

WHO'S SMOKING IN NEW YORK?



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Executive Summary

Since 1989 the prevalence of smoking in New York has fallen by about 24%. Despite this statewide decline, tobacco use has stagnated and remains high among certain population groups within the state. In this report we explore these differences in tobacco use in more detail. Specifically, we identify groups of individuals in New York who have disproportionately high rates of smoking relative to other populations in the state. We also highlight groups with the greatest number of smokers, and as such, bear the greatest health burden associated with tobacco use.

Specific findings include the following:

- Smoking prevalence, daily cigarette consumption, and smoking cessation rates all differ markedly by gender, age, and race/ethnicity.
- Non-Hispanic white males aged 40 to 64 represent the largest group of smokers in New York State.
- There is a strong socioeconomic gradient in tobacco use, with smoking prevalence highest among undereducated, low-income, rural individuals.
- Nearly half (47%) of all smokers are either on Medicaid or have no health insurance.
- Other significant populations of smokers include those between the ages of 40 and 64 (43%), those with annual family incomes of less than \$30,000 (39%), and those with mental health problems (20%).

Moving forward, we suggest implementing focused evidence-based interventions that specifically target these major populations of smokers.

1. Introduction

Statewide estimates of tobacco use mask considerable variation in smoking prevalence and the associated health burden across many population groups within the state.

Tobacco use is the leading preventable cause of death and disease in the United States (Mokdad et al., 2004). Each year, in New York State and throughout the country, thousands of people die from smoking-related diseases and thousands more suffer from exposure to secondhand smoke. Since 1989, when the first clean indoor air law was passed in New York State, the prevalence of smoking in New York has decreased from 23.8% to about 18.2% (Behavioral Risk Factor Surveillance System [BRFSS], 1989–2006). However, statewide estimates of tobacco use mask considerable variation in smoking prevalence and the associated health burden across many population groups within the state.

The goal of this report is to identify differences in the prevalence of smoking and in the numbers of smokers statewide among various population groups. The population groups examined in this report are presented in three broad categories: (1) demographic characteristics, including gender, age, race/ethnicity, and geographic location; (2) socioeconomic characteristics, including income, education, and medical insurance; and (3) personal characteristics, including mental health and sexual orientation.

The report identifies groups within each category with disproportionately high rates of smoking prevalence and highlights groups with the greatest numbers of smokers. Although smoking prevalence is the most widely used indicator of tobacco use, it does not reflect important differences between many groups in terms of cigarette consumption and smoking cessation. Therefore, the report also explores differences in daily cigarette consumption and differences in the percentage of current smokers who attempted to quit smoking during the past year and the percentage of current and former smokers who were able to maintain quit attempts for 6 months or more.

2. Background

2.1 Demographic Characteristics

2.1.1 Gender

The 2004 National Health Interview Survey (NHIS) estimates that 24% of adult males smoke and 19% of adult females smoke.

Historically, smoking prevalence has been significantly lower among women than among men, due in part to the widespread social disapproval of women smoking. Throughout the twentieth century, however, as social disapproval of women smoking has waned, smoking initiation by women has increased (Waldron, 1991). In addition, women have been differentially targeted by tobacco advertising (Pierce et al., 1991; Boyd et al., 2003), resulting in significant increases in the number of young women smokers (Berman and Gritz, 1991; French and Perry, 1996). Smoking rates among men have decreased continually since the 1950s, whereas smoking rates among women increased until the mid-1970s (CDC, 1999). Smoking prevalence has declined since then, from 40% to 24% among men and from 30% to 19% among women (CDC, 1999; USDHHS, 2004).

Differences between men and women in terms of smoking behaviors are well documented. Many women start smoking to reduce stress, whereas many men start smoking to be more energetic and alert (Pogun, 2001). In terms of disease risk, women appear to be more susceptible than men to smoking-related cardiovascular diseases and diabetes (Bolego et al., 2002; Njolstad et al., 1996; Will et al., 2001). According to the 2001 Surgeon General's report, *Women and Smoking* (USDHHS, 2001), there are no consistent gender-specific differences in terms of cessation interventions; however, more women stop smoking during pregnancy than at any other time during their life, and cessation interventions targeting women during pregnancy have been shown to be effective.

2.1.2 Age

Smoking patterns also have been shown to differ dramatically by age. Currently, smoking prevalence is 25% among adults aged 18 to 24 and approximately 24% among adults aged 25 to 39 and adults aged 40 to 64. In contrast, only 9% of adults aged 65 or older smoke, significantly less than all other age groups (USDHHS, 2004). The low prevalence of smoking among this age group is a result of continuing smokers being less likely to live to older ages than never smokers or even former smokers (USDHHS, 1989, 1990). In addition, older people have been found to be more motivated to maintain abstinence once they do quit (Giovino, 2002; Hatziandreu et al., 1990).

2.1.3 Race/Ethnicity

The existence of racial/ethnic differences in tobacco use has been widely acknowledged for some time and, as a result, has been extensively monitored and studied. The 1998 Surgeon General's report, *Tobacco Use Among U.S. Racial/Ethnic Minority Groups* (USDHHS, 1998), concludes that cigarette smoking is a major cause of disease and death among all four racial groups examined (African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics). However, African Americans—specifically men from the post-World War II cohort (Leistikow et al., 2005)—bear the greatest health burden. The 1998 Surgeon General's report also notes that differences in the degree of risk are directly related to differences in smoking patterns between the groups. American Indians and Alaska Natives have the highest prevalence of tobacco use as a group; however, the prevalence of smoking among African American and Asian American men is also relatively high. Asian American and Hispanic women, on the other hand, have the lowest prevalence of tobacco use (USDHHS, 1998, 2004).

Important differences also exist between non-Hispanic white and minority smokers. According to the 2004 NHIS, smoking prevalence is lower among non-Hispanic whites (22.4%) than among American Indians/Alaska Natives (33.6%) but higher among whites than among Hispanics (16.0%) and Asians (11.6%). Currently, smoking prevalence among African Americans (21.0%) and non-Hispanic whites (22.4%) is roughly equivalent. Smoking prevalence also differs within race/ethnicity by gender. According to the 2004 NHIS, male non-Hispanic whites, African Americans, Hispanics, and Asian Americans are all more likely to smoke than their female counterparts within their racial/ethnic groups.

Finally, evidence suggests that Hispanic smokers are more likely than white non-Hispanic smokers to attempt to quit smoking. However, Hispanic smokers are less likely to receive cessation advice from physicians and less likely to use cessation medications and nicotine replacement therapy (NRT) and, as a result, are less successful in their quit attempts than their non-Hispanic white counterparts (Levinson et al., 2004).

There is a growing recognition that, rather than a biological construct, differences by race/ethnicity result from several other interacting factors, including economics, culture, and other social influences.

Given all of these differences, there is a growing recognition that, rather than a biological construct, differences by race/ethnicity result from several other interacting factors, including economics, culture, and other social influences (Leischow et al., 2000; Krieger, 2000).

2.2 Socioeconomic Characteristics

According to the 1989 Surgeon General's report, *Reducing the Health Consequences of Smoking: 25 Years of Progress* (USDHHS, 1989), both education and income are important determinants of an individual's smoking status. Currently, smoking prevalence among adults with less than a high school education (27.2%) is more than three times higher than smoking prevalence among adults with postgraduate education (8.8%) (USDHHS, 2004). Likewise, smoking prevalence among men and women declines with increases in income. The 1989 Surgeon General's report also notes that "such trends indicate that the social and economic context affects the relationship to personal characteristics with smoking" and that "observed differences of race and sex are attributable to effects of income and education" (USDHHS, 1989, p. 347).

Several recent studies confirm the results of the Surgeon General's report. Specifically, Barbeau et al. (2004a) found that smoking prevalence was highest among individuals with working class jobs, low education, and low income and that each of these indicators of socioeconomic status was independently and positively associated with smoking prevalence. Another study found that smoking was associated with low income and that it clusters with social-contextual factors, such as unemployment, lack of social support, living in unsafe neighborhoods, and having unmet needs for food and medical care (Sorensen et al., 2004). Similarly, a study that monitored marketing patterns of the tobacco industry found that the industry considered "working class' young adults to be a critical market segment to promote growth of key brands" (Barbeau et al., 2004b, p. 115).

Differences between education and income levels extend beyond smoking prevalence. Less educated and lower income smokers who attempt to quit smoking have higher rates of relapse and shorter periods of abstinence than do more educated persons (USDHHS, 1982). In addition, greater socioeconomic resources are significantly related to success in self-initiated efforts to stop (USDHHS, 1982; Blair et al., 1980). Several recent studies have also examined the impact of socioeconomic characteristics, particularly education, on smoking cessation and found that there is a strong gradient in cessation between low and high education smokers (Wetter et al., 2005; Giovino, 2002). These findings

are consistent with recent national data indicating that the quit ratios for lower-education smokers are dramatically lower than for smokers with graduate degrees (CDC, 2002).

2.3 Personal Characteristics

2.3.1 Mental Health

People with a history of mental illness are estimated to be about 90% more likely to consume cigarettes than those without such a history.

Studies have shown that people with serious mental illnesses have significantly elevated rates of smoking relative to the general population. According to the National Institute of Mental Health, an estimated 26.2% of Americans suffer from a diagnosable mental disorder in a given year (Kessler et al., 2005); however, the burden of illness is concentrated in a much smaller proportion of the population, about 6%, who suffer from a serious mental illness. Overall, people with a history of mental illness are estimated to be about 90% more likely to consume cigarettes than those without such a history (Saffer and Dave, 2005). Smoking prevalence among individuals with serious mental illnesses has been estimated at 45%, with prevalence rates of 70% to 90% common among people with schizophrenia (Lucksted et al., 2004). Daily cigarette consumption is also considerably higher among smokers with mental health problems; estimates suggest that nearly 44% of all cigarettes smoked in the United States are smoked by people who have had a psychiatric or substance abuse disorder in the past month (Lasser et al., 2000; McNeill, 2001). Because of both the high rate of smoking and the high rate of daily cigarette consumption, individuals with mental health problems are particularly susceptible to smoking-attributable diseases. The rates of cardiovascular and respiratory diseases, for example, are twice as high in schizophrenics as in age-matched control populations (Brown et al., 2000).

The question of why individuals with mental illnesses smoke more is extremely complex. Psychiatric disorders have been shown to be related to socioeconomic deprivation (Rasul et al., 2001), which in turn has been linked to smoking (discussed in Section 2.2). A patient's environment has been shown to be important, with patients in institutions or who are homeless smoking more than those who live at home (Meltzer et al., 1996). It has also been found that smoking predates many mental illnesses, although causality has not been demonstrated. Specifically, tobacco use was found to increase slightly with the onset of depression (Wu and Anthony, 1999), as well as various anxiety disorders (Johnson et al., 2000).

2.3.2 Sexual Orientation

Sexual orientation has been shown to be associated with tobacco use. Specifically, tobacco use among lesbian, gay, and bisexual (LGB) adults exceeds use among heterosexual adults (Ryan et al., 2001; Gruskin et al., 2001; Greenwood et al., 2005). Several hypotheses have been proposed to explain higher tobacco use among these populations. Specifically, studies have noted that elevated depressive symptoms, stress, and lower self-esteem stemming from “antigay” stigma—in addition to harassment; social isolation; and rejection from family, friends, and peers—all contribute to a higher susceptibility for tobacco use among LGBs (Austin et al., 2004).

2.4 Summary

Tobacco use patterns are the result of complex interactions of multiple factors, such as socioeconomic status, cultural characteristics, acculturation, stress, biological elements, targeted advertising, the price of tobacco products, and varying capacities of communities to mount effective tobacco control initiatives.

Although many of the characteristics discussed in this section are associated with tobacco use, no single factor can completely determine the pattern of tobacco use among individuals. The authors of the 1998 Surgeon General’s report concluded that tobacco use patterns are the result of complex interactions of multiple factors, such as socioeconomic status, cultural characteristics, acculturation, stress, biological elements, targeted advertising, the price of tobacco products, and varying capacities of communities to mount effective tobacco control initiatives. Likewise, differences in smoking cannot be attributed to single characteristics or stratifications; they too are the result of a multitude of complex and interacting factors.

3. Demographic Characteristics

3.1 Gender

Smoking prevalence is significantly higher among New York males (18%) than among New York females (16%), but there is virtually no difference in the percentage of the smoking population that is male versus female (Exhibit 3-1). In the United States as a whole, both females (19%) and males (24%) smoke more than their New York State counterparts. Furthermore, the percentage of U.S. smokers who are male is higher overall than the percentage of U.S. smokers who are female (Exhibit 3-2).

Exhibit 3-1. Smoking Prevalence Among New York Adults by Gender, New York Adult Tobacco Survey (ATS) Q3 2003–Q4 2005

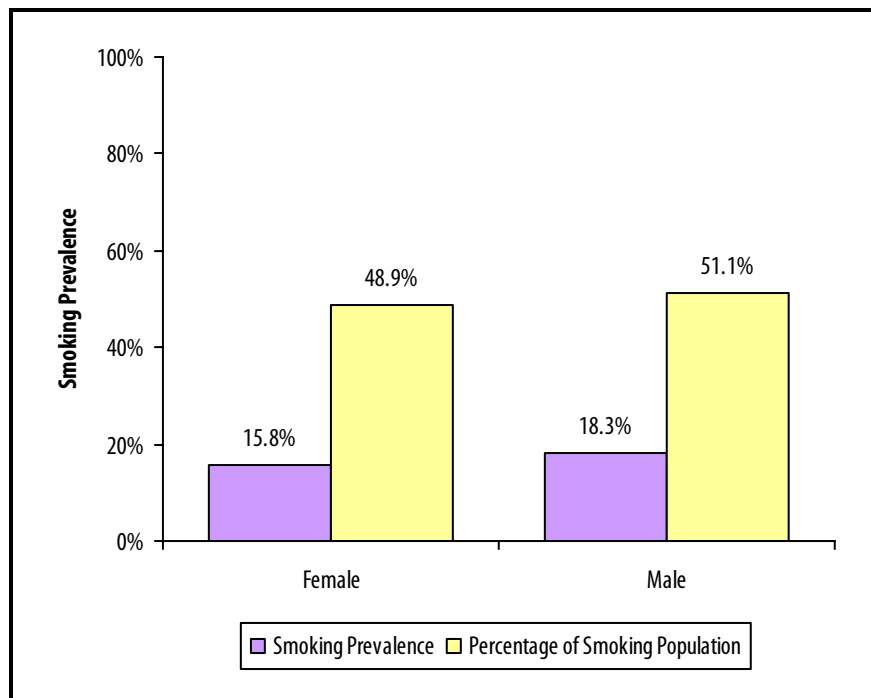
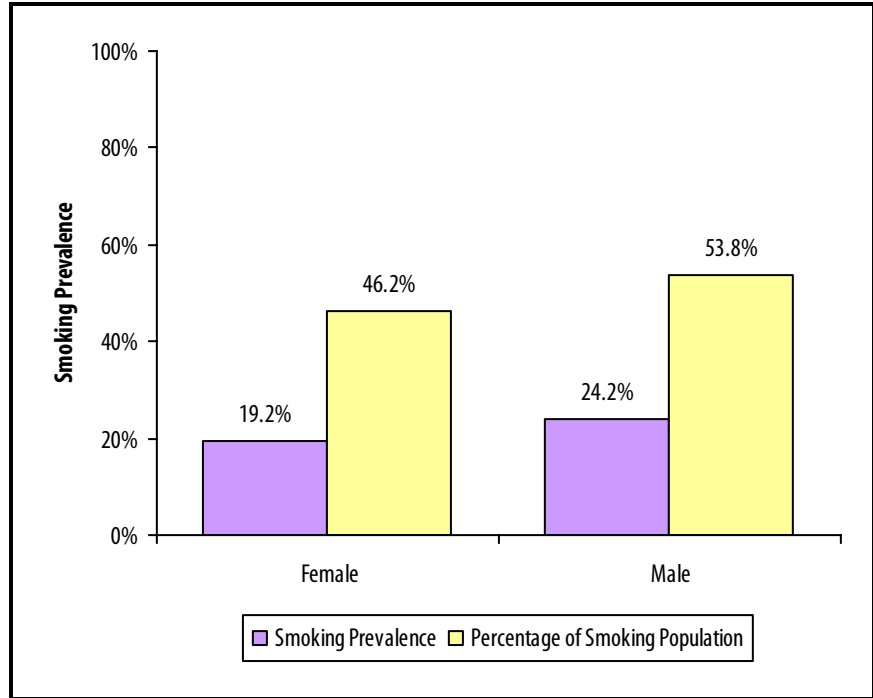
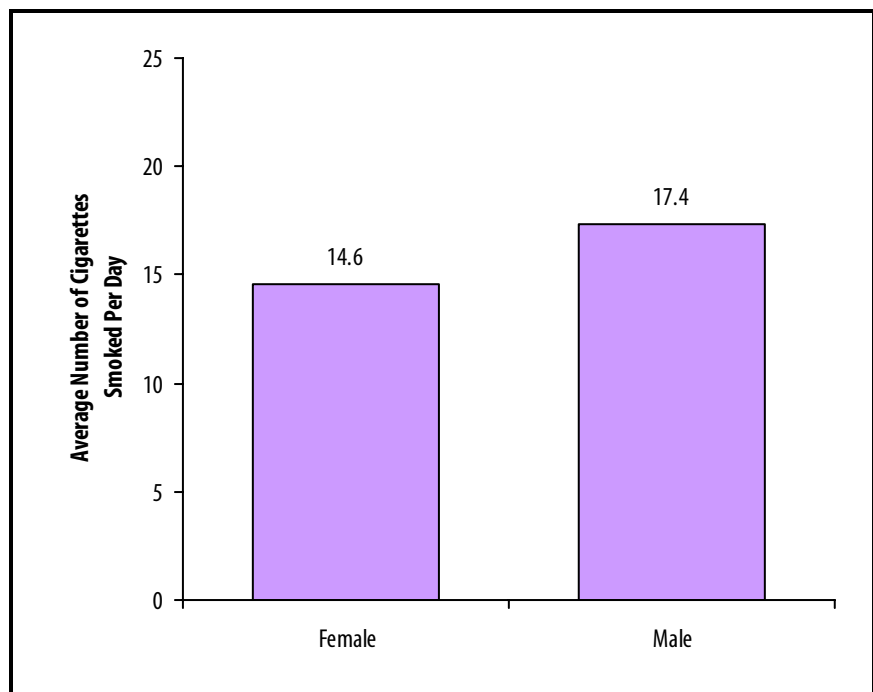


