of study interventions and comparisons, and presented the results as a narrative synthesis. Neither study showed a benefit in favour of the pharmacy-led intervention. Both studies showed a positive trend at follow-up with 45.5% versus 31.2% at 1 month in one study and 12.0% versus 7.4% (p = 0.09) at nine months for the other study.

Rice et al (2013 [++]1) focused on brief advice delivered by nurses. This review found that behavioural support (session lasted more than 10 minutes) with or without additional materials and usually with more than 1 follow-up contact, significantly increased quit rates compared with no advice or usual care (28 trials, RR 1.26, [95%CI 1.17 to 1.36]).

Stead et al (2013 [++]1) focused on the effectiveness of smoking cessation interventions delivered by physicians. This review found that more intensive interventions were effective in increasing quit rates compared with no advice (or usual care) (11 trials, RR 1.86 [95%CI 1.60 to 2.15]). The review found that the direct comparison between intensive and minimal (brief) advice in 15 trials suggested overall that there was a small but significant advantage of more intensive advice (RR 1.37 [95% CI 1.20 to 1.56]).
Behavioural support by subpopulation

Young people

Stanton & Grimshaw (2013 [++]]) focused on strategies that help young people (<20 years) to stop smoking tobacco. The author's concluded that complex interventions including motivational enhancement are effective for smoking abstinence (12 trials, RR of 1.60 [95%CI 1.28 to 2.01]). They also found that the Not on Tobacco (NoT) programmes for smoking cessation (a structured programme based on social learning theory) in young people had a marginally significant effect (6 trials of low quality evidence, RR of 1.31 [95%CI1.01 to 1.71]).

Summary

Overall, there was mostly consistent evidence across the 11 reviews for an effect of behavioural support. There is good evidence from 7 reviews that behavioural support interventions, across a range of intervention types and settings, delivered to an individual or group, are effective in helping people to stop smoking (Cahill et al. 2010 [++]; Lancaster et al. 2017 [+]; Lindson-Hawley et al. 2015 [+]; Rice et al. 2013 [++]; Stanton & Grimshaw 2013 [++]; Stead & Lancaster 2005 [++]; Stead et al. 2013 [++]]. A review of interventions in dental settings also indicated that behavioural support was effective, although limitations in the evidence ruled out any firm conclusions (Carr & Ebbert 2012 [+]). Although the evidence was restricted to motivational interviewing, there was limited evidence that GPs confer a greater benefit than interventions delivered by nurses or counsellors (Lindson-Hawley et al. 2015 [+]). One review that considered psychosocial interventions by general practitioners identified there was conflicting evidence that psychosocial interventions were more or less effective than minimal intervention on smoking behaviour, based on 2 trials which were not pooled (Huibers et al 2007 [++]). There was evidence from 3 reviews that there is limited or no additional benefit from intensive compared with less intensive counselling (Lancaster et al. 2017 [+]; Lindson-Hawley et al. 2015 [+]; Stead et al. 2013 [++]).

Evidence statements

4. There is strong evidence from 7 systematic reviews to suggest that behavioural support (either delivered to an individual or a group) is effective in increasing quit rates (13 trials, RR of 1.24 [95%CI 1.08 to 1.42]), (27 trials, RR 1.57 [95%CI 1.40 to 1.77]), (28 trials, RR 1.26 [95%CI 1.16 to 1.36]), (28 trials, RR 1.26, [95%CI 1.17 to 1.36]), (12 trials, RR of 1.60 [95%CI 1.28 to 2.01]), (13 trials, RR 1.88 [95%CI 1.52 to 2.33]), (15 trials, RR 1.37, 95%CI 1.20 to 1.56]). The reviews covered a range of intervention types, including: stage based design, individual behavioural counselling, motivational interviewing and group behaviour therapy. [ES4]

Applicability: With the exception of Stead et al 2013, the majority of the evidence in these reviews came from the USA, with only a relatively small amount of evidence from the UK. This has implications for applicability as in the UK Stop-Smoking Service combine extended face-to-face support with smoking cessation medications. In addition, most of the included reviews did not provide detailed information about the duration or frequency of interventions.

5. There was strong evidence from a single review that effectiveness may vary according to the person delivering the intervention: motivational interviewing is effective when delivered by GPs (2 trials, RR 3.49 [95%CI 1.53 to 7.94]) or counsellors (22 trials, RR 1.25 [95%CI 1.15 to 1.36]), but not effective when delivered by nurses (5 trials, RR 1.24 [95%CI 0.91 to 1.68]).
In reviews focused on counselling delivered by nurses (28 trials, RR 1.26, [95%CI 1.17 to 1.36]) and physicians (15 trials, RR 1.37, [95%CI 1.20 to 1.56]) there was strong evidence that interventions were effective.

A review of interventions in dental settings also provided weak evidence that behavioural support was effective, although limitations in the evidence ruled out any firm conclusions (OR 1.74, [95%CI 1.33 to 2.27]).

A review focused on support provided by community pharmacy personnel provided an insufficient number of studies to determine what specific support would aid cessation. [ES5]

**Applicability:** With the exception of Sinclair et al 2004 and Stead et al 2013, the majority of the evidence in these reviews came from the USA, with only a relatively small amount of evidence from the UK. There are no obvious limits to the applicability of this evidence, although the different context of healthcare service organisation may affect the delivery of interventions. In the UK specialist stop-smoking service combines extended face-to-face support with smoking cessation medications.
**Pharmacotherapy alone**

**Review question**
Are nicotine replacement therapy (established therapies, for example patch, gum or spray or newer, licensed e-cigarettes) or bupropion, on their own or combined with behavioural support, effective and cost-effective?

