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BEHAVIOURAL SCIENCE LEARNING MODULES

ENCOURAGING PEOPLE TO STOP SMOKING

DEPARTMENT OF MENTAL HEALTH
AND SUBSTANCE DEPENDENCE

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ENCOURAGING STOPPING SMOKING

Preface

Smoking causes an enormous burden on public health. While policy measures to control tobacco use are being applied all over the world, inadequate attention has been given to what the health care professionals can do in their routine work with patients. The present document, Encouraging Stopping Smoking gives information on how medical professionals and health workers can increase the likelihood of their patients stopping smoking. It also gives guidelines on this aspect being included in medical and nursing training programmes.

This document has been developed by Dr R.A. Walsh and Professor Rob W. Sanson-Fisher of Australia, and WHO is indeed grateful to them for having undertaken this task. They have also been responsible for incorporating many changes that were suggested by a series of reviewers, within and outside WHO.

Encouraging Stopping Smoking is part of the Behavioural Science Learning Modules series of the World Health Organization (WHO). This series is aimed at providing behavioural science knowledge and skills to health care professionals to positively influence the health of their patients. It is hoped that the present document is useful tool for these professionals and their trainers. We would be pleased to receive any feedback on the usefulness of this document and suggestions on how to improve it. These suggestions may be sent to the undersigned.

Many reviewers have provided comments and suggestions. Of particular assistance were:

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ENCOURAGING STOPPING SMOKING

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ENCOURAGING STOPPING SMOKING

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This module contains:

Part 1

- a review of the impact of smoking on public health and of the role of medical professionals in the promotion of non-smoking.
- a detailed step-by-step approach that medical professionals and health workers can adopt to increase the likelihood of their patients quitting smoking.

Part 2

- guidelines on the teaching and assessment in medical and nursing training programmes of techniques to encourage patients to stop smoking.

Part 1

Learning objectives

Upon completion of this module, the student should be able to explain:

- The reasons for including counselling to stop smoking into routine medical practice;
- Cognitive, behavioural and pharmacological procedures used to help people to stop smoking;
- How to tailor smoking cessation programmes to the patients' state of readiness to quit.

Upon completion of the module the student should be able to:

- Incorporate smoking cessation efforts into normal medical consultations;
- Assess the patient's smoking history and willingness to try to stop smoking;
- Deliver effective advice tailored to the patient's needs and state of readiness and provide help and follow-up;
- Prescribe nicotine replacement therapy (NRT) appropriately.

A review of the nature of the problem

Our aim

This manual is intended to help the health care professional to offer effective interventions for stopping smoking to patients during clinic visits. Health professionals are uniquely suited to the task of providing effective smoking cessation advice and support to patients who do smoke, and millions of smokers worldwide may be encouraged to quit smoking by their health advisers.

The knowledge imparted is, in the main, based on studies that are more relevant to medical students and practitioners in developed nations. However, with adaptation, the concepts and approaches recommended in the manual could be applied in other educational situations. In particular, a number of the cases presented in Appendices 3 and 4 are clearly relevant to patients in developing countries.

While the information included here is primarily aimed at helping patients who already smoke or use other tobacco products to stop, information can also be used to help prevent tobacco use in the first place. The latter approach should indeed represent the most effective way to eliminate completely smoking-related diseases in the long-term. However, the prevention of adolescent smoking has proved a difficult challenge and it has been argued that tackling adult smoking may be the best way to reduce uptake in youth (Hill, 1999). Therefore, efforts to help those who smoke or use tobacco to stop doing so will remain a vital component of any health promotion programme. The text also assumes that tobacco use is mainly through smoking cigarettes. Although many people use tobacco in other forms such as cigars, pipes, chewing tobacco, pan masala, betel quid, Goza or Shisha, we have for the sake of clarity chosen to address only cigarette smoking. However the directions and concepts described in this module can be applied to all tobacco users alike, regardless of the form their tobacco use takes.

The facts

Currently tobacco products are estimated to be responsible for 3 million deaths annually worldwide, or about 6% of all deaths. But by the 2020s or early 2030s, it is expected to cause 10.9% of all deaths in developing countries and 17.7% of those in developed countries, more than any single disease.

The statistics of tobacco-related mortality worldwide are devastating. Tobacco is a known or probable cause of about 25 diseases; hence its impact on global disease is tremendous, if not yet fully appreciated. It is estimated that there are approximately 1.1 thousand million smokers (47% of all men and 12% of all women) in the world, or about one-third of the global population aged 15 and over. The vast majority of smokers are in developing countries (800 million or over 70%), and most of them are men (700 million or over 60%). This clearly suggests that smoking is a major problem in developing as well as developed countries. In the light of the global impact of tobacco on human life, it is imperative that stronger measures be taken to persuade those who use tobacco to stop and to discourage those who do not smoke from starting.

In 1990 Peto and Lopez estimated that about 40% of adults in China, India, Indonesia and parts of South America were current smokers. In general, tobacco consumption is increasing most rapidly amongst the

world's poorest countries, with particularly dramatic increases in cigarette consumption in Asia. During the period 1960 to 1980, cigarette consumption rose by 400% in India and by 300% in Papua New Guinea (Taylor, 1989). The prevalence of smoking among persons aged 15 years or over in selected countries is outlined in Table 1.

Health risks

It has been clearly shown that cigarette smoking is a causal factor in the development of many serious medical problems, most notably cardiovascular disease, cerebrovascular disease, lung cancer, and chronic obstructive airways disease, as well as tumours of the mouth, larynx, oesophagus, lip and bladder. Other neoplastic and respiratory causes of death, newborn and infant deaths due to maternal smoking, cigarette-caused residential fires and passive smoking deaths from lung cancer are also substantial components of tobacco-related mortality (US Department of Health and Human Services, 1989).

Table 1

Estimated smoking prevalence among males and females aged 15 years and over in selected countries, percentages

	Males	Females
Developed Countries		
Australia	29	21
Austria	42	27
Sweden	22	24
United Kingdom	28	26
United States of America	28	22
Less Developed Countries		
Argentina	40	23
China	61	7
India (10 areas)	40	3
Korean Republic	68	7
Thailand	49	4
Turkey	63	24

Tobacco or Health: A Global Status Report.
World Health Organization: Geneva, 1997

Table 2 illustrates the proportions of ten selected causes of death estimated to be attributable to smoking in the USA. These data give an indication of the extent of specific disease mortality caused by smoking especially in developed nations. The proportions of deaths in other countries will be influenced by factors such as the prevalence of smoking, types of cigarettes available and patterns of smoking.

Figure 1 displays the estimated relative risks for smoking-related diseases of male and female smokers compared to non-smokers. These data were collected from an American Cancer Society study involving one million men and women aged 35 years and over from 1982 to 1986 (US Department of Health and Human Services, 1989). As depicted in Figure 1, male smokers are 22 times more at risk of dying from lung cancer than male non-smokers, while female smokers are 12 times more at risk than female non-smokers.

Table 2

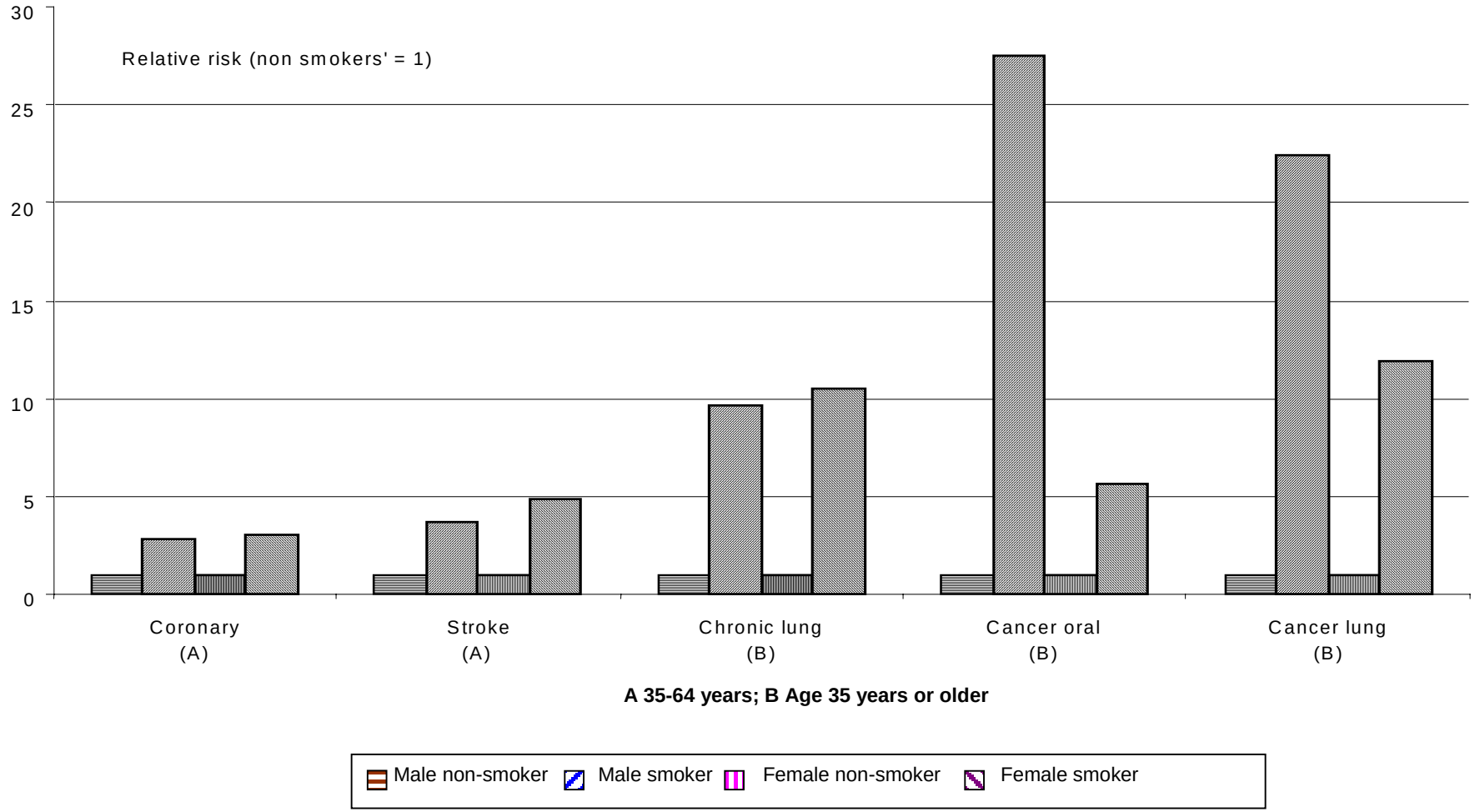
Estimates of the percentage of male and female deaths attributed to smoking for ten selected diseases, United States, 1985

Cause of death	Males %	Females %
Coronary heart disease, age <65 years	45	41
Coronary heart disease, age ≥ 65 years	21	12
Chronic airways limitation	84	79
Cancer of lip, oral cavity, and pharynx	92	61
Cancer of larynx	81	87
Cancer of oesophagus	78	75
Cancer of lung	90	79
Cancer of pancreas	29	34
Cancer of bladder	47	37
Cancer of kidney	48	12
Cerebrovascular disease, < 65 years	51	55
Cerebrovascular disease, ≥ 65 years	24	6

U.S. Department of Health and Human Services (1989

Figure 1. Major diseases caused by smoking

Estimated relative mortality risks for male and female smokers and non-smokers by disease category



(U.S. Department of Health and Human Services, 1989: 150-151)

Benefits of stopping smoking

After stopping smoking, the associated health risks diminish substantially in proportion to the period of abstinence, eventually returning to the level of non-smoker rates in some instances. Table 3 summarizes the risk reduction of diseases on stopping smoking.

The 1990 United States Surgeon General's Report (US Department of Health and Human Services, 1990) concluded that stopping smoking has major and immediate health benefits for men and women of all ages and that the benefits apply to persons with and without smoking-related disease. Former smokers live longer than continuing smokers. For example, persons who quit smoking before 50 years of age have one-half the risk of dying in the next 15 years compared with continuing smokers. Lower mortality rates upon stopping smoking have been demonstrated even through to elderly smokers who are in the age group 70-74 years at the time they stop. Women who stop smoking during the first 3-4 months of pregnancy reduce their chance of having a low birth weight baby to the same risk levels as that of women who have never smoked.