Exhibit 3-2. Smoking Prevalence Among U.S. Adults by Gender, NHIS 2004



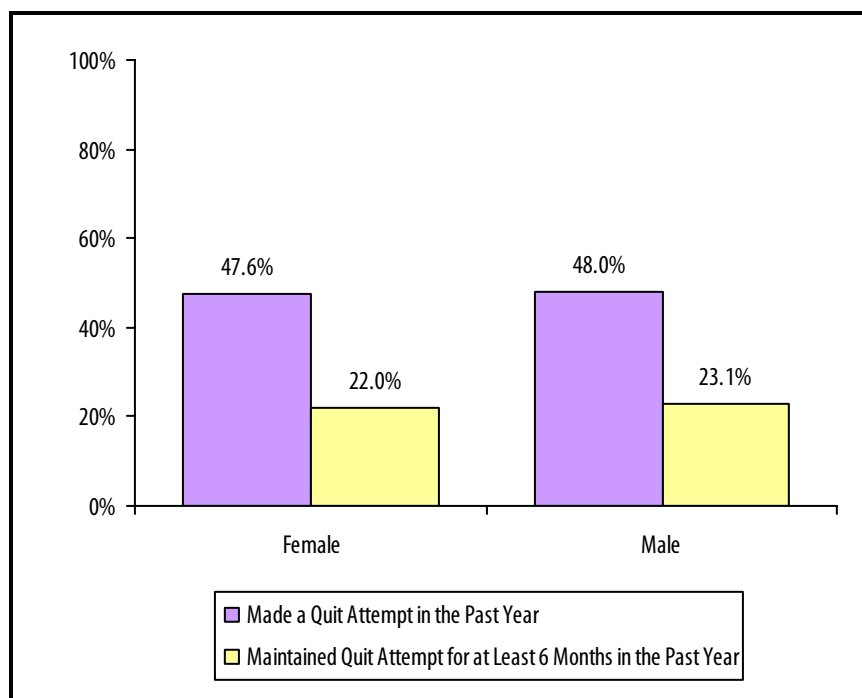
Male and female smokers in New York State also differ in their daily cigarette consumption. On average, male smokers consume approximately three more cigarettes per day than female smokers (Exhibit 3-3).

Exhibit 3-3. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Gender, New York ATS Q3 2003–Q4 2005



Despite the differences between men and women in smoking prevalence and daily cigarette consumption, there are no significant differences in the percentages of male and female smokers who have attempted to quit smoking in the past year. Likewise, there are no significant differences in the percentages of male and female current and former smokers who have been able to quit smoking continually for at least 6 months (Exhibit 3-4).

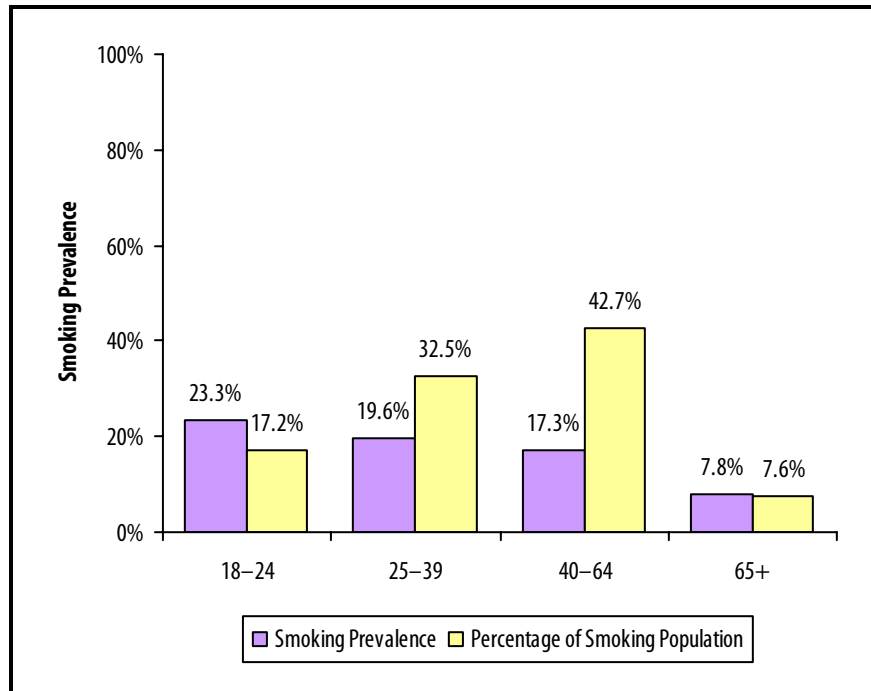
Exhibit 3-4. Smoking Cessation Among New York Adults by Gender, New York ATS Q3 2003–Q4 2005



3.2 Age

In New York State, smoking prevalence is significantly higher among the youngest smokers. Adults aged 18 to 24 smoke at significantly higher rates (24%) than adults in other age groups; however, these individuals only make up about 18% of the overall smoking population. In contrast, smoking prevalence among adults aged 40 to 64 (17%) is significantly lower than among younger smokers aged 25 to 39 (20%) and 18 to 24 (23%). However, smokers aged 40 to 64 account for the largest percentage of the adult smoking population at 43%. Finally, smoking prevalence among adults aged 65 and older is only 8%, and these smokers account for only 8% of the smoking population (Exhibit 3-5). The distribution of smoking prevalence by age in New York State largely corresponds with that of the United States as a whole. New York State

Exhibit 3-5. Smoking Prevalence Among New York Adults by Age Group, New York ATS Q3 2003–Q4 2005



differs from the total United States, however, in terms of the proportion of the smoking population accounted for by each age group. In New York State, the majority of smokers are between 40 to 64 years of age; in contrast, in the total United States, the majority of smokers are between 25 and 39 years of age (Exhibit 3-6).

Average daily cigarette consumption in New York State also differs by age group. Older smokers consumed significantly more cigarettes than their younger counterparts, with smokers aged 40 to 64 and 65 and older consuming about 18 cigarettes per day on average (Exhibit 3-7).

In contrast, smokers aged 40 to 64 and smokers aged 65 and older are both more likely than younger smokers to have quit smoking continually for at least 6 months (Exhibit 3-8). There were no statistically significant differences between age groups in the percentage of smokers who attempted to quit smoking during the past year.

Exhibit 3-6. Smoking Prevalence Among U.S. Adults by Age Group, NHIS 2004

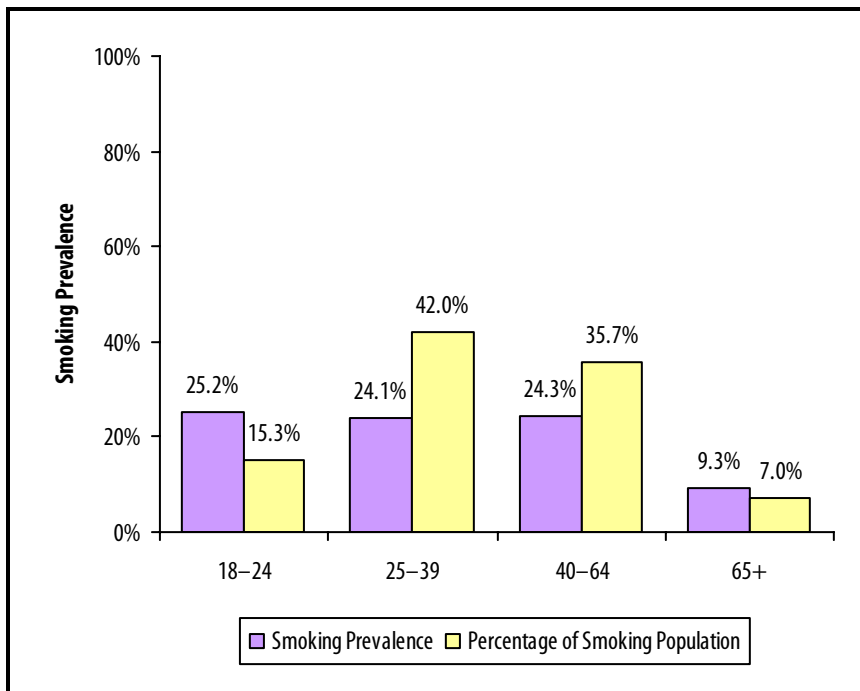


Exhibit 3-7. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Age Group, New York ATS Q3 2003-Q4 2005

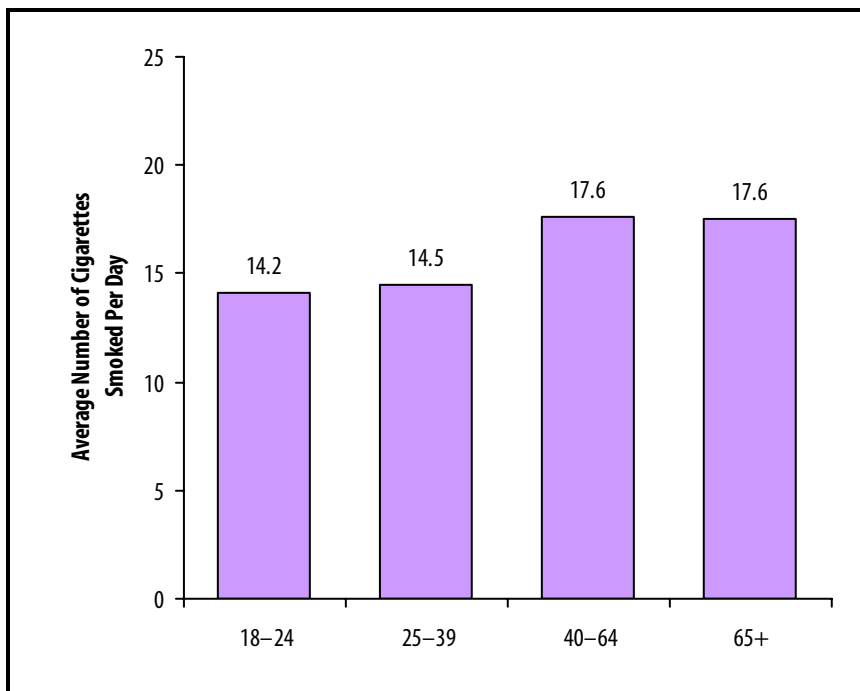
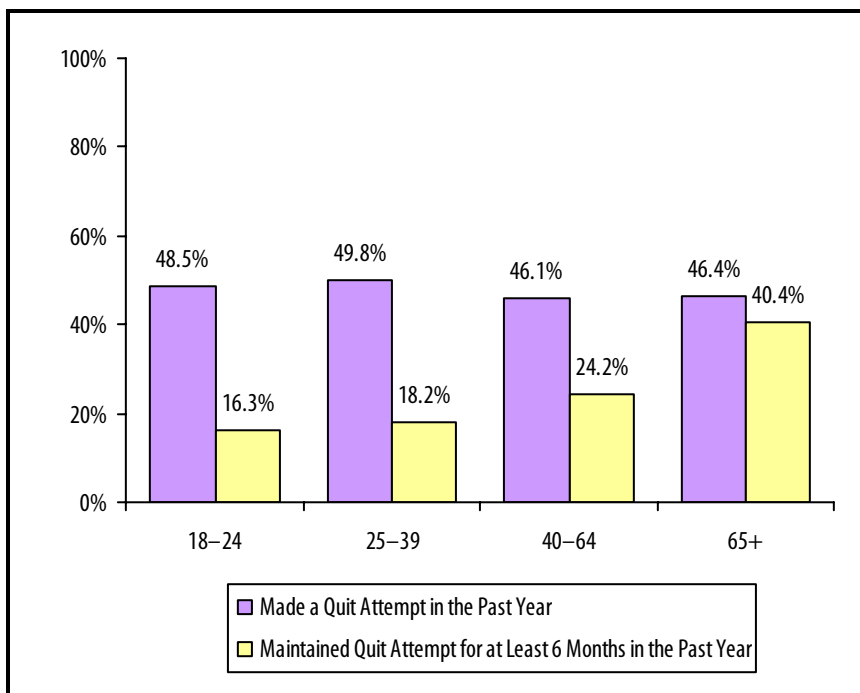


Exhibit 3-8. Smoking Cessation Among New York Adults by Age Group, New York ATS Q3 2003–Q4 2005



3.3 Age by Gender

When delineated by gender, smoking prevalence and the proportion of smokers accounted for by the selected age groups mirror the results discussed in Section 3.1. The only noteworthy difference between genders within age group is among individuals aged 25 to 39, where significantly more men smoke than women (Exhibit 3-9). As indicated in Section 3.2, most male and female smokers in New York are between 40 and 64 years of age (Exhibit 3-10).

In contrast with overall smoking prevalence, daily cigarette consumption differs by age group and gender. Specifically, although the overall trend in daily consumption by age is similar to the results presented previously, men between the ages of 18 to 24, 25 to 39, and 40 to 64 all consume significantly more cigarettes per day than women within their respective age categories (Exhibit 3-11).

Exhibit 3-9. Smoking Prevalence Among New York Adults by Age Group and Gender, New York ATS Q3 2003–Q4 2005

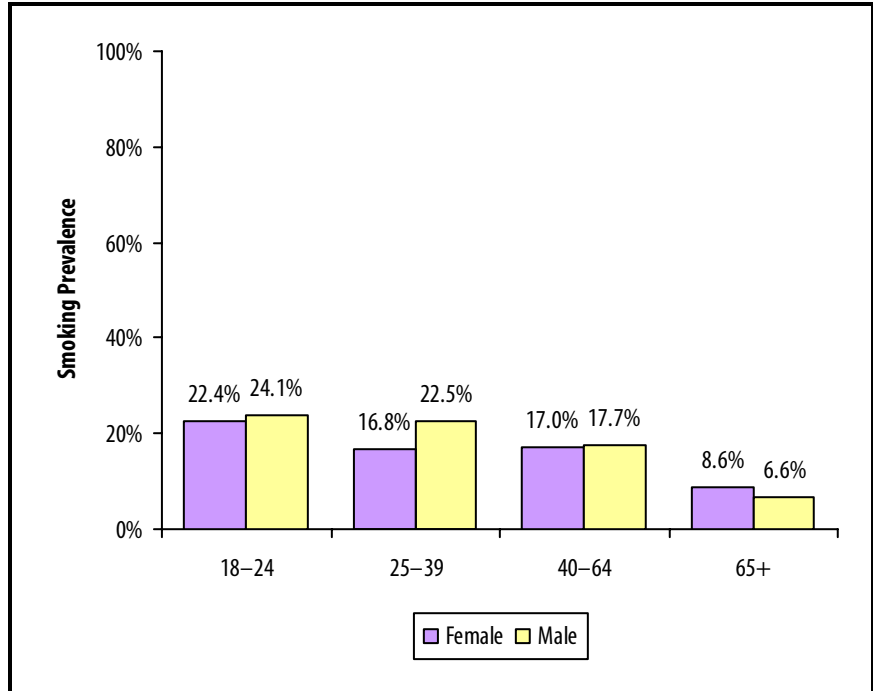


Exhibit 3-10. Percentage of New York Adult Smokers by Age Group and Gender, New York ATS Q3 2003–Q4 2005

