

Smoking Cessation Within the U.S. Hispanic Community

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Tobacco use is a major public health concern in the United States. Despite the availability of effective treatments for tobacco use, most primary care physicians are not providing assistance. The first step in treating tobacco use is to screen all patients who present to a clinic or hospital. Smokers who are willing to quit can be offered counseling and/or pharmacotherapy. If the smoker is unwilling to quit, the physician can offer a motivational interview, which may encourage the patient to quit at a later time. Hispanics are less likely to visit a physician and, when they do, are offered treatment less frequently. They are also less likely to use pharmacotherapies in quitting. Hispanic smokers require smoking cessation interventions that are culturally based and address level of education, gender, and acculturation. Smokers who try to quit are two to four times more likely to be successful if using the two main treatments, counseling and pharmacotherapy. First-line medications include nicotine replacement products such as the patch, gum, lozenge, inhaler, and nasal spray. Second-line medications – bupropion, clonidine, and nortriptyline – have also been shown to be effective but contain more side effects than the first-line medications and are not FDA-approved. (Caring for Hispanic Patients. 2005;2:9-12. Copyright © 2005 American Academy of Family Physicians.)



Tobacco use is the single greatest cause of preventable death and disease in the United States, leading to one in five (or 430,000) deaths each year.¹ The Surgeon General's landmark report on smoking and health in 1964 recognized the health hazards of tobacco use and associated cigarette smoking, including lung cancer, laryngeal cancer, chronic bronchitis, and coronary artery disease. Since then, 28 Surgeon General reports on smoking and health have been published, and smoking prevalence has dropped steadily. From 1965 to 1990, the prevalence of adults smoking cigarettes declined dramatically from 42 percent to 25 percent, but it has decreased only slightly to 23 percent from 1990 to 2003.^{2,3}

Cigarette smoking also affects the health of nonsmokers. Environmental tobacco smoke has been found to increase respiratory infections in children and to increase the risk of lung cancer and heart disease in adults.² Pregnant women who smoke are more likely to have babies with low birth weight, and their infants have an increased risk of health disorders or death.²

Treatment of tobacco-related disease is an enormous economic burden, which costs the United States over \$100 billion each year.⁴ Smoking cessation interventions are extremely cost effective, as they prevent costly chronic disease such as heart disease, cancer, and pulmonary disease.⁵

Tobacco in the Hispanic Population

Although Hispanics as a whole have a lower cigarette smoking prevalence (16 percent) than African-Americans (22 percent) and Caucasians (23 percent), certain segments of the American Hispanic population have higher rates of smoking.³ This rate spans from 23 percent among Mexican-Americans, who constitute over half of the U.S. Hispanic population, to 30 percent among Puerto Ricans, who comprise 10 percent of

that population.⁶ These rates may be underestimated, however, as language barriers may lead to underreporting of cigarette use.⁷

In addition, the tobacco industry disproportionately advertises to Hispanic communities.⁸ About 20 percent of advertising revenue for Hispanic newspapers is from tobacco and alcohol companies.⁹ The tobacco industry also supports the National Hispanic Scholarship Fund, contributes to community organizations and Hispanic politicians, funds Hispanic cultural events, and promotes cigarette brands such as Rio and Dorado in these communities.⁸

With this in mind, it is clear that smoking cessation interventions within the Hispanic community are crucial. But to develop and promote smoking cessation programs, smoking behavior must be understood. A survey of Hispanics in the United States found that Hispanic smokers consume fewer cigarettes per day on average than Caucasians. It also found that as U.S. Hispanics become more acculturated, their smoking behavior becomes similar to the Caucasian population.¹⁰ In addition, Hispanic men smoke more than Hispanic women – 22 percent compared to 11 percent³ – and Hispanic women are more likely to remain smokers.¹⁰ In fact, approximately half of Hispanic women who ever smoked remain smokers, which is higher than what is found among Caucasian women.^{10,11} Another strong indicator of smoking status is one's level of education. Among individuals with a General Equivalency Diploma, 44 percent were smokers compared to 8 percent among those with a graduate degree.³

Effective Treatments

Primary care physicians have a tremendous opportunity to provide smoking cessation counseling to their patients who smoke. A national survey found that approximately 70 percent

Table 1. Abstinence Rates for Different Pharmacotherapies

Pharmacotherapy	Abstinence Rate
Bupropion SR	31 percent
Clonidine	26 percent
Nicotine gum	24 percent
Nicotine inhaler	23 percent
Nicotine nasal spray	31 percent
Nicotine patch	18 percent
Nortriptyline	30 percent

(Note: Data were prepared prior to the development of the nicotine lozenge.)