Table 3

Risk reduction on smoking cessation

Disease Category	**Short-Term Effects (1-5 years)**	**Long-Term Effects (+5 years)**
Coronary heart disease	50% less risk at 1 year	Non-smoker rates at 10 years
Peripheral vascular disease	Halts progression	
Cerebrovascular disease	Quick decline in risk	Non-smoker rates at 5 years
Lung cancer	60% less risk at 5 years	Non-smoker rates at 10 years
Oral cavity cancer	Risk decreases with cessation	Non-smoker rates at 16 years
Respiratory disease	Slow decline	50% less risk at 20 years

Source: Fielding (1985) and US Department of Health and Human Services (1989)

Special targets

Adolescents and young adults

In many countries the average age at which people begin to smoke is under 15 years. The greatest increase in prevalence of regular smoking occurs between the age of 12 and 15 years (Morris and Koyama, 1990) and 90% of smokers report starting to smoke regularly before the age of 21 (US Department of Health and Human Services, 1989). Initiation of smoking at younger ages not only increases the risk of dying from a smoking-related cause and advances the age at which such risks will occur, but also makes it difficult to quit. Clearly then, adolescents and young adults are among major targets for prevention intervention and doctors can play an important role in discouraging young people from taking up smoking.

While young people begin to use tobacco for social and psychological reasons, the physical effects of the drug nicotine soon initiate an addiction process. Many young people, including experimental smokers, are unaware of, or underestimate, the addictive nature of smoking (Morris and Koyama, 1990). It is a process that usually takes about three years (US Department of Health and Human Services, 1994). During the period when young people begin using tobacco as well as before, doctors, especially family physicians and paediatricians can play a key role in informing them and their families about the addictive nature and other harmful effects of tobacco use. Cigarette smoking during childhood produces significant health problems among young people, including cough and phlegm production, an increase in the number and severity of respiratory illnesses, decreased physical fitness and potential retardation of lung growth and function. In counselling and consultations involving young people, doctors and nurses may want to focus on these more immediate health and physical effects of smoking rather than on the long-term consequences (Wong-McCarthy and Gritz, 1982). Written materials and waiting room posters should be used to support personal discussions.

Women and girls

Tobacco has serious effects unique to women and girls, aside from all the known general health risks, which are not gender-specific. Yet women have not been made sufficiently aware of this issue. Most of the advice to women about stopping smoking or tobacco use has centred on the effects of smoking on the foetus or unborn child, rather than on the women's own health. It is an aspect that physicians and nurses should highlight during their general health care counselling of young women and girls. In addition to active smoking, second-hand smoke has also been identified as an important women's issue (Samet & Yoon, 2001).

Appendix 3 provides individualized examples illustrating the consequences of tobacco use in different situations.

The clinician as an agent for the promotion of smoking cessation

There are a number of reasons why clinicians can be effective agents in helping people stop smoking.

Access: In developed nations, a high proportion of the population consult a primary care doctor each year. For example, Australian data show that general practitioners will see 80% of the population in any given 6

month period - one-third of whom will be smokers (Bridges-Webb, 1987).

Patient acceptance: Doctors and nurses have authoritative power and are generally regarded as reliable and knowledgeable sources of health information. Patients are likely to accept advice on changing their smoking habits from an acknowledged expert on health problems (Slama, et al., 1989). In addition, individuals tend to feel physically vulnerable when with a physician, and more willing to accept health risk counselling (Nutting, 1986). Often, too, their medical problems are related to smoking. When direct negative consequences of smoking are visible, patients tend to be even more receptive to advice about stopping smoking (Goldstein, 1993). Even three minutes of discussion with every patient about not smoking and its benefits has been shown to be cost-effective. The majority of smokers who want help to stop smoking prefer to seek it from a medical practitioner or other qualified health professional, rather than using self-help approaches (Owen, 1989). Table 4 presents data on the reaction of smokers to advice by a doctor about quitting smoking.

Table 4

Percentage of smokers in the community who expect and would follow advice from a GP to quit smoking

	% smokers (n=92)
Would change GP if asked about smoking on every visit	6
If another GP offered a special programme to help change behaviour would attend	30
Would attempt to follow GP's advice to quit smoking	59
Expect GP to offer behavioural strategies to help quit smoking	68
Expect GP to give advice on stopping smoking	84
Expect GP to ask about smoking on first visit	95

Source: Slama et al. (1989)

Doctors' acceptance of their role: Most medical practitioners see their job as not only treating manifest disease, but also as a health adviser to patients (Cockburn et al, 1987). Doctors, therefore, should see it as their role to promote non-smoking. Interventions to stop tobacco use should be considered in the same way as vaccination: they should be offered to every person. Doctors should ask all patients over 15 years of age (or even younger, if they feel there is a serious problem among children) about smoking and tobacco use during each visit, provide advice about stopping to those who smoke, and help patients to stop when they are ready. In many countries, this intervention has been facilitated by a decline in the prevalence of smoking amongst medical practitioners (Magnus, 1989). Where this is the case, the smoking rates of the general population have also decreased. There is indeed evidence to suggest that doctors who smoke are less likely to give anti-smoking advice and have higher rates of smoking amongst their patients only 22% received advice to quit. In a review of programmes to stop smoking (Miwa et al., 1995). This suggests that the public follows the lead of its health care providers. It is therefore a matter of great concern that high rates of smoking persist amongst medical students, nurses and practitioners in some developed and less developed nations (Chapman & Wai Leng, 1990; Miwa et al., 1995; Slama et al., 1995).

Doctors' current performance in promoting non-smoking

Even in those countries where doctors' knowledge of the risks of smoking can be taken for granted (and where cigarette smoking by doctors is uncommon), a major gap remains between acceptance of smoking risks and its translation into clinical practice (Fowler, 1993). Although doctors claim to ask and advise about smoking (Wechsler et al., 1983), only a minority of smoking patients recall being advised by their doctor (Cummings et al., 1987). For example, in a videotape observation study, Dickinson et al. (1989) found that doctors only detected 56% of smokers and, of these, during pregnancy, Walsh and Redman (1993) found that in 5 out of 6 studies

over half of pregnant smokers did not remember discussing smoking with the family doctor who confirmed their pregnancy.

In summary, it is clear that rates of smoking detection and offer of advice are not optimal and that doctors appear to overestimate these rates compared with medical record audits and patient self-reports (Lewis, 1988). While there is evidence from the United States that doctors' rates of giving advice to stop smoking has improved over the period 1974-87 (Gilpin, 1992), it is also clear that the role of medical advice in this regard is yet to realise its full potential. Doctors must not only possess the necessary knowledge and skills to intervene effectively, but also incorporate advice to people to stop smoking or not to take it up into their routine clinical practice. All patients should indeed be asked about their smoking status and smokers routinely advised to quit. Such practices should be fully integrated into primary care (Johns et al., 1987).

The potential of medical interventions to stop smoking

As discussed, doctors have frequently led the way in stopping smoking and they can play an exemplary role in tobacco control. Pessimism about the effectiveness of their efforts in encouraging patients to stop smoking has lessened some doctors' involvement in this area. Slama et al. (1995) have pointed out that this pessimism is provoked by the high relapse rates and the tendency of doctors to offer advice to those patients who are least likely to quit without extensive help. It is therefore important for physicians to be aware that rigorous scientific research has shown the efficacy of medical interventions in helping patients to stop smoking (Kottke et al., 1988). Even simple advice has a small effect on cessation rates, equivalent to an absolute difference of about 2.5% (Silagy, 2001). While intensive group programmes may achieve higher rates for quitting, the cumulative impact of brief interventions with patients in primary care settings on the overall reduction of smoking among the population is likely to be much greater over time (Jarvis & Russell, 1989). Smokers who are advised by their doctor to stop smoking are nearly twice as likely to do so than those who are not (Glynn, 1990). When combined with nicotine replacement therapy (NRT) medical advice appears to be even more effective. The cost-effectiveness of brief doctor counselling (Cummings et al., 1989), nicotine chewing gum (Oster et al., 1986) and the transdermal nicotine patch (Fiscella & Franks, 1996) have indeed all been shown to compare very favourably with other commonly accepted medical practices such as the management of moderate hypertension and hyper-cholesterolemia.

Although the effectiveness of the above interventions has been demonstrated by randomized controlled trials, there remains some controversy over the value of routinely offering follow-up visits (Walsh, 1994). Kottke et al.'s (1988) extensive review and meta-analysis suggested that the most significant factors relating to programme benefit were the number of doctor-patient encounters and the length of time over which they were extended. However, not all studies have provided support for the inclusion of extra visits (Gilbert et al.,)

1992).

Table 5 provides an overview of the results obtained in three types of studies on stopping smoking in primary medical practice: minimal interventions (2-3 minutes), medium interventions (3-11 minutes) and intensive interventions (including follow-up contact).

How doctors can encourage their patients to stop smoking

Stopping smoking: a behavioural science task

Approaches to stop smoking are informed to a large extent by behavioural science and strategies. Indeed, in common with other areas where behaviour change is being sought, programmes to stop smoking apply core principles of behavioural science teaching. Much of the material included in other health-related behavioural science learning modules is therefore equally relevant to, and can serve to, complement the approaches to stop smoking.

Examples include the following:

- "Appendix 2: Instructions for Progressive Muscle Relaxation" in the Module *Preparation for Invasive Procedures* is relevant to patients quitting smoking who list stress as a significant problem.
- the sections on "Social Training and Assertiveness and Coping Strategies Approach" in the Module *Psychological Interventions for Patients with Chronic Back Pain* are clearly of relevance to the patient involved in the process of stopping smoking.
- techniques designed to improve compliance in the Module *Improving Adherence Behaviour with Treatment Regimes* are obviously useful to the clinician interacting with a patient attempting to abstain from tobacco; and
- the section "Stages of Change in the Module *Promoting Nonpharmacologic Interventions to Treat Elevated Blood Pressure"* is crucial to the assessment of patients who smoke.

All the above also underline the fact that, while nicotine replacement therapy may be a major component of programmes to stop smoking, other critical elements of therapy include proper assessment of the patient, appropriate counselling, and support and follow-up to ensure compliance.

With regard to the stages of change specific to the process of stopping smoking, Prochaska and Di Clemente (1983) provide a useful analysis and summary of these stages, viz.:

1. **Pre-contemplation** – patient has not stopped smoking and is not planning to stop.
2. **Contemplation** – patient has thought about quitting but is not ready to do so yet.
3. **Preparation** – patient is mentally willing to stop smoking within the next month. These patients may have made little changes to combat their smoking, such as delaying their first daily cigarette or cutting down the number of cigarettes smoked daily, but have not given up cigarettes completely.

Table 5

Smoking interventions in primary medical practice

Brief Interventions (2 to 3 minutes)				
Author	Patients	Intervention	Follow-up	Abstinence
Russell et al., 1979	2138 patients attending 28 GP's in 5 practices in London, UK	Randomized by day of attendance to: 1. non-intervention control 2. questionnaire - only control 3. simple advice 4. simple advice, leaflet plus warning of follow-up	Self-report of abstinence at 1 month and 12 months; approx. 7% deception rate	1. 0.3% 2. 1.6% 3. 3.3% 4. 5.1%
Jamrozik et al., 1984	1519 patients attending 6 general practices in Oxford, UK (72% of eligible cigarette smokers who replied to follow-up)	Randomization by day of attendance to: 1. non-intervention control 2. advice to quit and booklet 3. advice to quit, booklet and demonstration and feedback of CO concentration 4. advice to quit and booklet and offer of further help from health visitor (no subsequent visits)	1 year follow-up (Chemical validation failed in 24%-40% subjects, not different between treatments)	1. 11% 2. 15% 3. 17% 4. 13%
Russell et al., 1987	4445 smokers attending 27 GPs	Patients allocated depending on practice groupings to: 1. usual care 2. brief intervention - support advice, leaflet and nicotine gum 3. supported brief intervention - support advice leaflet, nicotine gum and support for the doctors from smokers' clinic (no subsequent visits)	1 year (adjusted for overall 39% deception rate)	1. 5% 2. 5% 3. 8%

Table 5

Smoking interventions in primary medical practice (continued)

Medium Interventions (3-11 minutes)					
Page et al., 1986	289 patients attending 5 family practices in Ontario	Randomized to: 1. no advice 2. physician individualised advice 3. physician individualised advice and nicotine gum (no subsequent visits)	1 month 3 months 6 months (self report only)	1 month 1. 5.9% 2. 5.3% 3. 10.7% 3 months 1. 8.9% 2. 9.9% 3. 19.2% 6 months 1. 8.1% 2. 8.9% 3. 12.0%	
Slama et al.,1990	311 smokers attending general practices in Newcastle	Random allocation to: 1. no info or advice 2. simple advice plus 3 pamphlets 3. tailored behavioural intervention and health risk info (8-11 min duration - no subsequent visit)	1 month, 6 months and 1 year follow-up (using self-report, SR and chemical validation, CV)	1 month SR 1.9% 2 14% 3.19% 6 months 1. 11% 2. 11% 3. 18% 1 year 1. 11% 2. 10% 3. 17%	CV 2% 2% 8% 6% 7% 12% 8% 5% 12%

Table 5

Smoking interventions in primary medical practice (continued)

Intensive Interventions (>12 minutes)				
Fagerstrom 1984	145 patients seeing 10 GPs and 3 industrial MDs in Sweden	Physicians randomized 'motivated' patients to: 1. advice and short follow-up (2 weeks) 2. advice and long follow-up (1 week telephone call 2 weeks appointment 30 days appointment) 3. advice and short follow-up and nicotine gum 4. advice and long follow-up and nicotine gum	6 months and 1 year (adjusted for 15% deception rate)	6 months 1. 6% 2. 15% 3. 24% 4. 32% 12 months 1. 3% 2. 15% 3. 22% 4. 27%
Richmond et al .,1986	200 smokers attending 3 doctors in group practices in Sydney	Random allocating by day of attendance to: 1. non-intervention control (2 visits) 2. advice to quit, booklet, objective tests demonstrating smoking effects, support and counselling (6 visits)	6 months – abstainer defined as no tobacco in previous 3 months (adjusted for failed chemical validation) 3 years (chemically validated)	6 months 1. 3% 2. 33% 3 years 1. 8% 2. 36%

4. **Active** - patient has actually tried or is in the process of quitting smoking. Often these patients have relapsed and need to try to stop again.
5. **Maintenance** - patient has successfully given up smoking for 6 months or more and needs counselling to continue to stay off cigarettes.

