



NATIONAL GUIDELINES ON SMOKING CESSATION

**CLINICAL PRACTICE GUIDELINES ON TREATMENT OF TOBACCO
USE AND DEPENDENCE 2009**

Endorsed by:

Ministry of Health, World Health Organization, Pakistan Chest Society, Pakistan Cardiac Society, Hypertension league and Cancer Society.

CONTENTS

- Foreword.....02
- Message from WHO Pakistan.....03
- Preface.....04
- Introduction.....05
- Anti Tobacco Laws in Pakistan.....08
- Different forms of tobacco in use & their health consequences.....10
- Tobacco Dependence12
- Clinical Interventions For Tobacco Use And Dependence.....14
- Counseling a patient.....22
- WHO’S package for controlling tobacco epidemic.....25
- Pharmacotherapy for tobacco cessation.....27
- Appendix 1. Summary of Smoking Cessation Interventions.....34
- Appendix 2. How to assess Tobacco Dependence.....36
- Appendix 3. Smokers’ frequently asked questions and their answers.....38
- References.....42

FOREWORD

Tobacco is the single most common preventable cause of death in the world today (1). In the 20th century, more than 100 million people died worldwide due to use of tobacco and tobacco related products. This figure is estimated to rise to one billion during this century (2). The average loss of life in smokers is 15 years. For those who die in middle age, the average loss is as much as 22 years (3). About half of all regular smokers are eventually killed by smoking.

According to the WHO 2008 report, 32.4% adult men and 5.7 % adult women are current tobacco-users in Pakistan. Lung cancer is the number one cause of deaths due to cancer in Pakistani males and over 90% of them are caused by smoking (4). These figures are alarmingly high and we need to take urgent measures in order to save these human lives.

The Health Ministry recognizes the need for doctors and other health professionals to participate in the smoking cessation program. Healthcare professionals can play an active role in helping smokers to quit smoking. A brief advice of only a few minutes from the doctor, supported by educational material, has been shown to achieve tobacco-quitting rates of up to 5% (5).

Anti-tobacco policies and programs have been shown to increase the number of smokers attempting to quit. Smoke-free areas, public health campaigns and the role of healthcare professionals are the priority policy development areas identified to support this issue.

Most importantly, collaboration is needed between government & healthcare professional organizations to establish and promote guidelines and policies that encourage healthcare professionals to take a more active role in the treatment of Tobacco Dependence. Unfortunately, there have been no guidelines for the health care professionals in this regard. These Clinical Practice Guidelines are the first of its kind, meant to assist doctors and other health professionals to help smokers get rid of tobacco use for good.

.....

Dr Rashid Juma

Director General of Health

Ministry of Health

Message from WHO Pakistan

Dr Khalif Bile Mohamud

WHO Pakistan

PREFACE

Tobacco use can kill in so many ways that it is a risk factor for six of the eight leading causes of death in the world.

“Margaret Chan Fung Fu-Chun, Director General WHO 2008”

Tobacco use is one of the major causes of premature and preventable deaths in our country. It is estimated that approximately 100,000 deaths in Pakistan are attributed to tobacco use every year. However despite the high prevalence of tobacco use, the healthcare providers are not well trained to manage this problem effectively. Health professionals need to realize that treating tobacco dependence is much more cost-effective than treating diseases caused by tobacco use.

The objective of this guideline is to provide the latest and updated treatment protocols to assist health care providers in managing tobacco use and dependence effectively.

The preliminary draft of the guideline was reviewed by experts from various medical fields relevant to tobacco cessation. These include leading chest physicians, cardiologists, ENT specialists and cancer specialists. They all collaborated and reviewed various local and international materials to produce this document.

It is hoped that clinicians and all other allied healthcare providers will follow this evidence-based guideline to maximize the success rate of tobacco cessation. However, this guideline is not meant as a substitute for clinical judgment and clinicians are recommended to individualize their treatment strategies.

This guideline is planned for a review at an every two-year interval by the committee and appropriate updates if the need arises.

Dr Javaid Khan FRCP (Edin)

Head Section of Pulmonary and Critical Care Medicine

The Aga Khan University Karachi

Chairman Smoking Cessation Guideline Committee, Pakistan Chest Society

Other Members:

1. Dr Mukhtiar Zaman; Peshawer
2. Dr Mohammad Yusuf; Peshawer
3. Dr Saadia Ashraf; Peshawer
4. Dr Col Wajid Ali; Islamabad
5. Dr Shireen Khan; Quetta
6. Dr Muhammad Irfan Karachi

INTRODUCTION

“Tobacco is the only legally available consumer product which kills people when it is used entirely as intended”.

*(The Oxford Medical Companion,
Oxford: Oxford University Press, 1994)*

Global Situation

Tobacco use is the leading preventable cause of death in the world (1). In the 20th century, more than 100 million people died worldwide due to use of tobacco and tobacco related products, with 70% of these deaths occurring in developing countries. This year, tobacco will kill more than five million people – more than tuberculosis, HIV/AIDS and malaria combined. By 2030, the death toll will exceed eight million a year. Moreover, unless urgent action is taken, tobacco could kill one billion people during this century (2). Those who smoke 20 cigarettes/day are 25 times more likely to die of lung cancer as compared to non-smokers. World Health Organization (WHO) estimates that 47% men and 12% women smoke globally. In developed countries, 42% men and 24% women are smokers, whereas in developing countries, 48% men and 7% women are smokers. Tobacco use is a risk factor for six of the eight leading causes of death in the world inclusive of ischemic heart disease, cerebrovascular disease, lower respiratory infections, COPD, tuberculosis, and trachea and bronchus lung cancers (2).

Tobacco and its related products have played havoc with human lives around the globe. The destruction caused by tobacco over the years is huge and it has now turned into an ‘epidemic’, as the number of people dying is exponentially increasing. However, the tobacco epidemic is preventable. One can be a bit optimistic that hundreds of millions of people do not have to die from tobacco-related illness – but only if the leaders of governments and the civil society take urgent action now. Leaders around the globe need to recognize that tobacco use can and must be confronted and stopped.

TOBACCO EPIDEMIC DEATH TOLL

100 million dead in the 20th century

Currently 5.4 million deaths every year

Unless urgent action is taken:

By 2030, there will be more than 8 million deaths every year

By 2030, more than 80% of tobacco deaths will be in developing countries

One billion estimated deaths during the 21st century

Adapted from: WHO 2008 Report on Global Tobacco Epidemic

Situation in Pakistan

In most developed countries the prevalence of smoking is on the decline and so are tobacco related deaths from lung cancer, heart attacks and other diseases (1). Unfortunately tobacco use is on the increase in developing countries like Pakistan. Many transnational tobacco companies find Pakistan, a country with over 160 million people, an ideal place to promote their tobacco business. In the National Health Survey of 1996 among adults 36% of males and 9% of females were found to be smokers (2).

If we include the use of tobacco in other forms (smoke-less tobacco) such as *paan*, *gutka* and *naswar*, then the true prevalence of tobacco users is much higher.

Mainstreaming tobacco control into the public health agenda is a big challenge. This is due to the fact that tobacco industry contributes 40 billion Rupees in taxes to the national exchequer and provides employment and business opportunities to more than 1.2 million people all over the country.

One of the biggest challenges for the country in tobacco control is the high prevalence of smoking amongst the medical doctors. In one of the surveys done at a major teaching hospital of Karachi, 32 % of male house officers were found to be regular smokers (6). The whole credibility of the anti-tobacco message is lost if the public sees a doctor smoking. Doctors also need to be trained on smoking cessation skills. Most medical school curricula do not teach tobacco as a separate subject in spite of the fact that this powerful addictive substance is responsible for hundreds of preventable diseases.

A study conducted in Karachi (Pakistan) revealed that the prevalence of smoking among medical students was alarmingly high i.e. 22.0% of male and 3.8% of female medical students were current

National Guidelines on Smoking Cessation

smokers; although majority of them did recognize the dangers associated with active as well as passive smoking (7). The prevalence of adolescent females who had tried smoking at least once in their life (i.e. “ever-smokers”) was found to be 16.3% and the mean age of smokers was 15.29 yrs (8).

Use of smokeless tobacco in various forms is also very high in Pakistan. A recent study has shown that 21.5% of students have used tobacco in some form (smoked or smokeless) in their lifetime. Naswar was the most commonly used form of smokeless tobacco followed by paan and nass (9).

Tobacco associated cancers in Karachi were responsible for 38.3% of tumors diagnosed in males. Lung cancer was the most frequently encountered cancer in males followed by cancer of the oral cavity. In females, breast and oral cavity cancers are responsible for 40% of cancers in Karachi (4).

