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# Cigarette Smoking and the Desire to Quit Among Individuals Living with HIV

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## ABSTRACT

Among individuals living with human immunodeficiency virus (HIV), studies have found that smokers are at greater risk than nonsmokers to develop bacterial pneumonia, oral lesions and acquired immune deficiency syndrome (AIDS) dementia complex. Information is lacking regarding the prevalence of cigarette smoking among people living with HIV or about their intentions to quit smoking. A survey was conducted with a sample of patients attending an HIV outpatient clinic at San Francisco General Hospital to assess the prevalence of cigarette smoking and the level of interest in quitting. In total, 228 assessments were completed. Study results revealed a high percentage of smokers among our sample of individuals living with HIV compared to the percentage of smokers found in the general adult population. A total of 123 individuals (54%) reported that they smoked cigarettes. Men were more than twice as likely to have made previous attempts at smoking cessation than were woman. The majority of cigarette smokers (63%) reported that they were currently thinking about quitting. Respondents' preferences for types of smoking cessation methods are discussed, and recommendations are proposed for identifying and treating tobacco dependence in this population.

## INTRODUCTION

**I**N THE GENERAL POPULATION, cigarette smoking has been associated with increased rates of morbidity, specifically with increased risk of cancer, coronary heart disease, stroke, respiratory infections, and chronic lung disease. More than 430,000 U.S. deaths each year are attributable to tobacco use, with an economic burden of at least \$50 billion for medical expenditures and another \$50 billion in indirect costs.<sup>1</sup>

Among individuals living with human immunodeficiency virus (HIV), studies have found that smokers are at greater risk than non-

smokers to develop bacterial pneumonia, oral lesions and acquired immunodeficiency syndrome (AIDS) dementia complex.<sup>2-4</sup> The progression of smoking-induced emphysema is hastened in individuals with HIV infection as well.<sup>5</sup> Increased rates of lung cancer among individuals living with HIV/AIDS appear to be attributed to smoking rather than immunosuppression.<sup>6</sup>

Of the estimated 70% of cigarette smokers in the general adult U.S. population who reported visiting a physician or other health care professional at least once within the preceding 12 months, only 37% reported having received ad-

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vice from their health care provider to quit smoking.<sup>7</sup> This finding suggests that a significant number of opportunities are missed by health care professionals to advise their patients to quit smoking, despite the fact that smoking cessation has been shown to be clinically successful and cost effective.<sup>8</sup>

In the general population, smoking prevalence and cessation success rates vary among minority subgroups of the population.<sup>8</sup> While little is known about the prevalence of cigarette smoking among people living with HIV or about their intentions to quit smoking, there has been speculation that this group might lack motivation to quit, because of a pessimistic view of the likelihood of long-term survival. Moreover, clinicians who hold similarly unhelpful views might be less likely to recommend smoking cessation to their patients living with HIV, even though current research indicates that HIV patients can benefit from quitting.<sup>9</sup> Physicians, too, could be reluctant to prescribe nicotine replacement, not wishing to add a further burden to an already complicated and cumbersome medical regimen.

The advent of new antiretroviral treatments has decreased AIDS-related morbidity and mortality dramatically.<sup>10</sup> For the most part, the focus of primary care delivery has moved from treating HIV disease as a terminal illness to developing treatment strategies to manage HIV as a chronic condition.<sup>11</sup> For many, improved management of HIV disease has fostered a more optimistic outlook for long-term survival and provided a basis for seeking general improvement in the quality of life, which in turn has offered motivation to quit smoking. Improved prospects for HIV patients have also provided the impetus for clinicians to recommend smoking abstinence and cessation programs to individuals living with HIV. This paper describes the results of a survey that assessed the prevalence of cigarette smoking and the level of interest in quitting among a sample of patients attending an HIV outpatient clinic at San Francisco General Hospital (SFGH).

## MATERIALS AND METHODS

A survey was administered by clinicians to HIV patients attending scheduled appoint-

ments at the clinic during a 3-week period in 1998. The total number of unduplicated HIV patients receiving care at the clinic during 1998 was, 2421, with a majority of them being male (84%). Although data on HIV risk factors for the overall patient population were not available through the clinic, a breakdown by HIV risk category for clinic patients living with an AIDS diagnosis was available through Department of Public Health AIDS Office internal surveillance reports (L. Hsu, personal communication, 2001) as follows: males who have sex with males (64%), males who have sex with males and who are also injection drug users (18%), males who are injection drug users (9%), females who are injection drug users (5%), females who have sex with males (2%), other/unknown risk for males (<1%) and other/unknown risk for females (<1%).

In order to encourage clinicians to complete the smoking assessment with their patients, a questionnaire was attached to the cover of each medical record prior to the patient's scheduled clinic appointment. To ease the time commitment of clinicians during patient visits, the questionnaire was brief and contained only nine short, closed-end questions with only a few response options. First, patients were asked if they smoked cigarettes. Those individuals who identified themselves as smokers were then asked about their smoking behavior in terms of frequency, length of time smoking, and number of previous cessation attempts. Participants were also asked whether they were thinking about quitting. Among those who indicated that they wished to quit smoking, clinicians assessed levels of interest in group programs for smoking cessation and/or nicotine replacement treatments. Data were compiled and entered into a database, without identifying information, by the clinic's health education coordinator. SPSS for Windows (Version 10) was the statistical package used for data analysis.

