A smoking cessation intervention program for family physicians

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Family physicians are able to approach many patients who smoke but are often hesitant to help them quit. Lack of knowledge about effective interventions is a major reason for this hesitancy. The important components that have been tested in physician-initiated smoking cessation interventions are advice to quit, information about the risks of smoking and techniques for quitting, nicotine gum, setting a date for quitting and offers of supportive follow-up visits. We describe a cessation program developed for family physicians that incorporates these factors into three types of visits over a 2-month period: the challenge visit, which occurs during a regular office visit and focuses on advice and setting a date to quit; the quit-date visit, which involves instructing patients on the proper use of nicotine gum, if applicable, and confirming their desire to quit; and four supportive follow-up visits, which provide continuing encouragement for 2 months and allow physicians to monitor withdrawal symptoms, relapses and other problems. Such a program can be effectively incorporated into a general practice.

Le médecin de famille voit souvent un client fumeur, mais à qui il hésite à tenter de faire passer cette habitude. C'est surtout que dans bien des cas il ne connaît pas la manière efficace d'y arriver. Celle-ci comporte les éléments suivants qui ont été trouvés utiles: le conseil de ne pas fumer, l'information sur les dangers du tabac et sur la manière d'y renoncer, la prescription de la gomme à la nicotine, la fixation d'une date-cible, et les visites de contrôle et de soutien. Le programme que nous décrivons à l'intention du médecin de famille incorpore ces éléments dans trois types de visites étagées sur 2 mois: d'abord, au cours d'une visite ordinaire, la mise du client au défi de cesser de fumer, alors qu'on le conseille et lui fixe une date pour renoncer; à cette date on le revoit, l'instruit de l'usage correct de la gomme à la nicotine, s'il y a lieu, et le conforte dans sa résolution; enfin, quatre visites de contrôle et de soutien sur 2 mois, pour maintenir cet appui, s'enquérir des symptômes de sevrage, des rechutes et des autres problèmes. Un tel programme convient à l'exercice de la médecine générale.

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In the average family practice one-third of the adult patients smoke.[1] Smokers are twice as likely as nonsmokers to have a myocardial infarction.[2] Lung cancer accounts for 25% of the deaths due to cancer, and smoking accounts for 80% to 85% of deaths from lung cancer; therefore, smoking is the leading cause of death from cancer.[3] Other types of cancer and cerebrovascular disease are also directly associated with smoking.[4] As a result of these observations smoking has been named the main preventable cause of disease and death in North America.[5] Much of the risk can be reversed if people stop smoking, although the degree by which the risk is reduced depends on the amount and duration of the person's habit and the length of abstinence.[3] Since up to 70% of North Americans visit their physician once a year,[6] physicians have ample opportunity to talk to smokers. Helping patients to stop smoking can be a worthwhile and rewarding part of general practice.

Physicians, however, are sceptical about their ability to help smokers quit. When asked whether they approach patients about smoking cessation, family physicians reported that they frequently note the smoking status on patient charts but rarely offer more than simple advice to quit.[1]

Studies have indicated that physicians can play an important role in helping smokers.[7-9] Cessation rates appear to depend largely on the motivation of the smokers and the intensity of the support or follow-up.[1]

The perception that smoking cessation interventions are not effective is one of the reasons given by family physicians for not approaching more of their patients who smoke. The results of recent surveys of physicians' perceptions about health maintenance practices have helped to explain why such interventions are not frequently provided by family practitioners.[10,11] Some of the following perceptions act as barriers to the delivery of health promotion services: intervening with smokers is very time consuming; the efficacy of interventions for lifestyle behaviours may be statistically significant but may not always be clinically significant; physicians feel incompetent, usually because of a lack of training in medical school and residency training programs; lifestyle assessment or counselling; people cannot change their lifestyles; physicians should not be involved in health promotion because lifestyle is a matter of personal choice; and most provincial reimbursement schemes will not allow fees for lifestyle or health promotion counselling after an initial assessment. Simply the lack of a reminder system or good record-keeping can also be a barrier.

Although these factors are valid and important, it is possible to overcome most of them.

Interventions

Studies have shown that intervention components are clinically and statistically significant; however, comparisons are difficult because of the differences in length of follow-up, sample size and definitions of successful outcome.[7-9] The factors identified or suggested as influential in determining cessation include giving advice and information about smoking and quitting, offering nicotine gum with instructions, asking for a clear commitment about quitting and setting specific dates for follow-up visits.