**Evidence review**
Among the three Cochrane reviews that considered pharmacotherapy alone, the interventions examined were as follows

- Bupropion (Hughes et al 2014)
- Nicotine Replacement Therapy (NRT) (Stead et al 2012)

All reviews included smokers, some of whom were motivated to stop smoking. Each review excluded trials that included pregnant women and/or young people/adolescents. Many of the included reviews covered studies carried out in mixed settings though were predominantly in primary care, secondary care/smoking cessation clinics and community settings. The included reviews are summarised in Table 4 and further details are in Appendix D.4.1

**Table 4: Pharmacotherapy alone - Characteristics of included reviews**

<table>
<thead>
<tr>
<th>Author, year, title</th>
<th>Quality</th>
<th>Populations</th>
<th>Interventions</th>
<th>Comparison</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartmann-Boyce et al. 2016. Electronic cigarettes for smoking cessation</td>
<td>++</td>
<td>Current smokers motivated or unmotivated to quit.</td>
<td>Nicotine-containing electronic cigarettes</td>
<td>Placebo NRT</td>
<td>Quit rates</td>
</tr>
<tr>
<td>Hughes et al. 2014. Antidepressants for smoking cessation.</td>
<td>++</td>
<td>44 studies of Current smokers of any age</td>
<td>Bupropion</td>
<td>Placebo, no pharmacotherapy control, no other pharmacotherapy</td>
<td>Quit rates at 6 months or 12 months</td>
</tr>
<tr>
<td>Stead et al. 2012. Nicotine replacement therapy for smoking cessation</td>
<td>++</td>
<td>Any smokers in any settings.</td>
<td>NRT (patches, gum, inhaler / inhalator, tablets / lozenges, intranasal spray, oral spray)</td>
<td>Placebo, No NRT control</td>
<td>Quit rates</td>
</tr>
</tbody>
</table>

Hughes et al (2014 [++]) investigated the use of bupropion to aid smoking cessation. There was evidence from 44 trials that bupropion, compared with placebo, no pharmacotherapy control or no other pharmacotherapy significantly increased smoking cessation (RR 1.62 [95%CI 1.49 to 1.76]), with no substantial difference at 6 or 12 months (RR 1.69 [95%CI 1.49 to 1.97] and RR 1.59 [95%CI 1.44 to 1.76] respectively). Eight trials provided direct comparisons between bupropion and NRT: pooled results for all forms of NRT did not detect a significant difference (RR 0.96 [95%CI 0.85 to 1.09]).
Stead et al (2012 [++] ) investigated the effectiveness of NRT (in various delivery methods). The pooled risk ratio for abstinence for any form of NRT relative to control, across 117 trials, was 1.60 [95%CI 1.53 to 1.68]. Each of the six forms of NRT product significantly increased the rate of cessation compared with placebo or no NRT. NRT was effective in each of the settings covered in the review ‘over-the-counter’ (OTC) settings (5 trials, RR 2.71 [95%CI 2.11 to 3.49]), smoking clinics (10 trials, RR 1.73 [95%CI 1.48 to 2.03]), and in primary care settings (23 trials, RR 1.52 [95%CI 1.34 to 1.71]).

Hartmann-Boyce et al (2016 [++] ) assessed the effectiveness of nicotine-containing electronic cigarettes (NC-e-cigarettes) for smoking cessation. Three RCT’s were included in a quantitative synthesis. The pooled risk ratio for abstinence for any form of NC-e-cigarettes relative to placebo just reached significance across 2 trials, (RR 2.29 [95%CI 1.05 to 4.96]). In a comparison with (NRT) nicotine patch (1 RCT), there was no significant difference between the two (RR 1.26 [95%CI 0.68 to 2.34]). The interventions appear to include only minimal support.

**Evidence statements**

6. There is strong evidence from a single review (117 trials) that NRT did have a significant effect for smoking cessation (RR 1.60 [95%CI 1.53 to 1.68]). There was good effect for the range of products (lozenges, inhaler, nasal/oral spray, and patch). The use of NRT was effective in all settings ‘over-the-counter’ (5 trials, RR 2.71 [95%CI 2.11 to 3.49]), smoking clinics (10 trials, RR 1.73 [95%CI 1.48 to 2.03]) and primary care settings (23 trials, RR 1.52 [95%CI 1.34 to 1.71]). There is evidence from the same review (based on 9 trials that were pooled) that combination NRT is more effective than single NRT (RR 1.34 [95%CI 1.18 to 1.51]). [ES6]

**Applicability:** The majority of the evidence in these reviews come from the USA, with only a relatively small proportion from the UK. There are no obvious limits to the applicability of this evidence, although the different context of healthcare service organisation may affect the delivery of interventions. In the UK specialist stop-smoking service combines extended face-to-face support with smoking cessation medications.

7. There is strong evidence from a single review (based on 44 trials) that bupropion has a significant effect for smoking cessation (RR 1.62 [95%CI 1.49 to 1.76]). There were no conclusions that the efficacy of bupropion differed between lower and higher levels of behavioural support.[ES7]

**Applicability:** The majority of the evidence in these reviews come from the USA, with only a relatively small proportion from the UK. There are no obvious limits to the applicability of this evidence, although the different context of healthcare service organisation may affect the delivery of interventions. In the UK specialist stop-smoking service combines extended face-to-face support with smoking cessation medications.

8. There is weak evidence from a single review (and also expert testimony 1) (2 trials (RR 2.29 [95%CI 1.05 to 4.96]) that nicotine-containing e-cigarettes, compared with placebo e-cigarettes, helped smokers to stop smoking long-term. One of the included studies compared nicotine-containing e-cigarettes with NRT and there was no difference between the two interventions regarding quit rates (RR1.26 [95%CI 0.68 to 2.34]). There were low levels of confidence in the effect estimates presented in this review. [ES8]
Applicability: The trial evidence in this review came from New Zealand and Italy and the committee were not aware of any nicotine-containing e-cigarettes that have a license in those countries. In the UK only licensed e-cigarettes are approved for health use with a therapeutic indication for smoking cessation (or harm reduction).
Pharmacotherapy with behavioural support

Review question
Are nicotine replacement therapy (established therapies, for example patch, gum or spray or newer, licensed e-cigarettes) or bupropion, on their own or combined with behavioural support, effective and cost-effective?

Evidence review
Two reviews considered combined pharmacotherapy and behavioural interventions (Hughes et al. 2014 and Stead & Lancaster 2016) and 3 reviews considered behavioural support as an adjunct to pharmacotherapy (Mdege & Chindove 2014, Lancaster et al. 2017 and Stead et al 2015).

All reviews included smokers, some of whom were motivated to stop smoking. Most of the reviews excluded trials that included only pregnant women and/or young people/adolescents. Many of the include reviews covered mixed settings though were predominantly in primary care, secondary care/smoking cessation clinics and community settings.