Adapted from 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.

of smokers would quit if urged to do so by their physicians, but only 25 percent of these smokers reported receiving this advice from their physicians.¹² Ethnic minorities are less likely to visit a physician, and when they do they are less likely to be offered treatment.⁷ Hispanic smokers are also less likely to use pharmacotherapies in attempting smoking cessation.¹³ One possible explanation for this could be that Hispanic smokers tend to smoke fewer cigarettes and physicians do not feel "light" smokers would benefit from treatment.¹³

In 2000, the U.S. Public Health Service published *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. This comprehensive guideline outlines effective counseling and pharmacotherapy treatments, such as sustained release bupropion hydrochloride, nicotine gum, nicotine lozenge, nicotine inhaler, nicotine spray, and the nicotine patch.⁵ These treatments have been proven to be effective. (See Table 1.) Smokers who receive counseling and/or pharmacotherapy have a 15 percent to 30 percent success rate, while those who try to quit on their own have a 7 percent success rate.⁵ Accordingly, the Public Health Service calls for all physicians to offer these treatments to all tobacco users.

One way to identify all smokers is to expand the vital signs to include tobacco use. Once a smoker has been identified, the physician can assess the patient's motivation and readiness to quit using the transtheoretical model,¹⁴ which involves four stages. In the initial precontemplation stage, the patient is not motivated to change. Next is the contemplation stage, where the patient is motivated to change but has no definite plans. In the action stage, the patient has a plan in place. Finally, in the maintenance stage, the patient has changed behavior and is involved in relapse prevention. Understanding these stages

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Table 2. The "5 A's" – Brief Strategies to Help the Patient Willing to Quit Tobacco Use

Ask	Systematically identify all tobacco users at every visit.
Advise	Strongly urge all tobacco users to quit.
Assess	Determine the patient's willingness to quit.
Assist	Aid the patient in quitting. Provide counseling and pharmacotherapy.
Arrange	Schedule follow-up contact.

Adapted from 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.

Table 3. The "5 R's" for the Patient Unwilling to Quit at This Time

Relevance	Encourage patient to indicate why quitting is personally relevant: health concerns, disease status, family or social situations, etc.
Risks	Have patient identify potential negative consequences of tobacco use: shortness of breath, asthma, harm to pregnancy, cardiac disease, pulmonary disease, cancer, etc.
Rewards	Have patient identify potential benefits of quitting: improved health, saving money, having healthier babies and children, etc.
Roadblocks	Have patient identify barriers to quitting: withdrawal symptoms, weight gain, lack of support, depression, enjoyment of tobacco, etc. Note elements of treatment that could address barriers.
Repetition	Repeat the motivation intervention each time the unmotivated patient visits the clinical setting.

Adapted from 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.

can help the physician propose a treatment plan based on the patient's readiness to quit.

A brief clinical discussion is an ideal intervention for the busy primary care physician. This intervention, which can be performed in about 3 minutes, can be used for smokers who are willing to quit and those not ready to quit. The discussion should be guided by the "5 A's" (see Table 2), which includes a recommendation for both counseling and pharmacotherapy.⁵

Patients who are not ready to quit may also benefit from a brief clinical intervention. These patients may be frustrated after a failed attempt to quit, not know about the health risks of smoking, or be unaware of smoking's financial impact. These patients require the motivation intervention of the "5 R's" (see Table 3).⁵

All Hispanic smokers should be offered these same interventions; however, a successful intervention for Hispanic smokers

Table 4. Nicotine Replacement Products for Smoking Cessation

Nicotine replacement therapy	Dosage	Duration	Adverse effects	Advantages	Disadvantages	Availability
Nicotine patch	21 mg every 24 hours, then 14 mg every 24 hours, then 7 mg every 24 hours or 15 mg every 16 hours	4 weeks, then 2 weeks, then 2 weeks or 8 weeks	Local skin irritation, insomnia	Provides steady level of nicotine, easy to use	User cannot adjust dose for craving	Prescription and over the counter (OTC)
Nicotine gum	1 to 24 cigarettes /day: 2 mg gum up to 24 pieces/day ≥25 cigarettes/day: 4 mg gum up to 24 pieces/day	Up to 12 weeks	Mouth soreness, sore jaw, dyspepsia	User controls dose, oral substitute for cigarettes	User cannot eat or drink while chewing gum, can damage dental work	OTC
Nicotine lozenge	2 mg or 4 mg lozenge every 1 to 2 hours (weeks 1-6), then 1 lozenge every 2 to 4 hours (weeks 7 to 9), then 1 lozenge every 4 to 8 hours (weeks 10 to 12)	12 weeks	Soreness of the teeth and gums, indigestion, irritated throat	User controls dose, oral substitute for cigarettes	User cannot eat or drink while using lozenge	OTC
Nicotine inhaler	6 to 16 cartridges per day (4 mg per cartridge)	3 to 6 months	Local irritation of mouth and throat	User controls dose	Frequent puffing needed	Prescription only
Nicotine nasal spray	8 to 40 doses per day (dose = 0.5 mg per nostril)	3 to 6 months	Nasal irritation	User controls dose, most rapid delivery of nicotine	Most irritating product to use	Prescription only