ANTI-TOBACCO LAWS IN PAKISTAN

In 2002, the president of Pakistan implemented an ordinance by the name of “*Prohibition of Smoking in Enclosed Places and Protection of Non-smokers Health Ordinance, 2002*”. According to this ordinance:

1. No person can smoke or use tobacco in any place of public work or use.
2. No person can smoke or use tobacco in any other form in any public service vehicle.
3. No persons/ companies can advertise tobacco and tobacco products on any media, in any place or in any public service vehicle, if such advertisement is not in accordance with guidelines prescribed for this purpose by a committee formulated by the Federal Government.
4. No person can sell cigarettes, or any other such smoking substance to any one who is below the age of eighteen years.
5. No person can himself or by any person on his behalf, store, sell or distribute cigarettes or any other such smoking substance within an area of 50 meters from any college, school or educational institution.
6. The owner or manager or in charge of the affairs of every place of public work or use, shall display and exhibit a board at a conspicuous place in and outside the premises visited or used by general public prominently stating that the place is a "No Smoking Zone" and that "Smoking is an Offence".
7. Any person, who violates the law, would be punishable with a fine which may extend from one to five thousand rupees and in case of second or subsequent offence, would be punishable with a fine which shall not be less than one hundred thousand rupees or with imprisonment which may extend to three months, or with both.

However unfortunately, none of these laws are implemented in the true spirit. That’s why the burden of tobacco usage in our country is ever increasing.

Key Guideline Recommendations

The overarching goal of these recommendations is that clinicians strongly employ the use of effective tobacco dependence counseling and medication treatments to their patients who use tobacco.

1. Tobacco dependence is a chronic disease that often requires repeated intervention and multiple attempts to quit. Effective treatments exist, however, that can significantly increase rates of long-term abstinence.
2. It is essential that clinicians and health care delivery systems consistently identify and document tobacco use status and treat every tobacco user seen in a health care setting.
3. Tobacco dependence treatments are effective across a broad range of populations. Clinicians should encourage every patient willing to make a quit attempt to use the counseling treatments and medications recommended in this Guideline.
4. Brief tobacco dependence treatment is effective. Clinicians should offer every patient who uses tobacco at least the brief treatments shown to be effective in this Guideline.
5. Individual, group, and telephone counseling are effective, and their effectiveness increases with treatment intensity. Two components of counseling are especially effective, and clinicians should use these when counseling patients making a quit attempt:
 - Practical counseling (problem solving/skills training)
 - Social support delivered as part of treatment
6. Numerous effective medications are available for tobacco dependence, and clinicians should encourage their use by all patients attempting to quit smoking—except when medically contraindicated or with specific populations for which there is insufficient evidence of effectiveness (i.e., pregnant women, smokeless tobacco users, light smokers, and adolescents).
 - Three first-line medications reliably increase long-term smoking abstinence rates:
 - Bupropion SR
 - Nicotine gum
 - Nicotine patch
 - Varenicline
 - Clinicians also should consider the use of certain combinations of medications identified as effective in this Guideline.
7. Counseling and medications are effective when used by themselves for treating tobacco dependence. The combination of counseling and medication, however, is more effective than either alone. Thus, clinicians should encourage all individuals making a quit attempt to use both counseling and medication.
8. If a tobacco user currently is unwilling to make a quit attempt, clinicians should use the motivational treatments shown in this Guideline to be effective in increasing future quit attempts.

DIFFERENT FORMS OF TOBACCO IN USE & THEIR HEALTH CONSEQUENCES

In the 20th century, the tobacco epidemic killed 100 million people worldwide. During the 21st century, it could kill one billion.

(WHO report on the global tobacco epidemic, 2008)

Although standard cigarettes are the most commonly used type of smoked tobacco, other smoked tobacco products, such as bidis, kreteks, Naswar (snuff) and shisha, are gaining popularity – often in the mistaken belief that they are less hazardous to health. However, all forms of tobacco are lethal (10). Smoked tobacco in any form causes up to 90% of all lung cancers and is a significant risk factor for strokes and fatal heart attacks (11).

Bidis, small hand-rolled cigarettes are typically smoked in Sindh and part of Punjab and other south-East Asian countries. They produce three times more carbon monoxide and nicotine, and five times more tar than regular cigarettes (12). Bidi smokers have a three-fold higher risk of oral cancer compared with non-smokers and are also at increased risk of lung, stomach and esophageal cancer.

Shisha (tobacco mixed with flavorings and smoked from hookahs) is popular in the Eastern Mediterranean region. A recent study from Karachi showed that shisha use is gaining popularity amongst the youth of the city (13). It is also linked to lung disease, cardiovascular disease and cancer (10).

Smokeless tobacco

Over one-third of tobacco consumed in South Asia is smokeless. Traditional forms like betel quid, tobacco with lime and tobacco tooth powder are commonly used and the use of new products is increasing, not only among men but also among children, teenagers, women of reproductive age, and even medical and dental students. Oral sub mucous fibrosis is increasing due to the use of processed areca nut products, many containing tobacco. Pregnant women in India who use smokeless tobacco have a threefold increased risk of stillbirth and a two- to threefold increased risk of having a low birth weight infant. In recent years, several states in India have banned the sale, manufacture and storage of gutka, a smokeless tobacco product containing areca nut.

Prevalence of use of chewable products is high in Pakistan, with particularly high use of certain substances relative to certain socio-demographic profiles. Industrially prepared products, chaalia and gutka, are gaining popularity among the youth. Policies and focused interventions can be developed taking into consideration the preferred use of products among different socio-demographic groups.

The prevalence of use of smokeless tobacco products was higher than cigarettes among high-school students (16.1% versus 13.7%) and the age at starting use of smokeless tobacco was also lower than for cigarettes (mean 11.5 years versus 13.1 years). Several factors may contribute to the use of smokeless tobacco: it is easy to obtain, is more socially and culturally acceptable than cigarettes and easier to use than smoked products, especially in the school environment where smoking restrictions are enforced.

National Guidelines on Smoking Cessation

Parental sanctions are also not very high for the use of smokeless tobacco because of the conviction of many people that smokeless tobacco poses a lower health risk than cigarettes. Advice to stop smokeless tobacco coupled with behavioral support and counseling may increase long-term abstinence rates by 5-10%. There is insufficient evidence at present to recommend the use of nicotine replacement therapy, bupropion or varenicline to aid smokeless tobacco cessation (14).

Second-hand/ Passive Smoking

Smokers are not the only ones prone to sickness and death by tobacco. It must be noted that breathing secondhand smoke is equivalent to smoking i.e. Two hours in a smoky office equals to smoking four cigarettes, two hours in a nonsmoking section of restaurant equals to smoking two cigarettes, and living together with a pack-a-day smoker for 24 hrs means smoking at least three cigarettes. Second-hand smoke also has serious and often fatal health consequences. In the United States, second-hand smoke causes about 3,400 lung cancer deaths and 46,000 heart disease deaths a year. Second-hand smoke is responsible in the United States for an estimated 430 cases of sudden infant death syndrome, 24,500 low-birth-weight babies, 71,900 pre-term deliveries and 200,000 episodes of childhood asthma annually (15).

Some of the common diseases caused by second-hand smoke in children include brain tumors, middle ear disease, lymphoma, impaired lung function, asthma, sudden infant death syndrome, leukemia, and lower respiratory illness. Diseases like stroke, nasal sinus cancer, coronary heart disease, lung cancer, atherosclerosis, COPD, asthma, pre-term delivery & low birth weight babies are common in adults due to second-hand smoke (16).

In addition to the health consequences of second-hand smoke, it is also a serious drain on economic resources around the world. For example, second-hand smoke exposure in the United States alone costs an estimated US\$ 5 billion annually in direct medical costs and more than US\$ 5 billion more in indirect medical costs such as disability and lost wages (17). In the Hong Kong Special Administrative Region of China, the cost of direct medical care, long-term care and productivity losses due to second-hand smoke exposure is approximately US\$ 156 million annually (18).

The economic losses faced by Pakistan because of smoking are tremendous. Based on a study done by Alam SE et al in 1998 (19), Pakistan was facing a loss of more than 562 Million rupees daily because of the use of tobacco. This loss is expected to be much higher now considering the increase in the prevalence of smoking and increase in the price of cigarettes.

In Pakistan, tobacco is responsible for 90% of Lung Cancers, 90% of COPD, 40% of overall cancers (20) and 20 other fatal diseases. The list of diseases caused by smoking is huge and all the details cannot be covered here. However, some of the common diseases caused by smoking include stroke, blindness, cataract, coronary heart disease, pneumonia, atherosclerotic peripheral vascular disease, COPD, asthma, hip fractures, reduced fertility and cancers of the larynx, esophagus, trachea, lung, stomach, pancreas, kidney, ureter, colon, cervix, bladder etc (21).

It must be noted here that tobacco-related diseases usually do not become evident for years or decades after tobacco use is started. Pakistan is one of those countries that are still in the early stages of the “tobacco epidemic”, so we have yet to experience the full impact of tobacco related diseases and deaths already evident in wealthier countries where tobacco use has been common for much of the past century.

TOBACCO DEPENDENCE



Tobacco smoke contains approximately 4,000 different constituents, including toxic substances such as carcinogens (N-nitrosamines, aromatic hydrocarbons), ammonia, nitrogen oxide, hydrogen cyanide, CO and nicotine (20).

Tobacco dependence can be defined as “*a cluster of behavioral, cognitive and physiological phenomena that develop after repeated use and typically include a strong desire to smoke, difficulty in controlling its use, persisting in its use despite harmful consequences, increased tolerance to nicotine, and a (physical) withdrawal state*”(22).

Dependence on tobacco is a complex behaviour, with both environmental and genetic influences (23). Nicotine is the main component in cigarettes that contributes to addiction. It acts on specific nicotinic acetylcholine receptors in the brain, stimulating the release of dopamine that is believed to be associated with the acute rewarding effect of nicotine (24). Moreover, chronic smoking leads to an up regulation of nicotine receptors.