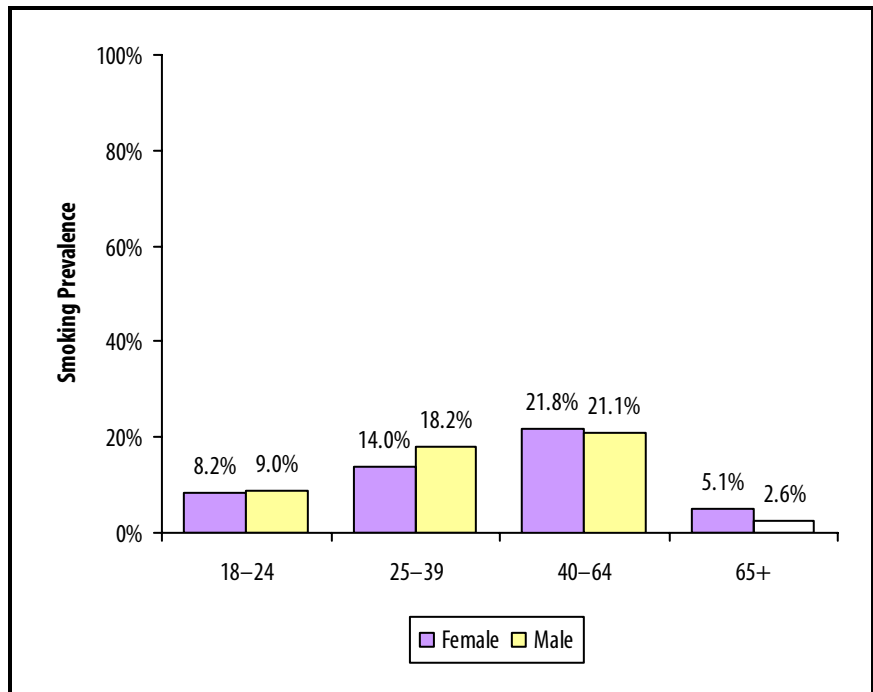
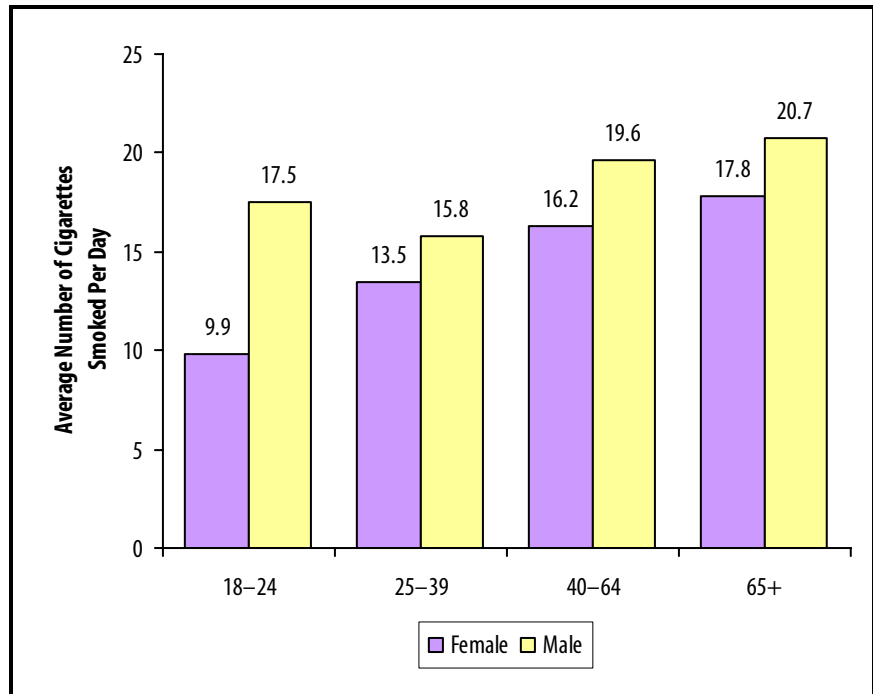


Exhibit 3-11. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Age Group and Gender, New York ATS Q3 2003–Q4 2005



There were no statistically significant differences within age group by gender between the percentages of smokers who attempted to quit smoking during the past year (Exhibit 3-12). Among individuals aged 65 and older, significantly more male smokers than female smokers have quit smoking for at least 6 months. There were no other significant differences within age group by gender (Exhibit 3-13).

Exhibit 3-12. Percentage of New York Current Smokers Who Attempted to Quit Smoking During the Past Year by Age Group and Gender, New York ATS Q3 2003–Q4 2005

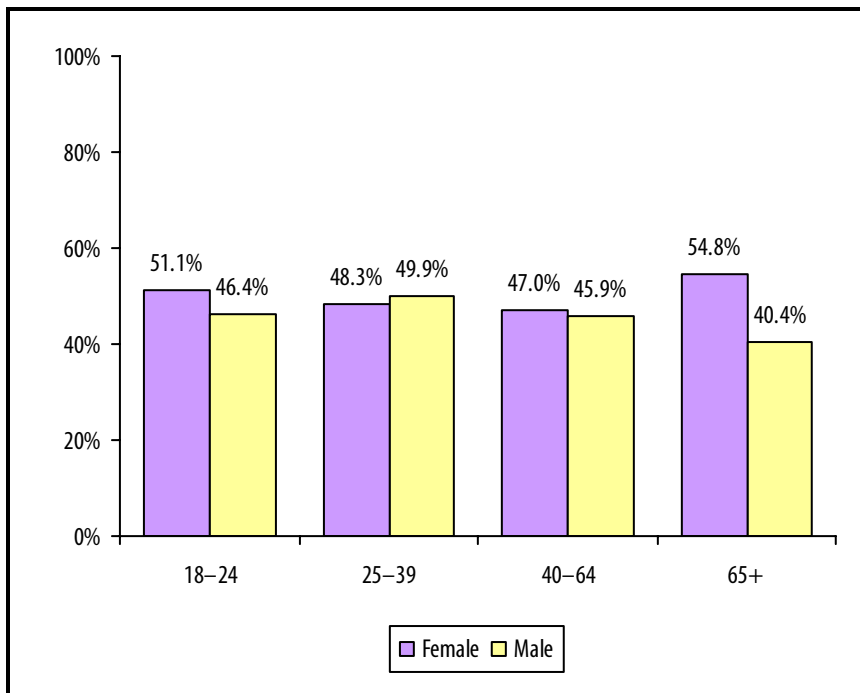
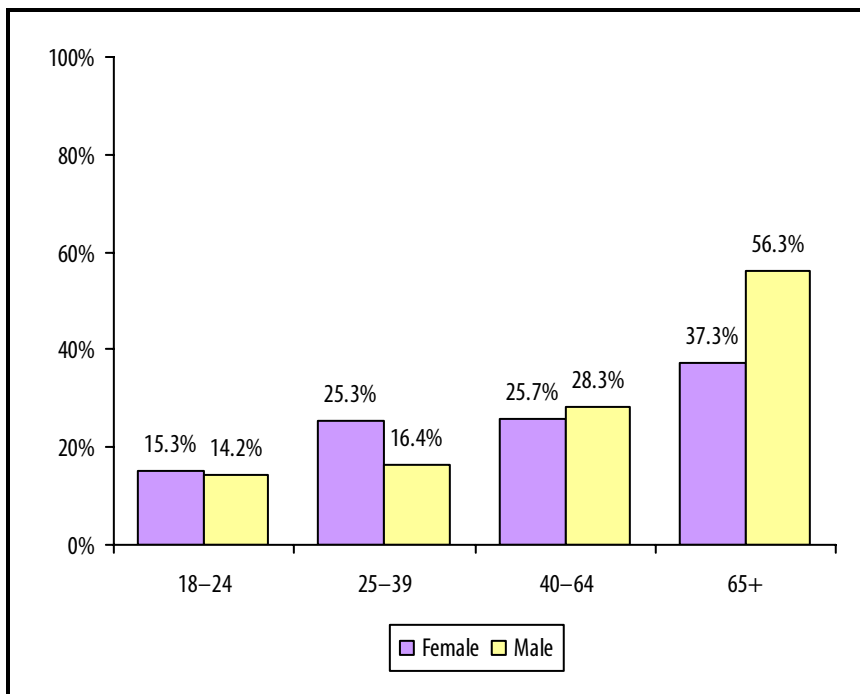


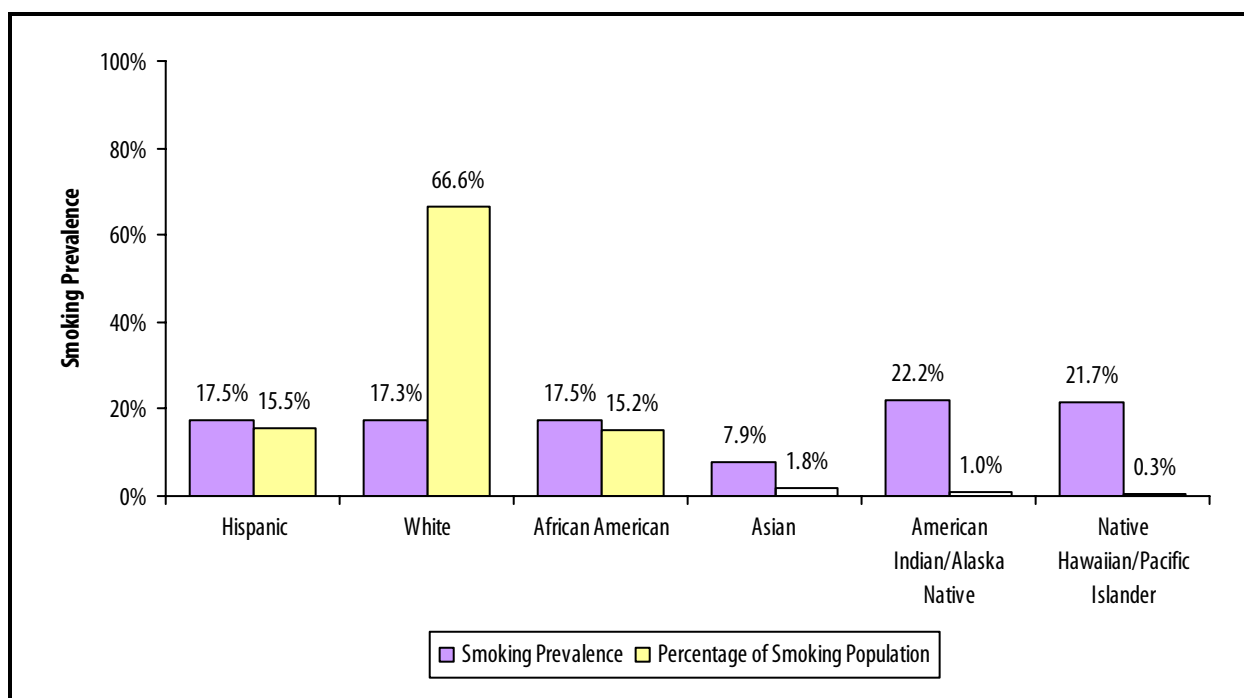
Exhibit 3-13. Percentage of New York Adults Who Successfully Quit Smoking for 6 Months or More During the Past Year by Age Group and Gender, New York ATS Q3 2003–Q4 2005



3.4 Race/Ethnicity

Overall, the prevalence of smoking among New York adults differs significantly by race/ethnicity. Currently, about 17% of adult non-Hispanic whites smoke, compared with approximately 18% of African Americans and Hispanics. In contrast with non-Hispanic whites, about 22% of Native Hawaiians/Pacific Islanders and American Indians/Alaska Natives smoke (Exhibit 3-14). Overall, significantly fewer Asian New Yorkers (8%) smoke than any other race/ethnicity. Differences in smoking prevalence are also reflected by large differences in the numbers of smokers in various racial/ethnic groups. The majority of smokers in New York State are non-Hispanic whites (67%), followed by Hispanics (16%) and African Americans (15%). Asians, Native Hawaiians/Pacific Islanders, and American Indians/Alaska Natives account for 2%, 0.3%, and 1% of smokers, respectively.

Exhibit 3-14. Smoking Prevalence Among New York Adults by Race/Ethnicity, New York ATS Q3 2003–Q4 2005^a

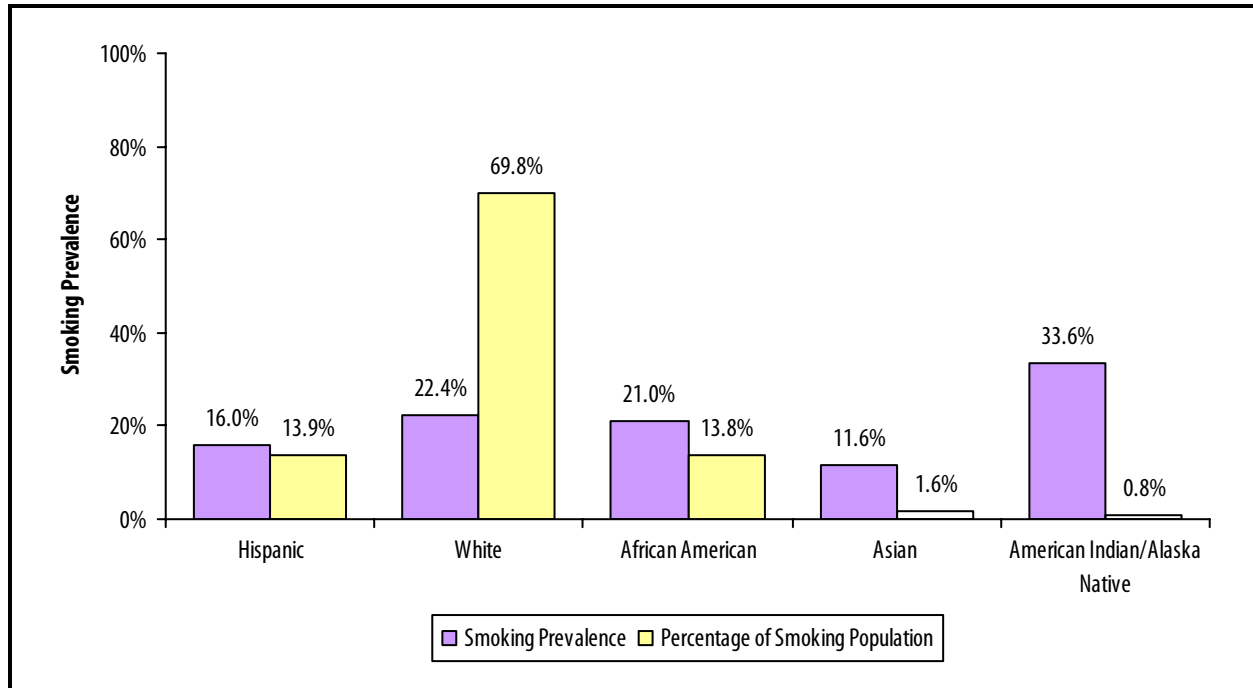


^aEstimate is based on a sample size of less than 50.

Smoking prevalence and the proportion of smokers by race/ethnicity both differ in the United States as a whole, compared with New York State. In general, for each racial/ethnic group, other than Hispanics, the percentage of individuals who smoke is higher among all U.S. adults than among New Yorkers, particularly among Native Hawaiians/Pacific Islanders and American Indians/Alaska Natives. Furthermore, compared

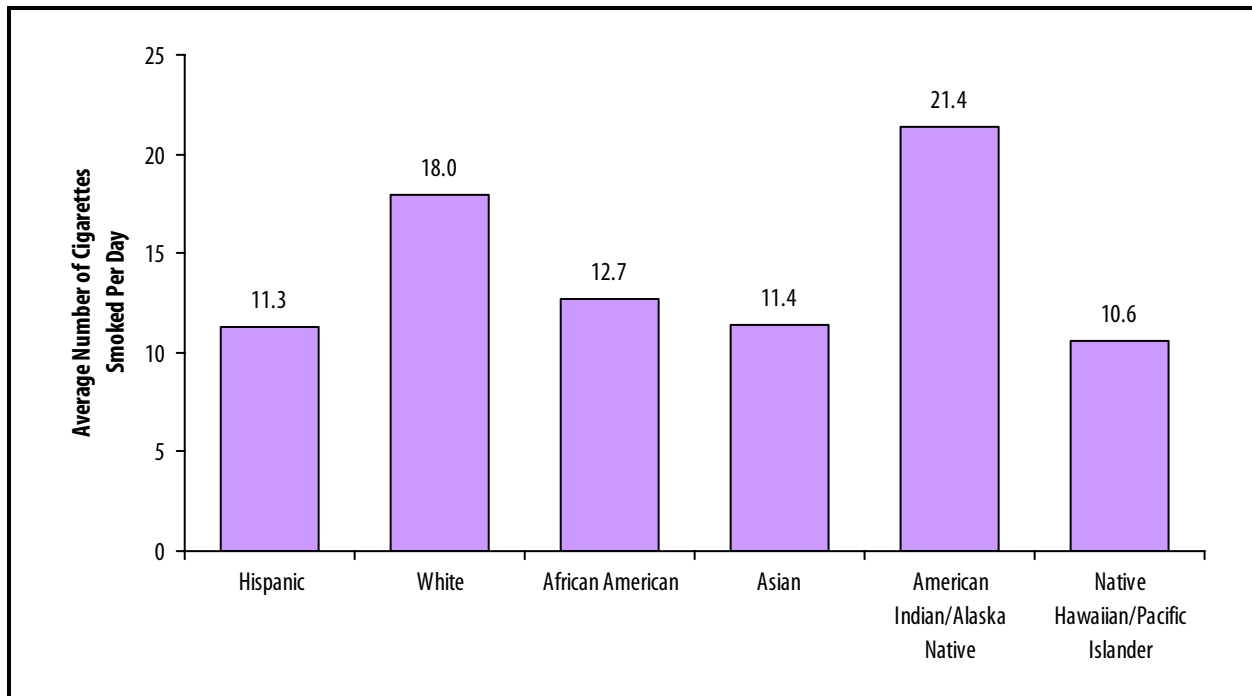
with New York State, the percentage of smokers who are non-Hispanic white is higher among all U.S. adults, whereas the percentage of smokers who are Hispanic and African American is lower among all U.S. adults (Exhibit 3-15).

