Keeping Smoking-Cessation Interventions Brief and Effective

By Paul Aveyard, PhD, MRCP, MRCGP

Most physicians agree that they should intervene with smokers to encourage them to stop smoking and to assist in the process. Physicians also recognize that they do not intervene as often as they could, most commonly because it is perceived as time consuming. The United States (US) clinical guidelines encourage physicians to use the “5 As” (Ask, Advise, Assess, Assist, Arrange) as the basis of an intervention (Figure 1). If the “assess” stage is reached, and it is discovered that the person is unwilling to make a quit attempt, then the US guidelines recommend either motivational interviewing using the “5 Rs” (Relevance, Risks, Rewards, Roadblocks, Repetition) to enhance motivation to quit. Alternative approaches are found in the New Zealand practice guidelines for smoking cessation, as well as in the recently updated guidelines issued by the British Department of Health. These simplify the intervention by dispensing with certain elements of the 5 As, making smoking-cessation interventions briefer and simpler, but no less effective. This issue of Smoking Cessation Rounds examines the evidence suggesting that simpler alternatives may actually be more effective than conventional approaches. It also suggests ways in which physicians can optimize the time available to address smoking.

The 5 As flow chart in Figure 1 suggests that offering smoking-cessation interventions may be complicated, but in reality this flow chart recommends what may be perceived as merely common sense. In essence, the 5 As approach encourages the physician to find out if a person smokes, advise him/her to stop, check whether he/she wants to stop, and, if so, provide assistance with cessation. However, if a patient is unwilling to consider cessation then the physician should identify and explore why the patient does not want to stop. One problem with the 5 As approach is that it is actually more complicated to try to remember what each of the 5 As stand for than it is to perform these actions! If physicians were left to their own devices, they would probably follow this system. The other problem with the 5 As is not remembering what to do, but rather ensuring that physicians intervene! Furthermore, the common-sense approach is not necessarily an optimal approach either in time efficiency or effectiveness.

The “ABC” and “3 As” approaches pare down the suggested activities for physicians. One key feature of the 3 As used in the United Kingdom is the tiered approach to smoking-cessation support (Figure 2). For most physicians who are treating smokers, this approach recognizes that the best we can expect is a brief mention of smoking. The aim of this article is to examine the evidence for the best possible use of those few seconds. With patients at high risk of smoking-related disease or with established disease caused or exacerbated by smoking, few clinical interventions are as effective at improving clinical outcomes as smoking cessation. It is important for physicians to devote as much time to managing smoking cessation in these patients as they would to managing blood pressure (BP) or any other significant preventive healthcare initiatives. Several experts have argued that tobacco dependence should be treated and managed like other chronic diseases.

The ABC approach (Figure 3) is recommended by the Ministry of Health in New Zealand; the intent is to ensure that all healthcare workers in contact with smokers
integrate this approach into their everyday practice.\textsuperscript{2} The goal of the approach is to generate “more quit attempts, more often.”