The vast majority of smoking patients are in the pre-contemplation or contemplation stages. In some developing countries, there may be a higher proportion of patients in the pre-contemplation stage because of reduced exposure to anti-smoking media content. This point emphasises the need in such settings to identify and interact with patients who have not given much or any thought to quitting smoking. Advancing patients from one stage to the next is probably more effective than trying to convince a smoker who has never considered quitting to do so immediately.

Farkas et al. (1996) have reported that their addiction model performed better than the stage of change model in predicting long-term success in smoking cessation. In a recent critique (Sutton, 2000), it has been argued that Prochaska & Di Clemente's transtheoretical model (TTM) is based on arbitrary time periods, has logical flaws and that the subscales do not measure discrete stages of change. However, the stage of change model (Prochaska & Di Clemente, 1983) has to-date had considerable influence on the smoking cessation field. The TTM remains popular with practitioners, clinicians and many researchers. It possesses substantial face validity. Providing those using the TTM are aware of its limitations and do not invest excessive resources attempting to adhere rigidly to the TTM in a doctrinaire fashion, awareness of the TTM and incorporation of some of its aspects in a smoking cessation interaction can be helpful for medical practitioners, nurses, and their patients.

The role of nicotine replacement therapy (NRT)

The two main forms of NRT available are nicotine gum and transdermal nicotine (skin patches). Cigarettes are among the most addictive products known, and the vast majority of people who quit smoking relapse within days (Henningfield, 1995). NRT is designed to assist those who have just stopped smoking cope with the withdrawal symptoms and other features of their physical dependence on nicotine. NRT provides effective treatment for tobacco dependence, typically doubling the rates of success of smokers who try to quit without treatment (Silagy et al, 2001). The effect of NRT in increasing the base quit rate is largely independent of the intensity of additional support offered (beyond a minimal level) or the setting (Silagy et al, 2001). The efficacy of NRT is lower in primary care settings than in specialized community clinics (Lam et al., 1987).

Although it may appear that transdermal nicotine is more effective than nicotine gum, no trial has compared the two medications directly (Henningfield, 1995). Campbell (1993) has argued that these two forms of NRT have similar effectiveness when given in addition to advice and support for motivated patients in general practice. In hospital patients with smoking-related diseases, Campbell (1993) states transdermal nicotine offers little if any advantage over

advice and support. Jamrozik (1993) points out that although transdermal nicotine has made NRT easier from a dosage and compliance viewpoint, its low efficacy, substantial cost and incidence of adverse effects argue for its cautious prescription. Patients who gain most from using NRT can be selected using a short questionnaire, which measures the level of nicotine dependence (Henningfield, 1995). The modified Fagerström Test for Nicotine Dependence is useful for this purpose (Heatherton et al., 1991) - see Table 6. As a starting point for nicotine gum dosing, Henningfield (1995) recommends that one dose of 2-mg gum be given in place of every two cigarettes. For patients who smoke more than 20 cigarettes per day, one dose of 4-mg gum should be prescribed for every three to four cigarettes. In the case of transdermal nicotine, Henningfield (1995) states that patients who smoke more than 10 cigarettes per day should be treated with the highest available dose of the brand used. After one to two months of NRT, weaning can be initiated: for gum, the total daily intake decreased by one unit dose each week and for patches, each of the lower dosages prescribed for two to four weeks. Patients should be advised of the more common side effects of NRT prior to initiation of treatment.

Table 6

The Fagerström Test for Nicotine Dependence – revised version

QUESTIONS AND ANSWERS	SCORE
How soon after you wake up do you smoke your first cigarette?	
≤ 5 min	3
6-30 min	2
31-60 min	1
≥ 61 min	0
Do you find it difficult to refrain from smoking in places where it is forbidden - eg, in church, at the library, in a cinema?	
Yes	1
No	0
Which cigarette would you hate most to give up?	
The first in the morning	1
Any other	0
How many cigarettes per day do you smoke?	
≤ 10	0
11-20	1
21-30	2
≥31	3
Do you smoke more frequently during the first hours after waking than during the rest of the day?	
Yes	1
No	0
Do you smoke if you are so ill that you are in bed most of the day?	
Yes	1
No	0

Heatherton et al. (1991). Scores of more than 6 are usually interpreted as indicating a high degree of dependence, with more severe withdrawal symptoms and greater difficulty in quitting.

The role of antidepressants

There are two reasons to believe antidepressants might help in smoking cessation (Hughes et al, 2001). First, depression may be a symptom of nicotine withdrawal, and smoking cessation sometimes precipitates depression. Second, smoking appears to be due, in part, to deficits in dopamine, serotonin and norepinephrine, all of which are increased by antidepressants. Allied with these reasons, some patients interested in pharmacologic treatment prefer not to use alternative sources of nicotine when quitting smoking.

A systematic review found there was evidence that two antidepressants, bupropion and nortriptyline, can aid smoking cessation (Hughes et al, 2001). The reviewers concluded that it was not clear whether these effects are specific for individual drugs, or a class effect. One study has found that bupropion was more effective than nicotine patch (Jorenby et al, 1999).

Bupropion appears to work equally well in patients with and without a past history of depression, suggesting that its efficacy is not due to its antidepressant effect. Although adverse events are mild, they are also relatively common (Editorial Board, 2001). For example, in clinical trials 40% of patients complained of insomnia. Other complaints included altered concentration, anxiety and dizziness. Some patients will experience nausea and a dry mouth. Severe allergic reactions have also been reported. In the comparative study (Jorenby et al, 1999), approximately 12% of the people taking bupropion stopped treatment because of its adverse effects. It has been recommended that bupropion not be used for smokers with a history of seizures, anorexia, heavy alcohol use or head trauma (Hughes et al, 1999). The suggested dosage of the slow-release preparation of bupropion is 300mg/d for 7 to 12 weeks (Hughes et al, 1999).

Zyban (bupropion) was licensed in the UK in June 2000 and by May 2001 approximately 419,000 people had been prescribed it. During this period 37 people have died after taking the drug, and there have been 5,352 adverse reactions reported (BBC News Online, 2001).

The Committee on Safety of Medicines (CSM) has noted that about 2% of adverse reports for all medicines are associated with a fatal outcome, but with Zyban the proportion of reports that are fatal is less than 1%. Nonetheless, in an effort to strengthen safeguards further, the CSM has decided that rules on prescribing should be altered to stop the dosage being increased, from the initial dose of one tablet per day, till day seven on the drug is reached. The CSM has also recommended that warnings to doctors related to risk factors for seizures should be strengthened. A British coroner has also called for the manufacturer to improve warnings about mixing the drug with other medications (BBC News Online, 2001).

Bupropion's most appropriate place in the therapeutic armamentarium requires further study and consideration (Silagy et al, 2001).

Recommended Steps in a Medical Intervention

To summarize, most individuals go through several stages of change in their behaviour before they stop smoking: contemplating change, preparing for it, making the change,

and then trying to maintain the change (Prochaska & Di Clemente, 1983). This process is common to any other behavioural issues in medicine, particularly those in the health promotion field. Doctors can assist and encourage patients to move through these different stages (Goldberg et al., 1994). Some smokers may stop smoking as a result of this assistance and encouragement, while others may benefit from a referral to a formal smoking intervention programme or simply from continued surveillance and contact with the doctor's office (Ockene, 1987).

However, it is known that a structured behavioural approach that assists smokers to quit is more effective than simple advice with or without information about risks (Walsh & Redman, 1993). What follows below is a description of steps, which doctors can follow during a single consultation. These steps are largely based on US clinical practice guidelines (The Agency for Health Care Policy and Research, 1996). If the doctor's time and patient's motivation permits, the approach can be enhanced by arranging follow-up contacts. The recommended steps (the 5As) -- *Address, Assess, Advise, Assist*, and *Arrange* -- should not be viewed as a prescriptive formula for doctors, but as a basic strategy which can be modified where the clinical circumstances require it. The 5As represent a low cost intervention suitable for incorporation into the routine practice of health care providers in developing and developed nations. It should also be stressed that, as with any intervention designed to modify health behaviour, it is likely to be more effective if tailored to the particular patient's health beliefs and readiness to change.

In addition to direct intervention with patients, there are indirect methods of promoting the stop smoking message. These are outlined in Appendix 5.

1. Address the topic of smoking and tobacco use

Simply addressing the topic of smoking is a crucial first step in a medical consultation. Putting smoking on the agenda sends a clear message to the patient that smoking is an important issue. This may be especially important in some developing countries where many people may be unaware of the basic information regarding health and tobacco. Lack of risk awareness may be compounded by the relatively unfettered promotional activities of the tobacco industry (Samet & Yoon, 2001). Introducing the smoking topic can legitimise and initiate a structured intervention tailored to the patient's needs. In this way, the 5A's can become part of a health professional's routine health care practice.

Initially, patients can be asked whether they would mind being asked a few questions about their social habits such as drinking and smoking. Patients with tobacco-related complaints should be told that their problem is related to tobacco use and they should consider quitting. With patients who do not have tobacco-related complaints the subject of tobacco usage will have to be addressed in a general way. At this early stage, the health provider might make the point that, after basic needs, such as appropriate food, clothing, shelter and employment, and freedom from infectious diseases are satisfied, smoking cessation is probably the most important step that can be taken to protect health.

2. Assess smoking status

Tobacco intake should be assessed routinely as part of a regular general procedure. Every patient who is high school age or older should be asked: *"Are you a smoker?"* and, if so *"How much do you usually smoke?"*
All patients should be asked, not just those with smoking-related symptoms. Patients who claim to have quit recently should be asked if they still smoke occasionally, since deception rates appear to be higher in this group (Nagle, 1996). The smoking status of patients should be clearly recorded in the medical record. Smokers should also be asked about how long they have been smoking and about their experience with any previous attempts to stop. Non-smokers, especially former smokers, should be praised for not smoking.

3. Advise the patient to quit smoking and determine willingness

Check if the patient is contemplating stopping and advise him/her accordingly

"Have you thought about stopping smoking?"

If the patient is not interested in stopping

- Encourage him/her to consider stopping, pointing out that the patient's current illness or health problems could be related to smoking. Strategies to motivate the patient should focus on health concerns tailored to the individual patient and on the positive benefits of stopping. Offer some personalized reasons for quitting, as in Table 7.
- Show concern: e.g. *"As a doctor, I'm concerned about your smoking, it would be much better for you if you stopped"*.
- Ask the patient what s/he considers to be the risks of smoking and benefits of quitting. Reinforce appropriate beliefs and correct inappropriate beliefs. Analogies about the effects of nicotine, tar and those of carbon monoxide may help to explain the main risks. In particular, counter the tobacco industry's claims that "low tar" cigarettes are safer than regular cigarettes, if this is an issue for the patient (Bates et al, 1999). Table 8 gives some common excuses patients have for not giving up and some appropriate responses for the doctor.
- Explain the effects of passive smoking and appeal to the patients' sense of responsibility.
- Advise the patient that there is help available if s/he is ready later. Mention agencies for referral.
- Offer literature and film/videos on the risks of smoking, if materials are available to you.