Benefits of Stopping Smoking

Stopping smoking is the best thing that a person can do to improve their current and future health. The earlier a person can stop the better. However, it is never too late to stop. People who stop smoking have:

- a reduced risk of dying early
- a reduced risk of developing lung cancer
- a reduced risk of coronary heart disease and stroke
- a reduced risk of dying from chronic bronchitis and emphysema
- improvement in respiratory symptoms, such as cough and shortness of breath
- reduced risks of other cancers related to smoking (for example, cancers of upper respiratory tract, esophagus, bladder and pancreas)
- reduced risks of complications in pregnancy and childbirth (for example, placenta previa and placental abruption)
- improvement in some mental health symptoms
- fewer sick days off work
- improvement in recovery from surgery and reduced perioperative risk
- a reversal of the risks of smoking if cessation is achieved by the age of 35.

Stopping smoking will also:

- set a good example for children and young people (children of non-smokers are less likely to become regular smokers)
- improve the health of young children of parents who have ceased smoking
- save money.

Adopted from: *New Zealand Smoking Cessation Guidelines*. Ministry of Health. 2007. Wellington: Ministry of Health.

CLINICAL INTERVENTIONS FOR TOBACCO USE AND DEPENDENCE

What can a health professional do?

- Do not smoke or use tobacco
- Take a history of smoking/tobacco use
- Give firm advice to patient who uses tobacco
- Learn “how to counsel a patient” in order to make them quit smoking/tobacco use
- Educate the public regarding the hazards of active & passive smoking and other forms of tobacco use

The 5 A’s Approach

Ask about tobacco use.	Identify and document tobacco use status for every patient at every visit. (Strategy A1)
Advise to quit.	In a clear, strong, and personalized manner, urge every tobacco user to quit. (Strategy A2)
Assess willingness to make a quit attempt.	Is the tobacco user willing to make a quit attempt at this time? (Strategy A3)
Assist in quit attempt.	For the patient willing to make a quit attempt, offer medication and provide or refer for counseling or additional treatment to help the patient quit. (Strategy A4) For patients unwilling to quit at the time, provide interventions designed to increase future quit attempts. (Strategies B1)
Arrange followup.	For the patient willing to make a quit attempt, arrange for followup contacts, beginning within the first week after the quit date. (Strategy A5) For patients unwilling to make a quit attempt at the time, address tobacco dependence and willingness to quit at next clinic visit.

A. For the Patient Willing To Quit

Strategy A1. *Ask*—Systematically identify all tobacco users at every visit

Action	Strategies for implementation
Implement an officewide system that ensures that, for every patient at every clinic visit, tobacco use status is queried and documented. ^a	Expand the vital signs to include tobacco use, or use an alternative universal identification system. ^b VITAL SIGNS Blood Pressure: _____ Pulse: _____ Weight: _____ Temperature: _____ Respiratory Rate: _____ Tobacco Use (circle one): Current Former Never

^a Repeated assessment is *not* necessary in the case of the adult who has never used tobacco or has not used tobacco for many years and for whom this information is clearly documented in the medical record.

^b Alternatives to expanding the vital signs include using tobacco use status stickers on all patient charts or indicating tobacco use status via electronic medical records or computerized reminder systems.

Strategy A2. *Advise*—Strongly urge all tobacco users to quit

Action	Strategies for implementation
In a <i>clear, strong, and personalized</i> manner, urge every tobacco user to quit.	Advice should be: <ul style="list-style-type: none"> • <i>Clear</i>—“It is important that you quit smoking (or using chewing tobacco) now, and I can help you.” “Cutting down while you are ill is not enough.” “Occasional or light smoking is still dangerous.” • <i>Strong</i>—“As your clinician, I need you to know that quitting smoking is the most important thing you can do to protect your health now and in the future. The clinic staff and I will help you.” • <i>Personalized</i>—Tie tobacco use to current symptoms and health concerns, and/or its social and economic costs, and/or the impact of tobacco use on children and others in the household. “Continuing to smoke makes your asthma worse, and quitting may dramatically improve your health.” “Quitting smoking may reduce the number of ear infections your child has.”

Adopted from; Fiore MC, Jaen CR, Baker TB, et al. *Treating Tobacco Use and Dependence: 2008 Update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

Strategy A3. Assess—Determine willingness to make a quit attempt

Action	Strategies for implementation
<p>Assess every tobacco user's willingness to make a quit attempt at the time.</p>	<p>Assess patient's willingness to quit: "Are you willing to give quitting a try?"</p> <ul style="list-style-type: none"> • If the patient is willing to make a quit attempt at the time, provide assistance <ul style="list-style-type: none"> – If the patient will participate in an intensive treatment, deliver such a treatment or link/refer to an intensive intervention – If the patient is a member of a special population (e.g., adolescent, pregnant smoker, racial/ethnic minority), consider providing additional information • If the patient clearly states that he or she is unwilling to make a quit attempt at the time, provide an intervention shown to increase future quit attempts

Adopted from; Fiore MC, Jaen CR, Baker TB, et al. *Treating Tobacco Use and Dependence: 2008 Update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

Strategy A4. Assist—Aid the patient in quitting (provide counseling and medication)

Action	Strategies for implementation
Help the patient with a quit plan.	<p><i>A patient’s preparations for quitting:</i></p> <ul style="list-style-type: none"> • Set a quit date. Ideally, the quit date should be within 2 weeks. • Tell family, friends, and coworkers about quitting, and request understanding and support. • Anticipate challenges to the upcoming quit attempt, particularly during the critical first few weeks. These include nicotine withdrawal symptoms. • Remove tobacco products from your environment. Prior to quitting, avoid smoking in places where you spend a lot of time (e.g., work, home, car). Make your home smoke-free.
Recommend the use of approved medication, except when contraindicated or with specific populations for which there is insufficient evidence of effectiveness (i.e., pregnant women, smokeless tobacco users, light smokers, and adolescents).	<p>Recommend the use of medications found to be effective in this Guideline</p> <p>these medications increase quitting success and reduce withdrawal symptoms. The first-line medications include: bupropion SR, nicotine gum, nicotine inhaler, nicotine lozenge, nicotine nasal spray, nicotine patch, and varenicline; second-line medications include: clonidine and nortriptyline. There is insufficient evidence to recommend medications for certain populations (e.g., pregnant women, smokeless tobacco users, light smokers, adolescents).</p>

Strategy A5. Arrange—Ensure followup contact

Action	Strategies for implementation
Arrange for followup contacts, either in person or via telephone.	<p><i>Timing:</i> Followup contact should begin soon after the quit date, preferably during the first week. A second followup contact is recommended within the first month. Schedule further followup contacts as indicated.</p>

Adopted from ; Fiore MC, Jaen CR, Baker TB, et al. *Treating Tobacco Use and Dependence: 2008 Update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

B. For the Patient Unwilling To Quit

Promoting the Motivation To Quit

Enhancing motivation to quit tobacco—the “5 R’s”