Table 5: Behavioural support – Characteristics of included reviews

<table>
<thead>
<tr>
<th>Author, year, title</th>
<th>Quality</th>
<th>Populations</th>
<th>Intervention</th>
<th>Comparison</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hughes et al. 2014. Antidepressants for smoking cessation.</td>
<td>++</td>
<td>40 studies of current smokers of any age</td>
<td>Combined bupropion and multisession individual/group counselling</td>
<td>Placebo, no pharmacotherapy control, no other pharmacotherapy</td>
<td>Quit rates at 6 months or 12 months</td>
</tr>
<tr>
<td>Lancaster et al. 2017. Individual behavioural counselling for smoking cessation.</td>
<td>+</td>
<td>6 studies of any smokers (excluding pregnant women and trials recruiting only children and adolescents). Settings were mixed, but included community and primary care.</td>
<td>Face-to-face individual counselling sessions of more than 10 minutes, with most also including further telephone contact for support as an adjunct to pharmacotherapy</td>
<td>Minimal-contact control (usual care, brief advice or self-help materials)</td>
<td>Smoking cessation at the longest reported follow-up. Sustained abstinence (where available)</td>
</tr>
<tr>
<td>Mdege et al 2014. Effectiveness of tobacco use cessation interventions delivered by pharmacy personnel: A systematic review</td>
<td>+</td>
<td>4 studies of pharmacy clients who were tobacco users.</td>
<td>Any pharmacy personnel delivered tobacco use cessation intervention (pharmacotherapy plus behavioural support).</td>
<td>Usual care, no treatment or other active treatment.</td>
<td>Abstinence from smoking (point prevalence; continuous abstinence) or relapse (time to relapse).</td>
</tr>
<tr>
<td>Stead &amp; Lancaster 2016. Combined pharmacother</td>
<td>++</td>
<td>Any smokers (excluding adolescents &amp; pregnant women only trials).</td>
<td>Combination behavioural support and medications (including,</td>
<td>Usual care, brief advice or self-help.</td>
<td>Smoking cessation at the longest follow-up.</td>
</tr>
<tr>
<td>Author, year, title</td>
<td>Quality</td>
<td>Populations</td>
<td>Intervention</td>
<td>Comparison</td>
<td>Outcomes</td>
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<tr>
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</tr>
<tr>
<td>apy and behavioural interventions for smoking cessation.</td>
<td></td>
<td></td>
<td>bupropion, and nicotine replacement therapies like patches or gum) help people quit smoking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|Stead et al. 2015. Additional behavioural support as an adjunct to pharmacotherapy for smoking cessation. | ++ | 47 studies of any smokers (excluding adolescents & pregnant women only trials). | Smoking cessation pharmacotherapy plus increased behavioural support | Smoking cessation pharmacotherapy plus minimal (relative to intervention group) behavioural support. | Smoking cessation at the longest follow-up (at least 6 months).

**Pharmacotherapy with behavioural support**

**Combined pharmacotherapy and behavioural support**

Hughes et al (2014 [++] ) investigated the use of bupropion to aid smoking cessation. The authors considered the effect of adding behavioural support to bupropion and found that both multi-session group behavioural support (10 trials, RR 1.76 [95%CI 1.44 to 2.16]) and multi-session individual counselling approach (30 trials, RR 1.60 [95%CI 1.46 to 1.76]) in combination with bupropion were effective. There was insufficient evidence to draw any conclusions about low intensity support (less than 30 minutes at the initial consultation, with no more than two further visits).

Stead & Lancaster (2016 [++] ) found good evidence that interventions that combined pharmacotherapy and behavioural support increase smoking cessation success compared with a minimal behavioural intervention or usual care (52 trials, RR 1.83 [95%CI 1.68 to 1.98]).

Mdege et al (2014 [+] ) reviewed 2 studies (1 CCT and 1 RCT) that compared a pharmacy-led combined pharmacotherapy and behavioural support intervention for smoking cessation with usual care. The CCT reported a statistically higher odds of success at 4 weeks with usual care (OR 2.42 [95%CI 1.90 to 3.08]) compared with a pharmacist-led intervention. The RCT however reported a significant difference in the point prevalence smoking abstinence at 12 months for hospital or community pharmacy-led interventions compared with a minimal intervention (38%,24% and 4.6% respectively p=0.031) but found no significant difference between the groups for continuous abstinence at 3, 6 or 12 months.

**Behavioural support as an adjunct to pharmacotherapy**

Stead et al. (2015 [++] ) found that the addition of increased behavioural support to pharmacotherapy interventions provided a small but statistically significant effect for smoking abstinence (47 trials, RR 1.17 [95%CI 1.11 to 1.24]) compared with pharmacotherapy with minimal behavioural support. All but four of the included studies provided four or more sessions of support to the intervention group. Most trials used NRT. There was an incremental benefit of additional behavioural support across a range of levels of baseline support.
Lancaster et al (2017 [+]) reviewed studies of individual counselling as a face-to-face encounter between a smoking patient and a counsellor trained in assisting smoking cessation. In a subset of studies where counselling was used as an adjunct to NRT there was a modest effect which just reached significance (6 trials, RR 1.24 [95%CI 1.01 to 1.51]). In a comparison of more intensive to less intensive counselling interventions (which still involved more than 10 minutes face-to-face contact) with adjunct pharmacotherapy (8 trials, RR 1.26; [95%CI 1.04 to 1.52), there was some evidence of benefit from more intensive compared with brief counselling.

Mdege et al (2014 [+]) reviewed 3 studies of pharmacist-led support as an adjunct to pharmacotherapy. Two of the studies showed a benefit in favour of the addition of pharmacy-led behavioural support to pharmacotherapy and the remaining study reported no statistically significant difference.

**Evidence statements**

9. There is strong evidence from 3 reviews that interventions that combine NRT and behavioural support (individual support: 18 trials, RR 1.32 [95%CI 1.18 to 1.49]; group support: 20 trials, RR 1.57 [95%CI 1.40 to 1.76]), (40 trials, RR 1.82 [95%CI 1.66 to 2.00]) are effective for smoking cessation. One of the review (2 trials) provided evidence that combined pharmacotherapy and behavioural support was effective when delivered by a pharmacist.[ES9]

**Applicability:** The majority of the evidence in these reviews come from the USA, with only a relatively small proportion from the UK. There are no obvious limits to the applicability of this evidence, although the different context of healthcare service organisation may affect the delivery of interventions. In the UK specialist stop-smoking service combines extended face-to-face support with smoking cessation medications.