Table 7

Personalised reasons for stopping smoking

Teenagers	**Smokers with a family history of smoking**
	Increased risk of cancer or heart disease
Bad breath	
Cost	**Asymptomatic adults**
Cough	
Respiratory infections	Heart disease
Stained teeth, fingers	Lung cancer
Sore throats	Emphysema
Effects on sports	Shorter life span
Life controlled by cigarettes	Cost
Hair and clothes smell	Quality of later life
	Wrinkles
Pregnant women	Inconvenience
	Bad breath
Miscarriage	Socially unacceptable
Low birth-weight infant	Life insurance discounts
Foetal death	

Table 7

Personalised reasons for stopping smoking (continued)

Parents	**Symptomatic adults**
More respiratory infections in children of smokers	Respiratory infections, cough
Role model for child	Dyspnoea
Less energy	Claudication
	Oesophagitis
New smokers	Sore throats
	Ulcers
Easier to stop now	Osteoporosis
	Gum disease
Long-term smokers	
	All smokers
Cancer	
Abnormal Pap smears	Cost
Heart disease	Ability to exercise
Less likely to live to enjoy retirement, grandchildren	Sense of well-being
	Health
	Social restrictions

Modified from Husten & Manley, 1990.

Table 8

Common excuses for not quitting

Excuse:	"My father lived till he was 85 and he smoked".
Answer:	"The fact remains 2 out of 5 smokers die early because of smoking".
Excuse:	"All the damage is already done".
Answer:	"There are immediate benefits from the day you quit".
Excuse:	"A lot of doctors smoke".
Answer:	"Very few doctors smoke and many more have given up".
Excuse:	"What about air pollution?"
Answer:	"You would have to put your mouth over a car exhaust to exceed the carbon monoxide you get from smoking".

Table 8

Common excuses for not quitting (continued)

Excuse:	"I've switched to a low tar cigarette".
Answer:	"The health claims about low tar cigarettes are very misleading. Without thinking, people switching to low tar cigarettes tend to inhale more deeply and more often, and put the filter further into their mouth. Low tar cigarettes have no effect on heart disease in smokers and any tiny effect on lung cancer rates is probably offset by increases in other cancers".
Excuse:	"I smoked in my last pregnancy and my baby was a normal weight".
Answer:	"Each pregnancy is different. It's like gambling with your baby's health".

- Tell the patient that you are making a note in the medical record, e.g. *"I will just make a note so we can discuss your smoking again in the future. Please give serious thought to stopping. This is the most important decision you could make to improve your health now and in the future"*.

If the patient is contemplating stopping but is not ready to quit

- Reassure the patient and make it clear that you understand smoking is hard to stop.
- Discuss concerns about quitting, providing further health information if the patient is interested. Some strategies are given in Table 9.
- Encourage the patient to take intermediate action by tapering

down the number of cigarettes smoked per day. Emphasize, however, that this should only be viewed as a short intermediate stage on the way to eventual abstinence. Smokers who attempt to limit their intake over an extended period seem to change their smoking behaviour in an effort to maintain their usual nicotine intake. Moreover, as the number of cigarettes is reduced those remaining can become particularly reinforcing:

"Cutting down the number of cigarettes you smoke is useful as a short-term measure. However, experience shows patients rarely taper all the way to zero. Your cigarette intake usually creeps back up if you don't go 'cold turkey' at some point."

- Provide self-help material which deals with smokers who are hesitant to quit.

4. Assist, if the patient indicates s/he is ready to attempt quitting or has already taken action to quit

- Encourage and reinforce the decision to quit:
  E.g. *"That's possibly the best thing you could ever do, for your health now and in the future"*.
- Negotiate a target date for stopping if the patient is still smoking and write this in the medical record. Patients who set a definite target date are most likely to make a serious attempt (Cummings et al, 1986). The date should be soon, and for many patients, there is no time like the day of their medical consultation. Some patients may wish to choose another time (preferably within 7 days), which they find more suitable.
- Stress the importance of going 'cold turkey'. As already discussed, progressive reduction usually does not, on its own, lead to abstinence.
- Deal with common problems anticipated by the patients, e.g. withdrawal symptoms, weight gain, stress, social pressure and relapse. Strategies for dealing with common problems are given in Table 9.
- Encourage the patient to give suggestions from their own experience to help them stay off smoking. Past attempts can be reinterpreted as a practice for successfully stopping. A list of stopping tips is given in Table 10.
- Teach behavioural skills, e.g. alternative behaviour or relaxation exercises.
- Prescribe NRT or bupropion if appropriate (see pages 14-16). Motivated, but more addicted, patients may benefit, however NRT with clear usage instructions needs to be used in combination with advice to stop. Patient instructions for NRT are outlined in Table 11.
- Provide a rationale for NRT:
  E.g. *"Nicotine replacement therapy is not a magic cure. However, it will help you to cope with the withdrawal symptoms and cravings associated with stopping and give you time to work on factors such as handling stress or boredom."*
- Provide self-help materials to supplement your advice.

5. Arrange follow-up

Review the patient's progress and provide appropriate encouragement and reinforcement. Relapse prevention, for example discussing how the patient will deal with cues to smoke, is an important component of any behaviour change programme. For example, if the patient always has a cigarette with a cup of coffee, or after a meal, he/she should be encouraged to change this routine to avoid this set of cues to smoke. Reassure patients who have relapsed, analyse what went wrong, and get them to try stopping again. If NRT or bupropion have been prescribed, follow-up contacts also enable dosing, encourage compliance and allow duration of use to be monitored.

Figure 2 presents a flowchart, which summarizes a smoking cessation strategy suitable for use in primary care settings.

Table 9

Strategies for dealing with common problems

Problem 1 – Withdrawal Symptoms

Side-effects may be experienced when quitting smoking. These generally appear within 24 hours of quitting, peak in about three days and decline steadily over three weeks or so. It may take up to three months to feel comfortable with not smoking.

Physical and psychological symptoms may include:

- Dry mouth, sore throat, gums or tongue

(coping: drink water, fruit juice, chew gum)

- Headache, tight bands forehead, muscular spasms, leg spasms, leg cramps

(coping: take a warm bath or shower, try relaxation or meditation)

- Irritability, tenseness, nervousness, reduced attention span, headache, tachycardia

(coping: take a walk, take a bath or shower, try relaxation or meditation)

- Increased appetite

(coping: drink water or low-calorie liquids, eat low fat, low-calorie snacks)

- Irregularity in bowel movements

(coping: add roughage to the diet, e.g. raw fruits and vegetables, drink water)

- Insomnia

(coping: don't drink caffeinated beverages, relaxation, meditation)

- Hypersomnia

(coping: take a nap, relax)

- Increase in cough – normal clearance mechanism

(coping: sip warm herbal tea, take cough drops)

Reassurance about the temporary nature of withdrawal symptoms should be given. Only the urge to smoke and increased appetite may persist long-term (US Department of Health and Human Services, 1990). NRT should be recommended to patients who are very worried about withdrawal.

Problem 2 – Weight Gain

Smoking appears to lower the efficiency of caloric storage and/or to increase metabolic rate. Although four-fifths of smokers who quit gain weight after cessation, the average weight gain is only 2.3 kg.

- Stress that the health benefits of quitting smoking far exceed the risks of the average weight gain.
- Suggest moderate exercise, drinking water, avoiding extra calories, sugarless chewing gum and fresh fruit snacks.
- Suggest a two-step approach if the patient finds it too difficult to follow the above advice and quit using tobacco simultaneously: First, the patient should quit tobacco while allowing the weight to accumulate; Second, when the habit is gone for good, he/she should focus on losing weight.

Table 9

Strategies for dealing with common problems (continued)

Problem 3 – Stress

Many patients use tobacco to cope with stress.

- Recommend simple relaxation exercises, e.g. “Take a slow, deep breath and, as you breathe out, say to yourself “relax”. Do this 10 times”.
- Give a stress pamphlet or refer to a relaxation class. See the Module Preparation for Invasive Procedures.

Problem 4 – Social Pressure

- Handling offers of cigarettes from other smokers may present a problem. The patient should rehearse saying “no” firmly.
- Alcohol drinking situations might be avoided for a short time if they present a high risk of relapse.

Problem 5 – Relapse Prevention

- Patients who are concerned about unsuccessful past attempts to stop should be reassured that most smokers achieve long-term cessation only after several attempts. Having a slip is perfectly normal and should not stop patients from continuing with their current efforts to stop. Past attempts should be viewed as valuable practice.
- Remind the patients about their reason(s) for quitting in the first place.
- Discuss with the patients ways they might cope with situations that have been previously related to relapse e.g. the Five Ds. Refer to Table 10.

Table 10

Behavioural tips to quit smoking

Tailor these hints to the individual patient. Suggestions include:

- **The Five Ds.** Patients may find it useful to remember and practise the Five Ds When confronted with the urge to smoke:
  - **D**elay, even for a short while
  - **D**rink water
  - **D**eep breathing
  - **D**o something different and
  - **D**iscuss the craving with another person
- write out a list of reasons to quit and display it prominently e.g. on the fridge
- get rid of all tobacco products, ashtrays, lighters, matches, etc. from all areas which you inhabit.
- Clean all clothes in order to remove cigarette smell
- Enlist the support of non-smoking friends, relatives, workmates
- change habits associated with smoking e.g. instead of smoking after meals, chew on a toothpick or change rooms
- change the environmental cues, e.g. the telephone often causes a reflex action to smoke, move the telephone to another place to change the cue.
- keep hands busy e.g. knitting, gardening, drawing, origami
- change the daily routine in order to minimize association of tobacco with certain activities or times of the day
- sit in non-smoking areas
- escape situations if a potential relapse cannot be avoided e.g. go to bathroom
- deep breathe
- positive self-talk
- try to avoid stressful situations in the immediate period after stopping
- substitute the urge to smoke with another activity eg going for a walk
- try daily exercise, eg walking to keep self occupied, to relieve stress and help maintain positive frame of mind and to become fit
- set aside the money normally spent on cigarettes to buy something as a reward
- do not drink alcoholic beverages because these are associated with relapse
- avoid, even temporarily, social situations normally associated with smoking. Practise saying, “No thank you, I don’t smoke”
- ask other smokers not to give cigarettes, offer to buy cigarettes or smoke in the patient’s presence
- think positive and remember your reasons for quitting in the first place
- view quitting as a day-at-a-time process rather than an immediate lifelong commitment

Table 11

Patient instructions for nicotine replacement therapy use

General

- Nicotine replacement therapy is not a magic cure.
- Nicotine replacement therapy helps you to cope with withdrawal symptoms but they do not deliver as much nicotine as cigarettes.
- You still need a lot of commitment to stop smoking permanently.
- After 1-2 months you can commence to taper off the medication.
- You must not smoke even one puff while using the medication.