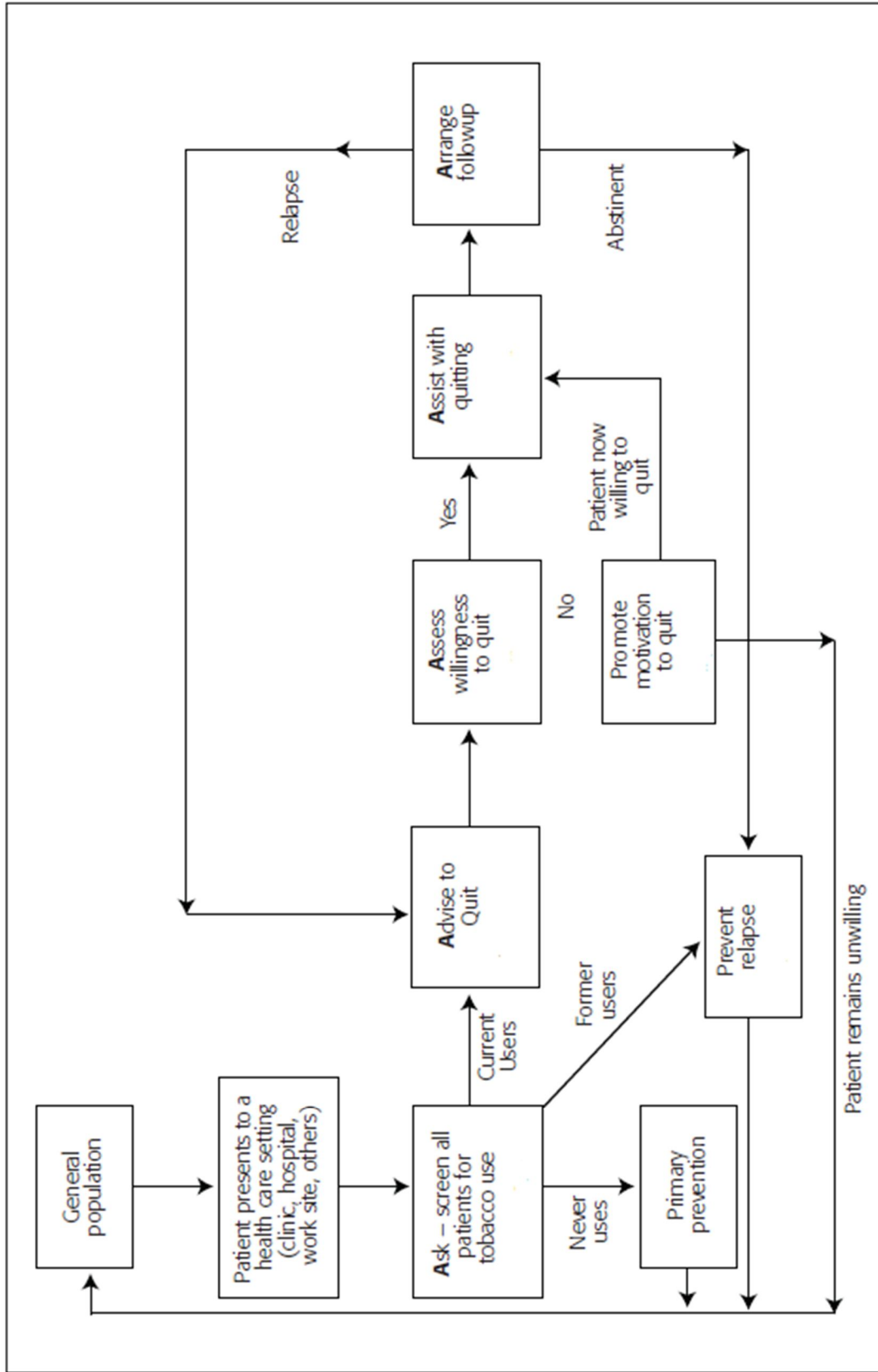
Relevance	Encourage the patient to indicate why quitting is personally relevant, being as specific as possible. Motivational information has the greatest impact if it is relevant to a patient’s disease status or risk, family or social situation (e.g., having children in the home), health concerns, age, gender, and other important patient characteristics (e.g., prior quitting experience, personal barriers to cessation).
Risks	<p>The clinician should ask the patient to identify potential negative consequences of tobacco use. The clinician may suggest and highlight those that seem most relevant to the patient. The clinician should emphasize that smoking low-tar/low-nicotine cigarettes or use of other forms of tobacco (e.g., smokeless tobacco, cigars, and pipes) will not eliminate these risks. Examples of risks are:</p> <ul style="list-style-type: none"> • <i>Acute risks:</i> Shortness of breath, exacerbation of asthma, increased risk of respiratory infections, harm to pregnancy, impotence, infertility. • <i>Long-term risks:</i> Heart attacks and strokes, lung and other cancers (e.g., larynx, oral cavity, pharynx, esophagus, pancreas, stomach, kidney, bladder, cervix, and acute myelocytic leukemia), chronic obstructive pulmonary diseases (chronic bronchitis and emphysema), osteoporosis, long-term disability, and need for extended care. • <i>Environmental risks:</i> Increased risk of lung cancer and heart disease in spouses; increased risk for low birth-weight, sudden infant death syndrome (SIDS), asthma, middle ear disease, and respiratory infections in children of smokers.
Rewards	<p>The clinician should ask the patient to identify potential benefits of stopping tobacco use. The clinician may suggest and highlight those that seem most relevant to the patient. Examples of rewards follow:</p> <ul style="list-style-type: none"> • Improved health • Food will taste better • Improved sense of smell • Saving money • Feeling better about oneself • Home, car, clothing, breath will smell better • Setting a good example for children and decreasing the likelihood that they will smoke • Having healthier babies and children • Feeling better physically • Performing better in physical activities • Improved appearance, including reduced wrinkling/aging of skin and whiter teeth

Enhancing motivation to quit tobacco—the “5 R’s” (continued)

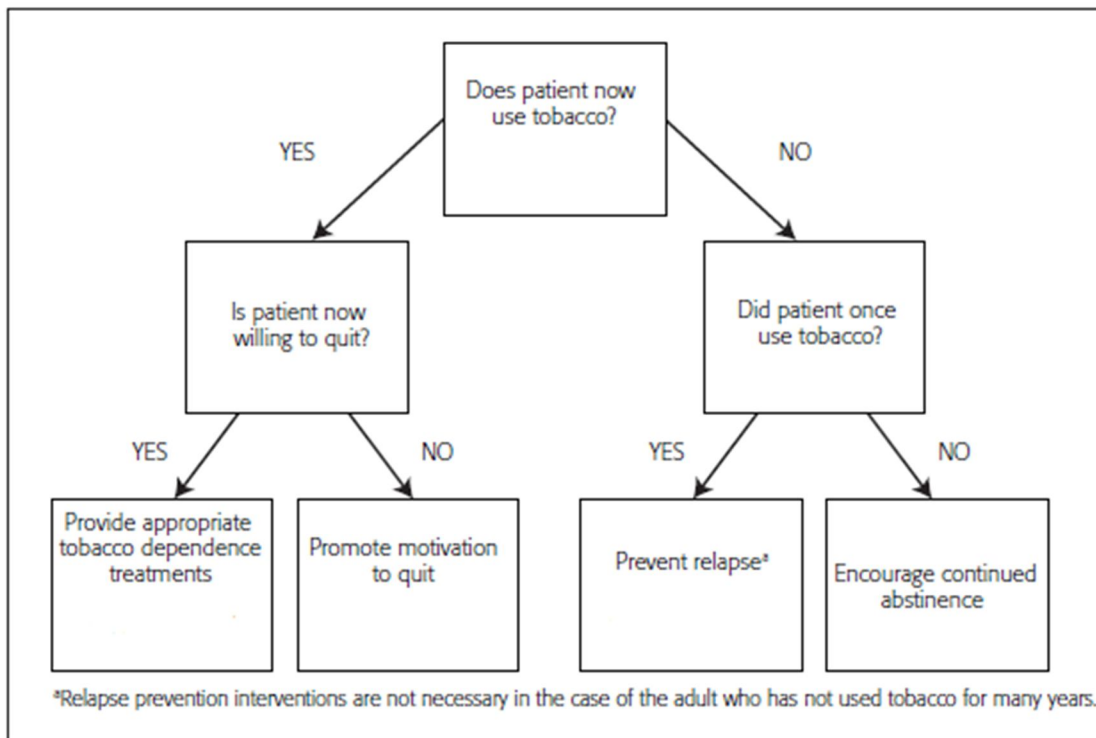
Roadblocks	<p>The clinician should ask the patient to identify barriers or impediments to quitting and provide treatment (problemsolving counseling, medication) that could address barriers. Typical barriers might include:</p> <ul style="list-style-type: none"> • Withdrawal symptoms • Fear of failure • Weight gain • Lack of support • Depression • Enjoyment of tobacco • Being around other tobacco users • Limited knowledge of effective treatment options
Repetition	<p>The motivational intervention should be repeated every time an unmotivated patient visits the clinic setting. Tobacco users who have failed in previous quit attempts should be told that most people make repeated quit attempts before they are successful.</p>

Adopted from; Fiore MC, Jaen CR, Baker TB, et al. *Treating Tobacco Use and Dependence: 2008 Update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

National Guidelines on Smoking Cessation



Algorithm for treating tobacco use



Adopted from; Fiore MC, Jaen CR, Baker TB, et al. *Treating Tobacco Use and Dependence: 2008 Update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

COUNSELING A PATIENT

Counseling a tobacco user to quit tobacco is an art which every health professional should try to learn. Patients addicted to tobacco and who wish to quit must be made clear right at the very beginning that tobacco smoking/nicotine addiction is more like a chronic, recurrent disorder with an expected successful cessation rate after treatment of 15–35% after 1 yr, similar to other addictive disorders. Several failed cessation attempts may occur before permanent abstinence is achieved. More importantly, even if a smoker is able to stop smoking and tobacco use, nicotine addiction remains present for many years as shown by relapse in ex-users.

Nicotine Withdrawal symptoms

Patients should be explained that approximately 4-12 h after quitting smoking, varying degrees of Nicotine withdrawal symptoms begin to appear. These may include irritability, anxiety, nervousness, restlessness, depressed mood, difficulty concentrating, craving for cigarettes, increased appetite and sleep disturbance. Symptoms often peak within a week and then decline over several weeks to months (25, 26). Weight may increase by 2–3 kg during the first 3 months after cessation of smoking. The patient should be very clearly told that these symptoms are temporary and will go away.

Last, but not the least; it is very important that the doctor gives the right message while he counsels the patient about quitting tobacco use. For example, a middle aged COPD breathless patient should be told that his disease is mainly because of tobacco use and if he quits smoking not only his breathing will be easier but it will also help improve his quality of life. A smoker, on the other hand, who brings his child with an asthma attack, should be told that one of the important triggering agents for his child's asthma exacerbations is smoking. For a middle-aged lady who uses tobacco, the relevant message could be that if she quits smoking, she will have reduced wrinkling of skin.

However, despite the counseling, it is very common to see smokers who stopped for quite a while but slipped back into smoking and then quit again and then slipped back again, and the cycle continues. Research suggests that people who smoke go through a five stage tobacco addiction cycle that leads them from being non-smokers to new smokers, then to committed smokers, to smokers trying to stop and to finally, reformed smokers (27).