Adapted from 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. (Note: Information on nicotine lozenge was taken from package insert.)

also should address the cultural needs of the patients and the level of education, gender, and acculturation.¹⁵ The Hispanic value of *familismo* (family closeness and loyalty) can be used in developing a culturally appropriate smoking cessation program by emphasizing that quitting smoking can provide a good example to children and improve the health of the smoker and the family.¹⁶ Very few studies have investigated culturally specific smoking interventions in the Hispanic smoker, but an evaluation of a culturally appropriate behavioral smoking cessation intervention for Hispanics found an abstinence rate of 21 percent in the intervention group compared to 9 percent in the control group.¹⁷

Addressing Nicotine Withdrawal

A major barrier to smoking cessation is nicotine withdrawal, which peaks at 1 to 2 weeks and consists of cravings, anxiety, headaches, irritability, hunger, restlessness, decreased concentration, drowsiness, and sleep disturbance.¹⁸ Nicotine replacement therapy aids in decreasing these symptoms. Currently there are five nicotine replacement products: gum, lozenge, transdermal patch, nasal spray, and vapor inhaler. None deliver nicotine to the circulation as quickly as smoking a cigarette, but all have been found to be an effective smoking cessation treatment.¹⁹

Table 4 compares nicotine replacement products used as first-line medications for the treatment of tobacco use.

There are three non-nicotine pharmacotherapies for the treatment of tobacco use: bupropion, clonidine, and nortriptyline. Bupropion is an antidepressant that has been shown to be an effective smoking cessation aid when used in combination with counseling. It lowers the threshold for seizures¹⁹ and is a good choice for heavy smokers, patients concerned with weight gain, and those with a history of depression.⁵ Bupropion can also be used in combination with nicotine replacement products. Clonidine and nortriptyline have also been shown to be efficacious for the treatment of tobacco use, but they have not been approved by the FDA and their side effect profiles limit their use⁵ (see *Table 5*).

One study has examined the efficacy of pharmacotherapies specifically in the Hispanic population. Researchers conducted a double-blind, randomized control study of 104 subjects comparing the nicotine patch to brief clinical intervention and referral to a quit-line.²⁰ (Quit-lines are telephone-based services providing tobacco cessation information and caller support, which have been found to be an effective tool to help smokers quit.⁵ Quit-lines can provide universal access to all smokers and can address ethnic disparities and access to treatments.) Researchers

Table 5. Non-Nicotine Pharmacotherapy for Smoking Cessation

Pharmacotherapy	Dosage	Duration	Adverse effects	Advantages	Disadvantages	Availability
Sustained release bupropion (first-line medication)	150 mg per day for 3 days, then 150 mg twice a day (begin treatment 1 week prequit)	7 to 12 weeks (maintenance therapy for up to 6 months)	Insomnia, dry mouth	Easy to use	Increases risk of seizures (<0.1 percent)	Prescription only
Clonidine (second-line medication)	0.1 mg to 0.3 mg twice a day by mouth	3 to 10 weeks	Dry mouth, sedation, dizziness	Easy to use	Side effects limit use	Prescription only
Nortriptyline (second-line medication)	75 mg to 100 mg per day (begin treatment 4 weeks prequit)	12 weeks	Dry mouth, sedation, dizziness	Easy to use	Side effects common	Prescription only

Adapted from 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.

found a 46 percent abstinence rate in the nicotine patch group compared to 26 percent in the control group.²⁰ This information is encouraging, but there are two major limitations of the study: the lack of diversity in the Hispanic population (the majority of the participants were Mexican) and the short follow-up time (10 weeks). Future research in this area should include a larger sample size, more diverse Hispanic population, and longer follow-up period.