Nicotine gum

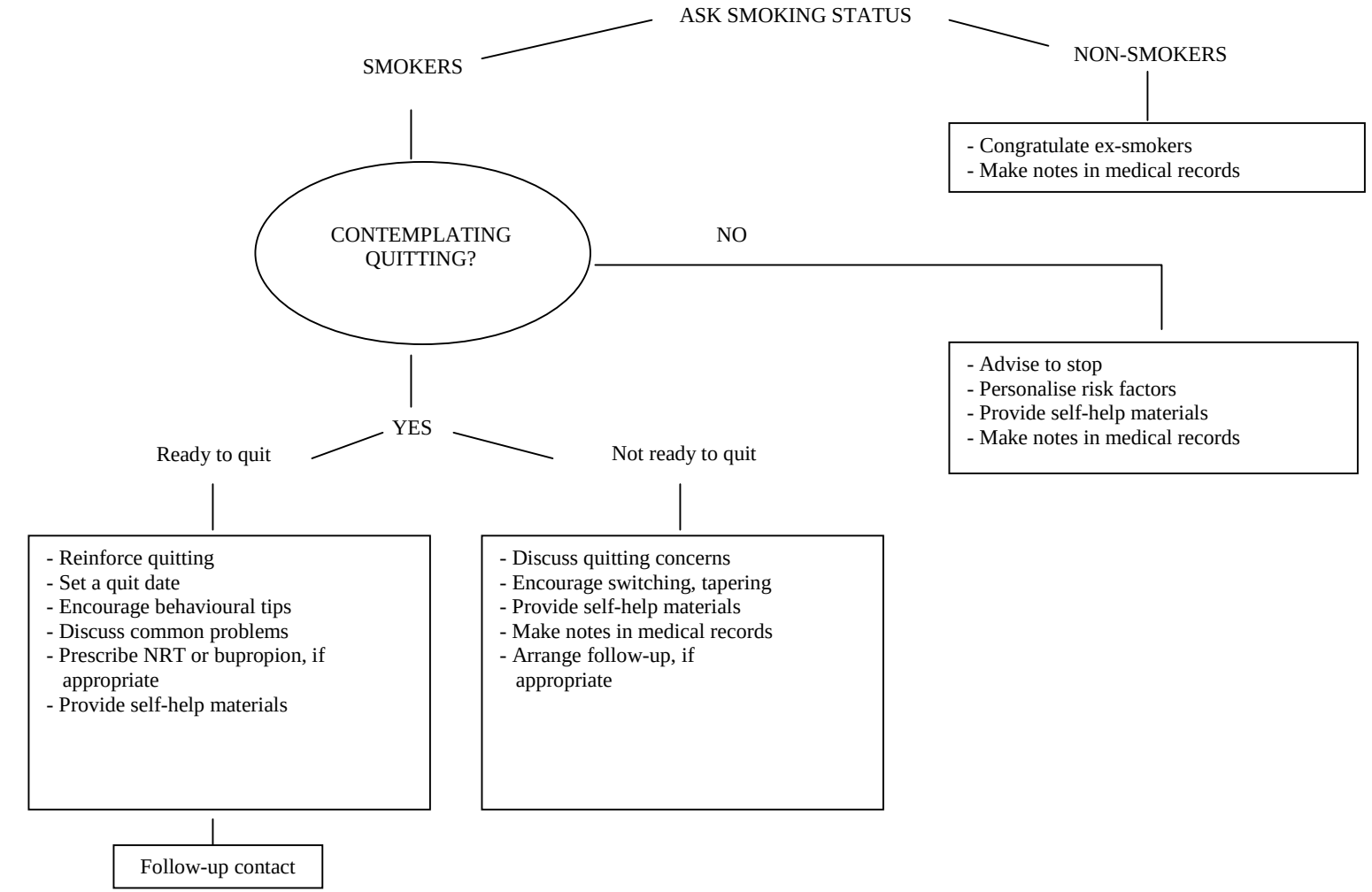
1. Chew x* dose per waking hour.
2. Do not use like chewing gum. Compress the gum a few times with your teeth then let it rest in the mouth. Repeat the cycle every minute or so.
3. Do not chew too quickly.
4. Discard the gum after about 30 minutes.
5. Do not use the gum when drinking.
6. You may take up to a week to get used to the gum's flavour.

Transdermal nicotine

1. Choose a hairless site that will be comfortable with typical clothing.
2. Change the site each day to reduce the risk of skin irritation.
3. Avoid sites where skin irritation has occurred.

* Dose to be decided after assessment, typically one dose per waking hour.

Figure 2. Smoking Cessation Strategy Flowchart



Motivational intervention

The final aspect of intervention, which is useful to understand and to be able to apply, is the concept of "motivational interviewing". This strategy is based on the idea that most patients do not come to you prepared to change their habits, although you might feel better if they do. Because of this, even if you try to give them advice about what they should and should not do, you may have limited success in getting them to change. In fact you may actually trigger resistance on their part with the advice-giving approach.

Statements of affirmation, encouragement and diplomacy form a large part of the interview. Encourage your patients to express and explore their thoughts both for and against their behaviour and change. Ask them how they feel about your bringing up issues, discussing these issues, advising or imparting information to them, before you try to do any of these. When you encounter resistance from a patient, you should immediately stop pushing and take a step backward. If you anger your patients, they will be much less receptive to your suggestions, and you become counterproductive. During this process you try to bring them closer to changing step by step. It may take multiple visits to get your patient to change. Knowing this in advance may make it easier for you to manage.

Techniques to aid patient recall of information

People remember more when they derive issues themselves rather than being told, e.g. patients should be asked what they perceive as the risks for themselves in continuing smoking and also what they perceive to be the benefits of quitting. People will mention what is relevant for them and will be more likely to remember.

There are other strategies which a doctor can use to ensure a patient understands and remembers information. These strategies should be used in every consultation:

- Make information simple, clear and specific.
- Avoid technical terms, or give additional information in layperson's terms.
- Speak slowly and clearly. Be aware that many older people may have hearing impairment.
- Present your advice in set categories. Go through each set in turn.
- Repeat important pieces of information.
- Stress the importance of your advice.
- Use simple diagrams or models.
- Write down the most important instructions - or have the patient write them down.
- Provide self-help materials for the patient to take away.

At the end of the consultation:

- Summarize the information.
- Check the patient's understanding.
- Make sure there are no outstanding questions.

(Professional Education and Training Committee & Postgraduate Medical Council of NSW, 1992).

PART 2

Guidelines for medical educators on how to teach cognitive-behavioural interventions to help patients stop smoking

Smoking has long been under-emphasized as a health issue in medical education (Ginzel, 1985). Doctors must be offered adequate training in preventive counselling skills to expand their role in smoking intervention (Ockene, 1987). To be effective in dealing with a problem as complex and ubiquitous as cigarette smoking, doctors must become familiar with the social pressures associated with smoking and must acquire the motivation, attitude and skills to intervene (Ginzel, 1985).

Educating doctors about the importance of smoking as a cause of disease is the first step. However, ignorance about techniques to stop smoking is a more profound problem (Fowler, 1993). Training doctors in such techniques can increase the likelihood of their advising patients to stop smoking (Kottke et al., 1989). However, medical education about smoking should not be confined to a single lecture or workshop but should be integrated throughout the medical curriculum and practicums. In the first years of the medical course, the focus could be mainly on public health and clinico-pathological issues with the emphasis in final years shifting to how doctors can help smokers to stop smoking.

In addition to the material contained in this module, a recommended handbook for teaching medical students about tobacco is also available (Richmond & Songmei, 1998). Purchase details are provided at the end of the References list.

Purpose

This educational programme describes the methods whereby medical students can be taught the skills necessary for effective interventions to help patients stop smoking.

The materials

- A written learning module summarizing the health risks of smoking and describing the principles and methods of cognitive-behavioural and pharmacological interventions for stopping smoking. The first two sections of this learning module can be used for this requirement.
- It is suggested that each medical school develops a videotape in which students can see a skilled doctor counselling a smoking patient about stopping smoking. This should provide a model for the students to base their own approach. If the videotape production is not a feasible option, an audio-tape demonstration would provide another, albeit less effective, educational resource. Alternatively, an English language videotape of a medical smoking cessation intervention can be obtained from the authors of this module.
- A set of papers describing scientific work and various programmes in smoking cessation should be available to students. This module's reference list contains relevant material.
- Each school should develop a series of case scenarios which can be used as the basis for student practice. Ideally, these should feature male and female patients in the various medical settings in which smokers may be encountered, for example community and hospital primary care clinics,

obstetric practice, hospital surgical and medical wards. It would be valuable to include patients of various ages with and without smoking-related diseases. Appendix 1 contains two sample case scenarios with guidelines for the patient and the doctor.

- A rating scale which can be used to assess student performance with regard to the practice of smoking cessation interventions.
- Appendix 2 contains a rating scale which could be used to score both smoking-specific and general interactional skills of students.
- Appendix 4 presents five relatively detailed teaching cases which demonstrate how the 5A's sequence of *Address, Assess, Advise, Assist and Arrange* can be applied in different clinical situations.

The process

- The students should read the learning module made available.
- The students should see one or two videotaped examples of a smoking cessation intervention conducted by a doctor; alternatively an experienced doctor can give a demonstration, using a 'simulated patient.' After the demonstration, sufficient time should be allotted for students to discuss the interaction(s) they have witnessed.
- A course lecturer should go through the learning module with the students to ensure they understand the process. Emphasis should be on the steps of the intervention component, unless students are uncertain too about the risks of smoking. A set of overhead transparencies or slides should be developed for use in this session to illustrate the recommended steps.
- Students should practise the skills required for an effective intervention. There are a number of ways this can proceed. If time permits, students can concentrate on one step at a time, for example educating about the risks, countering self-exemptions, and negotiating a target date for stopping. The complexities of correctly prescribing nicotine replacement appropriate preliminary assessment warrant a discrete focus. Alternatively, a whole intervention can be role-played in one sequence using case scenarios provided in their module. Up to 20 minutes should be allotted for this purpose. Although an experienced clinician may be able to conduct a smoking cessation interview more rapidly, a longer time should be allowed for students practising the full repertoire of skills for the first time.
- Where videotape facilities are accessible, each student can make a videotape in which s/he role-plays the part of the doctor. Segments of each student's videotape can then be viewed in a tutorial involving 4-8 students led by a tutor and appropriate feedback given. 'Simulated patients' may be used instead of students to play the part of the patient. When no videotape facilities are readily accessible, students can be divided into small groups of 3-5 students with each student having the opportunity to play the doctor and patient while the other(s) observe and rate the 'performance'. The tutor and students should strive to give constructive feedback during these sessions.
- A barrier assessment should be included where students must achieve a satisfactory performance in smoking cessation interventions based on an objective rating instrument - see Appendix 2. Medical students are more likely to take seriously areas of learning that are rigorously assessed.

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APPENDIX 1

Sample case scenarios

Hospital casualty setting

Patient role

You are James Grayson, a 24-year-old clerk who attends the local hospital casualty department to have a cut hand stitched. You cut your hand on a soft drink can at lunchtime. While the doctor is stitching you s/he asks about smoking (you smoke 15 a day) and your family history (your father who is only 53 years old had a coronary by-pass recently).

Doctor role

You are an intern on duty in a hospital casualty department. You routinely ask your non-emergency patients about smoking. James Grayson attends for stitching of a minor finger cut caused by a soft drink can. During the suturing procedure, you ask about James' smoking habits and family history. Casualty is not too busy, you have about 10-20 minutes to spare. You feel you have established empathy with the patient. You decide to give James advice about the importance of stopping smoking and, if he is interested in stopping, suggest ways to help him stop.

General practice setting

Patient role

Your name is Jane Mason. You are a 35-year-old teacher, married with two school-aged children. You have come to the doctor with an upper respiratory tract infection, the third this year. You are a smoker and have been since 16. You have heard about the associations between lung cancer and smoking, but are not sure if it is true, because you have heard that no-one has ever proved it conclusively. You have never heard of emphysema. Your father, a smoker, had a stroke when he was 65, but you have never associated this with smoking. You have only tried once to give up smoking - that was when you were last pregnant six years ago. That attempt failed and you went back to smoking after the baby was born. You also have put on some weight recently and are worried that stopping smoking will cause you to gain more.

Doctor role

You are Jane Mason's GP and have known her for 5 years. You have not previously discussed smoking cessation with Jane but decide to do so on this occasion. You must explain the relationship between Jane's illness and smoking, outline the other smoking related diseases and, if she expresses interest in quitting, advise her about recommended strategies to help her stop (Walsh et al., 1993).

APPENDIX 2

Rating scale for medical student performance

BEHAVIOURAL CHANGE - SMOKING CESSATION INTERVENTION

STUDENT NAME: _____
ASSESSOR: _____
PATIENT: _____ DATE:_____

Instructions Each student should be assessed on every section except nicotine replacement therapy (NRT) items D2-D8, when NRT is not indicated for the patient.

Key	
NS	*Not satisfactory*; student did not cover this item adequately
1	*Adequate* student performance; includes situations where the patient volunteered required information without student prompting
2	*Good* student performance
3	*Excellent* student performance
S	*Satisfactory* student performance; grades 1, 2 or 3 above
NA	*Not applicable*; relates to situations where the item did not apply to that particular patient for example, item B5 over would be NA if the patient did not reveal any self-exemptions.
MLC	*Minimal level of competence;* for example, in section C Behavioural Intervention (MLC=6S) the student should achieve a satisfactory grade (1,2 or 3) in 6 of 7 items to satisfy the MLC requirements. The MLC is reduced by one for each item scored as NA. It is anticipated that to achieve an overall pass the student should satisfy the MLC requirement for every section A-G.