10. There is strong evidence from 3 reviews that the use behavioural interventions as adjuncts to NRT (4 trials, RR 1.27 (95%CI 1.02 to 1.59)), (47 trials, RR 1.17 (95%CI 1.11 to 1.24)) are effective for smoking cessation - and more effective than NRT with minimal behavioural support. One of the review (3 trials) provided mixed evidence on the effectiveness of behavioural interventions as an adjunct to pharmacotherapy when delivered by a pharmacist. [ES10]

**Applicability:** The majority of the evidence in these reviews come from the USA, with only a relatively small proportion from the UK. There are no obvious limits to the applicability of this evidence, although the different context of healthcare service organisation may affect the delivery of interventions.

**Recommendations**

8. Discuss any stop-smoking aids the person has used before, including personally purchased nicotine replacement products (see 20 and 21). [2018]

9. Set out the pharmacotherapy and behavioural options as listed in 13 and 15 [2018]

10. Explain:

   • that a combination of pharmacotherapy and behavioural support is likely to be most effective
11. Agree the approach to stopping smoking that best suits the person’s preferences. Review this approach at future visits. [2018]

12. If people turn down pharmacotherapy, offer behavioural support (individual or group) based on individual needs or preferences. [2018]

13. Ensure people have behavioural support from trained stop smoking staff (see the NCSCT’s training standards). [2018]

14. Offer single or combined pharmacotherapy based on the person’s preferences and the likelihood that they will follow the course of treatment. Choose from:
   - varenicline
   - bupropion
   - short-acting nicotine replacement therapy (NRT; gum, inhalator, lozenge, microtabs or spray)
   - long-acting NRT (nicotine patches)
   - varenicline and long-acting NRT
   - varenicline and short-acting NRT
   - bupropion and long-acting NRT
   - bupropion and short-acting NRT
   - long-acting and short-acting NRT.

15. Prescribe varenicline or bupropion (or NRT if provided on prescription) while the person still smokes. Agree a quit date set within the first 2 weeks of bupropion treatment and within the first 1 to 2 weeks of varenicline treatment. Reassess the person shortly before the prescription ends. [2018]

16. Consider NRT¹ for young people over 12 who are smoking and dependent on nicotine. If this is prescribed, offer it within a stop smoking service. [2018]

17. Specialist stop smoking services should:
   - offer behavioural support, in combination with pharmacotherapy, based on individual needs or preferences
   - offer text messaging support as an adjunct to existing stop smoking support. [2018]

¹ Nicotine replacement therapy products vary in their licensing status for use in children and young people under 18. Refer to the summary of product characteristics for prescribing information on individual nicotine replacement therapy preparations.
18. GPs should offer pharmacotherapy plus brief advice based on individual needs or preferences. [2018]

19. All other prescribers should:
   - offer pharmacotherapy plus very brief advice based on individual needs or preferences (refer to NCSCT training on very brief advice).
   - offer text messaging support as an adjunct to existing stop smoking support. [2018]

Research recommendation

1. How effective and cost effective are consumer (non-prescription) nicotine-containing e-cigarettes in helping people to stop smoking and to prevent relapse?

Rationale and impact

Why the committee updated the recommendations

Many people try to quit smoking using a variety of methods and quitting should always be encouraged. So the NHS and publicly funded stop smoking services should all offer effective combinations of stop smoking aids and behavioural support to help people stop.

Evidence confirms that providing a combination of pharmacotherapy and behavioural support is still an effective way of helping people to stop smoking.

Changes were made to the wording of recommendations to make them easier to read or to reflect new products on general sale.

Impact of the recommendations on practice

The recommendations will reinforce current best practice and many organisations will not need to change practice.

The committee’s discussion of the evidence

Interpreting the evidence

The outcomes that matter most

The committee agreed that quit rate was the most important outcome as it was a reliable proxy for all the benefits accrued after a smoker quits. This includes the reduction in risk to tobacco-related illnesses and the morbidity and mortality associated with these. For people with tobacco-related illness there is an increased benefit in terms of greater risk reduction, lessening of symptoms, fewer hospital admissions etc.

For people with other medical conditions, stopping smoking can reduce the risk of complications associated with those conditions, increase treatment options (for example in HIV), and reduce delays in recovery after surgery.

From a population health aspect the committee noted that one of the largest risk factors for starting smoking is having a parent who smokes so any increase in quit rates in one generation will have a carry-on benefit in terms of further reducing the number of people who take up smoking in the next generation. There is an additional benefit from reduced exposure to second-hand smoke.
The quality of the evidence

The quality of the evidence reviewed for smoking cessation interventions was rated as moderate to high. The committee noted that for the most part the evidence of effectiveness in increasing quit rates for the different interventions was supported by their experiences in clinical and public health practice. There was one exception to this where the topic experts noted that the effectiveness of over the counter NRT was not as clear-cut in practice. Having said this, the committee agreed that the evidence in favour of NRT across different setting was consistent enough to avoid the need to draft separate recommendations based on setting.

Benefits and harms

The evidence reviews showed a clear benefit in terms of increasing quit rates, for each of the recommendations. For individual and groups from disadvantaged backgrounds behavioural support, if successful, may provide skills and confidence which will act as a buffer against the effects of disadvantage, facilitating positive behaviour change. The evidence on adverse effects of the pharmacotherapies was severely limited but the committee noted the Summary of Product Characteristics (SPC) of the drugs do not list severe adverse effects. Thus the committee considered that it would be safe to recommend these interventions in line with their SPC’s. The committee noted that there is an MHRA drug safety update on the use some medicines which may need to be adjusted if a smoker quits smoking (Smoking and smoking cessation: clinically significant interactions with commonly used medicines).

The role of personal preference in choosing a treatment option will have implications for the behavioural support and the practicalities of offering group behavioural support. As group behavioural support will generally require a minimum number of participants there may be a delay in starting, while waiting for a group to be filled. This should be taken into account when discussing options with the person. Also as with other group therapies, care must be taken to ensure that all candidates are suitable as unsuitable candidates may have a negative impact on the rest of the group. It was also noted that staff delivering the interventions need to be supported and developed as staff who are not competent will also have a negative impact on the group.

Another potential harm of successful stop smoking interventions may be an increase in compensatory behaviour, such as over-eating resulting in a weight gain with resulting impact on self-esteem/confidence and with long-term risks for health and wellbeing.

Cost effectiveness and resource use

No review of cost effectiveness evidence was undertaken. Instead, a bespoke model was developed which explored the threshold at which interventions are cost effective and assessed the cost effectiveness of a range of interventions identified in the effectiveness reviews. This topic area was covered in the overall health economic modelling, which indicated that all interventions were cost effective and potentially cost saving to both NHS and local authorities. Eight of the included studies involved some element of pharmacotherapy; all were found to be cost-effective.

