



NATIONAL GUIDELINE CLEARINGHOUSE™ (NGC™) GUIDELINE SYNTHESIS

TOBACCO USE CESSATION AND PREVENTION

Guidelines

1. Public Health Service (PHS). [Treating tobacco use and dependence](#). Rockville (MD): U.S. Department of Health and Human Services, Public Health Service; 2000 Jun. 197 p. [311 references]
2. University of Michigan Health System (UMHS). [Smoking cessation](#). Ann Arbor (Michigan): University of Michigan Health System, 2001. 9 p. [1 reference]

INTRODUCTION:

A direct comparison of PHS and UMHS recommendations for tobacco use cessation and prevention is provided in the tables below. [Table 1](#) provides an overview of the guidelines, [Table 2](#) compares the major recommendations, and [Table 3](#) compares the potential benefits and harms.

The comparison in [Table 2](#) is restricted to recommendations on interventions in direct control of the individual physician or health care professional. PHS also gives recommendations on interventions to be used by health systems and on the economic aspects of tobacco use cessation that are not addressed in this comparison. The user is directed to the individual guidelines for information on these recommendations.

The supporting evidence is classified and identified with the major recommendations, and the definitions of their rating schemes are included in the last rows of [Table 2](#).

Following the tables and discussion of content comparison, the areas of agreement and differences between the two guidelines are identified. In general, the timing of guideline development with respect to available data is an important factor to consider when evaluating areas of differences between these two guidelines. The PHS guideline cites the 1996 Agency for Health Care Policy and Research (now the Agency for Healthcare Research and Quality [AHRQ]) guideline, which reflected the scientific literature available between 1974 and 1994, as well as additional studies, which were available prior to the publication date of each guideline. UMHS utilized the literature searches from both the AHRQ guideline and the PHS guideline, but also supplemented the supporting evidence for its recommendations with subsequently published information. As previously mentioned, the AHRQ guideline was withdrawn when the PHS guideline was published.

Related Guidelines

Centers for Disease Control and Prevention/Task Force on Community Preventive Services. [Strategies for reducing exposure to environmental tobacco smoke, increasing tobacco-use cessation, and reducing initiation in communities and health-care systems](#). Am J Prev Med 2001 Feb; 20(2 Suppl): 10-5 [21 references].

Listed below are abbreviations used within the tables and discussions:

- AHRQ, Agency for Healthcare Research and Quality
- FDA, Food and Drug Administration
- NRT, Nicotine replacement therapy
- PHS, Public Health Service
- UMHS, University of Michigan Health System
- U.S., United States

TABLE 1: OVERVIEW OF GUIDELINE CONTENT	
OBJECTIVE AND SCOPE	
PHS (2000)	<ul style="list-style-type: none"> • To provide evidence-based recommendations along with a simple and flexible set of strategies that ensure that all patients who use tobacco are offered motivational interventions and effective treatments to overcome tobacco addiction • To include new effective clinical treatments for tobacco dependence that have become available since the 1996 AHRQ guideline was developed
UMHS (2001)	<ul style="list-style-type: none"> • To provide a systematic framework for care providers to assist patients in smoking cessation
TARGET POPULATION	
PHS (2000)	<p>The guideline addresses treatment and prevention in the following groups:</p> <ul style="list-style-type: none"> • Children • Adolescents • Adults
UMHS (2001)	<p>The guideline focuses primarily on adult smokers; adolescents are addressed in the context of special populations.</p>
INTENDED USERS	
PHS	Physicians; Nurses; Advance Practice Nurses; Physician Assistants;