Advice

Family physicians can initiate action through their role as authority figures or advisers. Russell and colleagues[8] found that when physicians advised their patients to quit smoking the cessation rates increased to 5%, validated at follow-up 1 year later, compared with 0.3% among patients who were not advised to quit. However, the effect was not repeated in a subsequent study.[12]

Information

Information and knowledge are generally important in attempts to change behaviour. Busy family physicians can direct patients to a wealth of free publications provided by the health agencies. These materials often contain information that helps smokers assess their habit and provides tips for successful quitting. However, information is often insufficient.[13] Furthermore, it is difficult to assess the specific impact of providing written materials, even though studies often include this intervention.[7,8,14-16] The importance of providing information for nicotine gum use has been determined:[17,18] the efficacy of nicotine gum was reduced when it was prescribed with no instructions.

Nicotine gum

Nicotine gum, a prescription drug, is relatively new and is intended to help smokers with the physiologic withdrawal phase of smoking cessation.[19] Nicotine in the form of gum gives smokers an opportunity to deal with the psychologic and habitual aspects of smoking while the physical withdrawal occurs gradually. The efficacy of the gum has been established in placebo-controlled trials.[15,17,20] Studies in clinics and general practice revealed significantly higher cessation rates when physicians gave instructions for gum use and offered supportive follow-up visits than when no gum was used.[17,20,21]

Most trials tested gum with a nicotine content of 2 mg; the 4-mg strength gum is usually reserved for heavy smokers. There is general agreement that key instructions are necessary for successful cessation.[20] People must stop smoking when they begin to use the gum. It should be chewed very slowly for 20 to 30 minutes when an urge to smoke occurs; since the full effect occurs after chewing for 15 minutes, some people use the gum before the actual urge starts. Many people find that they need one piece of gum for every two cigarettes formerly smoked. This regimen should continue for several months, and the reformed smoker should carry the gum for up to a year in case situations arise that may encourage a relapse. After the urge to smoke has disappeared, the intake can be gradually decreased, by one piece each week, until the person no longer needs the gum.

Deciding on a specific date to quit

Setting a specific date to quit is routinely included in group or counselling approaches to smoking cessation. The time between the decision to quit and the actual date for quitting offers smokers an opportunity to think about their habit and what it will mean to them to do without cigarettes and to prepare for quitting. How to prepare is an individual matter, but the principle of preparation time consistently appears in most cessation programs.[22-24] Some people prepare by enlisting the support of their family and friends,

whereas others plan to reduce the stress in their lives in order to increase the chance for success. We have found no randomized trials of physician counselling that tested the effect of preparation time. However, in cessation clinics a 2-week delay between the start of treatment and cessation has been shown to improve outcome.[22,23] In a prospective study Cummings and collaborators[24] found a positive correlation between the setting of a date and successful cessation. The importance of setting a quitting date is supported by the preliminary data of the current McMaster–Waterloo Family Practice Smoking Cessation Project and by feedback from participants of the Ontario Lung Association's Countdown Program. This concept must be assessed more rigorously to determine its contribution to primary care counselling.

Offer of supportive follow-up

Long-term follow-up is a normal part of family practice for conditions such as hypertension, diabetes and depression. Therefore, follow-up visits for smoking cessation can fit practically into daily practice. The evidence for the efficacy of such an offer is currently under debate. In 1982 a study revealed that the offer of follow-up visits had a significant effect on the cessation rate at 6 months.[7] Fagerstrom[9] observed a similar but statistically nonsignificant result with a small sample of patients followed up at 1 year. Marshall and Raw[25] found nonsignificant trends that favoured people who were offered follow-up for 3 months compared with those who were not. In summary, the evidence seems to support the importance of the physician's offer of follow-up support; however, the studies on which this conclusion is based were small, unvalidated or had limited patient selection.

Which patients should be approached?

There is a good rationale from the physician's point of view to target initially smokers who are motivated to quit. Physicians will receive more positive feedback and encouragement if they concentrate their efforts on those more likely to succeed.