**The evidence supporting and the practical issues surrounding brief interventions**

Many physicians routinely record smoking status in their clinical information systems or receive this information in a referral letter. Alternatively, status is often identified while taking the medical history. Both strategies, the ABC and the 3 As, eliminate the element of assessing the willingness to attempt quitting. Assessing willingness to quit takes more time and may be counterproductive. A Cochrane review of nicotine replacement therapy (NRT),\textsuperscript{3} including 7 studies offering NRT to trial participants who were unselected by motivation-to-quit as part of a brief intervention and 3 other studies, found that, compared with brief advice alone to quit on medical grounds, advice to quit plus the offer of NRT increased quit attempts with a relative risk (RR) of 1.30 (1.20 – 1.40). When contrasted with clinical studies where there was no intervention for smoking, there was an RR of 1.68 (1.48 – 1.89) in favour of cessation attempts. These data clearly demonstrate that offering assistance motivates more attempts to stop smoking than offering advice to quit on medical grounds alone or not mentioning smoking at all. Not only does offering treatment encourage people to try to quit who would not have done so, the treatment itself increases the chance that those people who do try will succeed. The results of the Inter99 Study (A Randomised Non-Pharmacological Intervention Study for Prevention of Ischaemic Heart Disease)\textsuperscript{4} support the hypothesis that assessing willingness to quit prior to offering assistance with cessation may actually be harmful. Smokers completed a “stage of change” questionnaire, including their intention to quit within the next month. In this study, only 10.8\% of smokers expressed an intention to quit soon, a result commonly found in surveys.\textsuperscript{5,6} However, the information was not given to the clinicians running the clinics and all smokers were offered referral to an intensive smoking-cessation program with medication and weekly group support. Of those who eventually achieved prolonged abstinence, 8 out of 10 had initially expressed no intention to quit within the next month; therefore, they would not have been offered intensive treatment if study personnel had followed the ask, advise, assist protocol.\textsuperscript{6} It is not surprising that offering assistance with cessation encourages people to “have a go” at quitting. When any new medication for smoking cessation is launched, there is a rise in sales of overall smoking-cessation medications, but no evidence of a reduction in the use of pre-existing treatments;\textsuperscript{9} this indicates a motivational effect from the perception that there are new opportunities for cessation success. Many patients have “given up on giving up” because they often see it as futile given their previous failures (most smokers fail to appreciate that the number of previous quit attempts is a powerful predictor of eventual cessation success). The role of the clinician is to consistently offer treatment opportunities as often as possible to motivate renewed attempts at quitting (see “Why can’t people just stop smoking?”). In my practice, almost

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**Figure 1: The 5 As**

- **General population**
  - Patient presents to healthcare setting (clinic, hospital, work site, others)
- **Ask**
  - Ask all patients to stop smoking
  - Current users
  - Former users
  - Never users
- **Advise**
  - Advise to quit
  - Assess willingness to quit
  - Yes
    - Assist with quitting
    - Arrange follow-up
  - No
    - Promote motivation to quit
- **Arrange follow-up**
  - Relapse
  - Prevent relapse
  - Patient remains unwilling

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**Figure 3: The ABC approach to smoking-cessation support**

**Ask**
1. Ask about and document smoking status for all people (for those who smoke or have recently quit smoking, smoking status should be checked and updated on a regular basis). For example, you could ask: “Do you currently smoke cigarettes?”
2. Personalize the advice (for example, if relevant, explain how smoking is related to existing health problems and how stopping smoking might help). Highlight the benefits of quitting smoking.
3. Acknowledge that some people make several attempts to quit before stopping for good.
4. Document that advice was given.

**Brief advice**
- **Provide advice** to all people who smoke. For example, you could say: “Stopping is the best thing you can do to improve your health. I understand that it can be hard to stop smoking, but I can help you.”
- **Ask** and **Advise** patient of personal health benefits
- **Act** on patient’s response

**Cessation support**
- There are 2 options for providing cessation support
  1. **Refer** Healthcare workers without the expertise or time to help people stop smoking should refer smokers to smoking cessation services
  2. **Provide support** Healthcare workers who are able to provide support should do so. Support can include planning, medications, and follow-up.
everyone has their smoking status recorded, and offering treatment on the basis of a record of current smoking is the quickest and most effective intervention I can provide. If a person has stopped smoking, this offer does not cause offence and his/her smoking status can be updated. If a person has not stopped, this “positive” orientation often leads to a useful conversation – and the provision of assistance — in a manner that does not always follow when “advice to quit” is the main strategy used.

There is compelling evidence, however, that advice to quit on medical grounds is an important motivator to quit smoking. The vast majority of the studies on which the 5 As guide was based evaluated advice to quit on medical grounds provided very briefly by physicians without any special training and in their own way. Advice to quit on medical grounds increased abstinence by ~50%;10 thus, in my practice, it is incorporated into the conversation after the offer of help with cessation. In the trials underlying the 5 As, however, it is probable that the advice was couched in terms of the harm continued smoking produces, but this was possibly not as clear for patients in the 1970s and 80s when most of these studies took place. Now most smokers understand that smoking is harmful, but fewer are clear about the benefits resulting from stopping smoking, particularly those who are older and assume the “damage is already done.” The majority of smokers know why they should not smoke, wish to be nonsmokers, and will make private quit attempts each year, but the overwhelming majority will be unsuccessful.11 Smokers welcome assistance with cessation and they do not necessarily, or typically, require more information about the harmful effects of smoking. Generally, it is more comfortable to give advice for quitting on medical grounds by describing the benefits of cessation rather than the harms of continued smoking (Table 1).