(2000)	Allied Health Care Practitioners; Respiratory Care Practitioners; Physical Therapists; Health Plans; Dentists; Pharmacists; Managed Care Organizations; Psychologists
UMHS (2001)	Physicians; Health Care Providers
INTERVENTIONS AND PRACTICES CONSIDERED	
PHS (2000)	<p>Screening for tobacco use and chart documentation</p> <p>Tobacco cessation counseling</p> <p>Pharmacotherapy:</p> <p style="padding-left: 40px;">First-line:</p> <ul style="list-style-type: none"> • Bupropion SR (sustained-release bupropion) • Nicotine gum • Nicotine inhaler • Nicotine nasal spray • Nicotine patch <p style="padding-left: 40px;">Second-line:</p> <ul style="list-style-type: none"> • Clonidine • Nortriptyline <p style="padding-left: 40px;">Over-the-counter NRT</p> <p>Prevention strategies</p> <ul style="list-style-type: none"> • Relapse prevention treatment (counseling and pharmacologic) • Encouraging children and adolescents to stay abstinent <p>Coordination of care</p> <p>Tailoring of treatments to special populations</p> <p>Advice on weight gain after smoking cessation</p> <p>Advice on non-cigarette tobacco products</p> <p>Clinician training in strategies to assist tobacco users in quitting</p>
UMHS (2000)	Screening for tobacco use and chart documentation

	<p>Tobacco cessation counseling</p> <p>Pharmacotherapy:</p> <p>First-line:</p> <ul style="list-style-type: none"> • Bupropion SR (sustained-release bupropion) • Nicotine gum • Nicotine inhaler • Nicotine nasal spray • Nicotine patch <p>Second-line:</p> <ul style="list-style-type: none"> • Clonidine • Nortriptyline <p>Follow-up to prevent relapse</p> <p>Tailoring of treatments to special populations</p> <p>Advice on weight gain after smoking cessation</p> <p>Advice on non-cigarette tobacco products</p>
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TABLE 2: RECOMMENDATIONS FOR TOBACCO USE CESSATION AND PREVENTION	
SCREENING AND ASSESSMENT	
Screening for tobacco use	
PHS (2000)	<p>All patients should be asked if they use tobacco and should have their tobacco-use status documented on a regular basis (Strength of Evidence = A).</p> <p>Clinic screening systems such as expanding the vital signs to include tobacco-use status, or the use of other reminder systems such as chart stickers or computer prompts are essential for the consistent assessment, documentation, and intervention with tobacco use (Strength of Evidence = B).</p>
UMHS (2001)	<p>Ask all patients about smoking status and assess smoker's readiness to quit.</p>

	Smoking status should be documented in the medical record. Techniques to remind the physician of a patient's smoking status include smoking status stickers, listing tobacco use on active problem list of tobacco status as part of vital signs.
Willingness to quit and motivational strategies	
PHS (2000)	<p>Once a tobacco user is identified and advised to quit, the clinician should assess the patient's willingness to quit at this time (Strength of Evidence = C).</p> <ul style="list-style-type: none"> • If the patient is willing to make a quit attempt at this time, effective interventions should be initiated. • If the patient is unwilling to quit at this time, a motivational intervention should be provided. <p>Tobacco dependence treatment is effective and should be delivered even if specialized assessments are not used or available (Strength of Evidence = A).</p>
UMHS (2001)	<p>Offer motivational interventions to those not ready to quit using the 4 "R's"</p> <ul style="list-style-type: none"> • Relevance: impact of smoking on current health/illness and/or on children and others in household; economic costs of tobacco use • Risks: potential negative consequences of smoking • Rewards: Improved health, improved taste, money saved • Repeat above strategies with unmotivated patients at every visit
TREATMENT STRUCTURE AND INTENSITY	
Advise tobacco users to quit	
PHS (2000)	<p>All physicians should strongly advise every patient who smokes to quit because evidence shows that physician advice to quit smoking increases abstinence rates (Strength of Evidence = A).</p> <p>All clinicians should strongly advise their patients who use tobacco to quit. It is reasonable to believe that such advice is effective in increasing their patients' long-term quit rates (Strength of Evidence = B).</p>
UMHS (2001)	Advise all smokers to seriously consider making a quit attempt using a clear and personalized message.
Intensity of clinical interventions	
PHS	Tobacco users should be offered at least a minimal intervention (3