Exhibit 3-15. Smoking Prevalence Among U.S. Adults by Race/Ethnicity, NHIS 2004



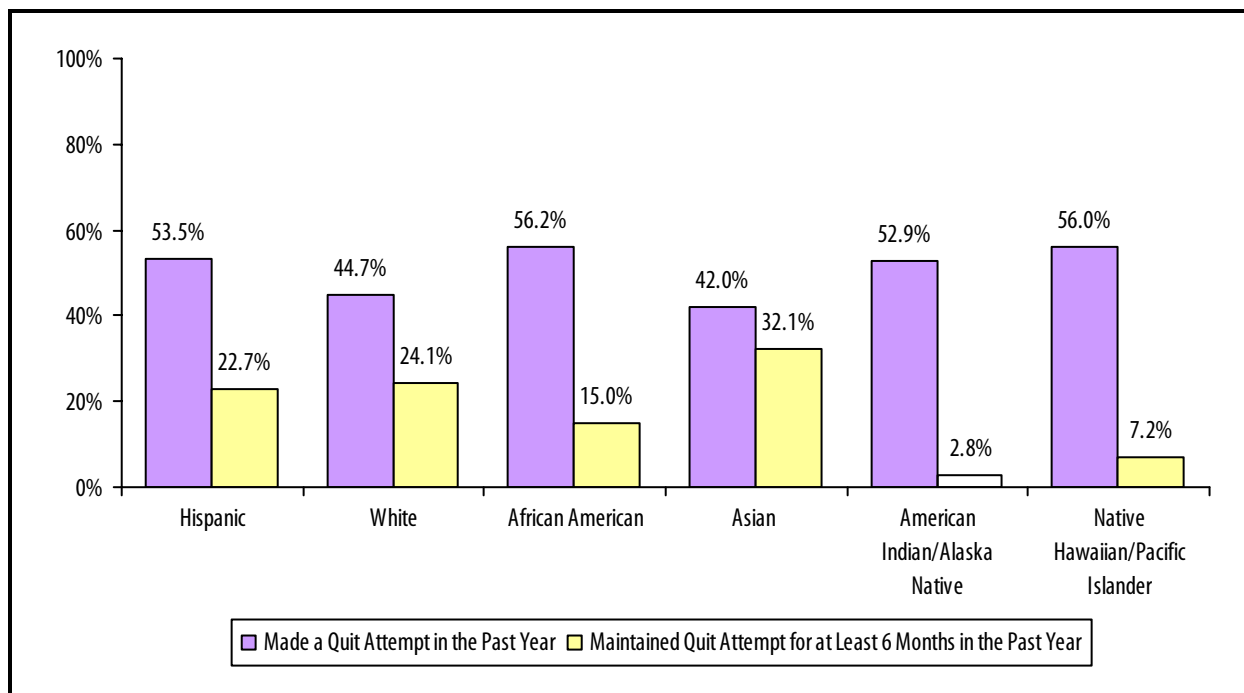
Daily cigarette consumption also differs significantly by race/ethnicity. Specifically, African Americans (13), Asians (11), Hispanics (11), and Native Hawaiian/Pacific Islanders (11) consume fewer cigarettes on average per day than non-Hispanic whites (18) (Exhibit 3-16).

Exhibit 3-16. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Race/Ethnicity, New York ATS Q3 2003–Q4 2005^a



^aEstimate is based on a sample size of less than 50.

Rates of smoking cessation also differ significantly by race/ethnicity. Although African American smokers are more likely than non-Hispanic whites to have attempted to quit smoking in the past year, significantly fewer were able to maintain their quit attempt for 6 months or longer. Furthermore, non-Hispanic whites were about three times more likely than Native Hawaiians/Pacific Islanders and about eight times more likely than American Indians/Alaska Natives to have maintained a quit attempt for at least 6 months (Exhibit 3-17). Finally, Hispanic smokers were more likely than non-Hispanic whites to have attempted to quit smoking in the past year, but there was no significant difference between Hispanic and non-Hispanic white smokers in terms of successful cessation for 6 months or more.

Exhibit 3-17. Smoking Cessation Among New York Adults by Race/Ethnicity, New York ATS Q3 2003–Q4 2005^a

^aEstimate is based on a sample size of less than 50.

3.5 Geographic Location

Although the vast majority of New Yorkers, and in turn New York smokers, live in urban settings (i.e., in metropolitan statistical areas [MSAs]) (see Appendix A), smoking prevalence is actually significantly higher among New Yorkers who live in rural areas of the state (non-MSA) (Exhibit 3-18). In this regard, New York State is no different from the nation as a whole, where most individuals live in cities and urban environments. As in New York State, adults who live in rural areas of the United States are more likely to smoke than those who do not (Exhibit 3-19).

Exhibit 3-18. Smoking Prevalence Among New York Adults by Location, New York ATS Q3 2003–Q4 2005

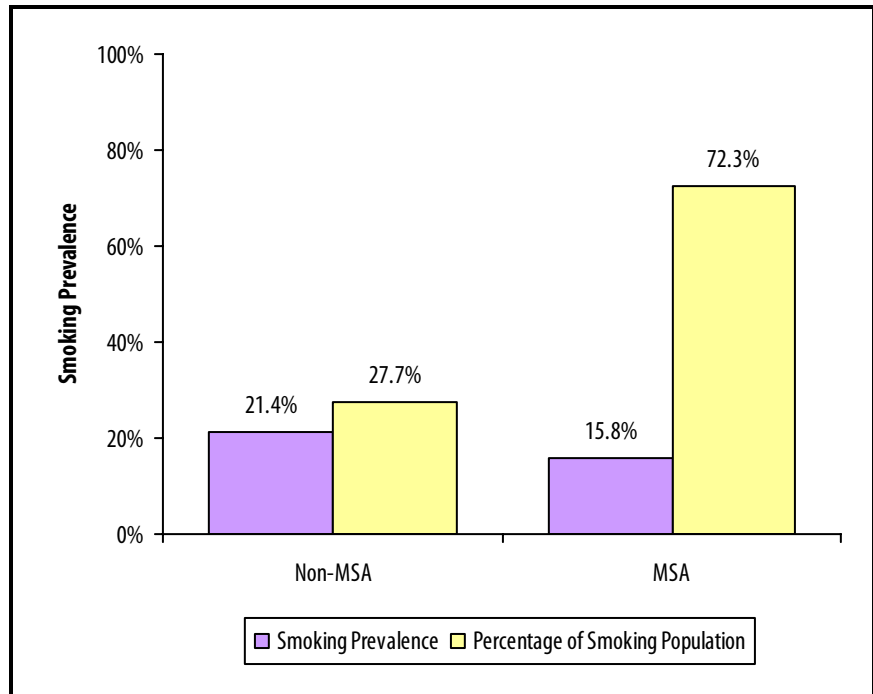
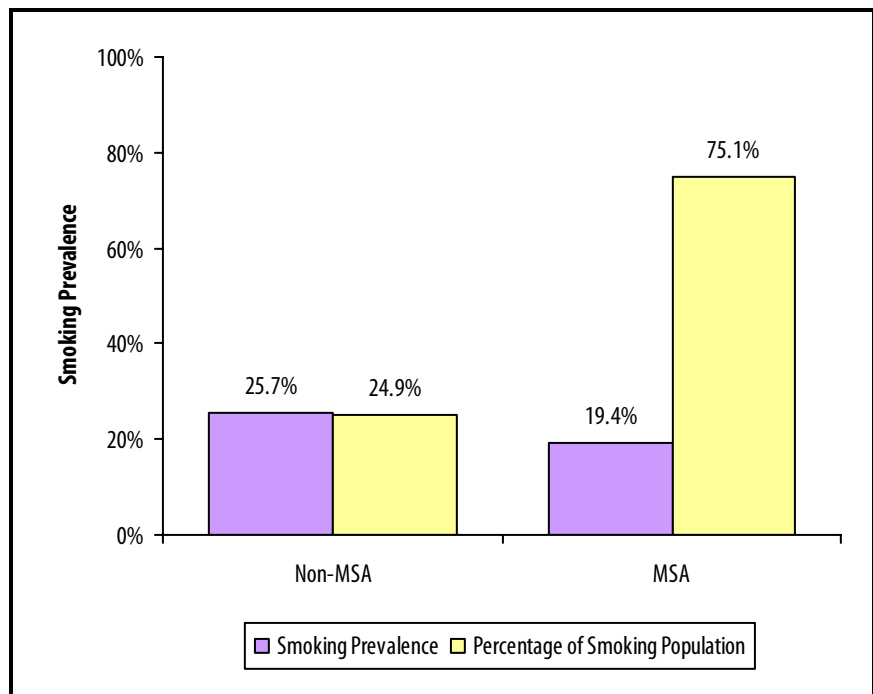
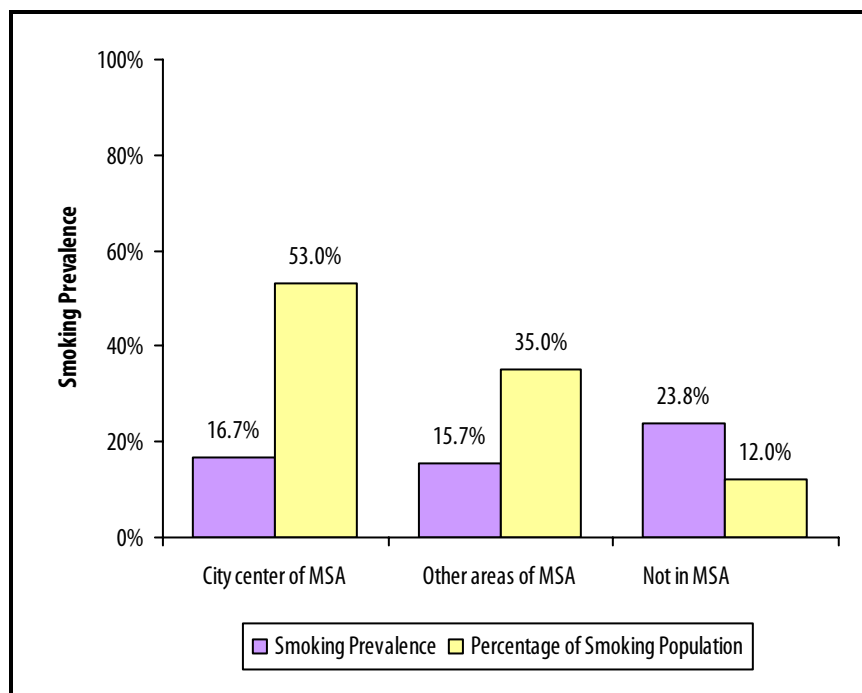


Exhibit 3-19. Smoking Prevalence Among U.S. Adults by Location, NHIS 2004



However, examining smoking prevalence by MSA reveals a number of important details. As noted previously, individuals who do not live in an MSA are more likely to smoke than individuals in all other location categories. However, more people who live within a city center (the majority of smokers in New York State, at 53%) smoke than people who live in other parts of an MSA (Exhibit 3-20).

Exhibit 3-20. Smoking Prevalence Among New York Adults by MSA Status, New York ATS Q3 2003–Q4 2005



People living in rural areas are not only more likely to smoke, but they also consume significantly more cigarettes per day than their counterparts living within an MSA. However, in contrast with smoking prevalence, smokers living in city centers within an MSA consume fewer cigarettes than their counterparts living in other areas within the MSA (Exhibit 3-21).

Finally, significantly fewer smokers living outside an MSA have quit smoking continually for at least 6 months than both groups of smokers living within an MSA. Furthermore, current smokers who live outside of an MSA are less likely than smokers living in a city center to have attempted to quit smoking in the past year (Exhibit 3-22).

Exhibit 3-21. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by MSA Status, New York ATS Q3 2003–Q4 2005

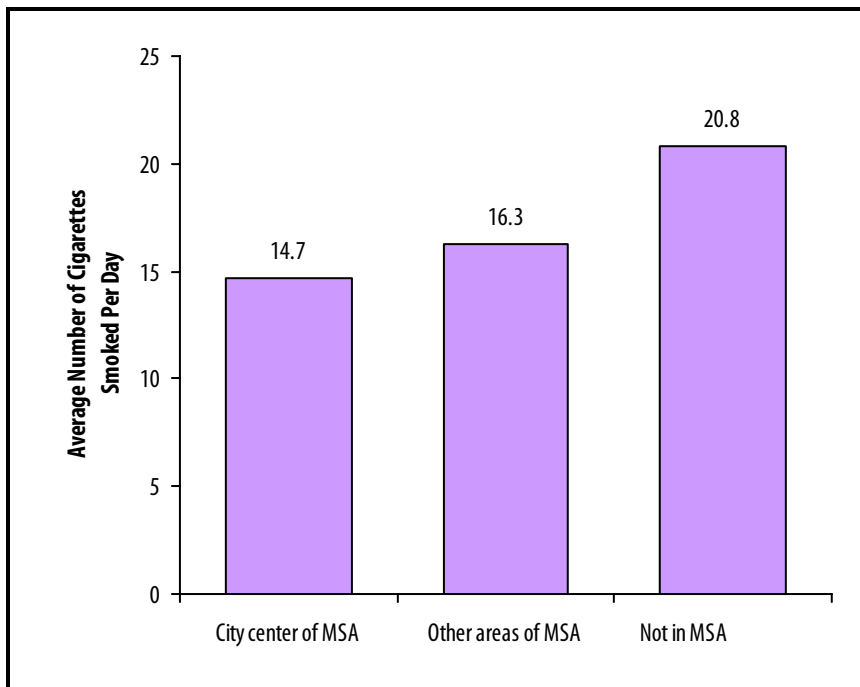
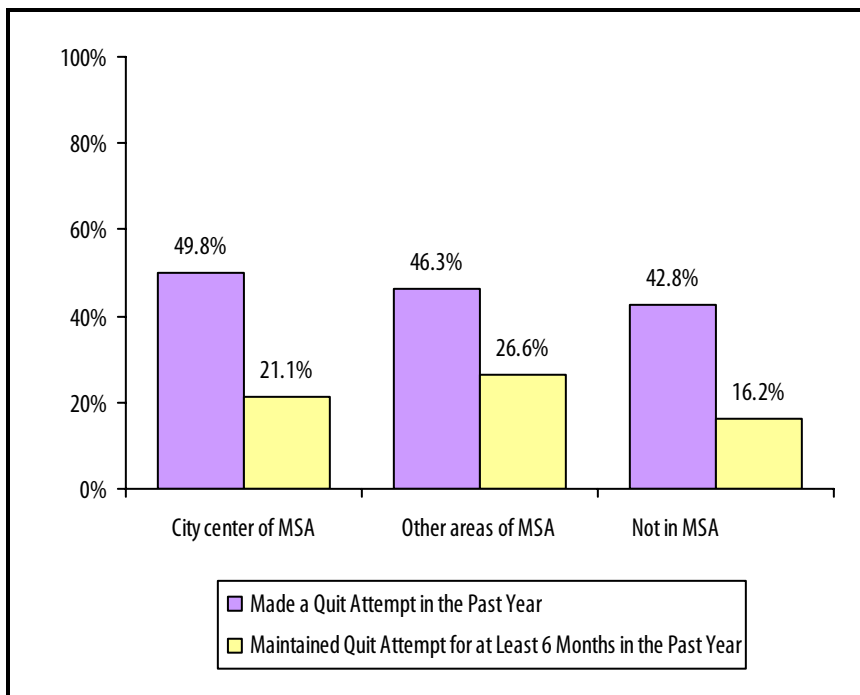


Exhibit 3-22. Smoking Cessation Among New York Adults by MSA Status, New York ATS Q3 2003–Q4 2005



4. Socioeconomic Characteristics

4.1 Income

As noted in Section 2.2, an individual's income, as well as several other socioeconomic indicators that will be discussed in subsequent sections, has been found to strongly predict tobacco use. These findings are corroborated in New York State, where smoking prevalence is significantly higher among people with incomes of less than \$30,000 per year (24%) than among people in all other income groups. Likewise, because large percentages of New York families report incomes below \$60,000, the majority of smokers are included in the two lowest income brackets (Exhibit 4-1). Although direct comparisons cannot be made between NHIS and the New York ATS (because of differences in the way income is reported), qualitatively similar results are seen when examining smoking prevalence and participation among all U.S. adults. As in New York State, among all U.S. adults, smoking is most prevalent among the least affluent. Similarly, as in New York, smoking prevalence and the percentage of smokers in each income bracket decrease as income level increases (Exhibit 4-2).