Conclusion

Tobacco use in the U.S. Hispanic population is a major public health concern. Effective smoking cessation treatments are often underutilized in this population and should be initiated in a culturally appropriate way. Further research that includes the Hispanic population in the study of pharmacotherapies in the treatment of tobacco use needs to be conducted. ❖

References

1. CDC. Cigarette smoking: attributable mortality – United States, 2000. *MMWR*. 2003;52:842-844.
2. Fiore MC, ed. Cigarette smoking. *Medical Clinics of North America*. 1992;76:2.
3. CDC. Cigarette smoking among adults – United States, 2003. *MMWR*. 2005;54:509-513.
4. National Center for Chronic Disease Prevention and Health Promotion. Reducing tobacco use. Available at http://www.cdc.gov/nccdphp/bb_tobacco/. Accessed Aug. 1, 2005.
5. 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.
6. CDC. Prevalence of cigarette use among 14 racial/ethnic populations – United States, 1999-2001. *MMWR*. 2004;53:49-52.
7. King TK, Borrelli B, Black C, Pinto BM, Marcus BH. Minority women and tobacco: implications for smoking cessation interventions. *Ann Behavioral Med*. 1997;19:301-313.
8. Tobacco Use Among U.S. Racial/Ethnic Minority Groups – African Americans, American Indians and Alaskan Natives, Asian Americans and Pacific Islanders, and Hispanics. A Report of the Surgeon General. Atlanta, Ga: Centers for Disease Control and Prevention; 1998.
9. Robinson RG, Barry M, Bloch M, et al. Report of the tobacco policy research group on marketing and promotions targeted at African Americans, Latinos, and women. *Tobacco Control*. 1992;1(suppl):S24-S30.
10. Pérez-Stable EJ, Ramirez A, Villareal R, et al. Cigarette smoking behavior among U.S. Latino men and women from different countries of origin. *Am J Public Health*. 2001;91:1424-1430.
11. Maher JE, Boysun MJ, Rohde K, et al. Are Latinos really less likely to be smokers? Lessons from Oregon. *Nicotine & Tobacco Research*. 2005;7:283-287.
12. Janz NK, Becker MH, Kirsch JP, Eraker SA, Billi JE, Wooliscroft JO. Evaluation of a minimal contact smoking cessation intervention in an outpatient setting. *Am J Public Health*. 1987;77:805-809.

Table 6. Smoking Cessation Resources

Smoking: Steps to Help You Break the Habit (Fumar: Pasos Para Ayudarle a Romper el Hábito), shown on page 13	http://www.familydoctor.org
Guide to Quitting Smoking: Don't Leave It for Tomorrow, Quit Today (Guía Para Dejar de Fumar: No lo Dejes Para Manana, Deje de Fumar Hoy)	http://www.smokefree.gov/info.html
National Network of Tobacco Cessation Quit-lines	1-800-QUITNOW (1-800-794-8669)
National Cancer Institute	http://www.smokefree.gov
Centers for Disease Control and Prevention	http://www.cdc.gov/tobacco
American Lung Association	http://www.lungusa.org/tobacco
Agency for Healthcare Research and Quality	http://www.ahrq.gov
American Cancer Society	http://www.cancer.org
Center for Tobacco Cessation	http://www.ctcinfo.org
Office of the Surgeon General	http://www.surgeongeneral.gov/tobacco

13. Levinson AH, Pérez-Stable EJ, Espinoza P, Flores ET, Byers TE. Latinos report less use of pharmaceutical aids when trying to quit smoking. *Am J Preventive Med*. 2004;26:105-111.
14. Bernstein E, Bernstein J. Case Studies in Emergency Medicine and the Health of the Public. London: Jones and Bartlett Publishers; 1996.
15. Marin G, Marin BV, Otero-Sabogal R, Sabogal F, Pérez-Stable EJ. The role of acculturation in the attitudes, norms and expectancies of Hispanic smokers. *J Cross Cultural Psychology*. 1989;20:399-415.
16. Woodruff SI, Talavera GA, Elder, JP. Evaluation of a culturally appropriate smoking cessation intervention for Latinos. *Tobacco Control*. 2002;11:361-367.
17. Leischow SJ, Hill A, Cook G. The effect of transdermal nicotine for the treatment of Hispanic smokers. *Am J Health Behavior*. 1996;20:304-311.
18. Hughes JR, Hatsukami D. Signs and symptoms of tobacco withdrawal. *Arch Gen Psychiatry*. 1986;43:289-294.
19. Rigotti NA. Treatment of tobacco use and dependence. *NEJM*. 2002;346:506-512.
20. Baezconde-Garbanati L, Garbanati J. Tailoring tobacco control messages for Hispanic populations. *Tobacco Control*. 2000;9(Suppl 1):i51.