(2000)	<p>minutes or less) whether or not they are referred to an intensive intervention (Strength of Evidence = A).</p> <p>Intensive interventions are more effective than less intensive interventions and should be used whenever possible (Strength of Evidence = A).</p> <p>If feasible, clinicians should strive to meet four or more times with individuals quitting tobacco use (Strength of Evidence =A).</p> <p>Treatment should be delivered by a variety of clinician types to increase abstinence rates (Strength of Evidence = A).</p> <p>Treatments delivered by multiple types of clinicians are more effective than interventions delivered by a single type of clinician and are therefore encouraged (Strength of Evidence = C).</p>
UMHS (2001)	<p>Advice as brief as 3 minutes is effective in smoking cessation [C]. In addition to clinician counseling in the office, intensive counseling (frequently defined as a minimum of weekly meeting for the first 4-7 weeks of cessation) significantly enhances cessation rates. However, participation in intensive counseling is based largely on patients' motivation to quit and ability to pay [C].</p>
<p>Follow-up assessment and procedures (prevention of relapse)</p>	
PHS (2000)	<p>All patients who receive a tobacco dependence intervention should be assessed for abstinence at the completion of treatment and during subsequent clinic contacts. (1) Abstinent patients should receive relapse prevention treatment (2) Patients who have relapsed should be assessed to determine whether they are willing to make another quit attempt (Strength of Evidence = C).</p> <p>Every ex-tobacco user undergoing relapse prevention should receive congratulations on any success and strong encouragement to remain abstinent.</p>
UMHS (2001)	<p>Arrange follow-up either with phone call or office visit. Follow-up contact should occur soon after the quit date, preferably during the first week [C]. Extending treatment contacts over a number of weeks appears to increase cessation rates [D]. Further follow-up as needed.</p> <p>For abstinent patients, prevent relapse by congratulating successes and reinforcing reasons for quitting. Assess any difficulties with pharmacologic therapy. Patients who relapse should be considered for more intensive counseling or should have their pharmacotherapy reassessed and should be advised to make another quit attempt.</p>
<p>TREATMENT ELEMENTS</p>	

Counseling and behavior therapies	
PHS (2000)	<p>Three types of counseling and behavioral therapies result in higher abstinence rates and should be included in therapies: (1) providing smokers with practical counseling (problem solving skills/skills training); (2) providing social support as part of treatment; and (3) helping smokers obtain social support outside treatment (Strength of Evidence = B).</p> <p>Aversive smoking interventions (e.g., rapid smoking, rapid puffing) increase abstinence rates and may be used with smokers who desire such treatment or who have been unsuccessful using other interventions (Strength of Evidence = B).</p> <p>Proactive telephone counseling, and group and individual counseling formats are effective and should be used in smoking cessation interventions (Strength of Evidence = A).</p> <p>Smoking cessation interventions that are delivered in multiple formats increase abstinence rates and should be encouraged (Strength of Evidence = A).</p>
UMHS (2001)	<p>Help the patient with a quit plan:</p> <ul style="list-style-type: none"> • Set a quit date and record this on patient's chart. Ask the patient to mark his/her calendar. Quit date abstinence is a strong predictor of long-term success [C]. • Patient should inform family, friends, co-workers of quit plan and request support. • Have patient remove cigarettes from home, car, and workplace environments. • Anticipate challenges, particularly during the first critical few weeks (i.e., nicotine withdrawal symptoms). <p>Consider referral to intensive counseling (multi-session, group or individual). Referral considerations include:</p> <ul style="list-style-type: none"> • Multiple, unsuccessful quit attempts initiated by brief intervention • Increased need for skill building (coping strategies/problem solving), social support and relapse prevention • Psychiatric cofactors such as depression, eating disorder, anxiety disorder, attention deficit disorder, or alcohol abuse <p>Give advice on successful quitting.</p> <p>Provide supplemental educational materials.</p>
Adjunctive pharmacotherapy	
PHS	All patients attempting to quit should be encouraged to use effective