Exhibit 4-1. Smoking Prevalence Among New York Adults by Income Level, New York ATS Q3 2003–Q4 2005

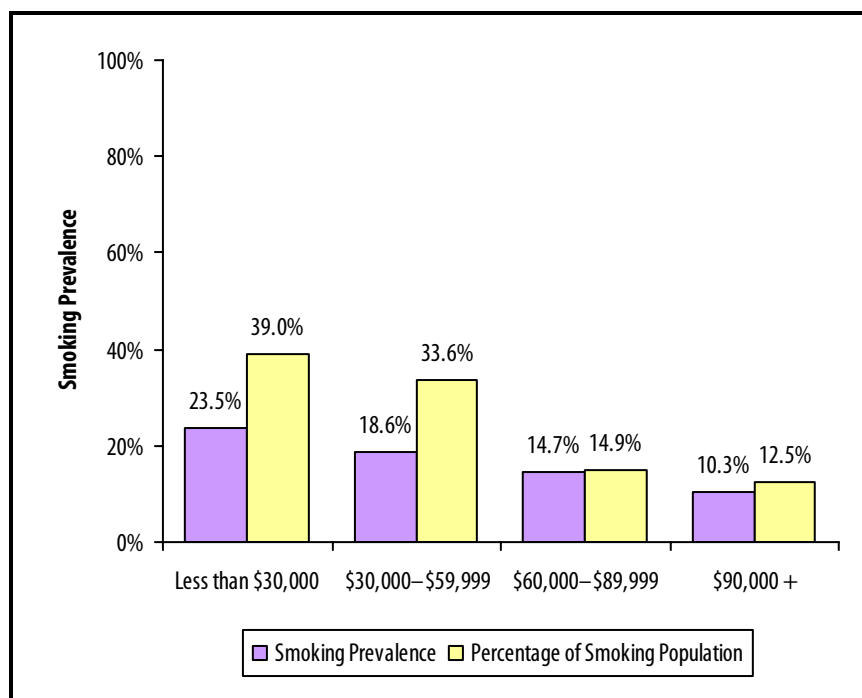
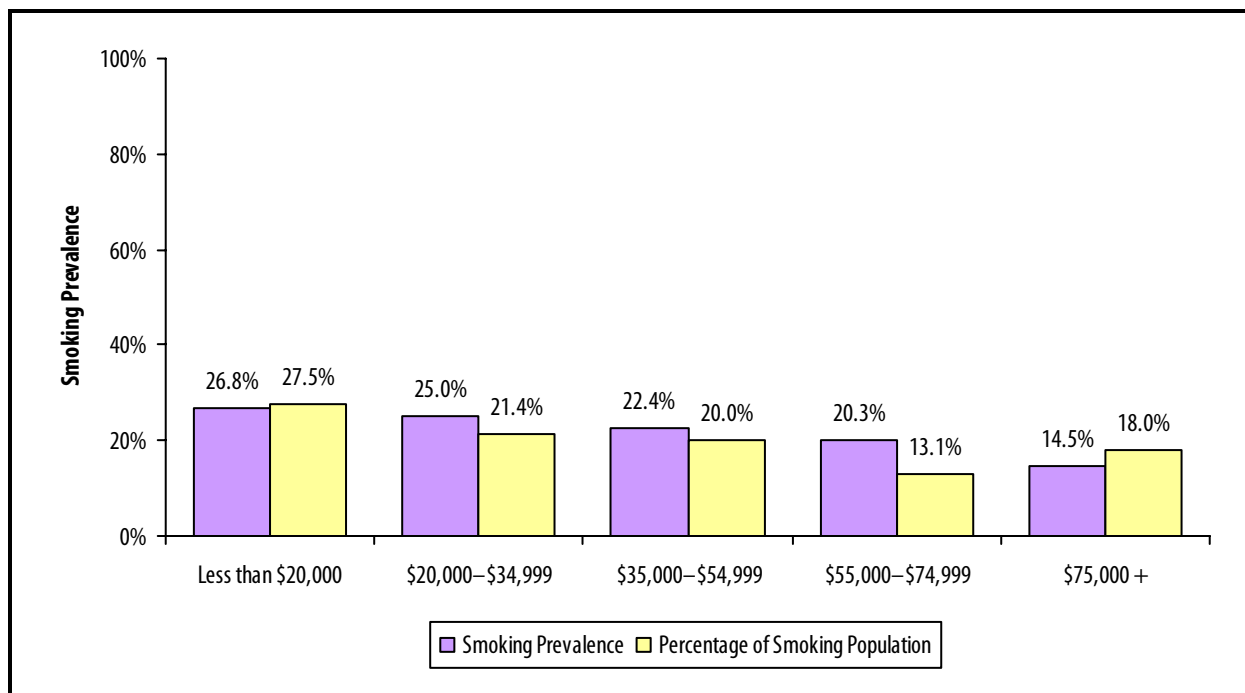
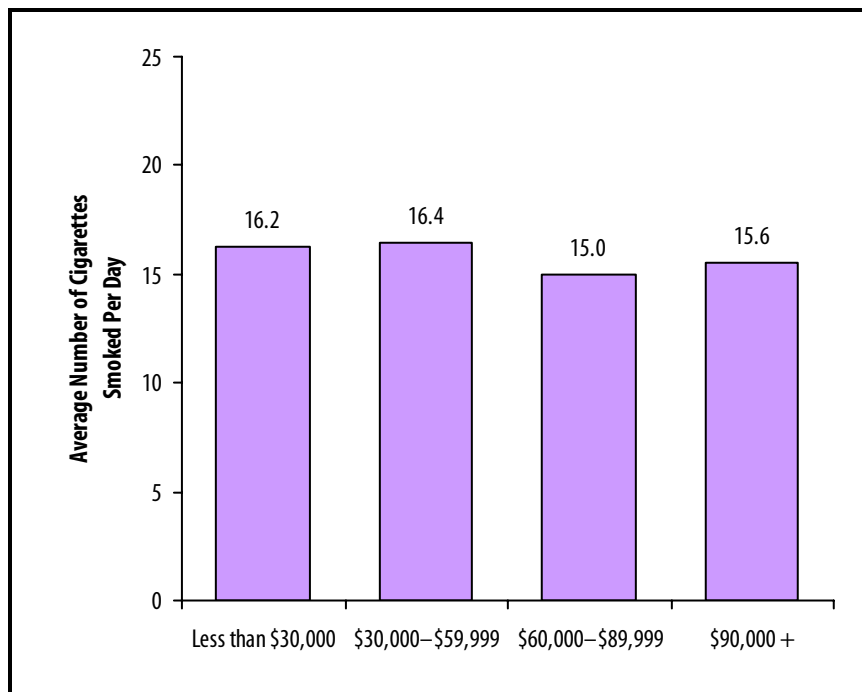


Exhibit 4-2. Smoking Prevalence Among U.S. Adults by Income Level, NHIS 2004



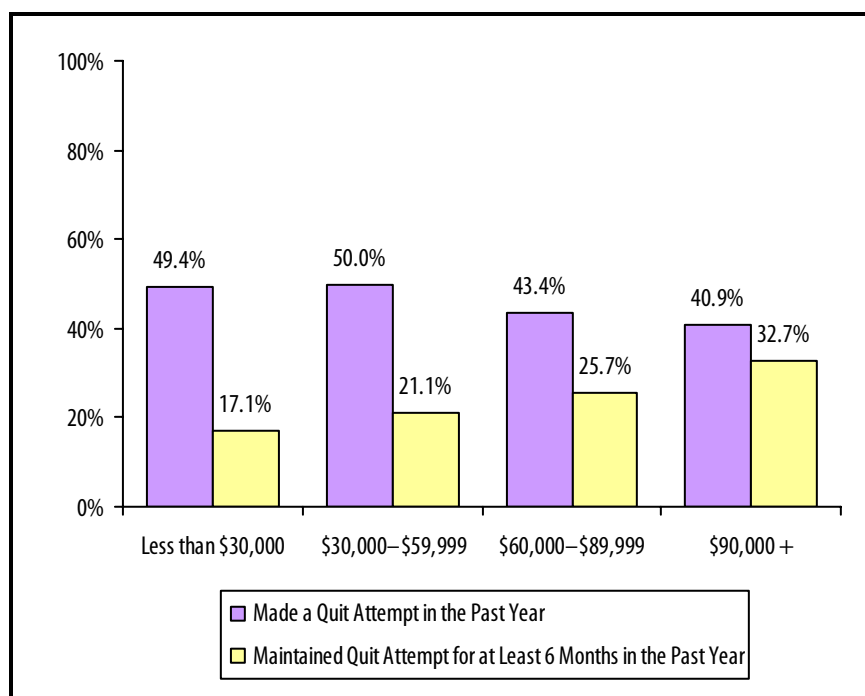
Unlike smoking prevalence, daily cigarette consumption in New York State did not differ significantly by income level (Exhibit 4-3).

Exhibit 4-3. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Income Level, New York ATS Q3 2003-Q4 2005



On the other hand, significant differences were found when examining the percentage of smokers who were able to quit for at least 6 months, by income level. Specifically, smokers with higher family incomes were more likely to report being able to quit than those with lower incomes, despite being less likely to have attempted to quit smoking in the past year (Exhibit 4-4).

Exhibit 4-4. Smoking Cessation Among New York Adults by Income Level, New York ATS Q3 2003–Q4 2005



4.2 Education

Because education and income are highly correlated, it follows that differences in tobacco use by education mirror differences by income. Specifically, in New York State, smoking prevalence was significantly higher among individuals with less than a high school degree (28%) than among individuals with any other educational background (e.g., 12% among college graduates). However, the largest group of smokers are those with at least a high school degree but no college experience (37%) (Exhibit 4-5). More smokers in New York have at least a college degree (23%) compared with smokers in the United States as a whole (12%) (Exhibit 4-6). Furthermore, there are significantly fewer smokers in New York with less than a high school degree (13%) than in the country as a whole (24%).

Exhibit 4-5. Smoking Prevalence Among New York Adults by Education Level, New York ATS Q3 2003–Q4 2005

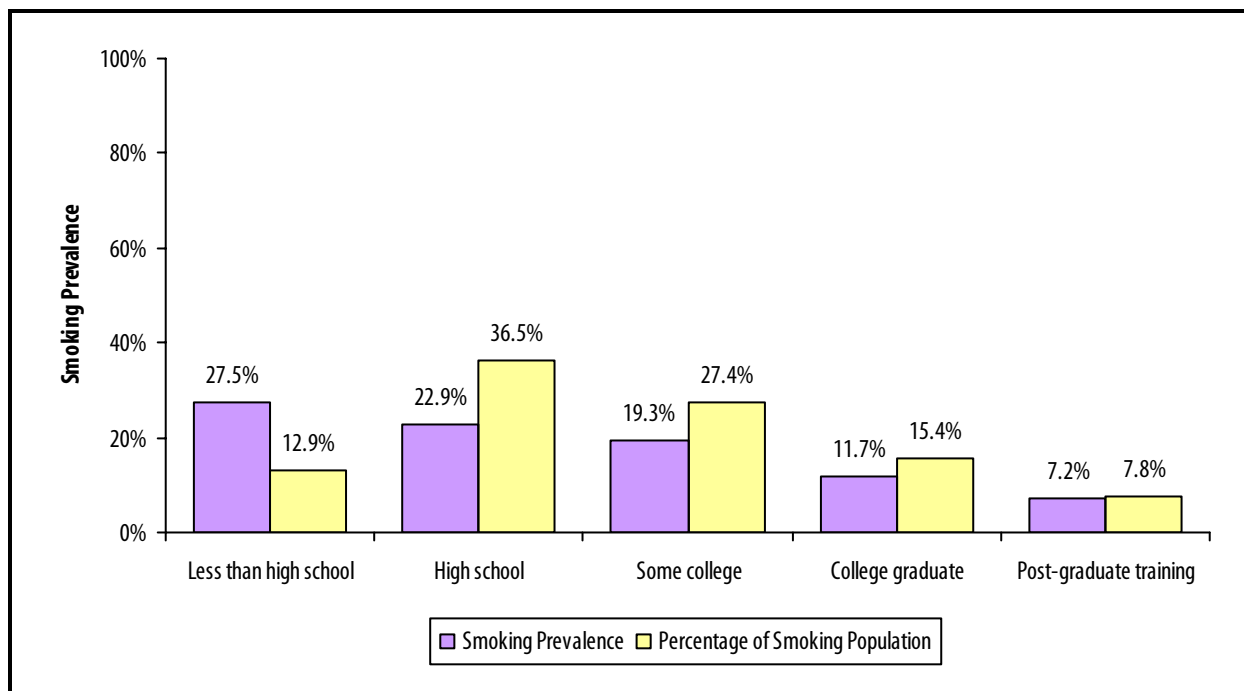
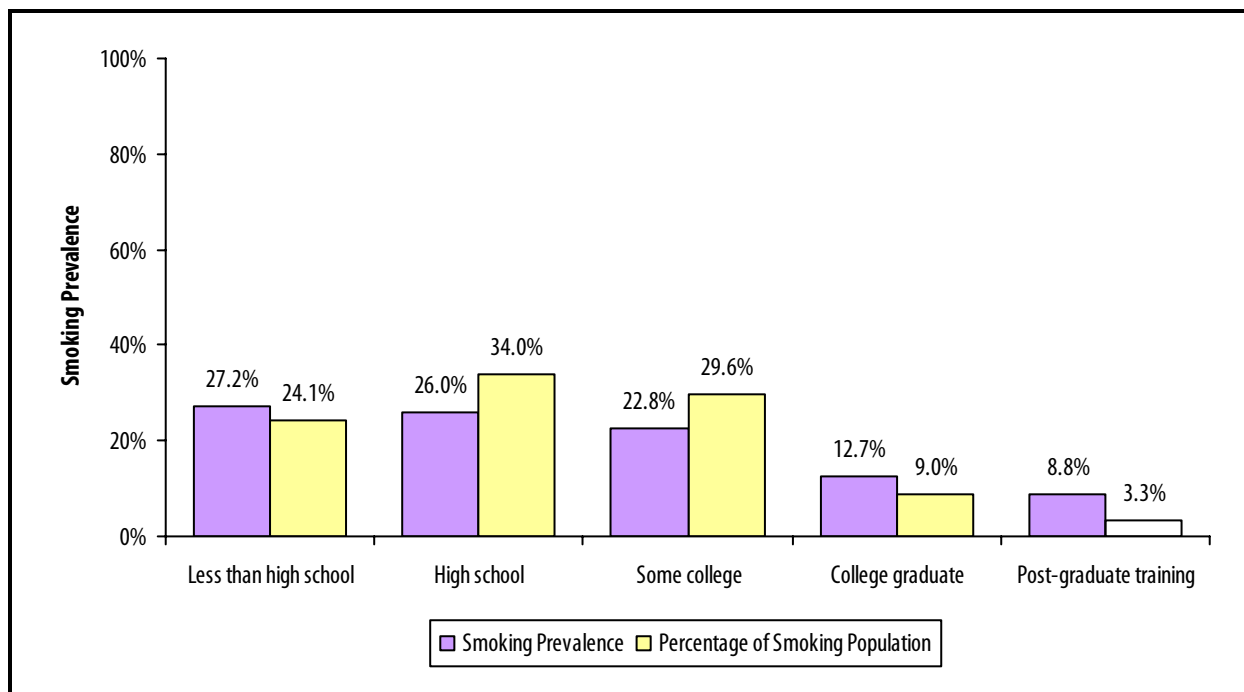
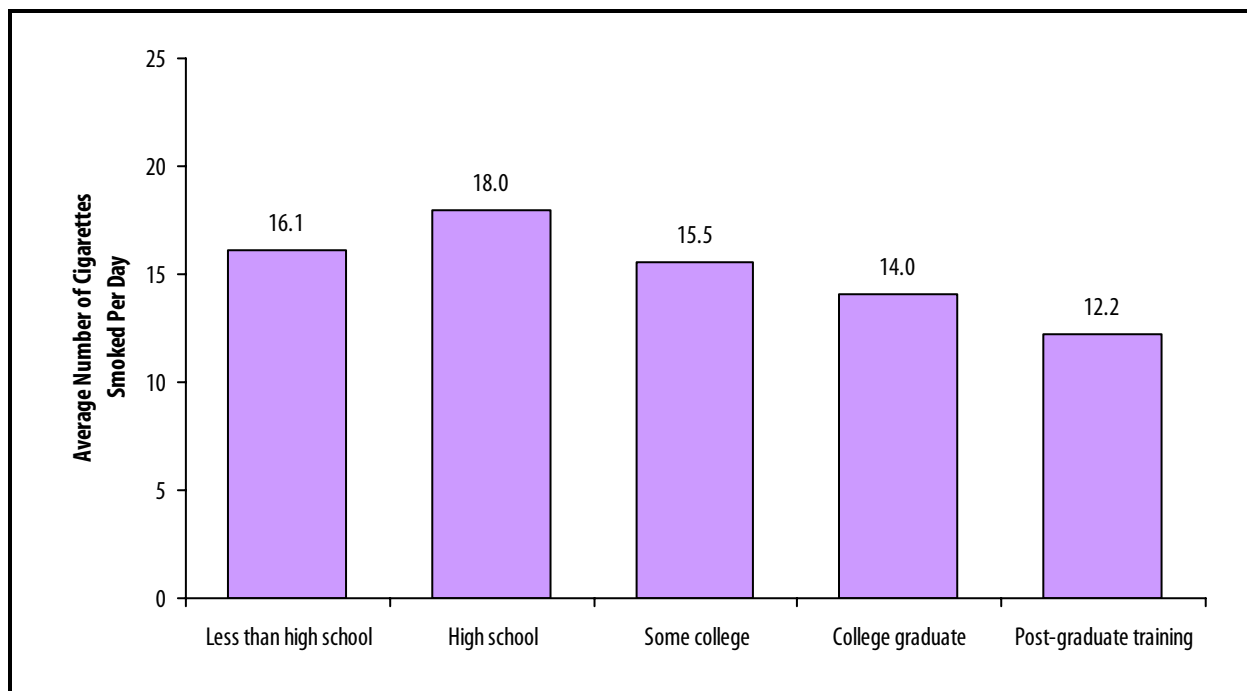