The potency of smoking cessation as a powerful preventive intervention is indisputable and Table 1 should act as an important driver of physician behaviour. Lifetime-smokers lose about 10 years of life relative to lifetime-never smokers, but cessation before the age of 40 years results in minimal loss of life. After the age of 40 years, smokers lose 3 months (on average) for every year they continue to smoke. Preventing smoking-related premature mortality in a medical practice means helping smokers to quit by age 40; thereafter, anyone continuing to smoke becomes a high priority for treatment. Strategies to optimize the likelihood of cessation attempts are a high priority in virtually any practice setting, since few things that physicians do in several minutes each year can save 3 months of life.

### Expectations of success

It is extremely important for the physician and helpful for the patient to have realistic expectations of success from a quit attempt. Without any support or medication, a smoker trying to quit has a 4% chance of eliminating cigarette smoking for a whole year.11 Medication, with or without brief support, could elevate this to 8%, and with weekly support and advice this could double again.11,14 As a physician, among your patient population, 12 out of 13 patients will have returned to smoking after medication and brief support, and 7 in 8 after intensive support when reviewed at 12-month follow-up. Since patients do not present in neat bundles of 8 or 13, success is not easily seen. For most physicians, the majority of their smoking patients fail their

<table>
<thead>
<tr>
<th>Age at stopping smoking</th>
<th>Years of life gained</th>
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<tr>
<td>25-34 years</td>
<td>10</td>
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<td>35-44 years</td>
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<td>45-54 years</td>
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### Table 1: Years of life gained relative to continuing smokers from stopping smoking at various ages in the British Doctors Study12

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**Why can’t people just stop smoking?**

There are many reasons why smokers do not stop smoking, but the dominant reason differentiating smoking from bad habits is tobacco dependence. Smoking is not a habit. Probably the most important factor that drives continued smoking is the presence of an urge to smoke. Nicotine binding in the midbrain leads to a release of dopamine in the nucleus accumbens. The urge to smoke (and the discomfort of withdrawal) reflects falling levels of nicotine and dopamine. These urges are often triggered or accentuated by cues in the environment; sometimes mood states act as cues to smoke, triggering urges. Think of the urges as similar to hunger pangs; you can see food and want to eat it despite not being hungry, but you can want to not eat despite being hungry. Typically, when smokers try to stop smoking, they do not want to smoke (most of the time), but nicotine urges to smoke undermine their best intentions. These urges often occur in situations or mood states when smokers have typically smoked and last only a few minutes, but they can be intense. They are probably the main reason smokers go back to smoking in the days and weeks following cessation.

Medications work to enhance cessation by reducing the frequency and or severity of these urges and the urges diminish after a few weeks without smoking in most smokers. Motivation is fluid; in moments of great stress smokers often can feel that “all bets are off” and reach for a cigarette. Unfortunately, this frequently reawakens the dormant urges and smokers find themselves trapped again. In addition, smokers suffer tobacco withdrawal symptoms when they go without smoking. A few are physical (mouth ulcers, cough, constipation), but most are psychological (anxiety, depression, restlessness, irritability, insomnia). Withdrawal symptoms probably do not drive the return to smoking, but they make smokers feel worse when they are trying not to give in to urges and often unexpectedly their health may decline temporarily. Some people become clinically depressed after they stop smoking and most people gain weight (average 7 kg) in the long term. As a result, general practitioners have a role in identifying and managing these problems.
quit attempt. In addition, data from national monitoring surveys reveal that most of those who succeed in stopping generally receive no support from a physician or the healthcare system and many do not even buy NRT. Most physicians who have smoked (and most of their friends) stopped without treatment. Combining these 2 observations may lead to the assumption that treatments are ineffective, but systematic reviews of trials and “real-life” studies reveal that treatments increase success rates, although in some settings absolute gains may be modest and imperceptible without collecting data. Further, achieving these gains is not time consuming or expensive and, in fact, smoking cessation is “among the most cost-effective of all healthcare interventions,” since the risks of continuing to smoke and the benefits derived from cessation are very great. Successful physicians’ interventions for smoking cessation are mainly reflected in an increase of cessation attempts and, with treatment, a small increment in the success of any single attempt. This relates to the previous observation that prior quit attempts are significant predictors of ultimate smoking-cessation success. Relapse to smoking is more often an indicator of the tenacity of nicotine addiction and not a measure of physician or even patient failure. Typically, more time is spent managing hypertension than smoking, yet the risks from moderate hypertension and the benefits of lowering BP are much lower than the benefits of helping smokers successfully deal with nicotine addiction. Successful cessation leads to the elimination of that risk factor and the need for ongoing risk-factor management; conversely, when we manage hypertension or hyperlipidemia we initiate and monitor important processes that may be ongoing for decades. Few other areas of clinical practice have the possibility of eliminating a major risk factor. Most physicians would like to eliminate hypertension or hyperlipidemia in 30% of their patients with those conditions, and this can be achieved with smoking cessation in many practice settings. Consistently offering treatment to help smokers overcome their addiction can provide dramatic benefits to patients in virtually every practice setting, as indicated in the hypothetical model of Figure 4.