Benefits of quitting Smoking

The patient should be given incentives and explained reasons why quitting smoking is so important. For example, following are some of the benefits which a health professional can tell the patient while counseling about quitting smoking.

- You will live longer and better and have reduced wrinkling / aging of skin.
- Quitting will lower your chance of having a heart attack, stroke or cancer and improve your health.

National Guidelines on Smoking Cessation

- You will have extra money to spend on things other than cigarettes
- Food will taste better and you will have an improved sense of smell.
- You will be able to save money.
- You will feel better about yourself and perform better at physical activities.
- You can stop worrying about quitting.
- You set a good example for children.
- You will have healthier babies and children.
- You will not have to worry about exposing others to smoke.

Modes of counseling

Brief Advice

Brief advice by a physician or nurse lasting as little as less than three minutes has been shown to be effective in making people quit smoking. This is done on a one-on-one basis and if a smoking cessation leaflet is also given at the time of this advice then it can increase the quit rate. There is a strong dose-response relationship between session length or person to person contact and successful treatment outcome. Intensive interventions are certainly more effective than brief advice.

Group Counseling

Group therapy allows more people to be treated by one expert and could be more cause effective than individual counseling.

Telephone Counseling

Telephone counseling can be proactive or reactive. In the proactive approach the expert initiates the call to provide the smoker with support to make a quit attempt. Proactive counseling is provided via a help line that takes calls from the smoker. There is a quit smoking service available in Pakistan in which a psychologist who is an expert on smoking cessation is available during working hours to take live calls from smokers who want to quit smoking (0800 IQUIT). Quit lines can be appealing to those patients who are uncomfortable discussing their smoking in a group—and it's free to the patient.

Web-based programs on the Internet

Like quit lines, Web-based programs offer smokers immediate feedback to help them quit. Many of the programs include links to quitting resources, stories from former smokers and cancer patients, live advice from counselors, and message boards. Web-based programs have been shown to help improve quit rates.

Important Quitting steps

1. Choosing a Quit Date

Each smoker who has decided to pursue a quit attempt should be asked to choose a quit date. Ideally this date should be within one to two weeks of his consultation with the health professional. This date could be a Birth Day, Wedding Anniversary, Eid Day, or 1st Ramadan. All users should be advised not to smoke even a single cigarette on the quit date. Between the initial consultation and quit date, the smoker should try to cut down the number of cigarettes smoked per day. Smokers often get an urge to light up “just one cigarette” after they have given up smoking. Smokers must be strongly advised that often this “innocent cigarette” can immediately lead to taking up smoking again. Even one puff of cigarette will increase the urge to smoke and increase the risk of failure in their quit attempt.

2. Telling friends and family

Telling friends and family about the plan to quit really helps as in this way the patient is not alone and he/she gets companions in the war against tobacco.

3. Changing routine and removing reminders

Household reminders such as ash trays etc. should be removed and the daily routine should be changed. It is of great help and relief as in this way one gets away from this evil easily, as it is said, “Out of sight, out of mind!”

4. Follow Up Visit

The patient must be seen again by the health professional within seven to ten days of his quit date. This is the time when smokers are having maximum nicotine withdrawal symptoms and the physician may be able to help in resolving some of their concerns.

WHO'S PACKAGE FOR CONTROLLING TOBACCO EPIDEMIC

“Reversing this entirely preventable epidemic must now rank as a top priority for public health and for political leaders in every country of the world”.

(Dr Margaret Chan, WHO Director-General, 2008)

The WHO's **MPOWER policy package** can reverse the tobacco epidemic and prevent millions of tobacco-related deaths.

- **Monitor tobacco use and prevention policies**
 - Data from monitoring, both national and international, is necessary to ensure the success of the five other policy interventions in the MPOWER package. Good monitoring systems must track several indicators, including
- prevalence of tobacco use
- impact of policy interventions
- tobacco industry marketing, promotion and lobbying
- **Protect people from tobacco smoke**
 - There is no safe level of exposure to second-hand smoke. Second-hand smoke exposure increases the risk of coronary heart disease by 25–30% and the risk of lung cancer in non-smokers by 20–30% (28). On the other hand, smoke-free environments help smokers who want to quit. For example, smoke-free policies in workplaces in several industrialized nations have reduced total tobacco consumption among workers by an average of 29% (29).
- **Offer help to quit tobacco use**
 - Among smokers who are aware of the dangers of tobacco, three out of four want to quit (30). However, like people dependent on any addictive drug, it is difficult for most tobacco users to quit on their own and they benefit from help and support to overcome their dependence. It is the primary responsibility of the countries' health-care systems to treat tobacco dependence. Treatment includes various methods, from simple medical advice to pharmacotherapy. Treatment should be adapted to local conditions and cultures, and tailored to individual preferences and needs.
- **Warn about the dangers of tobacco**
 - Tobacco use is usually seen as merely a bad habit but people do not really know the health risks associated with its use. People generally believe they can reduce or stop tobacco use before health problems occur. However, the reality is that most tobacco users will never be able to quit, and up to half will die from tobacco-related illnesses. Therefore, it is extremely important that we warn the general public, especially the adolescents and young adults, about the dangers of tobacco. We need to make them

National Guidelines on Smoking Cessation

realize that tobacco is extremely addictive and dangerous to their health. All this can be achieved through action by governments and civil society.

- **Enforce bans on tobacco advertising, promotion and sponsorship**
 - Marketing bans are highly effective in reducing tobacco use. In the United States, national-level studies before and after advertising bans found a decline in tobacco consumption of up to 16% (31-35). Unfortunately, tobacco is falsely associated with desirable qualities such as youth, energy, glamour and sex appeal through marketing. Also, the tobacco industry has strong influence over the sporting and entertainment businesses via the media. Therefore, the tobacco industry strongly opposes marketing bans; and the tobacco industry lobbies heavily against even the narrowest restrictions.
- **Raise taxes on tobacco**
 - Increasing the price of tobacco through higher taxes is the single most effective way to decrease consumption and encourage tobacco users to quit (36). It has been demonstrated in a study that a 70% increase in the price of tobacco could prevent up to a quarter of all smoking-related deaths worldwide (37). Hence the W.H.O. strongly urges its member countries to increase the taxes on all tobacco-related products.

PHARMACOTHERAPY OF TOBACCO CESSATION

Ten years ago all we had to offer was going cold turkey or nicotine gum. The good news for smokers is that people now have a choice. There's never been a better time to quit.

(Michel C. Fiore, Chairperson Subcommittee on Cessation, US Department of Health and Human Services. The Tobacco Atlas 2009)

First-line medications

First-line medications are those that have been found to be safe and effective for tobacco dependence treatment except in the presence of contraindications or with specific populations for which there is insufficient evidence of effectiveness (i.e. pregnant women, smokeless tobacco users, light smokers, and adolescents). These first-line medications have an established empirical record of effectiveness, and clinicians should consider these agents first when choosing a medication.

There are now three first-line medical options available to assist smokers to quit smoking (38, 39):

- Nicotine replacement therapy
- Bupropion
- Varenicline

Meta-analysis (2008): Effectiveness and abstinence rates for various medications and medication combinations compared to placebo at 6-months postquit (n = 83 studies)^a

Medication	Number of arms	Estimated odds ratio (95% C.I.)	Estimated abstinence rate (95% C.I.)
Placebo	80	1.0	13.8
Monotherapies			
Varenicline (2 mg/day)	5	3.1 (2.5–3.8)	33.2 (28.9–37.8)
Nicotine Nasal Spray	4	2.3 (1.7–3.0)	26.7 (21.5–32.7)
High-Dose Nicotine Patch (> 25 mg) (These included both standard or long-term duration)	4	2.3 (1.7–3.0)	26.5 (21.3–32.5)
Long-Term Nicotine Gum (> 14 weeks)	6	2.2 (1.5–3.2)	26.1 (19.7–33.6)
Varenicline (1 mg/day)	3	2.1 (1.5–3.0)	25.4 (19.6–32.2)
Nicotine Inhaler	6	2.1 (1.5–2.9)	24.8 (19.1–31.6)
Clonidine	3	2.1 (1.2–3.7)	25.0 (15.7–37.3)
Bupropion SR	26	2.0 (1.8–2.2)	24.2 (22.2–26.4)
Nicotine Patch (6–14 weeks)	32	1.9 (1.7–2.2)	23.4 (21.3–25.8)
Long-Term Nicotine Patch (> 14 weeks)	10	1.9 (1.7–2.3)	23.7 (21.0–26.6)
Nortriptyline	5	1.8 (1.3–2.6)	22.5 (16.8–29.4)
Nicotine Gum (6–14 weeks)	15	1.5 (1.2–1.7)	19.0 (16.5–21.9)
Combination therapies			
Patch (long-term; > 14 weeks) + <i>ad lib</i> NRT (gum or spray)	3	3.6 (2.5–5.2)	36.5 (28.6–45.3)
Patch + Bupropion SR	3	2.5 (1.9–3.4)	28.9 (23.5–35.1)
Patch + Nortriptyline	2	2.3 (1.3–4.2)	27.3 (17.2–40.4)
Patch + Inhaler	2	2.2 (1.3–3.6)	25.8 (17.4–36.5)
Patch + Second generation antidepressants (paroxetine, venlafaxine)	3	2.0 (1.2–3.4)	24.3 (16.1–35.0)
Medications not shown to be effective			
Selective Serotonin Re-uptake Inhibitors (SSRIs)	3	1.0 (0.7–1.4)	13.7 (10.2–18.0)
Naltrexone	2	0.5 (0.2–1.2)	7.3 (3.1–16.2)

^a Go to www.surgeongeneral.gov/tobacco/gdlnrefs.htm for the articles used in this meta-analysis.