Exhibit 4-6. Smoking Prevalence Among U.S. Adults by Education Level, NHIS 2004

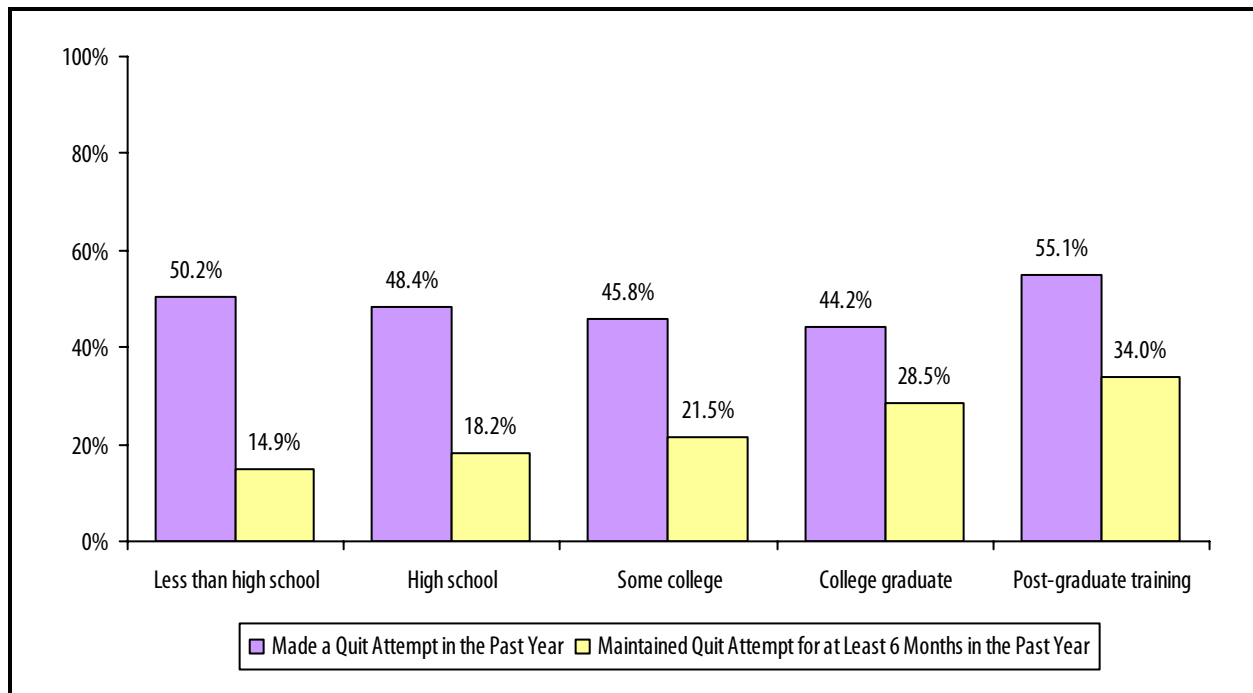


Daily cigarette consumption also differs by education level. On average, daily cigarette consumption is lower among smokers with post-graduate training (12) than among smokers with less than a high school degree (16) and among smokers with only a high school degree (18) (Exhibit 4-7).

Exhibit 4-7. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Education Level, New York ATS Q3 2003–Q4 2005



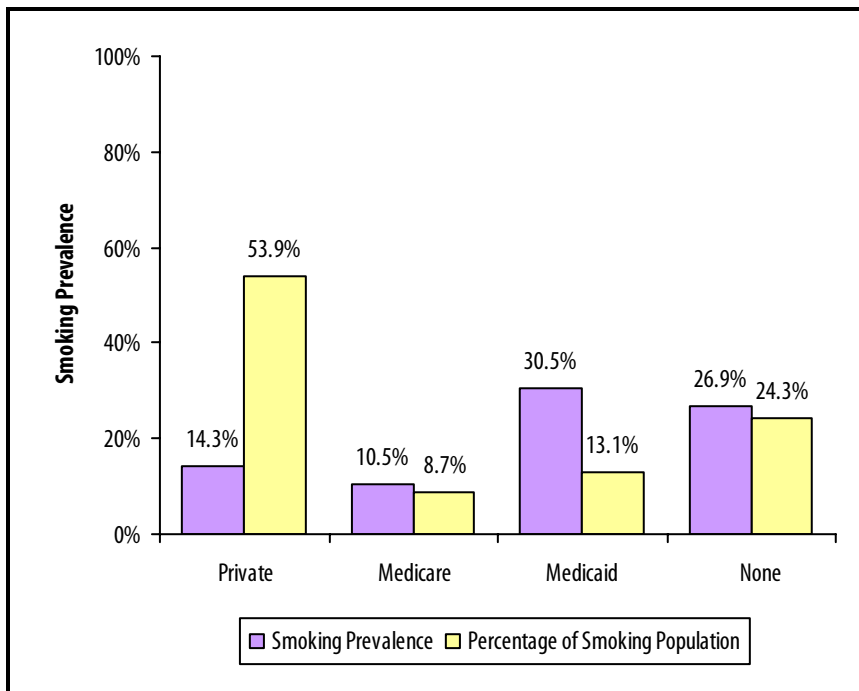
Finally, smokers with less than a high school degree were 2.5 times less likely to have quit smoking for at least 6 months than smokers with some post-graduate training (Exhibit 4-8). Overall, fewer smokers in the lowest education bracket were able to quit smoking for at least 6 months than smokers at any other education level. The percentage of current smokers who attempted to quit smoking during the past year did not differ significantly by education level.

Exhibit 4-8. Smoking Cessation Among New York Adults by Education Level, New York ATS Q3 2003–Q4 2005

4.3 Medical Insurance

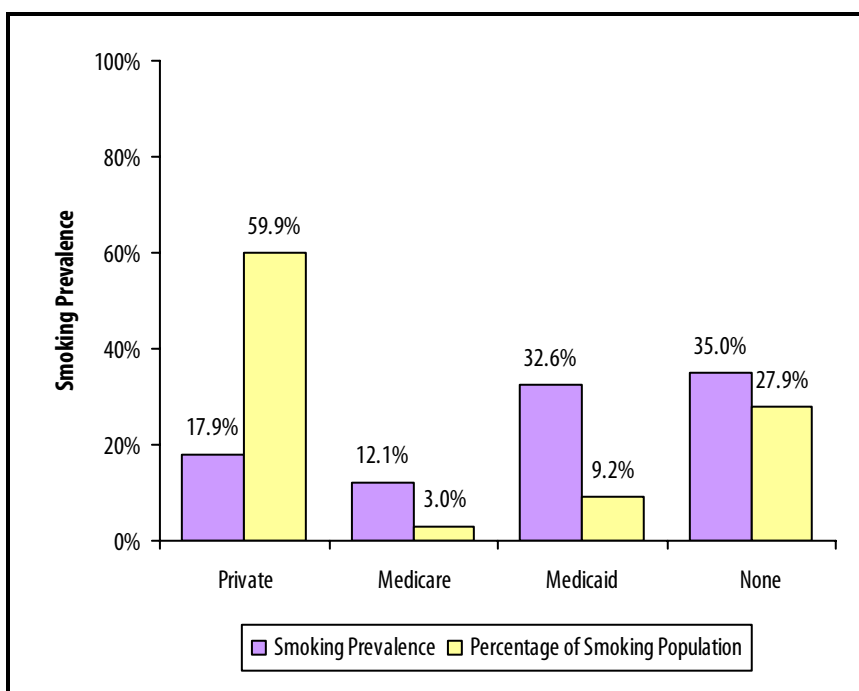
Health insurance status, like income and education levels, is indicative of an individual's overall socioeconomic well-being. As with income and education, examining tobacco use among individuals stratified by insurance status highlighted some significant differences. Most New Yorkers have private health insurance (64%); about 15% have no health insurance and about 7% are on Medicaid (results not shown). Seniors who qualify for Medicare (14%) account for the remaining percentage. Smoking prevalence is significantly higher among individuals on Medicaid (31%) and those without health insurance (27%) than among individuals with other sources of health insurance (Exhibit 4-9). When examining smoking rates among adults between the ages of 18 and 64, smoking prevalence among individuals on Medicaid (33%) and among those without any health insurance (28%) remains significantly higher than among individuals with private health insurance (15%). However, smoking prevalence among individuals on Medicare (individuals under age 65 are eligible for Medicare if they are disabled or if they have end-stage renal disease) is significantly higher (23%) than among individuals with private health insurance (results not shown).

Exhibit 4-9. Smoking Prevalence Among New York Adults by Insurance Status, New York ATS Q3 2003–Q4 2005



In all, approximately 24% of New York smokers have no health insurance, and approximately 13% of smokers are on Medicaid. Although smoking prevalence among all U.S. adults is higher across the board, similar results as those discussed above are seen with respect to the distribution of smokers by insurance status (Exhibit 4-10).

Exhibit 4-10. Smoking Prevalence Among U.S. Adults by Insurance Status, NHIS 2004



Despite the striking differences in smoking prevalence across insurance groups, there were no significant differences in daily cigarette consumption by insurance status (Exhibit 4-11). Restricting the analysis to adults aged 18 to 64 yielded similar results (not shown).

In contrast with daily cigarette consumption, significantly fewer smokers on Medicaid and smokers without health insurance reported being able to quit smoking for at least 6 months than smokers in other insurance groups (Exhibit 4-12). However, significantly more smokers on Medicare reported being able to quit smoking for at least 6 months than those with private insurance. Restricting the analyses to individuals aged 18 to 64, however, yielded some interesting differences. First, smokers on Medicaid were more likely to have attempted to quit smoking in the past year than those with private insurance. Second, although smokers on Medicaid and smokers without any insurance remained less likely to quit smoking successfully than those with private insurance, there were no differences between smokers on Medicare and those with private health insurance (results not shown).

Exhibit 4-11. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Insurance Status, New York ATS Q3 2003–Q4 2005

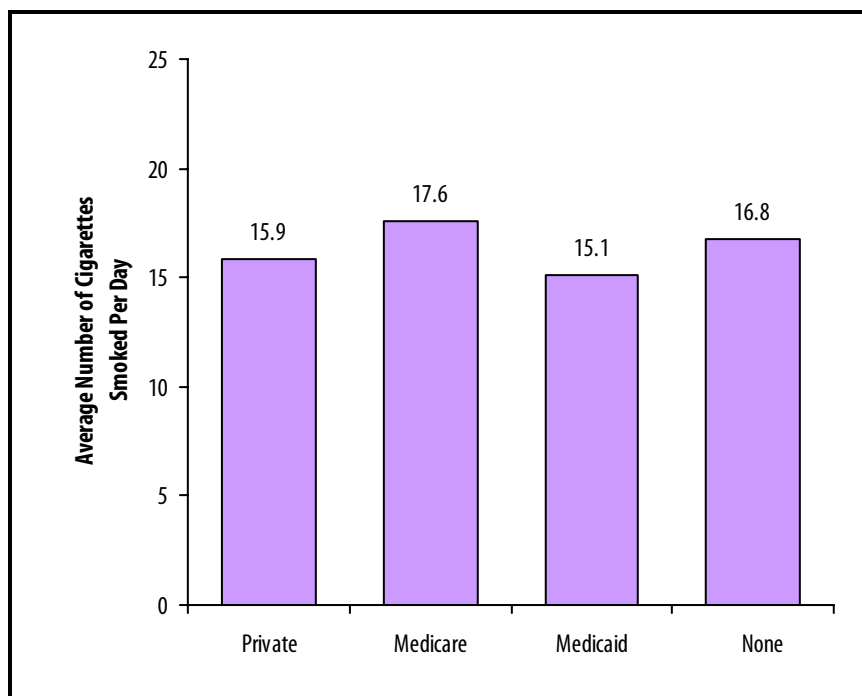
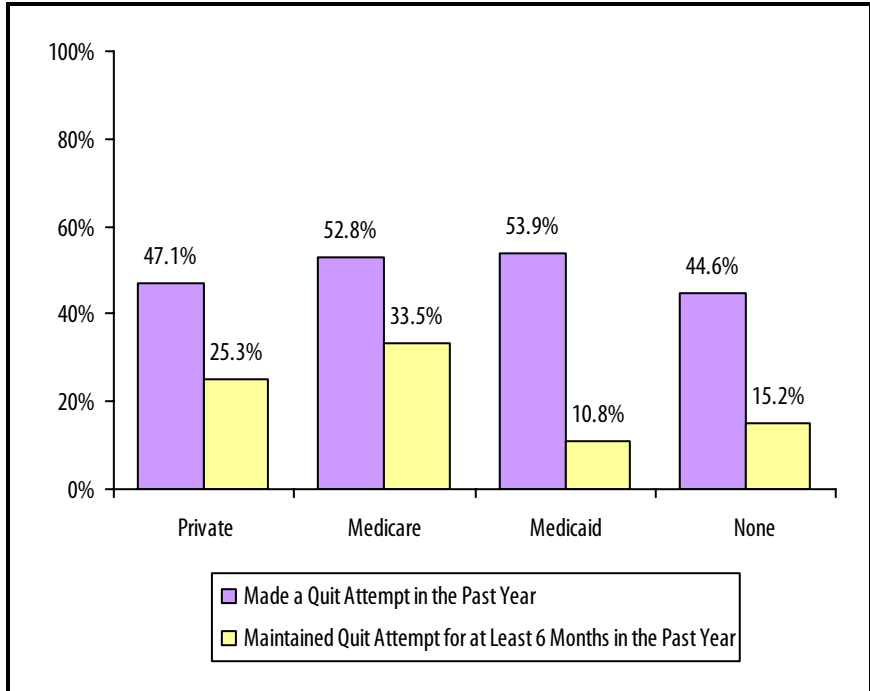


Exhibit 4-12. Smoking Cessation Among New York Adults by Insurance Status, New York ATS Q3 2003–Q4 2005

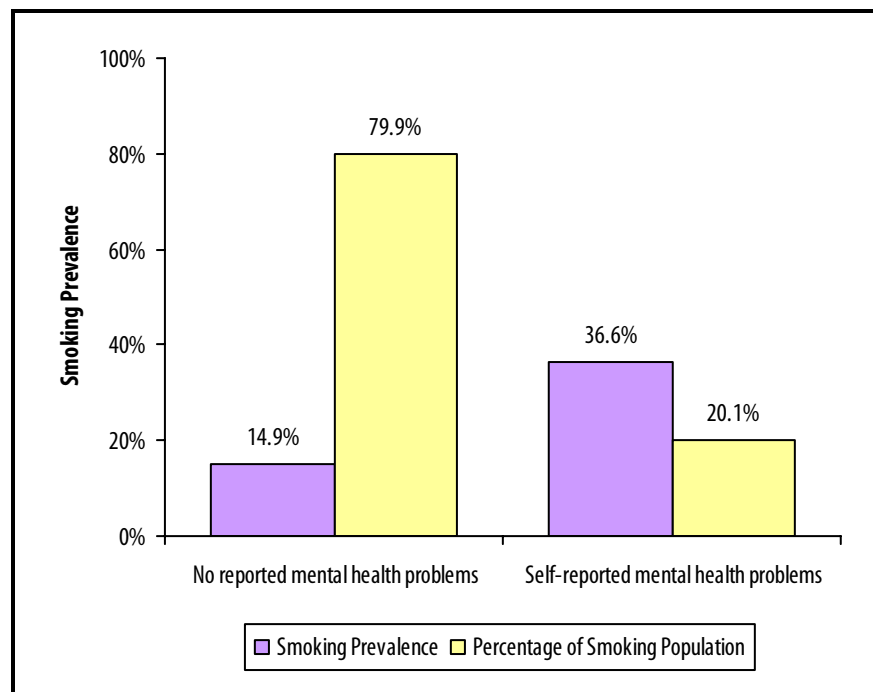


5. Personal Characteristics

5.1 Mental Health

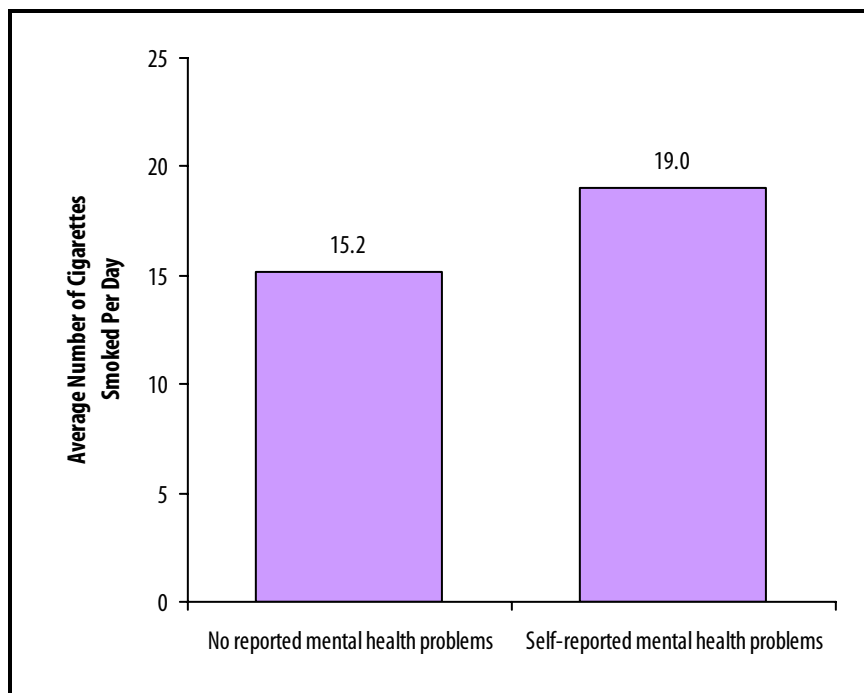
As noted in Section 2.3.1, individuals with mental health problems have been shown to smoke at significantly elevated rates relative to the general population. This striking difference is also observed in New York State. Although unable to estimate the prevalence of mental illness directly, the New York ATS asks respondents about their mental health (see Appendix A). Overall, smoking prevalence among individuals who reported some mental health problems was significantly higher (37%) than among individuals who did not (15%). Several studies estimate the percentage of U.S. adults with mental illness; however, these estimates vary depending on the specific definitions used. As noted in Section 2.3.1, the National Institute of Mental Health estimates that 26.2% of Americans suffer from a diagnosable mental disorder but that only a smaller percentage (6%) suffer from a serious mental illness. Only 9% of New York adults report any mental health problems (results not shown); although many individuals may have been reluctant to report any problems, more than 20% of smokers reported having had mental health problems (Exhibit 5-1).