Julian Tudor Hart, a famous Welsh general practitioner and epidemiologist, demonstrated how serious attention to the detection and treatment of hypertension can achieve significant health benefits in a practice, but no one has tried the same sustained approach to treating tobacco dependence.

Motivating the unmotivated smoker

The US guidelines advise physicians and others to use the 5Rs (Relevance why quitting is personally relevant to the health of the person, Risks of smoking, Rewards of stopping, Roadblocks to quitting, and Repetition of the other 4 Rs) in any discussion with smokers reluctant to consider cessation. There is some evidence that repeated discussions of this nature can help increase a commitment to abstinence. An alternative strategy advocated by the guidelines is motivational interviewing, a specific form of counselling that is focused on the ambivalence a patient feels regarding smoking cessation; this strategy requires training to accomplish. As noted, the offer of therapy (one sentence) and advice to quit on medical grounds (one sentence) can enhance motivation considerably and reflects an approach likely to be practical for most physicians. Furthermore, many people with no present plans to quit will try to quit in the near future, so the most efficient strategy may be to consistently offer treatment and wait for the right moment to be identified by the patient. For high-risk patients, some physicians may consider time spent discussing the reasons that underlie the refusal to try quitting could be time well spent.

Acceptance of treatment

Many physicians and other healthcare providers have concerns about providing brief interventions for fear of appearing to nag or pressure patients. However, offering treatment as the opening gambit can overcome this barrier, and the evidence suggests that a surprisingly high proportion of smokers will accept treatment if it is offered. Furthermore, assistance-oriented brief interventions are better received than simply advice to quit. The importance of a brief, personally relevant, nonjudgmental offer of assistance cannot be overemphasized, and it is welcomed by a large number of patients. In addition, indications of an appreciation for the difficulties associated with quitting smoking will eliminate the likelihood of the physician being seen as a “nag” or “lecturer.”

In the Cochrane review of NRT, analysis of 8 trials offering NRT to unselected smokers revealed...
that between 26% and 69% accepted the pharmacotherapy and the weighted average was 42%. In a primary-care study, practitioners were asked to systematically identify smokers and refer them to a telephone helpline for regular weekly telephone support; results indicated that one-half of all smokers were referred, three-quarters of this group were successfully contacted, and three-quarters of those accepted behavioural support (ie, 27% of smokers). Several other investigators have offered smoking-cessation therapy to unselected smokers. In the Inter99 study, 27% of smokers accepted the intensive-treatment programme and 19% attended at least once. Organizers of a study in US primary-care practices offered treatment to unselected smokers and the majority accepted it. Patients were given a choice of free NRT or NRT with behavioural support, and three-quarters opted for the more intensive option with support. Offers of assistance are frequently accepted and can lead to significantly greater participation in cessation endeavours and improved success.

Many physicians identify the optimal time for intervention as the occasion when a patient presents with a smoking-related illness, such as a respiratory infection. Some qualitative data suggest that this is perhaps not the moment when patients are most receptive to intervention. Advice to quit on such occasions may be misinterpreted by patients as assigning blame for their current illness, which can lead patients to resist acting on the advice. If controlling tobacco dependence and an offer of assistance with cessation are introduced as an important component of general preventive care, consistent with other chronic risk-factor management strategies, this potential flash point may be avoided.