Other factors the committee took into account

The topic experts noted that many people are using a variety of methods to quit smoking. The committee agreed that quitting should always be encouraged, but that only licensed medicinal products should be recommended. The committee noted that
prescribers have a duty of care to provide information about the pharmacotherapy that they are prescribing. As such it is unlikely that pharmacotherapy would ever be offered without this advice. The committee noted that the Summary of Product Characteristics (SPC) for varenicline and bupropion are specific in how they should be used (1 to 2 weeks before the agreed quit date), monitored and in what circumstances repeat prescriptions should be used. The committee were also aware that some of these intervention are used in combinations in smoking cessation but that there was limited evidence for this.

When considering the effectiveness of licensed e-cigarettes, the committee noted that the evidence was for out-of-date technologies and were carried out in non-UK settings. The topic experts noted that these countries (Italy and New Zealand) have no licensed e-cigarettes. The committee noted that this is a rapidly moving field and that there were ongoing studies of new e-cigarettes technologies in UK stop smoking services and so decided not to draft a recommendation on licensed e-cigarettes.

The committee considered that UK specialist stop smoking services are the only service currently providing behavioural support in the UK. The committee accepted that if GP’s were commissioned to provide this intervention then they would be likely to contract this out to the local Stop Smoking Service. Thus, the committee suggested that the pharmacotherapy combined with behavioural support recommendation be targeted at local Stop Smoking Service and the combination of pharmacotherapy plus brief advice be more targeted on those working in GP settings.

In order to reduce the risk of poorly trained staff having a negative impact the committee agreed that training standards are important as a means to help improve effectiveness. The committee were aware of the National Centre for Smoking Cessation and Training (NCSCT) standards and wanted to make reference to this. The committee noted that community pharmacies serve local communities and have the potential to reach and offer advice to smokers. They are also best placed to meet the needs of minority ethnic and disadvantaged groups and those who may have difficulty accessing other community services.

In general, stopping smoking conveys an additional benefit from reduced exposure to second-hand smoke. This might not be the case for nicotine-containing e-cigarettes as there is no evidence on the long-term toxicity on those exposed to second-hand vapour and so the committee decided to draft a research recommendation on the long-term effects of nicotine-containing e-cigarettes.

**Digital media as an adjunct**

**Review question**

Is digital media in smoking cessation interventions effective as an adjunct to very brief or brief advice, behavioural support, or pharmacotherapy?

**Evidence review**

Three individual studies were identified that met the inclusion criteria for evaluations of interventions that incorporated a digital media component as an adjunct to other smoking cessation activities (Japuntich et al 2006 [+], Naughton et al 2014 [+], Pakhale et al 2015 [+]). Characteristics of the included reviews are presented in Table 6. Detailed evidence tables are provided in Appendix D6.
Table 6: Digital media – Characteristics of included studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Quality</th>
<th>Intervention</th>
<th>Control</th>
<th>Setting</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japuntich et al 2006</td>
<td>+</td>
<td>Usual care + Web-based smoking cessation programme - CHESS SCRP</td>
<td>Usual care</td>
<td>Home-based computer</td>
<td>Quit rates verified biochemically</td>
</tr>
<tr>
<td>Naugton et al 2014</td>
<td>++</td>
<td>Usual care + Printed and short text messages iQuit</td>
<td>Usual care</td>
<td>Primary care (general practitioner surgeries in the UK)</td>
<td>Quit rates verified biochemically</td>
</tr>
<tr>
<td>Pakhale et al 2015</td>
<td>+</td>
<td>Usual care + Automated calls</td>
<td>Usual care</td>
<td>Respiratory clinic in Canada</td>
<td>Quit rates Self-reported outcomes (not biochemically verified)</td>
</tr>
</tbody>
</table>

Japuntich et al 2006 [+] conducted an RCT to test the efficacy of a web-based smoking cessation programme as an adjuvant to standard smoking cessation care. The intervention consisted of a web-based smoking cessation intervention as an adjuvant to standard smoking cessation care, which also included bupropion (for all participants). Using biochemically validated measures the authors reported no evidence of benefit of the intervention (Internet plus standard care) compared with usual smoking cessation care at:
- 3 months (OR=1.13, [95%CI 0.64 to 1.98])
- 6 months (OR=1.48, [95%CI 0.66 to 2.62]).

Naugton et al 2014 [++] conducted a pilot RCT to evaluate the effectiveness, feasibility and acceptability of a smoking cessation intervention (iQuit system) comprising tailored printed and short text message self-help delivered as an adjunct to cessation support in primary care to inform the design of a definitive trial. The study was conducted on 602 adults in 32 general practitioner surgeries in the UK. The study found no evidence of a short-term benefit to iQuit support when compared with usual care at 8-week follow-up. Self-reported smoking outcomes were verified biochemically. However, there was statistically significant evidence that the intervention group performed better than the comparison group for: prolonged abstinence at 6 months (control 8.9%, iQuit 15.1%; OR = 1.81 [95%CI = 1.09 to 3.01]); and 6-month continuous abstinence at 6 months (control 6.3%, iQuit 11.4%; OR = 1.92, [95%CI 1.07 to 3.45]).

Pakhale et al 2015 [+] conducted a pilot RCT in the Respiratory Clinic at the Ottawa Hospital in Canada, to evaluate the effectiveness of standard care smoking cessation advice with the following adjuncts: registration to an automated calling system that made nine calls scheduled seven days before their set quit date, and three, 14, 30, 60, 90, 120, 150 and 180 days after; and, a $110 voucher to purchase smoking cessation pharmacotherapy. Self-reported smoking outcomes were not biochemically verified. Self-reported smoking status was the primary indicator of effectiveness and was obtained at 26 to 52 weeks. Non-smoker status was 18.2% in the intervention group compared with 7.7% in the control group. The OR for self-reported non-smoker status was 2.36 [95%CI 0.39 to 14.15]. Observed differences between groups were not statistically significant (P=0.654). Whilst the intervention...
was associated with higher quit rates when compared with usual care, the
differences were not statistically significant.