Opening the Consultation Appropriately

A1	Opened the consultation appropriately	Yes/no

Patient Assessment and Education

B1	Assessed smoking habits - cigarette intake, previous quit attempts or NRT use.	NS	1	2	3	NA
B2	Elicited patient's beliefs about the health risks involved with smoking	NS	1	2	3	NA
B3	Confirmed/reinforced patient's understanding and informed of major risks not mentioned	NS	1	2	3	NA
B4	Determined self-exemptions/barriers to quitting	NS	1	2	3	NA
B5	Countered self-exemptions where necessary	NS	1	2	3	NA
B6	Informed patient of benefits of smoking cessation	NS	1	2	3	NA
B7	Tailored information on the basis of personal vulnerability, patient's symptoms	NS	1	2	3	NA

(MLC = 5S)

Behavioural Intervention

C1	Motivated the smoker to attempt to quit, specifically tailored the motivation to the age and background of the patient	NS	1	2	3	NA
C2	Asked for a definite quit date	NS	1	2	3	NA
C3	Discussed behavioural tips tailored to the patient	NS	1	2	3	NA
C4	Counselled about common problems and related strategies relevant to patient, e.g. withdrawal symptoms, weight gain and stress	NS	1	2	3	NA
C5	Discussed social supports available to patient	NS	1	2	3	NA
C6	Gave information/pamphlets related to patient's requirements	NS	1	2	3	NA
C7	Expressed confidence in patient's ability to quit	NS	1	2	3	NA

(MLC = 6S)

Prescription of nicotine replacement therapy (NRT)

D1	Assessed patient motivation and dependence level for NRT use	NS	1	2	3	NA
D2	Explained rationale for NRT	NS	1	2	3	NA
D3	Discussed types of NRT and negotiated NRT suitable for patient	NS	1	2	3	NA
D4	Outlined side-effects (common and severe) of NRT	NS	1	2	3	NA
D5	Stressed need for tobacco abstinence while using NRT	NS	1	2	3	NA
D6	Confirmed patient's continued desire to use NRT	NS	1	2	3	NA
D7	Discussed dose and correct method of NRT use	NS	1	2	3	NA
D8	Informed of need to taper off NRT after 1-2 months	NS	1	2	3	NA

(MLC = 6S)

Compliance aiding strategies

Characteristics of the regime

E1	Minimized complexity of regime	NS	1	2	3	NA
E2	Used concrete, specific advice	NS	1	2	3	NA

Explored difficulties in cessation

E3	Asked the patient whether they could see any difficulties in stopping smoking	NS	1	2	3	NA

Strategies for improving recall

E4	Used explicit categorisation as a method of conveying information (i.e. gathered all information together when presenting)	NS	1	2	3	NA
E5	Used repetition to reinforce important units of information	NS	1	2	3	NA
E6	Used other methods conveying information i.e. Diagrams, pointing to own or patient's body to indicate parts of	NS	1	2	3	NA

	body affected, smoking cessation pamphlets					
E7	Used concrete, specific advice	NS	1	2	3	NA
(MLC = 5S)						

Closing the consultation

F1	Student stated that he/she was about to summarise			Yes/no		
F2	Student checked with patient as to whether the summary was accurately understood			Yes/no		
F3	Student made specific arrangements for follow-up			Yes/no		
F4	Patient asked if anything further they wish to discuss or ask			Yes/no		
(MLC = 3S)						

Overall Interactional Skills

Empathy: student demonstrated the ability to be sensitive to the patient's feelings and to communicate this understanding:

G1	Accurately	NS	1	2	3	NA
G2	Frequently	NS	1	2	3	NA
Emotionally Laden Material						
G3	The student did not either avoid or handle insensitively	NS	1	2	3	NA

Warmth

G4	The student showed by sitting attentively, facilitating the patient's responses, and other verbal and non-verbal behaviour, that he/she has regard and concern for the patient	NS	1	2	3	NA

Language

G5	Student communicated in clear tone of voice	NS	1	2	3	NA
G6	Student clarified patient's use of technical language eg "Bronchitis"	NS	1	2	3	NA
G7	Student avoided technical language or explained its use	NS	1	2	3	NA

Question style

G8	Student used single brief questions rather than multiple questions	NS	1	2	3	NA
G9	Student encouraged precision in patient's response by following up vague responses	NS	1	2	3	NA

Control of Interview

G10	Student maintained the structure of the interview, making it clear where he/she wished to go with the interview and kept it going there	NS	1	2	3	NA

Non-Verbal Interaction

G11	The student demonstrated readiness to listen to the patient by appropriately establishing eye contact, facing patient, etc	NS	1	2	3	NA
G12	Student was self-assured and did not show confusion or embarrassment	NS	1	2	3	NA

(MLC = 10S)

(Walsh et al., 1993)

Appendix 3

The consequences of tobacco use

The negative aspects of smoking are numerous, ranging from practical and social concerns to extreme health risks. Let us use some examples to demonstrate.

Immediate effects

Maria is a 15-year-old student who has just begun smoking. Her best friend and classmate, Tina, an asthmatic, is having difficulty breathing when she is around Maria, as Maria's clothing, breath, hair, home, car etc. all stink of smoke. Tina is very turned off by all this and tells Maria, but Maria refuses to listen, because she thinks smoking makes her look cool.

Tina is not the only person who is experiencing the effects of Maria's second hand smoke. Unfortunately, Maria's family is also experiencing it. Watching Maria smoke has led her 13-year-old brother to consider taking up the habit himself. Furthermore Maria used to be an excellent student, but now she is having difficulty paying attention in school. This is because she is very tired from the part time job she has had to take on to earn money to buy cigarettes.

Short-term effects

Mohammed, aged 18, began smoking when he was 16, taking after his father and older brother who also started when they were about that age. Mohammed smokes about one and a half packs a day. Lately Mohammed's coach has been telling him that his performance on the cricket team has diminished. If Mohammed doesn't do something to bring his performance back up, he will have to be replaced.

This is a direct effect of smoking on his lungs. Carbon monoxide (CO), produced by burning the cigarette, is inhaled into his lungs and absorbed into the blood. Haemoglobin, the oxygen carrier in blood, has a higher affinity for CO than for oxygen, so it preferentially binds the CO resulting in lower oxygen carrying capacity of the blood and hence to the working tissues like the muscles.

Later effects

Sherice, a 36-year-old housewife, has been smoking about 40 cigarettes a day for about 10 years. She has been seeing the tobacco's effects. Every day while brushing she struggles to remove the unattractive tobacco stains from her teeth which used to be very white and beautiful. She finds herself getting cold-like symptoms often. It is causing her to be less productive and take days off from work to get better. Furthermore her 3 year old daughter, has been suffering numerous respiratory problems and ear infections because of her exposure to passive smoking from her mom's cigarettes.

Upon consulting her family doctor, Sherice is told that she is showing early signs of bronchitis as a result of her smoking. Her doctor urges her to quit smoking, warning her of the other conditions she is at risk of developing, such as emphysema, ulcers, lung cancer and cancer of the lip, mouth and throat as well as cancer of the oesophagus, pancreas, bladder and kidney (U.S. Dept. of Health and Human Services, 1989). Sherice is also advised about the increased chances of her having a stroke or heart attack later in life. Sherice is told that if she quits smoking before she develops a smoking-associated condition like bronchitis, in five years her risk of developing tobacco-related diseases may become similar to that of a lifetime non-smoker.

Long-term effects

Boris is a 60-year-old farmer who has just been diagnosed with lip cancer. He has had a previous tumour in his colon. For some time he has been noticing that his sense of taste has decreased, and last year he suffered a heart attack. Furthermore, he has developed a chronic cough. The doctor informs Boris that all his symptoms are related to his smoking

cigars and pipes for the last 40 years and tells Boris to quit. At first Boris doesn't understand why he is having so many problems from cigar and pipe smoking. He always thought the cigars and pipes were much less dangerous than cigarettes. When he mentions this, his physician tells him that studies have shown that mortality rates for cigar and pipe smoking were lower than cigarette smoking, but they are still higher than for non-smokers. But still, the risks exist and are high, as Boris has found out.

Boris is worried that after smoking for so long all the damage to his body is already done. He is quite surprised when he is told that there are many immediate health benefits by stopping smoking. In fact if he quits, even after having developed smoking-related diseases, he can expect a considerable reduction in the rate of deterioration of his peripheral vascular disease and a decrease in the risk of a further heart attack. Boris decides to break the habit of using cigars and pipes for the sake of his health. He lives until the age of 80.

Effects on pregnancy and parenting

Nina has been smoking about 25 cigarettes a day for the last 7 years. She has become pregnant with her first child. When she goes to her physician for an examination, she is urged again to quit smoking. She is warned that if she does not avoid smoking in the first 3-4 months of pregnancy, her chances of having a low birth weight or premature baby, a miscarriage, spontaneous abortion, stillbirth are high. Nina doesn't listen and continues to smoke, eventually giving birth to a normal weight baby girl.

During the next couple of years, Nina brings her daughter to the doctor often because of respiratory problems. Nina's doctor tells her that the little girl's problem are probably a result of breathing in Nina's second hand smoke. Nina is also informed that children of parents who smoke compared with the children of non-smoking parents have an increased frequency of chronic cough, bronchitis, middle ear effusion, other respiratory problems and hospitalizations. Parental smoking is also associated with sudden infant death syndrome. Nina doesn't stop smoking.

She goes back to her doctor during her next pregnancy and is again warned about the dangers of tobacco use on her unborn child. Nina tells her doctor that her last baby was normal, and she smoked. Her doctor tells her that each pregnancy is different. It's a gamble each time and she might not be so lucky this time. Nina is reminded that her first child is already experiencing the negative effects of Nina's smoke. Once again Nina does not listen and three months into her pregnancy she suffers a miscarriage.

Dangers to women's health

Yoko is a 37-year-old woman who goes to her doctor because she has stopped getting her menstrual cycles. She is worried because she has also been unable to get pregnant over the years. Her history shows that she has been smoking for the last 22 years. Her doctor tells her that if she doesn't begin to menstruate soon again, then she has most likely entered menopause. Yoko finds this hard to believe as she has not yet reached the age for menopause. The doctor tells her that women who smoke are at increased risk of premature menopause. In fact her inability to conceive could also be due to her tobacco use, as women who smoke have increased risk for impaired fertility. Yoko is advised to stop smoking not only because the effects of her tobacco use appear to be evident, but also because she is increasing her risk of developing cervical cancer by smoking. Yoko is very surprised by this information. She had not previously been aware that smoking had ill effects that were particular to women. She had only heard about the general effects on men and women.

Smokeless tobacco

Ratna is a 72-year-old woman who comes to her doctor because she has mouth pain. Just from looking at her the doctor can tell that she has been chewing pan masala and betel quid for many, many years. Her teeth have turned

dark and there are large spaces between teeth where they have rotted away. Her doctor diagnoses her as having mouth cancer and is not surprised to see this. Smokeless tobacco also poses serious health risks. Most notably, it elevates the risk of cancer of the oral cavity. In some countries, particularly those in the Indian subcontinent, chewing betel quid, another form of tobacco, is a widespread and common practice among women. As a result, in these areas, oral cancer occurs more prevalently than does breast cancer. The annual mortality from tobacco chewing in South Asia alone is over 50,000 deaths a year.

The benefits of tobacco cessation

Madelaine has successfully quit smoking cigarettes for 3 months now. Her doctor asks her how she is feeling. She replies saying that she feels great and that quitting was one of the best things she has ever done for herself. Her breath has improved, not to mention her clothes and home. She can run without getting immediately out of breath. Not only is she no longer worried about subjecting others to her second-hand smoke, but also she isn't fearful of quitting anymore. Food tastes better, and things in general are more fragrant. But best of all, she has been saving money, the money with which she used to buy cigarettes.

Appendix 4

Teaching cases

One effective way for you to learn how to intervene is by actually watching another person in action or seeing examples. So we have included several scenarios to demonstrate how to apply the information just given. It will be useful for you to read through these cases as we have included important information in them that is not mentioned elsewhere in this manual.

The scenarios illustrate possible ways of dealing with common issues, problems and questions that could come up when you are talking with your patients. However, you must keep in mind that these cases are only intended as a rough guide and to give you a flavour for how to go about it. Many different situations will come up during your practice that will require that you be creative and knowledgeable enough to come up with your own approach to elicit a favourable outcome. You may also find it helpful to practice intervention by role-playing with another person. Come up with some possible situations and then try acting it out.

Throughout the dialogues we have included messages in brackets. These are notations that refer back to the information about the stages of change and the 5 A's to help guide you through the intervention.

Case 1

Patient with smoking-related condition

Jin is a 32-year-old teacher who comes to you complaining of symptoms of emphysema. You know that he has been smoking cigarettes since he was 16 years old. You bring up the smoking issue.