Exhibit 5-1. Smoking Prevalence Among New York Adults by Mental Health Status, New York ATS Q3 2003–Q4 2005



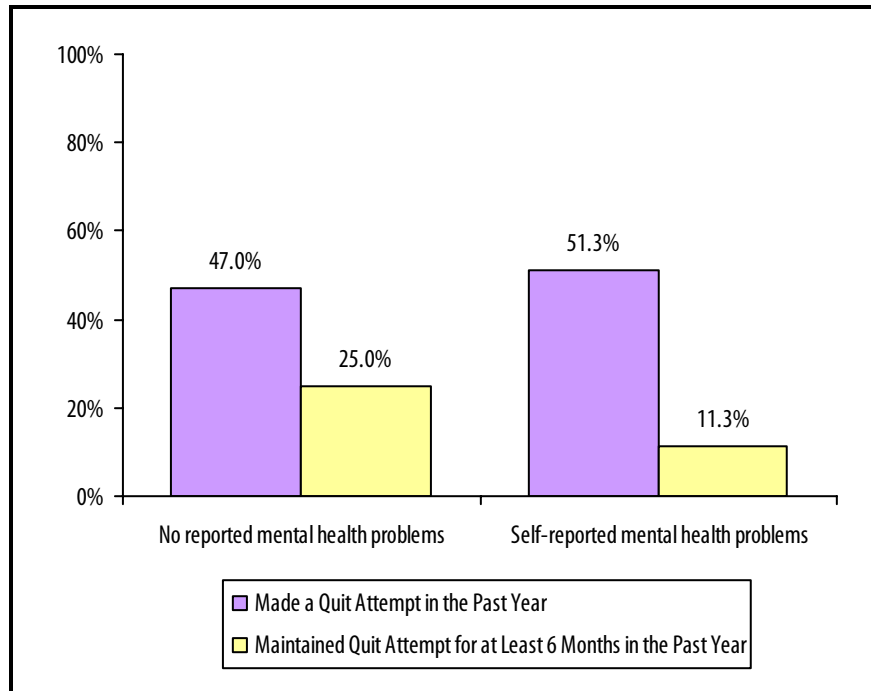
Individuals with mental health problems are not only more likely to smoke, but they also smoke significantly more cigarettes per day than those with no reported mental health problems. Specifically, in New York State, smokers with self-reported mental health problems indicated that they smoked 19 cigarettes per day on average, compared with 15 cigarettes per day among other smokers (Exhibit 5-2).

Exhibit 5-2. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Mental Health Status, New York ATS Q3 2003–Q4 2005



Smokers with mental health problems also were less likely to quit smoking for at least 6 months (11%) than their counterparts (25%) (Exhibit 5-3). There were no significant differences by mental health status in the percentage of current smokers who attempted to quit smoking during the past year.

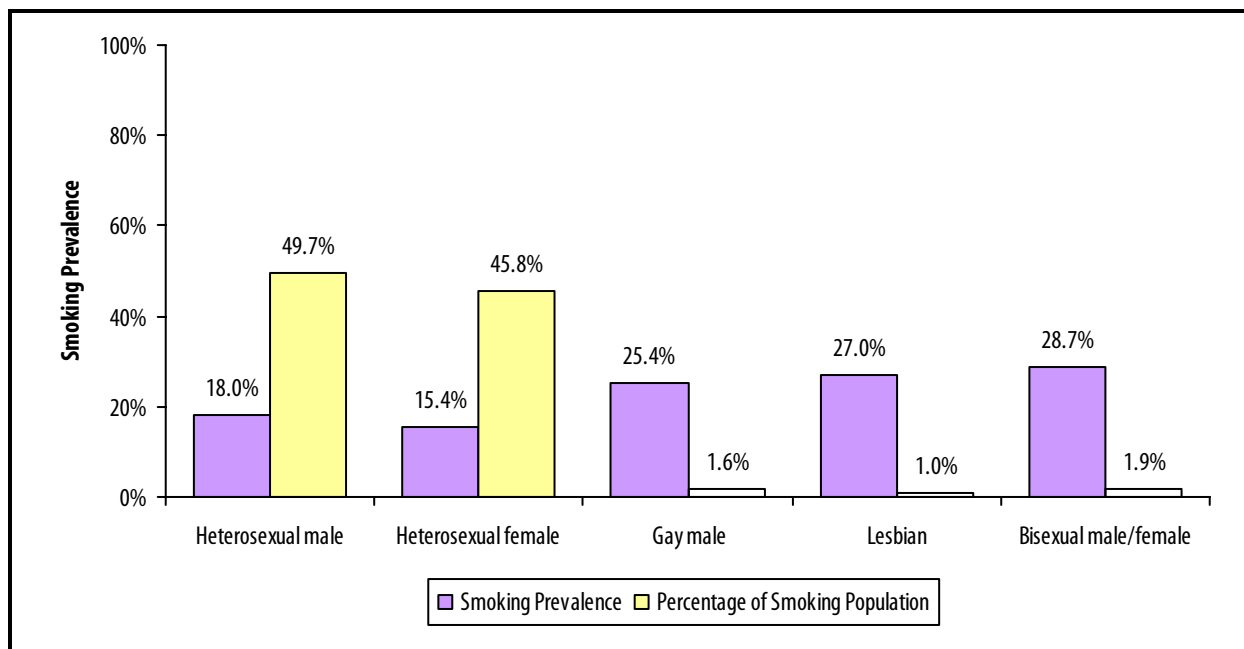
Exhibit 5-3. Smoking Cessation Among New York Adults by Mental Health Status, New York ATS Q3 2003–Q4 2005



5.2 Sexual Orientation

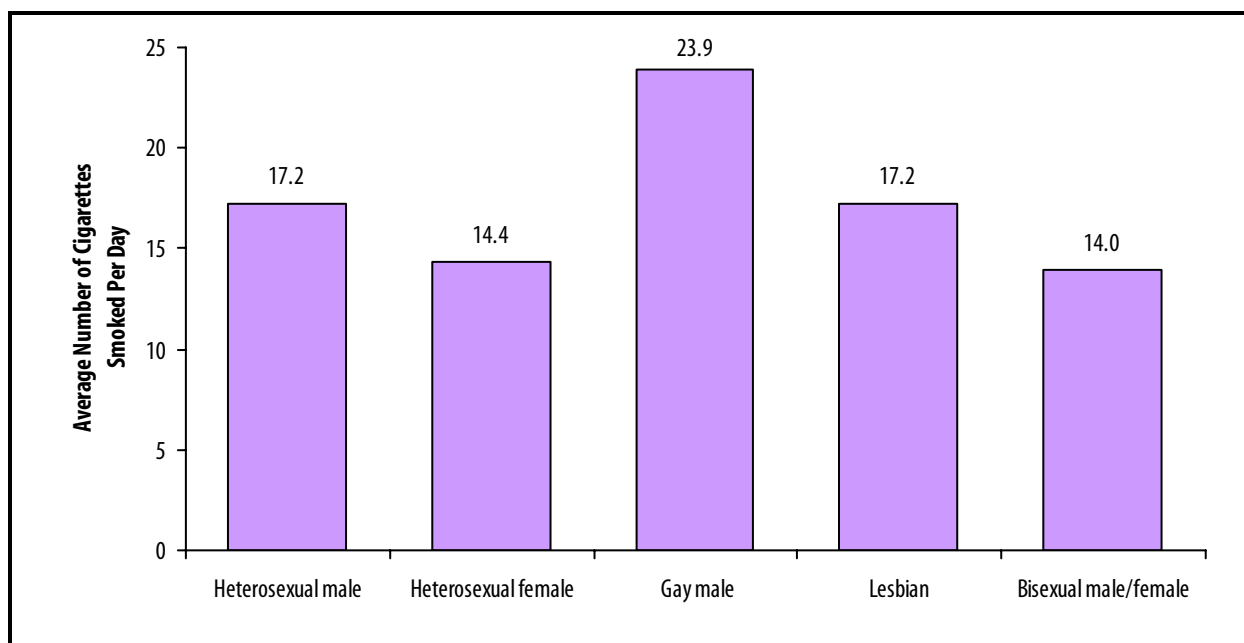
A number of studies have estimated the prevalence of tobacco use among LGB populations. Using the Gay Men's Tobacco Study, Greenwood et al. (2005) estimated that smoking prevalence among gay and bisexual men was 31%. Using data from a health survey of a large health maintenance organization, Gruskin et al. (2001) estimated that smoking prevalence among lesbian and bisexual women was approximately 25%. In the same studies, smoking prevalence was 25% among heterosexual males and 13% among heterosexual females. In New York State, smoking prevalence was significantly higher among gay males (25%) than among heterosexual males (18%), and smoking prevalence was significantly higher among lesbians (27%) than among heterosexual females (15%). As noted in Section 3, smoking prevalence among heterosexual males was significantly higher than among heterosexual females. Of note, only 1% of New Yorkers identified themselves as gay, lesbian, or bisexual. Although these figures likely result from underreporting, they suggest that only about 2% of smokers identify themselves as gay or bisexual and only 1% identify themselves as lesbian (Exhibit 5-4).

Exhibit 5-4. Smoking Prevalence Among New York Adults by Sexual Orientation, New York ATS Q4 2003–Q4 2005



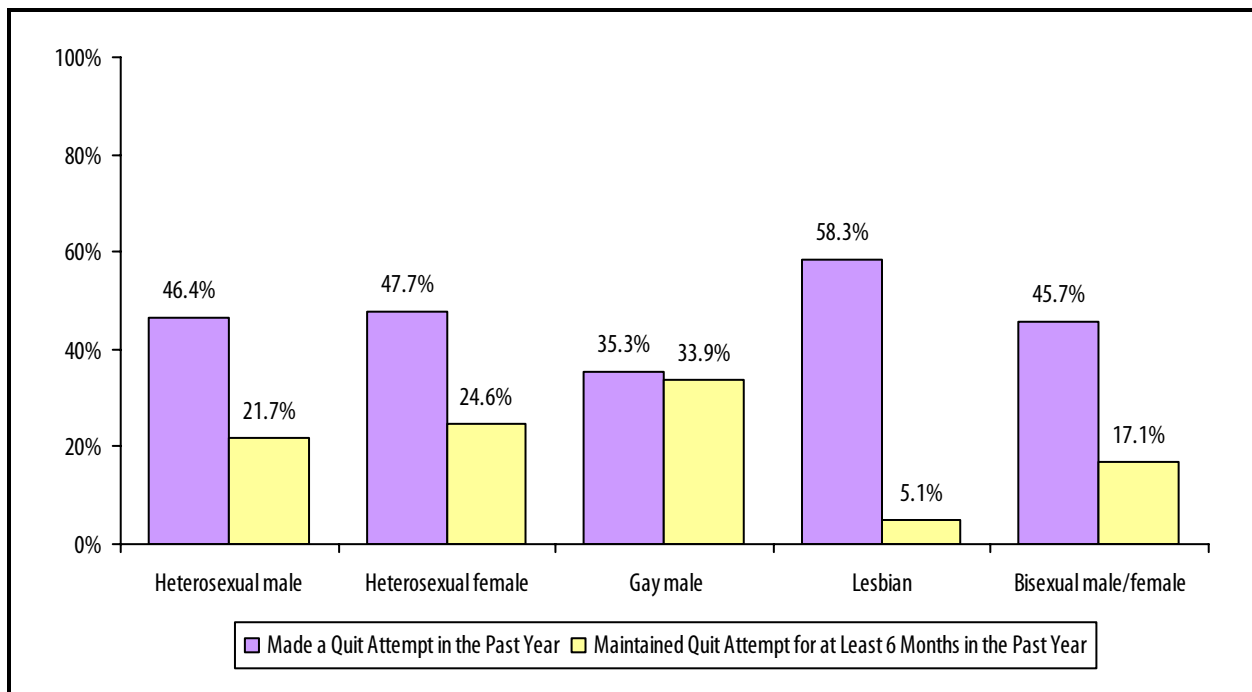
In terms of daily cigarette consumption, heterosexual female smokers and bisexual male or female smokers consumed fewer cigarettes on average than heterosexual male smokers, gay male smokers, and lesbian smokers (Exhibit 5-5).

Exhibit 5-5. Average Number of Cigarettes Smoked Per Day Among New York Adult Current Smokers by Sexual Orientation, New York ATS Q4 2003–Q4 2005



Although smoking prevalence and daily cigarette consumption both differed by sexual orientation, only lesbian smokers had a significantly lower successful quit rate than heterosexual male smokers (Exhibit 5-6). There were no significant differences by sexual orientation in the percentage of current smokers who attempted to quit smoking during the past year.

Exhibit 5-6. Smoking Cessation Among New York Adults by Sexual Orientation, New York ATS Q3 2003–Q4 2005



6. Discussion

The results compiled in this report demonstrate that statewide estimates of tobacco use mask considerable variation between population groups within New York State.

The results compiled in this report demonstrate that statewide estimates of tobacco use mask considerable variation between population groups within New York State. Specifically, estimates of smoking prevalence, daily cigarette consumption, and smoking cessation all differ markedly between and within the demographic, socioeconomic, and other groups highlighted.

In New York State, despite equal numbers of male and female smokers, smoking prevalence and daily cigarette consumption are significantly higher among men than among women. Although smoking prevalence among individuals aged 18 to 24 is higher than among any other age group, the largest percentage of smokers are actually middle-aged (aged 40 to 64).

Differences in tobacco use also exist by race/ethnicity. Although non-Hispanic whites, on average, smoke less than other groups, most notably Native Hawaiians, Pacific Islanders, and American Indians/Alaska Natives, the vast majority of smokers are non-Hispanic whites.

Differences also exist between the rural and urban populations within the state. Overall, more adults living in rural areas smoke than adults living in urban areas. In addition, rural smokers also consume significantly more cigarettes than their urban counterparts.

Although interventions targeting, for example, younger smokers, rural smokers, or specific minorities are certainly necessary, these individuals make up only fractions of the smoking population within the state. These results underscore the need for continued education and interventions targeting traditional smokers, namely non-Hispanic white, urban, middle-aged individuals who make up the vast majority of the smoking population.

There is a significant gradient associated with both individuals' income and education level and the prevalence of smoking.

As noted throughout this report, differences in tobacco use between population groups are also driven by underlying socioeconomic differences. Specifically, there is a significant gradient associated with both individuals' income and education level and the prevalence of smoking. Smokers with higher incomes and more years of education smoked fewer cigarettes than their counterparts and were more likely to quit smoking. The gradient associated with income and education was also evident when examining an individual's medical insurance status. Significantly more people without health insurance and on Medicaid smoke, compared with people who have private health insurance.

Cumulatively, these groups account for almost 40% of the smoking population and present a very real and difficult challenge for the public health community.

Individuals with mental health problems also represent a significant population of smokers. Not only do more individuals with mental illnesses smoke, but these individuals also smoke considerably more cigarettes per day than their counterparts. As noted in Section 2.3.2, some studies suggest that smokers with mental health problems consume as much as 44% of all cigarettes smoked in the United States. In New York, about 20% of all smokers have reported that they have or once had a mental illness.

Finally, significantly more gay men, lesbians, and bisexual men and women smoke than their heterosexual counterparts. However, although smoking rates are dramatically elevated among LGBs, they represent a limited target population. In all, less than 5% of the smoking population identified themselves as gay, lesbian, or bisexual.

Despite significant reductions in overall statewide estimates, differences in tobacco use between many population groups continue to present cause for concern. Interventions and policies targeting groups that consist of relatively few individuals, while certainly well intentioned, may do little in the long run to reduce the overall burden of tobacco use within the state. However, focused evidence-based interventions targeting major populations of smokers are necessary to ensure that the significant advances already made with regard to tobacco use continue into the future.