Evidence statements

11. There was strong evidence from 1 UK RCT that suggests that the use of text-
messaging plus tailored printed messages as an adjunct to smoking cessation
support in primary care improves abstinence from smoking when compared with
smoking cessation support alone. The study found no evidence of a short-term
benefit of the intervention compared with usual care at 8-week follow-up.
However, there was statistically significant evidence that the intervention group
performed better than the comparison group for:

- 6-month prolonged abstinence at 6 months (OR = 1.81 [95%CI = 1.09 to 3.01])
- 6-month continuous abstinence at 6 months (OR = 1.92 [95%CI = 1.07 to
  3.45]).[ES11]

Applicability: The evidence is applicable to the UK, given its setting in English
general practice.

12. There was moderate evidence from 1 RCT that providing automated calling,
and vouchers to purchase smoking cessation pharmacotherapies as adjuncts to a
standardised smoking cessation package in a respiratory clinic, does not improve
smoking quit rates.[ES12]

Applicability: The evidence is only partially applicable to the UK because the
study was conducted in Canada. However, the intervention may be feasible in a
similar UK-based setting. Some caution is required in interpreting the results due
to lack of biochemical validation of outcomes, and outcome data collection that
spanned a period of 26 to 52 weeks.

13. There was weak evidence from one RCT (USA) that suggests a web-based
smoking cessation intervention as an adjuvant to standard smoking cessation
care does not improve abstinence rates. Using biochemically validated measures
the authors found no evidence of benefit of the intervention (Internet plus standard
care) compared with usual smoking cessation care at 3 months (OR=1.13,
[95%CI 0.64 to 1.98) or 6 months (OR =1.48 [95%CI 0.66 to 2.62]). [ES13]

Applicability: The evidence is only partially applicable to the UK because the
study was conducted in the USA

Recommendation

See recommendations 18 and 20.

Research recommendation

2. How effective and cost effective are stop smoking interventions delivered
using web-based packages or apps?

Rationale and impact

Why the committee made the recommendations

Many people try to quit smoking using a variety of methods and quitting should
always be encouraged. So the NHS and publicly funded stop smoking services
should all offer effective combinations of stop smoking aids and behavioural support
to help people stop.
An evidence review confirmed that text messaging as an adjunct to stop smoking support was an effective way of helping people to stop smoking.

**Impact of the recommendations on practice**

The recommendations will reinforce current best practice and many organisations will not need to change practice.

**The committee’s discussion of the evidence**

**Interpreting the evidence**

**The outcomes that matter most**

The committee agreed that quit rate was the most important outcome as it was a reliable proxy for all the benefits accrued after a smoker quits. This includes the reduction in risk to tobacco-related illnesses and the morbidity and mortality associated with these. For people with tobacco-related illness there is an increased benefit in terms of greater risk reduction, lessening of symptoms, fewer hospital admissions etc.

For people with other medical conditions, stopping smoking can reduce the risk of complications associated with those conditions, increase treatment options (for example in HIV), and reduce delays in recovery after surgery.

From a population health aspect the committee noted that one of the largest risk factors for starting smoking is having a parent who smokes so any increase in quit rates in one generation will have a carry-on benefit in terms of further reducing the number of people who take up smoking in the next generation. There is an additional benefit from reduced exposure to second-hand smoke.

**The quality of the evidence**

The committee agreed that the evidence for digital media was sparse with few studies and only a single UK-based study identified. Only two of the studies used biochemically verified self-reported smoking outcomes. The evidence base also covered a wide range of digital media interventions, some of which would now be considered obsolete. The findings were inconsistent across the studies with some studies showing a benefit in terms of increasing quit rates and other studies being inconclusive.

The evidence for text messaging plus tailored printed messages came from a single RCT, which was conducted as a pilot study in GP settings. The committee were aware that a follow-up definitive study is ongoing and so the committee were minded to see the evidence base as immature relative to existing practice. This evidence was supported by the experience of the topic experts as text messaging is a routine part of usual care and is offered in stop smoking services as an opt-in option.

**Benefits and harms**

The committee agreed that text messaging plus tailored printed messages as adjunct to smoking cessation interventions showed benefit in term of increasing quit rates. The committee discussed the harms that might be associated with text messaging such as the potential for ‘nagging’ but considered that as individuals have the opportunity to opt-out of receiving the text messages then this would not be an issue.

**Cost effectiveness and resource use**

No review of cost effectiveness evidence was undertaken. Instead, a bespoke model was developed which explored the threshold at which interventions are cost effective.
and assessed the cost effectiveness of a range of interventions identified in the effectiveness reviews. This topic area was not covered in the overall health economic modelling, as no studies were found to inform an analysis. However, scenario analyses indicated that interventions with modest effectiveness would be cost-effective and potentially cost saving to both NHS and local authorities if costs were sufficiently low. The committee noted that text messaging was cheap and would not require a significant investment, other factors the committee took into account

Whilst the evidence for text messaging plus tailored printed messages was as an adjunct to GP smoking cessation interventions, the topic expert stated that current standard practice in a Stop Smoking Service is to offer text messaging as an adjunct to other interventions. The topic experts confirmed that their experience of text messaging in local Stop Smoking Services was consistent with the RCT evidence review and so decided to recommend the use of text messaging as an adjunct to other smoking cessation interventions.

The topic experts also noted that printed ‘stop smoking’ information is also readily available in stop smoking services and healthcare settings,

Advice and referral options for consumer e-cigarettes

Review question

What advice and referral options are appropriate for people using consumer e-cigarettes for smoking cessation?

Evidence review

No published evidence was identified and the committee agreed to use expert testimony (see Appendix F2 and F3).

Evidence statements

14. No published evidence was identified. The expert testimony covered the following themes

- the increase in popularity of vaping has been accompanied by reduction in smoking, with large numbers of smokers successfully switching to vaping in countries where vaping is allowed.(Expert testimony 2)
- Including an offer of a ‘starter pack’ e-cigarette within the English stop-smoking services is likely to increase their attractiveness and reach and may increase their efficacy (Expert testimony 2)
- the evidence that e-cigarettes are effective in smoking cessation in England is limited (Expert testimony 3)
- there is currently no published evidence on the long-term benefits and harms of these products (Expert testimony 3) [ES14]

Applicability: This evidence is directly applicable as it is based on existing practice in the UK.