You: "From your medical records and my examination of you it looks like you are developing emphysema. It is probably a result of your smoking. Perhaps we should discuss it? What do you think? " *[ADDRESS the smoking issue.]*

Jin: "What about my smoking?"

You: "Are you still smoking?" *[ASSESS the patient's smoking status]*

Jin: "Yes."

You: "I'm making a note of it in your chart. About how many cigarettes would you say you smoke each day?" [*You now begin to assess his stage of change]*

Jin: "I'm guessing about 40 a day."

You write this in his file.

You: "How do you feel about that?"

Jin: "I like it. It relaxes me and makes me feel good."

You: "Anything else?"

Jin: "No that is all."

You: "Do you have any concerns about what I said, in terms of, smoking causing your emphysema?"

Jin: "No, I'm not worried."

You: "Well I can see your pulse has risen, you are complaining of cough and shortness of breath. You are sure you don't have any questions?"

Jin: "No, you seem surprised."

You: "Actually I am a bit. Cigarette smoke has long been known to increase the risk of getting chronic obstructive diseases, like your emphysema, heart attacks, stroke, lung cancer and cancers of the mouth, throat, kidney, rectum and bladder. Its second hand effects are equally bad. Passive smoke also causes increased risk for these sorts of conditions. Because of this, thousands of people are quitting or have quit all over the world. Have you ever thought about quitting smoking yourself?"

Jin: "No, why should I?" [*He is clearly not interested in stopping.]*

[ADVISE. You need to focus more on getting him to consider the idea i.e. move him into the contemplation stage. Try targeting his medical condition.]

You: "Clearly it is your decision about what to do with your health. But I would like you just to consider the idea of quitting. But aside from the risks I just mentioned, your emphysema will grow worse if you don't. Would you like to know

exactly how cigarette smoking is giving you emphysema?"

Jin: "Tell me."

You: "Certainly. Do you know that carbon monoxide is produced during cigarette smoking?"

Jin: "No."

You: "OK. Carbon monoxide is a poisonous gas which you inhale with ever cigarette you smoke. But along with it, you also inhale other poisonous gases. All these gases cause you to cough and your airway tubes to become narrowed. If our bronchial tubes are narrowed, you will have more difficulty getting air into your lungs. Are you able to understand what I'm saying?"

Jin: "Yes."

You: "OK, with prolonged usage, these toxic gases also cause the hair cells in your airways which help stop dangerous particles from reaching your lungs to become paralysed and no longer work. These gases also cause the mucous membranes, which line your airways, to get thicker, so that you have difficulty getting in air as well. Eventually you end up with a lung disorder like emphysema. This process is happening right now inside of you. How do you feel about smoking now?"

Jin: "But, my father lived until he was 85 and he smoked all his life."

[This is the real reason why Jin won't be open to quitting. He believes that smoking isn't a problem and his father is proof.]

You: "I see. Well that's wonderful. It seems your father was one of the lucky 3 out of 5 smokers who does not die because of smoking."

Jin: "He used to smoke 5 packs a day and had a great life."

You: "I'm really happy for you. Since you brought him up, may I ask you some questions about your father?"

Jin: "What do you want to know?"

You: "Well, while he was alive, was he energetic and healthy or did he get colds or cold-like symptoms often and have to take time off from work because he wasn't feeling well?"

Jin: "Sure he got colds every couple of months. We all get sick and when you get sick, you cannot work. There's nothing shocking about that. And no, he wasn't what you call the energetic type. He preferred to watch sports rather than play them."

You: "I see. So your family was satisfied that he was in good health?"

Jin: "Yes, why"

You: "Well, I cannot say for sure because I never examined your father. But it's highly possible that his frequent colds, and yours too, could be due to his smoking. Part of your condition probably developed just from inhaling the unfiltered second hand from your father's cigarettes. Your father lived to be 85 years old. But it seems he and you may have suffered from at least some of the effects of his smoking, even if he did not develop the more serious conditions which smoking causes. What do you think?"

Jin: "I think you are wrong."

[He is not responding, even though you have tried a couple of tactics now. This is probably enough intervention for this time. It is best to stop before making your patient angry.]

You: "It is possible that I might be. I am happy to be wrong in these situations. Anyway, as I said, it is your decision whether or not to quit smoking. In my opinion it would be a wise thing to do for your health. Let's see how you are feeling at your next visit, and then we can talk about it again."

Discussion

It's difficult to move to the ASSIST stage with Jin, because he is not even considering the idea of quitting. In the next visit you should bring up the issue of quitting smoking again and see if he has moved on the contemplation stage. If so at that point you can move on and offer him your assistance.

This whole conversation would not take more than a few minutes. Yet, in those few minutes, you have imparted some very valuable information to your patient and at least placed the idea of quitting in his head. Regardless of whether or not he plans to stop, the next time you mention it, he will be more used to the idea and maybe you

can shift him to the stage where he is contemplating cessation. If you can't, then you will have to repeat these sorts of conversations and feed him more information until he does become ready to move to the next phase.

Case 2

Adolescent smoker

Anita is a teenager who visits you for her annual physical. You have never discussed smoking with her, but now that she has turned 15 you do.

You: "Hello Anita. Do you have any questions for me before we get started with your examination?"

Anita: "No."

You: "Alright. Well then there are a few questions I'd like to ask you about social habits if you don't mind?" *[ADDRESS]*

Anita: "No, go ahead."

You: "Have you ever tried using any tobacco containing products? Things like cigarettes, chewing tobacco?" *[ASSESS]*

Anita: "Yes, cigarettes. Why?"

You: "I make a note of all my patients who use these products so that I can discuss it with them."

Anita: "Oh."

You: "How long ago did you start smoking?"

Anita: "Two years ago."

You: "And roughly how many cigarettes do you smoke a day?"

Anita: "I don't smoke everyday. But when I do probably about one packet."

[You are writing all this down.]

You: "How do you feel about smoking?"

Anita: "It's cool."

You: "Anything else?"

Anita: "Nothing else. My friends and I do it because it's cool."

You: "May I ask you why you feel smoking is a 'cool' thing to do?"

Anita: "Well everyone does it. Watch the movies; everyone in America and Europe smokes."

[*This is a very common misconception. It is a perfect opportunity for you to address it.]*

You: "It's very interesting that you feel this way Anita, because many people in these places actually do not smoke. It's not quite the situation which you are imagining. Even though some of the actors and actresses do it now on the screen, the movies which contain a lot of smoking were made many years ago. Many of these countries have very strict laws which don't even allow smoking in any public areas, including restaurants and transportation vehicles. In fact, many smokers are trying to quit. Do you know why?"

Anita: "Why?"

You: "Because using tobacco is very dangerous to the health."

Anita: "How is it dangerous?"

*(**You have to focus on the negative effects of smoking and personalize them to your patient. Refer to Table 7 for examples of how to do this. In the case of an adolescent it is more difficult because, adolescents are unlikely to have symptoms. They are also unlikely to be receptive to the long-term effects of smoking since they are so young and far away from it. You need to focus on the more immediate and practical negatives of tobacco use.]*

You: "Well tobacco has been known to cause or at least been associated with many diseases which I am more than happy to discuss, but before I do. I would like to explore some of the more immediate benefits of quitting. Is that OK with you?"

Anita: "Ok."

You: "First off I'm sure you know that when you smoke, your breath along with your hair, clothes and any place where you are will smell of smoke."

Anita: "Yes, that is true. What else?"

You: "You'd save money by not buying the cigarettes!"

Anita: "OK, keep going."

You: "If you keep up the smoking, in a few years you will develop tar stains on your teeth which will be very difficult to remove. Your teeth are white now, but that may not last. It has also been suggested that smoking can cause you to get wrinkles early. "

Anita: "Wrinkles?"

You: "Yes, but that is not the worst that can happen. Now I'll tell you about the health risks with tobacco use. It can increase your chance of getting bronchitis, emphysema, lung and other cancers, heart disease which can lead to heart attacks or strokes. For women such as yourself, in particular, smoking also increases risk for cervical cancer, infertility and early menopause."

Anita: "Oh, I'm not worried. It won't happen to me. Besides I don't smoke that much."

[This response is not in the least surprising. Adolescents rarely think that any long-term consequences will affect them. For this reason, when dealing with patients in this age group, we do not recommend going into the long-term health dangers of smoking right away. Instead focus on the immediate unpleasant consequences of smoking and then mention the long-term effects.]

Anita: "If it's so bad for you, then why do you and so many doctors still do it? I mean you are supposed to be the authority on what's healthy and not aren't you?"

[Do not deny that you are a smoker. Be honest and explain.]

You: "I do smoke, and you are right, some others in the health care profession, do it also. However, I have tried to quit and I am still trying. Unfortunately it's extremely difficult because I am dependent. I started smoking around your age, because I thought it was a cool thing to do. I was like you, just a few here and there, now and then. Nobody warned me that it was a health hazard. But gradually then I got dependent on the nicotine and it developed into a serious habit. That's why I'm suggesting that you stop smoking now while you still are able to. *[ADVISE]"*

Anita: "Suppose I did stop, how will it look when everyone else is doing it? People will make fun of me and think I'm not cool."

[Peer pressure is probably the most important issue with adolescents. You have got to address it logically and confidently while at the same time showing understanding and sympathy for your patient's situation.]

You: "Anita, I know how hard peer pressure can be to go against. Believe me, I succumbed to it myself when I was your age. But you have to do what you think is best for you. In the future, you will face decisions like this again. Not everyone thinks the same way. You might even try explaining why you are stopping to your peers and perhaps get them to do the same."

Anita: "I don't know."

You: "I know this is a tough situation. You have a younger brother don't you?"

Anita: "Yes."

You: "It's possible that if you smoke, given the pressure around you to do it, then he might start doing it as well. But if you don't give in, seeing you, he might think twice about starting."
Anita: "Maybe."

You: "Of course this is a decision which you need to make for yourself. I would just like for you to think about what I've said and about quitting. If you have any questions let me know and I'll be happy to discuss them with you."

Discussion

Because Anita is an adolescent who is not contemplating stopping, we can't use the same strategies because of the age issue. But we were able to clear up her misconceived notion that all Americans smoke and that is why smoking is so cool. We did personalize the information for her a bit by targeting her as a woman and as a role model as in the case of being an older sibling.

It is very important when you are dealing with an adolescent that you do not act judgmental or express shock at any of the habits which you learn your patient has. You need to treat adolescents as adults and give them information in a general matter-of-fact way. Anita seems reasonably receptive to the idea of quitting but seems to see peer pressure as the main hindrance factor. You leave her with the information and hope that she will at least ponder over what you have said. At the next visit, you should check to see

if Anita has moved one step towards contemplating stopping smoking.

Case 3

Patient without a tobacco related complaint

John is a 45-year-old teacher who is complaining of knee pain. You take a history of his complaint and then proceed to perform the physical examination. During the physical you are talking with him and, as with all your patients, you bring up the subject of smoking.

You: "Aside from your knee, how is your health?"

John: "I feel perfectly fine otherwise."

[In this situation, because he doesn't have a smoking related problem, there isn't really a logical lead in to the topic of smoking. So you have to skip the section of ADDRESSING the issue and move straight to ASSESSING. You may be able to come back to ADDRESS. Try to approach it in a general, clinical way.]

You: "I'd like to ask you a few questions about your use of alcohol and tobacco if you don't mind?"

John: "No I don't mind."

You: "How would you describe your use of these?"

John: "I only drink socially, usually just one or two drinks at parties and such events. I do smoke cigars, about 7 or 8 a day."

[After you finish examination of his knee and give him your diagnosis, you decide to bring up the topic of smoking again.]

You: "I'd like to talk with you a bit about your smoking, if that's ok."

[*ADDRESS, so we ended up reversing the order of the steps ADDRESS AND ASSESS.]*

You write down that he smokes 7 or 8 cigars a day.

[*Now you continue ASSESSING.]*

John: "OK."

You: "How many years have you been smoking?"

John: "Well let's see. I started smoking cigarettes when I was 19 and kept up until I was 38. Then I quit for a while, but I started back up again. I switched to cigars though, because they are not as dangerous to the health. But even after starting back up I haven't been smoking as much as I used to. I used to smoke 3 packs of cigarettes a day, I'd say."

[It's difficult to say which stage John is at, because he quit once and has since switched to cigars with the idea of decreasing health risks. Still, it was so long ago.]

You: "I think it's great that you quit. Really it's wonderful. But may I ask what made you start up again?"

John: "I was at a party at which I was drinking heavily. I rarely do that, but I was really depressed that night. It made me want to smoke badly. So I had a cigar. Since then I've continued."