Studies have revealed relatively high cessation rates when interventions were focused on motivated smokers rather than all smokers.[8,9] However, it is not yet known how a physician can validly and reliably identify motivated smokers. In addition, the physician's advice to a seemingly uninterested smoker may be an important motivating factor. Physicians have opportunities to take advantage of the "teachable moment", when patients are especially concerned about their health after a heart attack, during a bout of bronchitis or early in pregnancy. We suggest that physicians challenge all of their patients who smoke to quit.

Guidelines for follow-up visits

We are currently evaluating the sequence of visits in a randomized control trial (Table I). This intervention is based on our understanding of the findings from other clinical trials[7–9,14,15] and combines their most efficacious ingredients as well as our experience in primary care.

Challenge visit

We recommend that physicians spend an additional 5 to 7 minutes during regular office visits discussing the importance and advantages of quitting in terms of the individual's health. It is important to determine the patient's smoking history and willingness to quit. It is also important to challenge the patient to make a clear decision about quitting (Figs. 1 and 2) and to set a date to quit within the next month, at which time he or she will return to see the physician. During the initial visit the physician can inform the person about nicotine gum and how it basically works. We recommend that the detailed instructions be given when the person returns on the "quit date".

Before leaving the office the patient should also arrange a follow-up visit 2 days after the quit date.

Quit-date visit

During this 10-minute visit the physician determines whether the patient is still willing to quit; if motivation appears to be lagging we recommend that a few minutes be spent reviewing the patient's reasons for wanting to quit. It is important to ensure that patients who want to use nicotine gum understand clearly how to use it. We teach physicians to go through the instructions outlined in the section on nicotine gum to help them remember what to say as the patient tries a piece of gum. The patient can discuss any reactions during this time.

If the patient has chosen not to try nicotine gum, this visit is primarily for encouragement and support. The physician can provide suggestions for strategies to help the patient quit successfully. In the McMaster–Waterloo project such information

Table I — Sequence of office visits for smoking cessation intervention program

Sequence	Length of visit, min
Challenge visit (at time of regular office visit)	5–7
Quit-date visit	5–10
Supportive follow-up visit, at	
2 d	5–7
10 d	5–7
1 mo	5–7
2 mo	5–7

is being provided through "tip sheets" that are given to the patients and are referred to by the physicians. (Demonstration copies of these materials are available from the authors upon request.)

Preliminary data from the McMaster–Waterloo study show that 60% of the patients who set up a quit-date visit actually attended and that the validated cessation rate at 1 year was 14.6% among those who attended, compared with 6.5% among those who did not attend.

The patients must be reminded to return in 2 days and also a week later for support during the early, most difficult period.

Follow-up visits

These comprise four visits over a 2-month period. Their content will depend on the stage of the cessation process and the problems discussed

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FULL NAME _____ **DATE** _____
First Name Surname

1. **Are you a cigarette smoker within the past 7 days?** Yes ☐ No ☐

2. **How many cigarettes do you smoke on a typical day? (Please check response)**
   1-5 ☐ 20-30 ☐
   5-10 ☐ 30-40 ☐
   10-20 ☐ 40 or more ☐

3. **What brand of cigarettes do you usually smoke?** _____

4. **How many years have you smoked cigarettes regularly?** _____ **years.**

5. **How many times have you tried to stop smoking?** _____ **times.**

6. **When did you last quit?** _____ (Month) _____ (Year)
   for how long? _____
   with what method? _____

7. **How soon after you wake up do you smoke your first cigarette?** _____ **minutes.**

8. **How confident are you that you will not be smoking one year from now? Please circle response.**

Not at all									Very much
1	2	3	4	5	6	7	8	9	10

9. **How willing are you to quit smoking within the next month? Please circle response.**

Not at all									Very willing
1	2	3	4	5	6	7	8	9	10

10. **What are your main reasons for wanting to quit smoking?**
    expense ☐ bad example ☐
    dirty habit ☐ don't really enjoy ☐
    my health ☐ risks of cancer, heart disease ☐

11. **How many of the people with whom you live smoke cigarettes?** _____

Fig. 1 — Questionnaire given by family physician during regular office visit to patients who smoke.

by the patient at the visit. A flowsheet helps the physician to monitor and support the reformed smoker (Fig. 3). The most important role for the physician at this time is to provide long-term support by encouraging the patient through the difficult times and, if applicable, ensuring the proper use of nicotine gum. If a patient starts smoking again we suggest that the physician and patient negotiate another quit date and repeat the process.