(2000)	<p>pharmacotherapies for smoking cessation except in the presence of special circumstances (Strength of Evidence = A).</p> <p>Long-term smoking cessation pharmacotherapy should be considered as a strategy to reduce the likelihood of relapse.</p> <p>The following first-line medications should be considered except in cases of contraindications (Strength of Evidence for all medications = A).</p> <ul style="list-style-type: none"> • Bupropion SR (Sustained release bupropion) • Nicotine gum • Nicotine inhaler • Nicotine nasal spray • Nicotine patch <p>The following second-line medications should be considered for use on a case-by-case basis after first-line treatments have been used or considered:</p> <ul style="list-style-type: none"> • Clonidine (Strength of Evidence = A) • Nortriptyline (Strength of Evidence = B) • Combination nicotine replacement therapy (Strength of Evidence = B) <p>Over-the-Counter Therapy:</p> <p>Over-the-counter nicotine patch therapy is more efficacious than placebo and its use should be encouraged (Strength of Evidence = B).</p>
UMHS (2000)	<p>Both nicotine replacement therapy (NRT) and bupropion hydrochloride (Zyban) have been shown to significantly improve cessation rates [A]. Therefore, pharmacologic therapy should be recommended to all patients except in the presence of special circumstances (see Considerations in Special Populations below). At the time of publication of the 2001 UMHS guideline, bupropion hydrochloride was the only non-nicotine product with Food and Drug Administration (FDA) approval for smoking cessation.</p> <p>Non-FDA approved agents with potential benefit in smoking cessation include nortriptyline and clonidine. These drugs may best be used as second-line agents when patients cannot take or do not wish to take either NRT or bupropion [D].</p>
CONSIDERATIONS IN SPECIAL POPULATIONS	
Pregnancy and second-hand smoke exposure in infants and children	
PHS (2000)	<p>Because of the serious risks of smoking to the pregnant smoker and the fetus, whenever possible pregnant smokers should be offered extended</p>

	<p>or augmented psychosocial interventions that exceed minimal advice to quit (Strength of Evidence = A).</p> <p>Clinicians should offer effective smoking cessation interventions to pregnant smokers at the first prenatal visit as well as throughout the course of pregnancy (Strength of evidence = B).</p> <p>Pharmacotherapy should be considered when a pregnant woman is otherwise unable to quit, and when the likelihood of quitting, with its potential benefits, outweighs the risks of the pharmacotherapy and potential continued smoking (Strength of Evidence = C).</p> <p>Clinicians in a pediatric setting should offer smoking cessation advice and interventions to parents to limit children's exposure to second-hand smoke (Strength of Evidence = B).</p>
UMHS (2001)	<p>Intensive counseling interventions increase quit rates during pregnancy [A]. If intensive counseling is not possible, brief in-office counseling still has a beneficial effect and should be offered. No studies have addressed the safety of nicotine replacement therapy or bupropion hydrochloride in pregnancy.</p>
Children and adolescents: counseling and treatment of tobacco-dependence	
PHS (2000)	<p>Counseling and behavioral interventions shown to be effective with adults should be considered with children and adolescents. The content of these interventions should be modified to be developmentally appropriate (Strength of Evidence = C).</p> <p>When treating adolescents, clinicians may consider prescriptions for bupropion SR or NRT when there is evidence of nicotine dependence and desire to quit (Strength of Evidence = C).</p>
UMHS (2001)	<p>The treatment strategies described for above for adults will apply to most adolescents who smoke. Clinicians should personalize the encounter to the individual adolescent's situation. Nicotine replacement therapy may be considered. Bupropion has been studied only in adults.</p>
Children and adolescents: prevention of initiation of smoking	
PHS (2000)	<p>Clinicians should screen pediatric and adolescent patients, and their parents for tobacco use and provide a strong message regarding the importance of totally abstaining from tobacco use (Strength of Evidence = C).</p> <p>Because of the importance of primary prevention in children and adolescents, clinicians should pay particular attention to delivering prevention messages to this population.</p>
UMHS	No recommendations offered