Combining treatment directives

The 2 key evidence-based elements of any brief intervention are the offer of treatment and advice on the benefits of quitting or the harms of continued smoking. These 2 elements take almost no time, but if a patient accepts treatment (as many will) then in some situations the physician will need to give some brief advice on how to quit, prescribe, and follow-up, as they would when prescribing antihypertensives, for example. In many practice situations, it is possible to enlist the help of others to spend time with the smoker and pass on appropriate advice (see “Advice for helping patients stop smoking”). It is important to recognize that the high acceptance rates for treatment described above were achieved when physicians made a referral or other arrangements immediately during the consultation. Leaving the onus for follow-up with the patient is less effective.

If a patient presents for a routine consultation and the brief offer of treatment is accepted, then the next step is a discussion about whether medication is appropriate and which medication to use.

Advice for helping patients stop smoking

- Discuss medication; it will reduce the urges to smoke (sometimes called cravings) and withdrawal symptoms (restlessness etc.). Most people can resist most urges, but resisting nearly all of them will insure a successful quit attempt. Medication doubles or triples the chance of success.
- Check on side effects and manage these or change the medication.
- Set a day as the last day of smoking, ie, the quit day.
- Review previous quit attempts; what led to relapse and what lessons can be drawn?
- Plan ways to deal with the cigarettes that will be the hardest to eliminate; often, this is the one at the start of the day, but also ones that are smoked in the evening. This may involve changing normal routines to avoid the cues to smoke, eg, instead of drinking coffee, switch to tea.
- Even if smokers continue to consume the same amount of caffeine after cessation as prior to it, their blood levels will rise. Reduce caffeine intake. Drinking tea or coffee is characteristically associated with smoking, so avoiding the drink associated in this way is helpful in the first weeks of a quit attempt.
- Alcohol is a major cause of relapse; it is probably best to avoid it altogether for the first few weeks. Do not get drunk.
- Think of yourself as a non-smoker. Smoking is not even an option, since even one cigarette will seriously reduce the chance of making a successful quit attempt.

These encounters about smoking cessation often take place late in the consultation and may need to be brief. It is helpful in these circumstances to prescribe medication with minimal advice on cessation and ask the patient to return for a visit dedicated to smoking cessation. Medication choice and the prescription can be completed rapidly and requesting the patient to begin the medication helps crystallize the commitment to quit, which for many was prompted by the preceding discussion and may not have been a firm commitment prior to the consultation. Both bupropion and varenicline require a patient to start medication and continue smoking. Short-acting forms of NRT (eg, gum) have a bad taste for many people, but this improves with practice. If it is not tolerated, it is better to discover this prior to the quit day. The use of NRT while smoking is safe and can be safely recommended.

The next consultation is best planned prior to the quit day, ie, the day the patient commits to stop smoking completely. Advice on how to quit can be given by the physician or delegated to other members of the practice team. Subsequent follow-up consultations should emphasize pharmacotherapy management (eg, dosing and titration strategies, suggestions for managing common side effects, moderation of caffeine and alcohol intake, etc.). Simple, practical, and strategic advice can be profoundly helpful. All of the pharmacotherapies for smoking cessation are effective, but all have minor side effects. Many patients are uncertain about the...
value of the medications and, without appropriate guidance, adherence to ideal medication regimens may be low, but better adherence improves outcomes.\textsuperscript{31} Increasingly, the titration and adjustment of doses appropriate to the relief of withdrawal and the symptoms of craving, and the combination of pharmacotherapies for cessation is becoming more common in smoking-cessation practice, but a full discussion is beyond the scope of this paper.

Summary

Tobacco dependence is a chronic condition that can be successfully addressed through active management by a physician offering treatment in a timely manner, with a referral, or providing simple effective follow-up. These steps can make a difference to the prevalence of smoking among patients in any practice and will dramatically enhance their health and well-being.

Dr. Aveyard is a practicing public health and primary care physician and a physician and researcher in smoking cessation at the University of Birmingham, UK.

References:


Upcoming Meeting

22–23 January 2010

The 2nd Annual Ottawa Conference

Contemporary Approaches to Smoking Cessation

Chateau Laurier Hotel, Ottawa, Ontario

CONTACT: Ms. Carle Brown
Tel: 613-761-7602

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New “Ask the Expert” Feature

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