Recommendations

20. Offer advice on using nicotine replacement products on general sale, including e-cigarettes² [2018]

² Nicotine replacement therapy products vary in their licensing status for use in children and young people under 18. Refer to the summary of product characteristics for prescribing information on individual nicotine replacement therapy preparations.
21. Ask people about their use of nicotine-containing e-cigarettes and explain that

- although these products are not licensed medicines, they are regulated by the Tobacco and Related Products Regulations 2016
- some smokers have found them helpful to quit smoking cigarettes and
- there is currently little evidence on the long-term benefits or harms of these products. [2018]

Be aware that Public Health England³ and the Royal College of Physicians⁴ have stated that e-cigarettes are significantly less harmful to health than tobacco.

Rationale and impact

Why the committee made the recommendations

Smokers often ask healthcare practitioners and stop smoking services about using e-cigarettes to help them stop smoking. The committee agreed that advice should be provided to allow an informed discussion of e-cigarettes as an aid to smoking cessation.

Impact of the recommendations on practice

The recommendations will support current best knowledge on e-cigarettes and many organisations will not need to change practice.

The committee’s discussion of the evidence

Interpreting the evidence

The outcomes that matter most

The committee agreed that quit rate was the most important outcome as it was a reliable proxy for all the benefits accrued after a smoker quits. This includes the reduction in risk to tobacco-related illnesses and the morbidity and mortality associated with these. For people with tobacco-related illness there is an increased benefit in terms of greater risk reduction, lessening of symptoms, fewer hospital admissions etc.

For people with other medical conditions, stopping smoking can reduce the risk of complications associated with those conditions, increase treatment options (for example in HIV), and reduce delays in recovery after surgery.

From a population health aspect the committee noted that one of the largest risk factors for starting smoking is having a parent who smokes so any increase in quit rates will have a carry-on benefit in terms of further reducing the number of people who take up smoking. There is an additional benefit from reduced exposure to second-hand smoke.

The quality of the evidence

Benefits and harms

The committee accepted the expert testimony stating that nicotine-containing e-cigarettes was effective as a harm reduction strategy but noted that the evidence for effectiveness as a smoking cessation aid was sparse and further research is

⁴ https://www.rcplondon.ac.uk/projects/outputs/nicotine-without-smoke-tobacco-harm-reduction-0
needed. There was some concern over the lack of evidence on long-term harms of using these products and impact on those exposed to second-hand vapour.

The topic experts noted that there was a split amongst smoking cessation professionals internationally over the benefits of offering advice on nicotine-containing e-cigarettes with some professionals seeing them as an unproven harm reduction strategy for smokers and other professionals see e-cigarettes as a useful aid to help smokers quit or to reduce the number of cigarettes smoked. The committee noted the expert testimony stating that national trends had been identified an increase in the popularity of e-cigarettes has been accompanied by reduction in smoking cigarettes, with large numbers of smokers successfully switching to e-cigarettes. One of the topic experts reported that preliminary 2015 data in the UK suggest that there are around 800,000 ex-smokers in the England who have successfully switched to e-cigarettes and another 640,000 who had smoked cigarettes and e-cigarettes but have quit smoking completely. It was noted that some professionals have expressed concern that nicotine-containing e-cigarettes may become a ‘gateway’ to smoking as the use of nicotine-containing e-cigarettes may normalise ‘smoking’ behaviours.

Cost effectiveness and resource use

No review of cost effectiveness evidence was undertaken. Instead, a bespoke model was developed which explored the threshold at which interventions are cost effective and assessed the cost effectiveness of a range of interventions identified in the effectiveness reviews. This topic area was covered in the overall health economic modelling, with two studies including e-cigarette interventions. These both indicated that e-cigarettes were cost effective and potentially cost saving to both NHS and local authorities. The committee noted that nicotine-containing e-cigarettes are cheaper than cigarettes a fact which may be useful as a lever in a harm reduction strategy.

Other factors the committee took into account

The topic experts reported that personally-purchased nicotine-containing e-cigarettes are being used increasingly by people who smoke to help them stop smoking. While there is a paucity of evidence on the effectiveness and safety of these as medicinal products, the committee noted that these products appear to be less harmful than smoking. The committee cited reports produced by Public Health England (E-cigarettes: and evidence update) and the Royal College of Physicians (Nicotine without smoke: Tobacco harm reduction) which report that the constituents of cigarette smoke that harm health are either absent in e-cigarette vapour or, if present, they are mostly at levels much below 5% of smoking doses and also that the main chemicals present in e-cigarettes only have not been associated with any serious risk.

The Medicines and Healthcare products Regulatory Agency (MHRA) has decided that all nicotine-containing products should be regulated. In this situation, the committee decided that it would be harmful to ignore the fact the nicotine-containing e-cigarettes are being used as an aid to smoking cessation.
Stop Smoking Services

Topic area
Publicly funded stop smoking services

Evidence review
No published evidence was looked for or reviewed for this review so the committee agreed to use expert testimony (see Appendix F4 & F5).

Evidence statements

15. No published evidence was looked for or reviewed. The expert testimony covered the following themes

   - Some local authorities have decommissioned stop smoking services entirely and others are limiting services to provide for certain groups e.g. pregnant women. (Expert testimony 4)
   - Reduction in the number of staff employed in a number of services has resulted in less, and lower quality, behavioural support received by smokers (Expert testimony 4)
   - The English Stop-Smoking Services (SSS) have been extremely cost-effective and could be more effective if they were all commissioned to follow evidence-based guidance from the National Centre for Smoking Cessation and Training (NCSCT), and the National Institute for Health and Care Excellence (NICE). (Expert testimony 5)
   - The Stop-Smoking+ model as template that can be used to develop local service delivery plans to maximise the success at stopping smoking that can be obtained with reduced budgets. (Expert testimony 5) [ES15]

   **Applicability:** This evidence is directly applicable as it is based on existing practice in the UK.

Recommendations

22. Use sustainability and transformation partnerships and plans, health and wellbeing strategies, and any other relevant local strategies and plans to ensure evidence-based stop smoking interventions and services are available for everyone who smokes. [2018]

23. Use the joint strategic needs assessment to estimate smoking prevalence among the local population. [2018]

24. Prioritise specific groups who are at high risk of tobacco-related harm for intervention. These may include:

   - people with mental health problems, including mental health disorders (see NICE's guideline on smoking: acute, maternity and mental health services and depression in adults)
   - people with health conditions made worse by smoking or who have a smoking-related illness (see NICE's guidelines on cardiovascular disease: identifying and supporting people most at risk of dying early and chronic obstructive pulmonary disease)
   - communities with particularly high smoking prevalence
   - people in custodial settings
• populations with a high prevalence of morbidity or a particularly high susceptibility to harm
• people living in disadvantaged circumstances
• pregnant women who smoke (see NICE’s guideline on smoking: stopping in pregnancy and after childbirth). [2018]