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Appendix A: Data and Methods

In this report, we used two data sources: the New York Adult Tobacco Survey (ATS) and the National Health Interview Survey (NHIS). The analyses presented in the report using the New York ATS are from 10 quarterly surveys from Q3 2003 through Q4 2005. The ATS target population is adults aged 18 or older living in residential housing units in the state. During each interview, study participants were asked about their demographic characteristics and their smoking behaviors, in addition to other relevant questions. The analyses presented in the report using the NHIS are exclusively from the 2004 survey. The NHIS is a household, multistage probability sample survey conducted annually by interviewers of the U.S. Census Bureau for the Centers for Disease Control and Prevention's National Center for Health Statistics. In 2004, household interviews were completed with 94,460 people living in 36,579 households, reflecting a household response rate of 86.9%.

A.1 Estimating the Percentage of Smoking Population

To quantify the percentage of smokers within each population group, we first calculated the total number of smokers in New York State and the total United States using smoking prevalence estimates (from the New York ATS and NHIS, respectively) and population totals (U.S. Census Bureau, 2004). Using the same procedure, we then calculated the total number of smokers in each population group and determined the proportion of smokers accounted for by each group.

A.2 Geographic Indicators

For the purposes of this report, a metropolitan statistical area (MSA) is defined as an area that has at least one urbanized area of 50,000 or more inhabitants. The largest city in each MSA is designated a "principal" or "central" city. Additional cities may qualify to be designated as principal or central if specified requirements are met concerning population size and employment. An MSA/central city indicator was derived using geographic information system (GIS) software for each county in New York State and was merged with the New York ATS data using the county indicator provided by survey participants.

A.3 Mental Health

Serious mental illness is defined as having a diagnosable mental, behavioral, or emotional disorder that met criteria in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and

that resulted in functional impairment that substantially interfered with or limited one or more major life activities. For the purposes of this report, individuals who reported mental health problems (including stress, depression, and problems with emotions) on 14 or more days in the past 30 days were coded as having some mental health problems or frequent mental distress.

Appendix B: Detailed Tables

Exhibit B-1. Detailed Results of Smoking Outcomes Among New York Adults, New York ATS Q3 2003–Q4 2005

| Characteristic (N) | Smoking Prevalence [95% CI] | Percentage of Smoking Population [95% CI] | Average Number of Cigarettes Consumed Per Day [95% CI] | Made a Quit Attempt in the Past Year [95% CI] | Maintained a Quit Attempt for at Least 6 Months in the Past Year [95% CI] |
|-------------------------------|--------------------------------|---|---|--|---|
| Gender | | | | | |
| Male (N=7,759) | 18.3% [17.1–19.5] | 51.1% [48.8–53.4] | 17.4 [16.3–18.4] | 47.6% [44.1–51.1] | 22.0% [18.3–25.6] |
| Female (N=12,351) | 15.8% [14.9–16.7] | 48.9% [46.6–51.2] | 14.6 [13.8–15.3] | 48.0% [44.9–51.0] | 23.1% [19.9–26.2] |
| Age | | | | | |
| 18–24 (N=1,217) | 23.3% [20.4–26.2] | 17.2% [15.3–19.3] | 14.2 [12.2–16.1] | 48.5% [41.9–55.1] | 16.3% [9.0–23.7] |
| 25–39 (N=4,617) | 19.6% [18.1–21.1] | 32.5% [30.3–34.7] | 14.5 [13.5–15.4] | 49.8% [45.6–54.0] | 18.2% [14.2–22.3] |
| 40–64 (N=9,564) | 17.3% [16.3–18.4] | 42.7% [40.4–44.9] | 17.6 [16.6–18.6] | 46.1% [42.8–49.4] | 24.2% [20.7–27.7] |
| 65+ years (N=4,295) | 7.8% [6.7–8.9] | 7.7% [6.6–8.8] | 17.6 [15.1–20.0] | 46.4% [39.0–53.7] | 40.4% [32.6–48.2] |
| Age by Gender (Male) | | | | | |
| 18–24 (N=566) | 24.1% [19.8–28.3] | 17.6% [14.9–20.7] | 17.5 [13.5–21.5] | 46.4% [35.8–56.9] | 14.2% [3.5–24.9] |
| 25–39 (N=1,751) | 22.5% [20.0–25.0] | 36.2% [32.8–39.6] | 15.8 [14.0–17.5] | 50.0% [43.1–56.8] | 16.4% [9.4–23.4] |
| 40–64 (N=3,800) | 17.7% [16.0–19.4] | 41.1% [37.8–44.5] | 19.6 [17.5–21.6] | 45.9% [39.9–51.9] | 28.3% [21.8–34.8] |
| 65+ years (N=1,552) | 6.6% [5.0–8.2] | 5.1% [4.0–6.6] | 20.7 [16.6–24.9] | 40.4% [26.2–54.6] | 56.3% [43.1–69.4] |
| Age by Gender (Female) | | | | | |
| 18–24 (N=651) | 22.4% [18.5–26.4] | 16.8% [14.1–19.7] | 9.9 [8.7–11.0] | 51.1% [40.5–61.6] | 15.3% [4.2–26.3] |
| 25–39 (N=2,865) | 16.8% [15.0–18.5] | 28.6% [26.0–31.5] | 13.4 [12.1–14.9] | 48.3% [41.7–54.8] | 25.3% [18.5–32.0] |
| 40–64 (N=5,763) | 17.0% [15.7–18.3] | 44.3% [41.3–47.3] | 16.2 [15.1–17.4] | 47.0% [42.2–51.9] | 25.7% [21.0–30.4] |
| 65+ years (N=2,741) | 8.6% [7.1–10.1] | 10.3% [8.7–12.2] | 17.8 [13.9–21.8] | 54.8% [45.2–64.3] | 37.3% [26.6–48.0] |

(continued)

Exhibit B-1. Detailed Results of Smoking Outcomes Among New York Adults, New York ATS Q3 2003–Q4 2005 (continued)

| Characteristic (N) | Smoking Prevalence [95% CI] | Percentage of Smoking Population [95% CI] | Average Number of Cigarettes Consumed Per Day [95% CI] | Made a Quit Attempt in the Past Year [95% CI] | Maintained a Quit Attempt for at Least 6 Months in the Past Year [95% CI] |
|---|--------------------------------|---|---|--|---|
| Race/Ethnicity | | | | | |
| Hispanic (N=1,570) | 17.5% [15.0–20.0] | 15.1% [13.2–17.2] | 11.3 [10.0–12.7] | 53.5% [45.9–61] | 22.7% [15.2–30.3] |
| White (N=15,545) | 17.3% [16.5–18.2] | 64.9% [62.5–67.2] | 18.0 [17.2–18.8] | 44.7% [42.1–47.3] | 24.1% [21.4–26.8] |
| African American (N=1,805) | 17.5% [15.2–19.7] | 14.7% [13.0–16.6] | 12.7 [10.9–14.5] | 56.2% [49.6–62.8] | 15.0% [8.4–21.7] |
| Asian (N=485) | 7.9% [4.9–10.8] | 1.7% [1.2–2.5] | 11.4 [8.8–13.9] | 42.0% [23.6–60.5] | 32.1% [4.7–59.6] |
| Native Hawaiian/Pacific Islander ^a (N=44) | 21.7% [8.5–34.8] | 0.3% [0.2–0.6] | 10.6 [7.4–13.8] | 56.0% [25.2–86.9] | 7.2% [–6.8–21.2] |
| American Indian/Alaska Native (N=154) | 22.2% [13.6–30.8] | 0.9% [0.6–1.4] | 21.4 [6.5–36.2] | 52.9% [33.7–72] | 2.8% [–2.0–7.7] |
| Other non-Hispanic (N=514) | 13.5% [9.9–17.1] | 2.4% [1.8–3.2] | 14.9 [11.9–17.9] | 46.5% [32.9–60.2] | 25.4% [10.2–40.6] |
| Geographic Location | | | | | |
| City center of MSA (N=9,024) | 16.7% [15.6–17.8] | 53.0% [50.7–55.2] | 14.7 [13.7–15.6] | 49.8% [46.4–53.2] | 21.1% [17.6–24.5] |
| Other areas of MSA (N=7,982) | 15.7% [14.6–16.7] | 35.0% [32.9–37.2] | 16.3 [15.3–17.2] | 46.3% [42.6–50.0] | 26.6% [22.6–30.5] |
| Non-MSA (N=2,867) | 23.8% [21.3–26.2] | 12.0% [10.8–13.4] | 20.8 [18.8–22.8] | 42.8% [37.0–48.5] | 16.2% [11.0–21.3] |
| Income | | | | | |
| Less than \$30,000 (N=5,157) | 23.5% [21.7–25.2] | 33.3% [31.2–35.6] | 16.2 [15.1–17.4] | 49.4% [45.4–53.5] | 17.1% [12.9–21.3] |
| \$30,000–59,999 (N=5,519) | 18.6% [17.2–20.1] | 28.7% [26.8–30.8] | 16.4 [15.4–17.5] | 50.0% [45.9–54.1] | 21.1% [16.9–25.4] |
| \$60,000–89,999 (N=2,886) | 14.7% [12.9–16.5] | 12.8% [11.3–14.4] | 15.0 [13.8–16.2] | 43.4% [37.1–49.7] | 25.7% [19.3–32.1] |
| \$90,000 and more (N=3,151) | 10.3% [8.8–11.8] | 10.7% [9.3–12.3] | 15.6 [13.7–17.5] | 40.9% [33.9–48.0] | 32.7% [25.3–40.2] |
| Education | | | | | |
| Less than high school (N=1,360) | 27.5% [24.1–30.9] | 12.9% [11.4–14.7] | 16.1 [13.9–18.3] | 50.2% [43.2–57.2] | 14.9% [8.5–21.2] |
| High school (N=5,492) | 22.9% [21.3–24.5] | 36.5% [34.3–38.8] | 18.0 [16.8–19.2] | 48.4% [44.5–52.3] | 18.2% [14.2–22.3] |
| Some college (N=4,824) | 19.3% [17.7–20.9] | 27.4% [25.4–29.5] | 15.5 [14.5–16.5] | 45.8% [41.5–50.2] | 21.5% [16.7–26.4] |
| College graduate (N=4,483) | 11.7% [10.4–13.0] | 15.4% [13.9–17.1] | 14.0 [12.6–15.5] | 44.2% [38.6–49.7] | 28.5% [22.5–34.4] |
| Post graduate (N=3,872) | 7.2% [6.2–8.2] | 7.8% [6.8–9.0] | 12.2 [10.8–13.5] | 55.1% [47.9–62.3] | 34.0% [26.9–41.1] |

(continued)

Exhibit B-1. Detailed Results of Smoking Outcomes Among New York Adults, New York ATS Q3 2003–Q4 2005 (continued)

| Characteristic (N) | Smoking Prevalence [95% CI] | Percentage of Smoking Population [95% CI] | Average Number of Cigarettes Consumed Per Day [95% CI] | Made a Quit Attempt in the Past Year [95% CI] | Maintained a Quit Attempt for at Least 6 Months in the Past Year [95% CI] |
|---------------------------------------|--------------------------------|---|---|--|---|
| Medical Insurance | | | | | |
| Private (N=12,539) | 14.3% [13.4–15.1] | 53.9% [51.5–56.3] | 15.9 [15.0–16.7] | 47.1% [43.9–50.2] | 25.3% [22.1–28.5] |
| Medicare (N=3,348) | 10.5% [9.1–12.0] | 8.8% [7.6–10.1] | 17.6 [15.2–19.9] | 52.8% [45.7–60.0] | 33.5% [25.3–41.6] |
| Medicaid (N=1,170) | 30.5% [26.7–34.2] | 13.1% [11.5–14.9] | 15.1 [13.3–16.8] | 53.9% [47–60.9] | 10.8% [5.2–16.3] |
| None (N=2,234) | 26.9% [24.3–29.4] | 24.3% [22.2–26.5] | 16.8 [15.2–18.4] | 44.6% [39.4–49.8] | 15.2% [9.2–21.2] |
| Mental Health | | | | | |
| Without mental distress (N=17,845) | 14.9% [14.2–15.6] | 79.9% [78.0–81.8] | 15.2 [14.5–15.9] | 47.0% [44.4–49.6] | 25.0% [22.2–27.8] |
| With mental distress (N=1,911) | 36.6% [33.3–39.9] | 20.1% [18.2–22.0] | 19.0 [17.4–20.6] | 51.3% [46.0–56.6] | 11.3% [7.5–15.1] |
| Sexual Orientation | | | | | |
| Heterosexual male (N=6,278) | 18.0% [16.7–19.3] | 49.7% [47.2–52.2] | 17.2 [16.1–18.3] | 46.4% [42.6–50.3] | 21.7% [17.6–25.8] |
| Heterosexual female (N=9,820) | 15.4% [14.4–16.4] | 45.8% [43.3–48.3] | 14.4 [13.7–15.1] | 47.7% [44.3–51.1] | 24.6% [21.0–28.1] |
| Gay (N=188) | 25.4% [16.8–34.0] | 1.6% [1.2–2.3] | 23.9 [9.9–38.0] | 35.3% [20.1–50.5] | 33.9% [12.6–55.3] |
| Lesbian (N=123) | 27.0% [15.7–38.3] | 1.0% [0.6–1.5] | 17.2 [8.5–26.0] | 58.3% [38.0–78.7] | 5.1% [–2.2–12.3] |
| Bisexual (N=176) | 28.7% [19.8–37.6] | 1.9% [1.4–2.7] | 14.0 [10.3–17.6] | 45.7% [28.6–62.8] | 17.1% [–3.0–37.1] |

^aEstimates based on a sample size of less than 50.

Exhibit B-2. Detailed Results of Smoking Outcomes Among U.S. Adults, NHIS 2004

| Characteristic | Smoking Prevalence [95% CI] | Percentage of Smoking Population [95% CI] |
|--|--|--|
| Gender | | |
| Male (N=13,812) | 24.2% [23.3–25.0] | 53.9% [51.9–55.7] |
| Female (N=17,361) | 19.2% [18.5–19.9] | 46.2% [44.4–47.8] |
| Age | | |
| 18–24 (N=3,312) | 25.2% [23.1–27.4] | 15.3% [14.0–16.6] |
| 25–39 (N=8,742) | 24.1% [23.0–25.2] | 42.0% [40.1–44.0] |
| 40–65 (N=13,163) | 24.3% [23.5–25.1] | 35.7% [34.5–36.8] |
| 65+ (N=5,956) | 9.3% [8.5–10.1] | 7.0% [6.4–7.6] |
| Race/Ethnicity | | |
| White (N=19,974) | 22.4% [21.7–23.1] | 69.8% [67.6–72.0] |
| African American (N=4,223) | 21.0% [19.5–22.5] | 13.8% [12.8–14.8] |
| American Indian/Alaska Native (N=159) | 33.6% [26.0–41.3] | 0.8% [0.6–1.0] |
| Asian (N=893) | 11.6% [9.4–13.9] | 1.6% [1.3–1.9] |
| Hispanic (N=5,592) | 16.0% [14.8–17.1] | 13.9% [12.9–14.9] |
| Geographic Location | | |
| Large MSA (N=99,783,000) | 17.7% [16.9–18.5] | 39.4% [37.6–41.2] |
| Small MSA (N=72,206,000) | 21.9% [20.8–23.0] | 35.3% [33.5–37.1] |
| Not in MSA (N=43,203,000) | 26.2% [24.5–27.9] | 25.3% [23.6–26.9] |

(continued)

Exhibit B-2. Detailed Results of Smoking Outcomes Among U.S. Adults, NHIS 2004 (continued)

| Characteristic | Smoking Prevalence [95% CI] | Percentage of Smoking Population [95% CI] |
|---|--|--|
| Income | | |
| Less than \$20,000 (N=7,696) | 26.8% [25.4–28.1] | 27.5% [26.2–28.9] |
| \$20,000–\$34,999 (N=5,174) | 25.0% [23.5–26.4] | 21.4% [20.2–22.6] |
| \$35,000–\$54,999 (N=4,624) | 22.4% [21.0–23.8] | 20.0% [18.7–21.2] |
| \$55,000–\$74,999 (N=2,910) | 20.3% [18.7–21.9] | 13.1% [12.1–14.1] |
| \$75,000+ (N=4,882) | 14.5% [13.4–15.5] | 18.0% [16.7–19.3] |
| Education | | |
| No high school or some high school (N=5,988) | 27.2% [25.8–28.6] | 24.1% [22.9–25.4] |
| High school graduate (N=8,828) | 26.0% [25.0–27.0] | 34.0% [32.7–35.3] |
| Some college (N=8,770) | 22.8% [21.8–23.8] | 29.6% [28.3–30.9] |
| College graduate (N=4,780) | 12.7% [11.6–13.8] | 9.0% [8.2–9.8] |
| Post-graduate degree (N=2,505) | 8.8% [7.7–9.9] | 3.3% [2.9–3.7] |
| Medical Insurance | | |
| Private (N=20,002) | 17.9% [17.3–18.5] | 59.9% [57.9–62.0] |
| Medicare (N=5,951) | 12.1% [11.2–13.0] | 3.0% [2.8–3.2] |
| Medicaid (N=2,251) | 32.6% [30.3–34.9] | 9.2% [8.6–9.9] |
| None (N=5,300) | 35.0% [33.5–36.6] | 27.9% [26.7–29.1] |

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