1. Nicotine Replacement Therapy

a) Nicotine Gum

Dosage

Nicotine gum is available in 2 mg and 4 mg (per piece) doses. The 2 mg gum is recommended for patients smoking less than 25 cigarettes per day, while the 4 mg gum being used for patients smoking more than 25 cigarettes per day. Generally, the gum should be used for up to 12 weeks, with no more than 24 pieces/day. Dosage and duration of therapy can be tailored to fit the needs of each individual patient. During the first few weeks it is recommended that one chewing gum be used every hour.

Prescribing Instructions

1. Chewing technique. Gum should be chewed slowly until a peppery or mint taste emerges, and then parked between cheek and gum for 10 minutes or until the taste dissipates to facilitate nicotine absorption through the oral mucosa.
2. Avoid eating and drinking anything except water for 15 minutes before and during chewing as acidic beverages interfere with the buccal absorption of nicotine.
3. Chew the gum on a fixed schedule (at least one piece every 1-2 hours during waking hours) for at least 1-3 months.

Availability

Nicotine Chewing Gum (Nukik 2 mg)

Precautions

- Pregnancy.
- Lactating women.
- Cardiovascular diseases.

Side Effects

- Mouth soreness
- Hiccups
- Dyspepsia
- Jaw ache. Generally mild and transient, and can often be alleviated by correcting the patient's chewing technique.

b) Nicotine Patch

Dosage

Treatment of 8 weeks or less has been shown to be as efficacious as longer treatment periods. 16 and 24-hour patches are of comparable efficacy. Clinicians should individualize treatment based on specific patient characteristics such as previous experience with the patch, amount smoked, degree of addictiveness, etc. Consider starting treatment on a lower patch dose in patients smoking 10 or fewer cigarettes per day.

National Guidelines on Smoking Cessation

Prescribing instructions

1. At the start of each day, the patient should place a new patch on a relatively hairless location, typically between the neck and waist.
2. No restrictions on activity while using the patch.
3. Patches should be applied as soon as the patient wakes up on their quit day.
4. In patients who experience sleep disruption, advise the patient to remove the 24-hour patch prior to bedtime or use the 16-hour patch.

Availability

Currently not freely available in the country

Recommended Dosages

15 mg for 8 weeks,

Then 10 mg for 2 weeks

And finally 5 mg for 2 weeks

Precautions

- Pregnancy.
- Lactating women.
- Cardiovascular diseases.

Side effects

- Local skin reaction. Usually mild and self-limiting, but may worsen over the course of therapy.
- Local treatment with hydrocortisone cream (1%) or triamcinolone cream (0.5%) and rotating patch sites may reduce such local reactions.
- Insomnia.

2. Bupropion (Zylexx 75 mg, Zyban 150mg)

Originally developed as an antidepressant, bupropion is a non-nicotine oral therapy which reduces the urge to smoke and reduces symptoms from nicotine withdrawal.

Dosage

It is recommended that patients begin with a dose of 150 mg QD for 3 days, then increase to 150 mg BD for 7-12 weeks. Bupropion SR treatment is started 1-2 weeks before the patient quits smoking. For maintenance therapy, consider bupropion SR 150 mg BD for up to 6 months.

Prescribing instructions

- Some patients will lose their desire to smoke prior to their quit date, or will spontaneously reduce the amount they smoke.

National Guidelines on Smoking Cessation

- If insomnia is marked, taking the PM dose earlier (in the afternoon, at least 8 hours after the first dose) may provide some relief.

Availability

Available as Zylexx in Pakistan (75mg tablet), Zyban (150 mg tablets; currently not available in Pakistan)

Precautions

- Pregnancy
- Lactating women
- Cardiovascular diseases. Infrequent reports of hypertension.

Side effects

- Insomnia
- Dry mouth

Contraindications

- History of a seizure
- History of an eating disorder
- Patients taking any MAO inhibitor
- Using another form of bupropion i.e. Wellbutrin or Wellbutrin SR

3. Varenicline (Chantix 0.5 mg and 1 mg Tablets)

Mechanism of Action

It targets the nicotinic acetylcholine (ACh) receptor in the reward centres in the brain, where it acts as a partial agonist to alleviate symptoms of craving and withdrawal.

Dosage

The recommended dose of varenicline is 1 mg twice daily following a 1 week titration as follows:

Days 1-3: 0.5 mg O.D.

Days 4-7: 0.5 mg B.D.

Day 8 – End of treatment: 1 mg B.D.

Prescribing instructions

The patient should set a date to stop smoking and Varenicline dosing should start 1 week before this date. Patients should be treated for 12 weeks. Once the patient has successfully stopped smoking at the end of 12 weeks, an additional course of 12 weeks treatment with Varenicline 1 mg B.D. is also recommended.

Availability

National Guidelines on Smoking Cessation

Film coated tablets available in 0.5 and 1 mg strengths as Varenicline start rate.

Precautions

- Known hypersensitivity to Varenicline
- Pregnancy
- Lactation

Side effects

- Nausea
- Headache
- Insomnia
- Abnormal dreams

Second-line medications

Second-line medications are also efficacious for treating tobacco dependence but their role is limited mainly because they may have more potential side effects than the 1st line medications. These are:

1. Clonidine
2. Nortriptyline

1. Clonidine

Dosage

Dose varies from 0.15-0.75 mg/day PO to 0.10-0.20 mg/day transdermal (TTS). Typically, the initial dose is 0.10 mg BD PO or 0.10 mg/day TTS, increasing by 0.10 mg/day per week if needed. Duration of therapy may also vary from 3-10 weeks.

Side effects

Dry mouth, drowsiness, dizziness, sedation and constipation. Blood pressure should be monitored while using clonidine, because of its antihypertensive effects.

2. Nortriptyline

The dose of nortriptyline used for smoking cessation is approximately 75 mg per day for 12 weeks. However, its application has been limited because of its potential for serious side effects. These include dry mouth, constipation, nausea, sedation and headaches, and a risk of arrhythmia in patients with cardiovascular disease. It can be dangerous in case of an overdose.

Possible future options

There are a number of tobacco cessation therapies and nicotine vaccines in development (40-42). The selective type 1 cannabinoid receptor antagonist rimonabant (43) and the nicotine receptor partial agonist varenicline (44) have demonstrated some efficacy in studies, but as yet there is insufficient evidence for their use in tobacco cessation. Further data and research are needed before any of these methods of treatment for tobacco dependency can be recommended.

“In the 20th century the tobacco epidemic killed one hundred million people worldwide. During the 21st century it could kill one billion!”

(WHO EMPOWER Report 2008)

Appendix 1

Summary of effectiveness data for smoking cessation interventions (abstinence at least six months) with information from all the latest Cochrane Reviews

Intervention(source)		Quit rate (%)	comparator	Odd ratio (95% confidence interval)
Self-help interventions ^a			No intervention	1.24(1.07-1.45)
Individual behavioural counselling ^b			Minimal behavioural intervention	1.56(1.32-1.84)
Physician advice ^c	Brief advice		No advice	1.74(1.48-2.05)
	Intensive advice		Minimal advice	1.44(1.24-1.67)
Group behaviour therapy ^d			No intervention	2.17(1.37-3.45)
			Self-help programme	2.04(1.60-2.60)
Nicotine replacement therapy (NRT) ^e			Placebo or non-NRT	1.58(1.50-1.66)
Telephone counselling ^f			Without telephone counselling	1.41(1.27-1.57)
			Less intensive counselling	1.33(1.21-1.47)
Quit and Win contests ^g		8-20%	Baseline community rate	
Bupropion ^h			Placebo	1.94(1.72 to 2.19)
Varenicline ⁱ			Placebo	2.33 (1.95 to 2.80)
a. Lancaster T, Stead LF. Self-help interventions for smoking cessation. Cochrane Database of Systematic Reviews 2005, Issue 3. Art. No.: CD001118. DOI: 10.1002/14651858.CD001118.pub2.				