25. Set targets for the specialist stop smoking services, including the number of people using the service and the proportion who successfully quit smoking. Performance targets should include:
- treating at least 5% of the estimated local population who smoke each year
- achieving a successful quit rate of at least 35% at 4 weeks, based on everyone who starts treatment and defining success as not having smoked (confirmed by carbon monoxide monitoring) in the third and fourth week after the quit date. [2018]

26. Check and confirm quit attempts using carbon monoxide monitoring, with success defined as less than 10 parts per million (ppm) at 4 weeks after the quit date. This does not imply that treatment should stop at 4 weeks. [2018]

27. Monitor performance data for specialist stop smoking services routinely and independently. Make these results publicly available. [2018]

28. Audit exceptional results (for example, 4-week quit rates lower than 35% or above 70%) to determine the reasons for unusual performance as well as identify best practice and ensure it is being followed. [2018]

Rationale and impact

Why the committee made the recommendations

The committee agreed that it was important to understand the needs of the local population. They agreed that recommendations about commissioning and providing local stop smoking services are still important, but updated the recommendations because of changes in government policy. Areas now use joint plans agreed between the NHS and local authorities, known as sustainability and transformation plans, to improve health and care services. They suggested using joint strategic needs assessments and health and wellbeing strategies to help identify people who smoke heavily or who find it hard to stop.

Some local authorities are reducing or cutting their stop smoking services because of competing demands on local budgets. The original evidence showed that services could make a bigger difference and target resources more effectively if they focused on certain groups. So NICE's 2008 guideline on stop smoking services highlighted the need to target some minority ethnic and socioeconomically disadvantaged communities. Similarly, some people in the groups listed are likely to smoke heavily or find it harder to quit than the general population of smokers, and are also more likely to have other physical health problems. By targeting these people, services could make better use of resources.
Targets are important to monitor the performance of stop smoking services to ensure that resources are used effectively and promote best practice. A clear definition of quitting is important to measure success.

**Impact of the recommendations on practice**

The recommendations will reinforce current best practice and many organisations will not need to change practice. Identifying people most at risk of smoking-related illnesses and setting targets for stop smoking services to help these people stop smoking could increase the effective use of resources, and so reduce costs associated with caring for people with such illnesses. Targeting more vulnerable people aims to tackle health inequalities.

**The committee’s discussion of the evidence**

**Interpreting the evidence**

**The outcomes that matter most**

The committee agreed that quit rate was the most important outcome as it was a reliable proxy for all the benefits accrued after a smoker quits. This includes the reduction in risk to tobacco-related illnesses and the morbidity and mortality associated with these. For people with tobacco-related illness there is an increased benefit in terms of greater risk reduction, lessening of symptoms, fewer hospital admissions etc.

For people with other medical conditions, stopping smoking can reduce the risk of complications associated with those conditions, increase treatment options (for example in HIV), and reduce delays in recovery after surgery.

From a population health aspect the committee noted that one of the largest risk factors for starting smoking is having a parent who smokes so any increase in quit rates in one generation will have a carry-on benefit in terms of further reducing the number of people who take up smoking in the next generation. There is an additional benefit from reduced exposure to second-hand smoke.

**The quality of the evidence**

No evidence was reviewed for this topic. The committee agreed to consider expert testimony as an appropriate method to update this set of recommendations. The expert testimony presented to the committee supported the retention of these recommendations and the committee were not aware of any reason to remove or weaken these recommendations.

**Benefits and harms**

The committee agreed with the expert testimony that local Stop Smoking Service have been effective in helping individuals to quit smoking.

**Cost effectiveness and resource use**

No review of cost effectiveness evidence was undertaken. Instead, a bespoke model was developed which explored the threshold at which interventions are cost effective and assessed the cost effectiveness of a range of interventions identified in the effectiveness reviews.

This topic area was not covered in the overall health economic modelling. However, scenario analyses indicated that even interventions that increased the quit rate by 1% would be cost-effective if the costs were less than £225 per person.

**Other factors the committee took into account**

Social inequalities in tobacco use make a significant contribution to inequalities in health. Interventions that are effective in reducing social inequalities in tobacco use...
are therefore central to the government’s public health strategy and to the broader goal of promoting health equity.

It is important to ensure that publicly funded stop smoking services are easily accessible by people from these groups and that they are encouraged to use them. The committee noted the cultural acceptability of behaviour change interventions such as those delivered by Stop Smoking Services varies from group to group. There was agreement on the need to emphasize the need for Stop Smoking Services to work closely with different client groups over time and to use needs assessments to gather local and cultural information to ensure interventions are tailored appropriately.

It was also noted that changing smoking behaviour might not be a priority for the individuals being targeted. People do not necessarily make their own long-term health a priority and may want to focus on other, more immediate needs and goals (for example, relieving stress, or complying with peer pressure). Motivated individuals actively seeking to make changes in their behaviour require a different approach from those who are unmotivated. The latter may need more information about the benefits of change, as well a realistic plan of action. The committee considered that for these individuals it might be necessary to make use of each contact to see if the individual is ready to take up the offer for support to quit smoking.

The topic experts suggested that a local Stop Smoking Service should be seen as part of a comprehensive system-wide plan to achieve targets for reducing smoking prevalence. However guidance on reducing smoking prevalence is available in related NICE guidance such as ‘Smoking: reducing and preventing tobacco use (NICE QS82) and related national government documents. It was also recognised that reducing smoking prevalence would require other interventions such as legislation which is outside the remit of NICE guidance.

Community pharmacies serve local communities and have the potential to reach and treat large numbers of people who use tobacco. They are able to meet the needs of minority ethnic and disadvantaged groups and those who may have difficulty accessing other community services.

The committee agreed to retain the recommendations from PH10 in their entirety as they saw no evidence to amend these beyond updating the terminology used.

References

Cahill K, Lancaster T and Green N. 2010. "Stage-based interventions for smoking cessation". Cochrane Database of Systematic Reviews

Carr AB, and Ebbert J. 2012. "Interventions for tobacco cessation in the dental setting". Cochrane Database of Systematic Reviews


Lancaster T and Stead LF. 2017. "Individual behavioural counselling for smoking cessation". Cochrane Database of Systematic Reviews.