You: "Yes, alcohol can have that effect. I'm interested in what you mentioned about your switching from cigarettes to cigars because cigars are less dangerous. That is what you said, right?"

John: "Yes, that is correct."

You: "Well, it's still a health hazard to smoke cigars. Studies have shown that cigarette smokers who switch to cigars or pipes have lower risk for some of the smoking related conditions as compared to long time cigarette smokers. So you are partly correct in your thinking. However, the risks of a long time cigarette smoker who has switched to cigars is still considerably higher than a non-smoker. Would you agree?"

John: "I know. I keep telling myself that I should quit, but I just don't have the will power to do it."

[John himself brought up the issue of quitting so you do not need to ADVISE him yourself. Reinforce his concern about the difficulty of quitting.]

You: "I know it's hard to quit. Nicotine is very addictive. But millions of people have stopped smoking. Not all have done it on their first attempt, but after several trials they have

succeeded. You did it once, I'm sure you can do it again. I'd like to help you. I can give you some information containing tips, and my support."

John: "How do you suggest I do it?"

[ASSIST]

You: "There are a number of options and I'll help you in any way that I can. You might start by removing all the cigars, lighters and ashtrays from all the places you are normally in. Tell your friends and family that you want to quit and ask them to help you. If any of them smoke you could even try to get them to quit with you so that you have a little support group whenever you feel the urge to smoke. What do you think?"

John: "That's fine, go on."

You: "It's probably a good idea also if you stay away from alcoholic beverages while you are trying to quit. As you found out, it will make you want to start smoking again and you will be more likely to relapse."

John: "Yes, I know."

You: "Good. May I suggest that you set a date sometime in the next two weeks for yourself to actually stop smoking cigars."

John: "Yes, I suppose so. I think I'll be ready to stop by the end of next week."

You: "Wonderful, next Friday it is. I'm so pleased that you've decided to quit. This is one of the best things you can do for your health. Now, I'd like to make you aware of some of the problems which you could expect as you are trying to quit so that you can try to prepare yourself for them in advance. Since you have quit once before, you'll be familiar with some of them already."

John: "Yes, go ahead and remind me."

You: "All right. You could expect withdrawal symptoms. If you experience tenseness, irritability or headaches try taking a walk or a bath or relaxation and deep breathing techniques. You might feel tired in which case just take a nap. If you feel your mouth is getting dry drink a glass of water. You might gain a little weight. Try exercising. It will help take your mind off smoking also. You may experience stress, depression and social pressure, so it's really important to get friends and family to support you in this. Do you have any questions?"

John: "No, I've done this before. I think I'll be fine."

You: "OK, great. I wish you the best of luck. Let me know if you need anything or if you need to talk about it. I'll be getting in touch with you in a couple of weeks to see how you are doing."

Discussion

John was a relatively easy patient to intervene with, as he had already tried to quit smoking and was thinking about doing it. A little push from you helped him to make the commitment to go through with quitting instead of constantly thinking about it and intending to but not actively trying.

We tried to deal with issues of why he relapsed which in John's case was due to alcohol. We also make him aware of the difficulties which he can expect while trying to quit and suggest ways to combat them.

Case 4

Women's health

Luz is a 32-year-old teacher who comes to you for a general examination.

You: "I'd like to ask you about your tobacco use, if you don't mind." [*ADDRESS]*

Luz: "No, go ahead."

You: "Are you still smoking?" *[ASSESS]*

Luz: "Yes."

You: "How much do you smoke?"

Luz: "About 3 packages a day."

You write all this down.

You: "I'm writing this down in your chart. How do you feel about smoking? Do you have any concerns or questions about it?"

Luz: "I'm a bit concerned. I've heard about the health risks. But I'm not going to worry about it now."

You: "OK. I'm interested to know what sorts of things you've heard about the dangers of smoking."

[Explore Luz's understanding of the health risks and focus on personal risks.]

Luz: "It causes lung cancer, strokes and heart attacks right?"

You: "Excellent, those are some of the big ones. But tobacco also causes chronic bronchitis, emphysema, oral and throat cancer, cancer of some abdominal organs."

Luz: "Yes, my uncle died of mouth cancer and my dad died from a stroke."

You: "Yes, I see that here in your chart. They were smokers too, weren't they?"

Luz: "Yes, they were."

You: "With your family history of these sorts of early deaths, you are particularly at risk already for developing both of these conditions. By smoking, you are increasing those chances even more. Are you aware of this?"
Luz: "Yes, I've been told that."

You: "There is another aspect that you should know about. Do you want to hear about it?"

Luz: "Another aspect? What is it?"

You: "As a woman, there are some special health risks if you use tobacco. You have an increased risk of having problems in getting pregnant if and when you decide to have a child. You are also at higher risk for getting cervical cancer and hitting menopause earlier. Are you worried about this? Would you like to talk about it?"

[You are targeting issues that are personal to Luz.]

Luz: "Well if it's going to happen, it's going to happen. I'll have to deal with it when it comes. I have considered quitting, and maybe I will eventually, but not now."

[Reassure]

You: "I'm glad you are considering quitting. Is there anything that is worrying you or holding you back from quitting that you want to talk about." [ADVISE]

[ASSIST by trying to find out if there are major reasons why she won't quit and discuss those issues.]

Luz: "Well, it's very hard to quit, and I'll gain weight if I stop. I have a weight problem as it is and smoking helps keep it under control."

[*It's very important to reassure her that you understand the situation.]*
You: "I know it's very hard to quit. But the benefits of quitting are so many. As far as putting on weight is concerned, not everyone who stops smoking gains weight, and even the ones who do on average only gain between 2-3 kg."

Luz: "Not me, I'll put on more than 5 kg if I stop."

You: "Well if you are very concerned about this, there are ways to deal with extra weight. You could do more exercise. This would help to keep the extra weight off and distract you from wanting to smoke. It is healthy for your body as well. You should eat more foods such as fruit and vegetables, which are nutritious and low in calories. Make sense?"

Luz: "Basically you are telling me to go on a diet."

You: "In a way yes, because that is the healthy way to lose weight, not by relying on cigarettes. However, if you find that dieting and quitting smoking simultaneously is too difficult, deal with it in two steps. First focus on quitting smoking and allow the extra weight to accumulate. When you are confident that you are off cigarettes for good, begin exercising and dieting to remove the weight. Smoking is much more risky to your health than a few extra pounds, so you should not let that stop you from quitting."

Luz: "I'll think about it."

You: "Great. We'll discuss how you feel about it the next time you come in."

Discussion

Luz is contemplating stopping smoking, but she is not ready to quit. So it's important to reinforce her thoughts and continue probing for reasons not to quit. She expressed some misconceptions about the

effects of quitting smoking which were important to address and correct, as we did. She has agreed to think about quitting more seriously. Perhaps if she is more receptive, at the next meeting you can try to get her to take small steps toward abstinence like cutting down the number of cigarettes she smokes each day, delaying her first daily cigarette and switching to a lower tar brand.

Case 5

Patient who relapses

Mrs. Wiwendo is a 56-year-old woman who began actively quitting smoking two weeks after her last visit with you one month ago. She has come to see you for a follow-up visit. You know that she is in the active phase and you do not need to assess this part. You begin discussing how things have been going with her.

You: "So Mrs. Winwendo, tell me how things are going with you in terms of quitting smoking?"

Mrs. Wiwendo: "Actually doctor, I could not do it. I'm smoking again. I tried to stop but after 4 days, I just could not take it. I had to have a cigarette."

[Be positive and encouraging.]

You: "Mrs. Wiwendo it's quite alright. I understand how difficult it is to do this. But you managed to stay off for four days. That's something right there."

Mrs. Wiwendo: "Thank you. But what am I going to do? Quitting is much harder than I thought."
[Reinforce.]

You: "It certainly is a hard thing to do. But you know many people who have succesfully quit smoking needed to try several times before they finally were able to quit for good. What you've experienced is perfectly normal."

Mrs. Wiwendo: "It is?"

You: "Yes. But the most important thing to do is to try to learn from this experience so that you will be prepared in the future. OK?"

Mrs. Wiwendo: "I don't understand."
You: "What I mean is let's discuss what went wrong and then figure out how you may have been able to deal with that situation. Does that sound alright to you?"

Mrs. Wiwendo: "Yes. I was sitting down after having my dinner and I just got a huge urge to smoke. I had been feeling the need to smoke for several days but I was able to manage it. This particular time, I just couldn't control it. I got tense. I think the need to smoke was building up inside of me during those days until I couldn't control anymore that night. So I bought a packet of cigarettes and started smoking."

You: "I understand. The time after finishing a meal is a very common time for people to smoke. The fact that you got such a strong urge at that moment is not surprising. Tell me what you think you could have done to deal with this as an alternative to smoking the cigarettes."

Mrs. Wiwendo: "I'm not sure. I tried some of the activities you had suggested to help with some of the withdrawal symptoms and they helped sometimes but this time nothing could stop me."

You: "I see. Ok let's think about that day overall. Were you very busy during the day?"

Mrs. Wiwendo: "No, I don't think so. My children were playing at one of their friend's home and my husband was working late. So I was doing things at a slower pace for a good part of the day. Why, do you think this had something to do with it?"

You: "Well it might. Since you were less busy, you might have had more time to think about smoking. So that when the time came after dinner you couldn't control it."

Mrs. Wiwendo: "Oh."

You: "I would suggest that under circumstances like that, so soon after giving up cigarettes, one thing you could try to do when you feel such an enormous craving is to immediately make yourself busy doing something which would make smoking difficult to do at the same time."

Mrs. Wiwendo: "Like what?"

You: "Well you could do some physical activity like exercising. These sorts of activities usually require some focus on your part and might help you to forget about smoking long enough to be able to overcome the urge. What do you think?"

Mrs. Wiwendo: "I'm not sure how much good that would do."

You: "Well everyone is different. Some techniques work for some people but not others. But it is worth trying don't you think?"

Mrs. Wiwendo: "I guess so."

You: "Even if you don't find exercising to be useful, I would suggest doing anything that keeps you very busy. But tell me what you did that helped you in the first four days before you had this relapse. You mentioned that you felt the urge to smoke at times during those days as well."

Mrs. Wiwendo: "Well the first couple of days, I was able to manage by thinking about my reasons for quitting. I thought about my health and my children's health by breathing second hand smoke. It helped refuel my desire to quit. But around the third day it wasn't quite enough. I was having trouble sleeping, I was coughing and I was getting tense. I tried relaxing by breathing deeply and concentrating and I didn't drink tea or coffee in the evening like you said. But still by the fourth day it was really hard. I guess at some point I just thought it was enough."

You: "Well I'm very proud of you for trying. I think your idea of thinking about your reasons for quitting in the first place is an excellent one. Like I said earlier, don't be so hard on yourself for having relapsed. It does happen to many people. But the thing to do is look at it as a learning experience and try again. What do you think?"

Mrs. Wiwendo: "I really don't know if I can do this."

You: "Please don't feel that way. I cannot tell you how many people have been in your place and thought the same way but they kept at it and eventually quit. I know you can do it. Do consider giving it another chance."

Mrs. Wiwendo: "Well OK. I guess I can try again. But I make no promises about quitting."

You: "That's fine. All I ask is that you try as hard as you can. This time you'll know more about what to expect and hopefully after our conversation you'll be a bit more prepared to handle some hard situations when they come up."

Mrs. Wiwendo: "I hope so."

You: "The first thing you should do is to stop smoking immediately. Get rid of all the cigarettes you recently bought and associated products like lighters. In a couple of weeks why don't you come back and see me so we can evaluate your progress again."

Mrs. Wiwendo: "OK"

You: "Great. I cannot tell you how happy I am and what a great thing this is that you are doing. Good luck and I'll see you in a couple of weeks.

Discussion

The most important thing we have done here, is encourage, reinforce and assist Mrs. Wiwendo. It was important to be positive in spite of her relapse and to make her feel good about what she did accomplish. We also made it clear to her that relapse is common and normal. We analyzed what went right and wrong and tried to work out the situation which caused her relapse. We treated the whole attempt as a learning situation and then got Mrs. Wiwendo to try quitting again.

Appendix 5

Indirect intervention - other ways to reinforce the stop smoking message

1. Enforce a "No-Smoking" policy in your office which includes office staff members.

2. Put up posters that indicate "Stop Smoking" and which clearly express the dangers of smoking.

3. Clearly display reading material about smoking cessation and the risks and effects of smoking in the office.

4. Remove all ashtrays.

5. Remove all tobacco advertising.

6. Screen magazines for promotional tobacco advertising. Do not display issues which contain messages encouraging tobacco use.