National Guidelines on Smoking Cessation

b. Lancaster T, Stead LF. Individual behavioral counseling for smoking cessation. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD001292. DOI: 10.1002/14651858.CD001292.pub2.
c. Lancaster T, Stead LF. Physician advice for smoking cessation. Cochrane Database of Systematic Reviews 2004, Issue 4. Art. No.:CD000165. DOI: 10.1002/14651858.CD000165.pub2.
d. Stead LF, Lancaster T. Group behaviour therapy programmes for smoking cessation. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD001007. DOI: 10.1002/14651858.CD001007.pub2.
e. Stead LF, Perera R, BullenC,Mant D, Lancaster T.Nicotine replacement therapy for smoking cessation. Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD000146. DOI: 10.1002/14651858.CD000146.pub3.
f. Stead LF, Perera R, Lancaster T. Telephone counselling for smoking cessation. Cochrane Database of Systematic Reviews 2006, Issue 3.Art. No.: CD002850. DOI: 10.1002/14651858.CD002850.pub2.
g. Hey K, Perera R. Quit and Win contests for smoking cessation. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.:CD004986. DOI: 10.1002/14651858.CD004986.pub2.
h. Hughes JR, Stead LF, Lancaster T. Antidepressants for smoking cessation. Cochrane Database of Systematic Reviews 2007, Issue 1. Art. No.: CD000031. DOI: 10.1002/14651858.CD000031.pub3.
i. Cahill K, Stead LF, Lancaster T. Nicotine receptor partial agonists for smoking cessation. Cochrane Database of Systematic Reviews 2008, Issue 3. Art. No.: CD006103. DOI: 10.1002/14651858.CD006103.pub3

Appendix 2

HOW TO ASSESS TOBACCO DEPENDENCE

The first step in treating tobacco use and dependence is to identify tobacco users. All patients should be asked if they use tobacco and should have their tobacco-use status documented on a regular basis.

The assessments are to look for:

1. Level of addiction (using Fagerstrom Questionnaires + number of cigarettes smoked)
2. Readiness for quitting

MODIFIED FAGERSTRÖM TEST FOR NICOTINE DEPENDENCE (45)

1. How soon after you wake up do you smoke your first cigarette?
a. Within 5 minutes (3 points)
b. 5 to 30 minutes (2 points)
c. 31 to 60 minutes (1 point)
d. After 60 minutes (0 points)
2. Do you find it difficult not to smoke in places where you shouldn't, such as in church or school, in a movie, at the library, on a bus, in court or in a hospital?
a. Yes (1 point)
b. No (0 points)
3. Which cigarette would you most hate to give up; which cigarette do you treasure the most?
a. The first one in the morning (1 point)
b. Any other one (0 points)

National Guidelines on Smoking Cessation

4. How many cigarettes do you smoke each day?
a. 10 or fewer (0 points)
b. 11 to 20 (1 point)
c. 21 to 30 (2 points)
d. 31 or more (3 points)
5. Do you smoke more during the first few hours after waking up than during the rest of the day?
a. Yes (1 point)
b. No (0 points)
6. Do you still smoke if you are so sick that you are in bed most of the day or if you have a cold or the flu and have trouble breathing?
a. Yes (1 point)
b. No (0 points)
Scoring:
7 to 10 points = highly dependent;
4 to 6 points = moderately dependent;
less than 4 points = minimally dependent

Appendix 3

SMOKERS' FREQUENTLY ASKED QUESTIONS AND THEIR ANSWERS

Following are some of the commonly asked questions by smokers when they consult a health professional and their possible answer. Every individual is different and answers may have to be modified according to the specific situation. What message you give to a young person may not appeal to a middle aged person.

Q1. I am 60 years old. I started smoking 40 years ago. Damage has already been done. Isn't it too late to stop now? What would I gain by giving up smoking at this age?

Ans. It's never too late to give up smoking. By stopping smoking, further damage to our lungs, heart and other organs would stop. Research on respiratory functions has shown that by stopping smoking patient is able to avoid further deterioration in lung functions. This lung function saved might in the end determine whether a patient spends his remaining life in bed gasping for breath or walking and doing all routine physical work. Quality of life of an ex smoker is far superior compared to one who continues his smoking habit.

Q2. I have been smoking for over 20 years. Should I cut down on my cigarettes first or stop it altogether?

Ans. Research has shown that those who set a firm quit date and stop suddenly, have a better chance of quitting, compared to those who attempt a gradual reduction. However, reducing the number of cigarettes in the week before the quit date is helpful.

Q3. I am addicted to the nicotine present in the cigarettes and you are prescribing me nicotine chewing gum for quitting smoking. Isn't there a risk that I will be hooked on to nicotine chewing gum?

Ans. Nicotine taken through chewing gum only provides 1/3 to 1/2 of nicotine delivered by cigarettes. It helps in reducing the "CRAVING" & breaking the bad habit. Chances of getting hooked to nicotine chewing gum itself are less than 5%. When you take nicotine in gum form, you avoid the other 4700 toxins present in cigarettes. Nicotine itself does not cause Lung Cancer or Heart Attack.

Q4. How many chewing gums should I use every day?

Ans. Someone who smokes between 10-20 cigarettes/day needs to use 1 (2mg) chewing gum every hour for about 10 to 15 hours (during awake hours). Most failures occur because

people use less chewing gum than they need. One can also use additional gum at any time when there is an urge. Those who smoke more than 20 cigarettes should use a 4 mg chewing gum.

Q5. How can I use the chewing gum and for how long?

Ans. Generally chewing gum is required for a period of 2 to 3 months. Most people tend to reduce its use as time passes (craving for smoking get less after the initial 2 weeks). "Chew and park" method is the best. Chewing gum should stay in the mouth for 30 minutes or so.

Q6. I don't like the bad taste of chewing gum! It's very hard to chew!

Ans. Remember it is a medicine; not a sweet or Gulab Jamun. For example, in malaria one takes Quinine which is very bitter in taste but it is important to take it in order to get cured from Malaria. Most people do not like the taste of their first cigarette but after few days they begin to enjoy smoking. Similarly it takes few days before one starts feeling the benefit of nicotine chewing gum use. Side effects are Hiccough, Jaw ache and Indigestion.

Q7. Do all smokers need NRT, Zylexx (Bupropion) or Varenicline as a smoking cessation aid?

Ans. If a person smokes less than 10 cigarettes/day and has had previous successful long term quit attempts without any problems then NRT or other medicines may not be necessary. But if patient has tried and failed previous "self attempts" of quitting smoking then he or she should be advised to use some pharmacotherapy.

Q8. I have tried Nicotine Chewing gum before; it does not work for me...

Ans. Nicotine chewing gum does not give the same "pleasure" as cigarettes. It only provides 1/3 to 1/2 of nicotine that the cigarette was providing. It will certainly decrease the "craving" but will not give the same relief as cigarettes. Nicotine from Chewing gum is delivered slowly than from inhaled smoke. Most people who fail do not use adequate amounts of chewing gum or are not motivated enough to get rid of this addiction.

Q9. Is Nicotine chewing gum as effective as Nicotine patches?

Ans. All NRT (patch or chewing gum) are equally effective, one can combine the two products in heavily addicted smokers but there is no added benefit in controlled trials. Through skin patch there is sustained delivery of nicotine compared to chewing gum.

Q10. I have developed mouth ulcer ever since I started using chewing gum...

Ans. Mouth ulcers are the symptoms of nicotine withdrawal. It usually settles down in a few days. It's not because of using nicotine chewing gum.

Q11. I have heard that by quitting smoking I would gain weight, but I want to look smart?

Ans. Yes it's true that one gains about 6 kgs of weight within a year of quitting smoking. Nicotine chewing gum would delay the weight gain. Slight weight gain has far less risks compared to the serious hazards associated with "smoking". There is no need to worry too much about weight gain "Quitting smoking" & "controlling weight" should be tackled at a different time. One cannot climb two mountains at any one time!

Q12. Can I smoke one or two cigarettes after the quit date?

Ans. No, not at all. Not even one cigarette after the quit date. If you take even one cigarette you will go back to the same habit. "Do not feed a dying monster in your brain"!

Q13. Smoking helps me to relax in my very hectic and tense life. Whenever I try to quit smoking I become angry and start fighting with my colleagues.

Ans. Anger & restlessness are nicotine withdrawal symptoms. These symptoms last only for a few weeks. It can be controlled by NRT or with tablet ZYBAN. What you call relaxation is actually a relief from the "withdrawal" symptoms of nicotine addiction.

Q14. My life is very stressful. Smoking helps me in coping with stress.

Ans. It is wrong to say that smoking decreases stress levels. Studies have shown that stress level at 4 weeks after quitting smoking is far less than the stress level during smoking. Smokers get 10 – 15 episodes of stress every day which is relieved by smoking. In the first week after quitting smoking, smokers are more anxious but soon anxiety level goes down. (Give example of Heroin addiction).

Q15. How do I use Bupropion?

Ans. You should start one week prior to quit date. Initially take 150 mg daily, then on the day of quitting increase Zyban to 150 mg / twice/ day. Continue Zyban for about 2 to 3 months.

Q16. Is there any contra indication to use of Bupropion ?

Ans. If somebody has H/O epilepsy or seizures then Zyban should not be used.

Q17. What do I do if I get irresistible desire to smoke?

Ans. Delay, Escape, Distract; Remember the "urge" to smoke lasts for 6 minutes only.

Q18. My uncle smoked all his life but he is still alive at age 80. If smoking is so bad then why he is still alive?

Ans. It's true that some people are more vulnerable to the effects of tobacco use than others. Genetic make up of the individual does play a role in deciding the extent of damage caused by tobacco. Research has however clearly shown that half of all regular smokers will die prematurely from their smoking habit. On an average, smokers lose about 10 years of their life. For some smokers, years lost because of smoking may be as many as 35 years to as low as 1 to 2 years. The quality of life of a smoker is also much inferior compared to that of a non-smoker.

Q19. Life is full of risks in any case then why there is so much talk against smoking these days? What is the harm if some one smokes?