(2001)	
Gender concerns, racial/ethnic minorities, patients with psychiatric cofactors, older smokers, and hospitalized patients	
PHS (2000)	<p>Gender concerns</p> <p>The same smoking cessation treatments are effective for both men and women. Therefore, except in the case of the pregnant smoker, the same interventions can be used with both men and women (Strength of Evidence = B). Women may face different stressors and barriers to quitting that may be addressed in treatment. These include greater likelihood of depression, greater weight control concerns, hormonal cycles, and others.</p> <p>Racial and Ethnic Minorities</p> <p>Smoking cessation treatments have been shown to be effective across different racial and ethnic minorities. Therefore, members of racial and ethnic minorities should be provided treatments shown to be effective in the original guideline (Strength of Evidence = A).</p> <p>Whenever possible, tobacco dependence treatments should be modified or tailored to be appropriate for the ethnic or racial populations with which they are used (Strength of Evidence = C).</p> <p>Psychiatric cofactors</p> <p>Smokers with comorbid psychiatric conditions should be provided smoking cessation treatments identified as effective (Strength of Evidence = C).</p> <p>Bupropion SR and nortriptyline, efficacious treatments for smoking cessation in the general population, also are effective in treating depression. Therefore, bupropion SR and nortriptyline should be especially considered for the treatment of tobacco dependence in smokers with current or past history of depression (Strength of Evidence = C).</p> <p>Evidence indicates that smoking cessation interventions do not interfere with recovery from chemical dependency. Therefore, smokers receiving treatment for chemical dependency should be provided smoking cessation treatments shown to be effective, including both counseling and pharmacotherapy (Strength of Evidence = C).</p> <p>Older smokers</p> <p>Smoking cessation treatments have been shown to be effective for older adults. Therefore, older smokers should be provided smoking</p>

	<p>cessation treatments shown to be effective (Strength of Evidence = A).</p> <p>Hospitalized Smokers</p> <p>Smoking cessation treatments have been shown to be effective for hospitalized patients. Therefore, hospitalized patients should be provided smoking cessation treatments shown to be effective (Strength of Evidence = B).</p>
<p>UMHS (2001)</p>	<p>Gender concerns</p> <p>Smoking cessation treatments are shown to benefit both women and men [B]. Two studies suggest that some treatments are less efficacious in women than in men. Women may face different stressors and barriers to quitting (e.g., greater likelihood of depression, greater weight control concerns, and hormonal cycle). This research suggests cessation programs that address these issues would be more effective in treating women [D].</p> <p>Racial/ethnic minorities.</p> <p>Smoking cessation treatment has been shown to be effective across both racial and ethnic minorities [A]. Little research has examined intervention specifically designed for a particular ethnic or racial group; however, it is recommended that, when possible, smoking cessation treatment should be tailored to the specific ethnic or racial population with which they are used [C].</p> <p>Psychiatric cofactors</p> <p>If presence of psychiatric cofactors, such as depression, eating disorder, anxiety disorder, attention deficit disorder, or alcohol abuse, strongly consider referral to intensive counseling [B]. Treatment of cofactors must be undertaken in preparation for smoking cessation.</p> <p>Older smokers</p> <p>Smoking cessation treatment has been shown to be effective for older adults and should be provided [A]. Due to particular concerns of this population (e.g., mobility issues) the use of proactive telephone counseling appears to be promising as a treatment modality.</p> <p>Hospitalized smokers</p> <p>A few studies comparing augmented smoking cessation with usual care of hospitalized patients suggest smoking cessation treatment to be effective [B]. Hospitalization should be used as a springboard to promote smoking cessation.</p>

EVIDENCE RATING SCHEMES	
Rating Schemes	
PHS (2000)	<p>Definitions of Strength of Evidence Grades:</p> <ul style="list-style-type: none"> A. Multiple well-designed randomized clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings. B. Some evidence from randomized clinical trials supported the recommendation, but the scientific support was not optimal. For instance, either few randomized trials existed, the trials that did exist were somewhat inconsistent, or the trials were not directly relevant to the recommendation. C. Reserved for important clinical situations where the panel achieved consensus on the recommendation in the absence of relevant randomized controlled trials. <p>The availability of randomized clinical trials was not considered in economic recommendations.</p> <p>The panel declined to make recommendations when there was no relevant evidence or the evidence was too weak or inconsistent.</p>
UMHS (2001)	<p>Levels of evidence reflect the best available literature in support of an intervention or test:</p> <ul style="list-style-type: none"> A. Randomized controlled trials B. Controlled trials, no randomization C. Observational trials D. Opinion of expert panel