## RESULTS

A total of 228 assessments were completed. The average age of respondents was 40 years old (range, 22–71). A total of 123 individuals (54%) reported that they smoked cigarettes. Charac-

teristics of smokers are reported in Table 1. Most of the smokers were men (83%). Smokers reported that they had smoked for many years (mean, 21.8 years), with men reporting an average of one pack of cigarettes per day and women reporting an average of three-quarters of a pack of cigarettes per day. The majority of smokers (72%) reported that they had tried to quit smoking previously. The proportion of men (81%) who reported previous cessation attempts was twice that of woman (40%), with the difference being statistically significant ( $\chi^2 (1, N = 116) = 14.68, p = <0.001$ ). The majority of smokers (63%) reported that they were currently thinking about quitting, with no significant difference found between men and women. Of those respondents thinking about quitting, 69% expressed interest in participating in a group smoking cessation program, while 82% indicated interest in receiving a prescription for a nicotine replacement medication. A majority of smokers considering cessation (56%) reported that they were interested in both group intervention and nicotine replacement.

## DISCUSSION

Study results revealed a high percentage of smokers among our sample of individuals living with HIV compared to the percentage of smokers found in the general adult population. The percentage of smokers in the study sample (54%) was three times that of the general adult populations of the City and County of San Francisco (18%)<sup>12</sup> and the State of California (18%).<sup>13,14</sup> Consistent with the smoking cessation literature,<sup>15</sup> our data reveal that most cigarette smokers had previously attempted smoking cessation. Men in this study were more than

twice as likely to have attempted smoking cessation than woman. Therefore, because a history of previous attempts at quitting has been found to be a predictor of smoking relapse,<sup>16</sup> men may require additional follow-up to improve their long-term abstinence from smoking.

Contrary to what has been suggested in the literature, our data reveal that the majority of cigarette smokers living with HIV mirror their counterparts in the general population of the United States population in the desire to quit smoking. Furthermore, most respondents were interested in obtaining assistance and expressed willingness to use a combination of smoking cessation methods, including nicotine replacement and participation in a group intervention. This is encouraging, since the use of a combination of smoking cessation methods (as compared to one method alone) increases the likelihood of long-term success rates.<sup>8</sup> Moreover, it is plausible that those who reported a motivation to quit smoking did so as a result of an increased optimism regarding their longevity and the general quality of their lives.

Limitations of the study included self-reported data, in which the accuracy of smoking status could not be verified and the unavailability of specific data (because of confidentiality concerns) that would have allowed for a comparison of smoking prevalence based on key variables, such as sexual orientation and drug use.

## CONCLUSION

As with the general population and in accordance with the current clinical guideline for identifying and treating tobacco dependence recommended by the U.S. Department of Health and Human Services (DHHS),<sup>8</sup> clinicians treating HIV patients should assess tobacco use and document the results at every clinic visit. As the availability of effective HIV treatments continues to increase, the number of HIV patients who seek medical care will also increase,<sup>17</sup> which should give provides more opportunities to identify individuals who smoke. In accordance with the DHHS guideline, once smokers are identified, clinicians should first advise their patients to quit and then assess their willingness to do so. Given time constraints, clinicians should be trained in techniques for conducting

TABLE 1. CHARACTERISTICS OF HIV-POSITIVE SMOKERS

	<i>Male</i>	<i>Female</i>	<i>Combined</i>
Gender (%) <sup>a</sup>	83.3	16.7	
Mean age in years	40.2	42.2	40.5
Average # years smoking	21.2	26.1	21.8
Mean # of cigarette packs/day	1.0	.75	.95

<sup>a</sup>Percentages do not include three respondents for whom gender was not recorded.

brief interventions, using a combination of counseling and pharmacotherapy to help their patients quit smoking. Follow-up contacts should be part of a protocol that addresses the possibility of relapses. Efforts to train physicians in this area will contribute to meeting one of the objectives of the Nation's Healthy People 2010, to increase the proportion of physicians who counsel their patients to stop using tobacco.<sup>18</sup> In light of the evidence indicating that more intensive treatments (such as those used in multiple group session interventions) produce greater success rates,<sup>8</sup> patients needing more intensive treatment should be referred to reputable smoking cessation programs such as those offered by the American Lung Association. However, established programs would be well advised to address the unique concerns of individuals living with HIV by adapting to their special circumstances. For example, focus groups conducted with cigarette smokers living with HIV revealed that participants preferred group interventions comprised exclusively of HIV positive individuals.<sup>19</sup>

Evidence supports that even very brief smoking cessation interventions, lasting less than 3 minutes, can have a positive impact on overall abstinence rates.<sup>8</sup> Considering the high prevalence of cigarette smoking found in this study sample of HIV patients, it is incumbent upon health care professionals to promote smoking cessation as part of the routine delivery of health care services to this particularly vulnerable population.

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