In the McMaster–Waterloo study we have found that the validated cessation rate at 1 year is 29.6% among patients who attended all four follow-up visits, compared with 6.1% among those who attended one visit and 10.8% among those who attended two visits.

Check

From the questionnaire-review with the patient:

- **Clarify number of years smoking**
- **Number of cigarettes per day**
- **How willing are you to quit?**
- **Reasons for wanting to quit (if applicable)** ☐

Remind patient of serious health risks.
Relate these to actual symptoms or risks of patient, where possible. ☐

Briefly outline benefits of quitting.
Risks for related disease including coronary artery disease and cancer are lessened.
Breathing improves. ☐

Indicate that you strongly recommend quitting and you realize it is difficult.
You want to help. ☐

Briefly provide information on nicotine gum

- **Nicotine reinforces and strengthens the desire to smoke. It is the smoke, not the nicotine, that causes most of the health problems. The nicotine in the gum helps to reduce some of the side effects of quitting.**
- **Nicotine gum is not a cure-all.**
- **Further information and specific instructions will be given at the next visit if the patient is interested in quitting using the gum.** ☐

Ask patient if he or she wants to quit with your help?

NO ☐
YES ☐
and nicotine gum? ☐

Discuss the needs for the patient to set a QUIT DATE as soon as possible, no longer than 1 month from now (ideally, 2 weeks).

ENTER QUIT DATE HERE

Give patient take home materials.

Fig. 2 — Outline of procedure for physicians to challenge patients to quit smoking.

Patient Name: _____	Major reasons for quitting	Health
Symptoms while smoking (e.g., cough)		Other

	Quit day	2-4 days post quit day	1-2 weeks post quit day	1 month	2 months
DATE:					
General well being					
Reminder of reasons to quit					
Any cigarettes in past week? number/day					
Commitment to quitting (scale of 1-10)					
Confidence to succeed (scale of 1-10)					
Sample of nicotine gum					
Instructions on nicotine gum use					
Prescription with repeats					
Dispose of cigarettes					
Tips and materials					
Average daily use of nicotine gum over past week					
Any side effects of nicotine gum? –Do you like the gum?					
Any withdrawal symptoms after stopping cigarettes?					
How often do you feel like smoking? How strong is this craving? (Low, Medium, High)					
Does the gum help you cope with this craving?					
Have you noticed any weight gain? Is this a problem? Record weight					
Do you spend a lot of time around other smokers?					
Are you feeling support from others at home or at work?					
Recommend exercise/walking:					

Fig. 3 — Flowsheet to help physicians monitor progress of patients after they have quit smoking.

Discussion

The experience of the family physicians who are participating in the McMaster–Waterloo project indicates that the intervention program we have described is feasible and simple to apply. After an initial adjustment period the three- to six-visit format was found not to be disruptive to the office routine, since no more than one or two smokers were approached each day.

After the program had been applied for 3 to 4 months the physicians agreed that talking to their smoking patients at a regular office visit was the most effective way to reach them and that the motivational content of that first visit was an important part of the program's success. The quit-date visit provided additional time for instructions on gum use and ensured that the patient was still motivated and prepared to quit. Although the offer of four follow-up visits over a 2-month period may seem excessive, we have found that the successful quitter attends more of these visits. Motivation and other personal factors must be considered when the data are interpreted. We need to know whether it is worth while to encourage compliance with follow-up visits.

About 70% to 90% of smokers are willing to try to quit smoking.[26] Helping a patient to quit is one of the most cost-effective services a family physician can provide. Our preliminary cost–benefit analysis has shown that helping 1 smoker in 20 to quit is at least five times more effective, in terms of lives saved, than dealing with other coronary risk factors.

Conclusions

Our clinical and research experience indicates that approaching patients who smoke during regular daily practice is feasible and can be an effective use of time. Cessation rates are higher among patients who can see that smoking directly affects their health. Advice to quit that is relevant to the person and that is communicated with a strong personal concern will often motivate a smoker to try to quit. A quit date set within a few weeks of the original counselling session provides an opportunity to discuss nicotine gum and other supports for quitting and is an important ingredient in a successful cessation program. Finally, physicians can offer continuing long-term support, which is often helpful to smokers who try to quit and is a natural part of general family practice.

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