TABLE 3: POTENTIAL BENEFITS AND HARMS	
POTENTIAL BENEFITS	
PHS (2000)	<p>Assessment and treatment of tobacco use and dependence may:</p> <ul style="list-style-type: none"> • Enhance the rates of successful tobacco cessation • Decrease the incidence of medical illnesses related to tobacco use • Decrease the number of deaths related to tobacco use
UMHS (2001)	<p>Effective interventions and strategies are provided that could help health care providers assist patients in smoking cessation.</p>

POTENTIAL HARMS	
PHS (2000)	<p>Weight gain of as much as 30 pounds occurs in up to 10% of quitters.</p> <p>Exacerbation of comorbid psychiatric conditions may occur following cessation of tobacco use.</p> <p>Common side effects and their reported incidence for pharmacological agents approved by the U.S. Food and Drug Administration (FDA) for smoking cessation include the following:</p> <ul style="list-style-type: none"> • Bupropion SR: insomnia (35-40%) and dry mouth (10%) • Nicotine inhaler: local irritation in the mouth and throat (40%), coughing (32%), and rhinitis • Nicotine nasal spray: nasal/airway irritation and reactions (94%), dependency (15-20%) • Transdermal nicotine (the nicotine patch): local skin reaction (50%) and insomnia • Nicotine chewing gum: mouth soreness, hiccups, dyspepsia, and jaw ache <p>Common side effects and their reported incidence of pharmacologic agents not FDA approved for smoking cessation:</p> <ul style="list-style-type: none"> • Clonidine: dry mouth (40%), drowsiness (33%), dizziness (16%), sedation (10%), and constipation (10%) • Nortriptyline: sedation, dry mouth (64-78%), blurred vision (16%), urinary retention, lightheadedness (49%), and shaky hands (23%)
UMHS (2001)	<p>Side effects of medications may occur and include the following:</p> <ul style="list-style-type: none"> • Transdermal nicotine patch. Skin reactions such as pruritus, edema, rash; sleep disturbance • Nicotine gum (polacrilex). Jaw fatigue, hiccups, belching, and nausea • Nicotine nasal spray. Nasal irritation/rhinorrhea (98% of patients), sneeze, cough. Severity of effects decreases after first week • Nicotine inhaler. Cough, mouth and throat irritation • Bupropion hydrochloride SR (Zyban). Insomnia and dry mouth • Clonidine. Dry mouth and sedation • Nortriptyline. Dry mouth <p>No studies have addressed the safety of nicotine replacement therapy or bupropion hydrochloride in pregnancy. The Food and Drug Administration (FDA) pregnancy risk categories are: Zyban — category B, nicotine transdermal, spray and inhaler — category D, nicotine gum — category C.</p> <p>Most smokers who quit will gain weight, but the majority will gain less</p>

than 10 pounds.

GUIDELINE CONTENT COMPARISON

The Public Health Service (PHS) and the University of Michigan Health System (UMHS) present recommendations for tobacco use cessation and prevention. Both organizations provide explicit reasoning behind their judgments by rating the evidence upon which the recommendations are based.

Although both groups provide recommendations on identification of tobacco users and the benefits of counseling and adjunctive pharmacologic treatment for tobacco use, the PHS guideline gives a more extensive review and is more comprehensive than the UMHS guideline (which is adapted from PHS). PHS presents detailed outlines for both brief and intensive strategies to be used by clinicians for tobacco use intervention. In addition, PHS offers recommendations concerning clinician training in effective tobacco use treatments.

The most notable difference in content between PHS and UMHS, however, is that PHS provides specific recommendations for health care administrators, insurers, and purchasers in treating tobacco dependence. PHS argues that tobacco intervention efforts need to be expanded beyond individual clinicians for two reasons. First, individual efforts have yielded disappointing results in the past (clinicians have been failing to advise and assist their patients in quitting tobacco use). Secondly, Americans are receiving more of their health care in managed care settings. PHS identifies a number of institutional policies that would facilitate these treatment interventions.

Areas of Agreement

Since UMHS used the PHS literature search as the primary basis of its guideline recommendations, the recommendations for tobacco use cessation and prevention are in almost total concurrence.