Ans. It's true that life has many risks. God has provided us with a brain to think and we should avoid all those actions, which tend to harm our health. Smoking is today the single largest preventable cause of disease and death. Active or passive smoking has serious health risks. Quitting smoking is in our hand. We can protect ourselves from several diseases which are directly caused by tobacco abuse.

Q 20 What are the side effects of Varenicline and are there any contraindication to its use

Ans. In general Varenicline is a safe medicine. Its main side effect is nausea which usually occur in the first week of the therapy. It's currently not recommended for use during pregnancy and for some one who has history of epilepsy.

REFERENCES

1. World Health Organization: The World Health Report 2003
2. WHO report on the global tobacco epidemic 2008, The MPOWER package
3. In: The Tobacco Atlas, Third Edition 2009, American Cancer Society, Atlanta, Georgia USA.
4. Burgri Y, Bhugri A, Hasan SH, Usman A et al. Cancer Patterns of Karachi division (1998-1999) *J Pak Med Assoc.* 2002 June 52 (6)24-6
5. Stead LF, Bergson G, Lancaster T. Physician advice for smoking cessation. Cochrane Database of Systematic Reviews 2008, Issue 2. Art. No.: CD000165. DOI: 10.1002/14651858.CD000165.pub3.
6. Piryani R M, Rizvi N. Smoking habits amongst house physicians working at Jinnah Postgraduate Medical Center, Karachi, Pakistan *Trop Doct.* 2004 Jan;34(1):44-5)
7. Khan FM, Husain SJ, Laeeq A, Awais A, Hussain SF, Khan JA. Smoking prevalence, knowledge and attitudes among medical students in Karachi, Pakistan. *East Mediterr Health J.* 2005 Sep-Nov; 11(5-6):952-8.
8. *Int J Tuberc Lung Dis.* 2007 Dec;11(12):1366-71. Cigarette smoking among adolescent females in Pakistan. Ganatra HA, Kalia S, Haque AS, Khan JA.
9. Imam SZ, Nawaz H, Sepah YJ, Pabaney AH, Ilyas M, Ghaffar S. Use of smokeless tobacco among groups of Pakistani medical students - a cross sectional study. *BMC Public Health.* 2007 Sep 3;7:231.
10. World Health Organization. *Tobacco: deadly in any form or disguise.* Geneva, World Health Organization,2006
http://www.who.int/tobacco/communications/events/wntd/2006/Tfi_Rapport.pdf
11. World Health Organization. *World health report 2002.* Geneva, World Health Organization, 2002
http://www.who.int/whr/2002/Overview_E.pdf.
12. Gottlieb N. Indian cigarettes gain popularity, but don't let the flavor fool you. *Journal of the National Cancer Institute, 1999, 91(21):1806–1807.*
13. Knowledge, attitudes and practice of university students regarding waterpipe smoking in Pakistan. A. Jawaid, A. M. Zafar, T-U. Rehman, M. R. Nazir, Z. A. Ghafoor, O. Afzal, J. A.Khan. *Int J Tuberc Lung Dis* 12(9):1077–1084
14. West R, McNeill A, Raw M. Smokeless tobacco cessation guidelines for health professionals in England. *Br Dent J.* 2004 May 22;196(10):611-8.
15. California Environmental Protection Agency. *Proposed identification of environmental tobacco smoke as a toxic air contaminant: executive summary.* Sacramento, California Environmental Protection Agency, June 2005 <ftp://ftp.arb.ca.gov/carbis/regact/ets2006/app3exe.pdf>

National Guidelines on Smoking Cessation

16. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006
<http://www.surgeongeneral.gov/library/secondhandsmoke/report/fullreport.pdf>
17. Behan DF, Eriksen MP, Lin Y. *Economic effects of environmental tobacco smoke*. 2005
[http://www.soa.org/files/pdf/ETSReportFinalDraft\(Final%203\).pdf](http://www.soa.org/files/pdf/ETSReportFinalDraft(Final%203).pdf)
18. McGhee SM et al. Cost of tobacco-related diseases, including passive smoking, in Hong Kong. *Tobacco Control*, 2006, 15(2):125–130.
19. Alam SE et al, *J Pak Med. Assoc*, 1998 March, 48;3, 64–6
20. Postma DS, Siafakas NM, eds. Management of Chronic Obstructive Pulmonary Disease. *Eur Respir Mon* 1998; 7.
21. U.S. Department of Health and Human Services. *The health consequences of smoking: a report of the Surgeon General*. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004
http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/chapters.htm
22. Tønnesen P, Carrozzi L, Fagerström KO, Gratiou C, Jimenez-Ruiz C, Nardini S, Viegi G, Lazzaro C, Campell IA, Dagli E, West R. Smoking cessation in patients with respiratory diseases: a high priority, integral component of therapy. *Eur Respir J*. 2007 Feb;29(2):390-417.
23. Batra V, Patkar AA, Berrettini WH, Weinstein SP, Leone FT. The genetic determinants of smoking. *Chest* 2003; 123: 1730–1739.
24. Watkins SS, Koob GF, Markou A. Neural mechanisms underlying nicotine addiction: acute positive reinforcement and withdrawal. *Nicotine Tob Res* 2000; 2: 19–37.
25. Hughes JR, Gust SW, Skoog K, Keenan RM, Fenwick JW. Symptoms of tobacco withdrawal. A replication and extension. *Arch Gen Psychiatry* 1991; 48: 52–59.
26. Shiffman S, West RJ, Gilbert DG. SRNT Work Group on the Assessment of Craving and Withdrawal in Clinical trials. *Nicotine Tob Res* 2004; 6: 599–614.
27. Prochaska JO, Goldstein MG. Process of smoking cessation. Implications for clinicians. *Clin Chest Med*. 1991 Dec;12(4):727-35.
28. U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006
<http://www.surgeongeneral.gov/library/secondhandsmoke/report/fullreport.pdf>
29. Fichtenberg CM, Glantz SA. Effect of smoke-free workplaces on smoking behaviour: systematic review. *British Medical Journal*, 2002, 325(7357):188.
30. Jones JM. *Smoking habits stable; most would like to quit*. 18 July 2006 (<http://www.gallup.com/poll/23791/Smoking-Habits-Stable-Most-Would-Like-Quit.aspx>, accessed 6 December 2007).
31. Smee C et al. *Effect of tobacco advertising on tobacco consumption: a discussion document reviewing the evidence*. London, Economic and Operational Research Division, Department of Health, 1992.

National Guidelines on Smoking Cessation

32. *Country profiles*. Fifth WHO seminar for a Tobacco-Free Europe, World Health Organization Regional Office for Europe, Warsaw, 26–28 October 1995.
33. Jha P, Chaloupka FJ. *Curbing the epidemic: governments and the economics of tobacco control*. Washington, DC, World Bank, 1999 <http://www.globalink.org/tobacco/wb/wb04.shtml>
34. Public health at a glance – Tobacco control. *Why is reducing use of tobacco a priority?* Washington, DC, World Bank, 2003
<http://siteresources.worldbank.org/INTPHAAG/Resources/AAGTobacControlEngv46-03.pdf>
35. WHO Tobacco Free Initiative. *Building blocks for tobacco control: a handbook*. Geneva, World Health Organization, 2004
<http://www.who.int/entity/tobacco/resources/publications/general/HANDBOOK%20Lowres%20with%20Cover.pdf>
36. Jha P et al. Tobacco Addiction. In: Jamison DT et al., eds. *Disease control priorities in developing countries*, 2nd ed. New York, Oxford University Press and Washington, DC, World Bank, 2006: 869–885 <http://files.dcp2.org/pdf/DCP/DCP46.pdf>
37. Fiore MC, Bailey WC, Cohen SJ, et al. *Treating tobacco use and dependence*. Clinical practice guideline. Rockville, MD: U.S. department of health and human services. Public Health Service. June 2000.
38. Zwar N, Richmond R, Borland R, Peters M, Stillman S, Litt J, Bell J, Caldwell B. Smoking cessation pharmacotherapy: an update for health professionals. Melbourne: Royal Australian College of General Practitioners, 2007.
39. Foulds J, Steinberg MB, Williams JM, Ziedonis DM. Developments in pharmacotherapy for tobacco dependence: past, present and future. *Drug Alcohol Rev* 2006; 25:59–71.
40. Siu EC, Tyndale RF. Non-nicotinic therapies for smoking cessation. *Annu Rev Pharmacol Toxicol* 2007;47:541–64.
41. Hall WD. Will nicotine genetics and a nicotine vaccine prevent cigarette smoking and smoking-related diseases? *PLoS Med* 2005; 2:e266.
42. Cahill K, Ussher M. Cannabinoid type 1 receptor antagonists (rimonabant) for smoking cessation. *Cochrane Database Syst Rev* 2007;3:CD005353.
43. Etter J. Cytisine for smoking cessation: a literature review and a meta-analysis. *Arch Intern Med* 2006;166:1553–9.
44. Swartz LH, Noell JW, Schroeder SW, Ary DV. A randomized control study of a fully automated internet based smoking cessation program. *Tobacco Control* 2006;15:7–12.
45. Adapted with permission from Heatherton TF, Kozlowski LT, Frecker RC, and Fagerström KO. The Fagerström test for nicotine dependence: a revision of the Fagerström Tolerance Questionnaire. *Br J Addict* 1991; 86:1119-27.