Identification of Tobacco Users

PHS and UMHS are in general agreement regarding the need to identify tobacco users during routine clinic visits. Both groups recommend the use of a chart or sticker system to label a patient as a user or former user of tobacco. Both groups also acknowledge that tobacco use includes smokeless as well as smoked forms of tobacco.

Benefits of Counseling

PHS and UMHS agree on the effectiveness of counseling as a means for clinicians to modify the behavior and address tobacco dependence in their patients. The counseling should include discussions of the health benefits of quitting, self-help materials, and referral to community groups, if necessary. Patients who do not wish to quit should receive motivational interventions. The importance of frequent

and/or intensive counseling is also stressed by both organizations. In particular, the dose-response relationship between treatment intensity and abstinence from tobacco use is emphasized.

Adjunctive Pharmacologic Therapy

Both organizations endorse the use of nicotine replacement therapy (NRT) as an adjunct to counseling. PHS and UMHS indicate that pharmacotherapy including NRT should be considered for all patients except in special circumstances when contraindicated. PHS states that special considerations should be given before prescribing pharmacotherapy in patients with medical contraindications: those smoking fewer than 10 cigarettes/day, breast-feeding women, and adolescent smokers. UMHS states that the safety of NRT and bupropion have not been studied in pregnancy and refers to the FDA pregnancy risk categories for these drug therapies.

Bupropion is recommended as adjunctive treatment by both guideline groups; clonidine, nortriptyline, and combination NRT are recommended as second-line therapy. Both PHS and UMHS recommend combination NRT only for smokers who have failed several previous quit attempts using a single type of pharmacotherapy.

Counseling and Treatment of Children and Adolescents

PHS provides specific recommendations on counseling and treatment of child and adolescent tobacco users. PHS states that counseling must be tailored to the intellectual maturity of the patient and that emphasis should be placed on the short-term negative effects of tobacco use. PHS also recommends adjunctive pharmacotherapy but only when the clinician has evidence that the adolescent is nicotine dependent and is willing to quit. UMHS states that the same counseling and treatment strategies used in adults can be applied to adolescents; however, clinicians should personalize treatment to the individual adolescent.

Prevention Strategies

The need for follow-up to prevent and treat relapses is acknowledged by both guideline groups.

PHS emphasizes the need for clinicians to help prevent the initiation of tobacco use in children and adolescents through direct counseling or by participation in school-based or community programs. UMHS does not provide specific recommendations in this area.

Passive Smoke Exposure

PHS offers specific recommendations on counseling to parents on the need to limit children's exposure to second-hand smoke. UMHS states that the negative effects of passive smoking should be emphasized in trying to motivate smokers to quit.

Gender Concerns, Racial/Ethnic Minorities, Patients With Psychiatric Cofactors, Older Smokers, and Hospitalized Patients

Both groups agree that these special populations can benefit from many of the same treatments as the general population, but that treatment can be improved by recognizing the problems or concerns of the individual.

Areas of Differences

Non-Pharmacologic Interventions

PHS differs from UMHS in recommending aversive therapies, such as rapid smoking, for patients who desire this treatment or who are unsuccessful with other types of behavioral treatments. PHS cites evidence showing increased abstinence rates when this therapy is used. PHS also differs from UMHS by citing evidence of increased abstinence rates when multiple types of clinicians are involved in treatment.

Tobacco Use Treatment During Pregnancy

PHS gives detailed recommendations for cessation interventions during pregnancy, including assessing the pregnant woman's tobacco use status, the use of extended or augmented psychosocial interventions, and consideration of pharmacotherapy. PHS emphasizes that the risks of pharmacotherapy must be weighed against the risks of continued smoking during pregnancy. UMHS recommends counseling (intensive, if possible) for all pregnant women who smoke, but does not recommend pharmacotherapy because of the lack of safety studies in this population.

This Synthesis was originally prepared by ECRI on January 22, 2001. It has been subsequently modified a number of times. The most current version of this Synthesis removed outdated guidelines. A future version incorporating guidelines from the US Preventive Service Task Force, Singapore Ministry of Health, and the New Zealand Guidelines Group is currently being prepared.

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