

**Differences by Race/Ethnicity in Smoking Behavior
and Smoking Cessation of the Medicare Population—
Final Report**

Purpose: The subject study was conducted using data from the Medicare Managed Care (MCC) Consumer Assessment of Health Plans Study (CAHPS®). MCC CAHPS surveys were created to obtain information from enrollees in Medicare managed care plans, and included questions concerning respondents' assessments of their plans and providers, their overall health status, health conditions, and health system utilization. Also included were questions on current and former smoking behavior and whether the respondent had been counseled to quit smoking. There are several reasons for the subject study: 1) to examine the prevalence of smoking in the Medicare managed care population to determine whether there are differences by race/ethnicity, and by gender within race/ethnicity; 2) to assess the extent to which doctors counsel Medicare beneficiaries to quit smoking and whether there are racial/ethnic disparities in counseling; 3) to examine differences by race, ethnicity, and gender in success in quitting; and 4) to examine how smoking, being counseled to quit, and success in quitting are related to several serious health conditions in the Medicare managed care population.

Results: The following racial/ethnic groups were identified for this study: Whites (non-Hispanic), Blacks (non-Hispanic), Asians (non-Hispanic), American Indians/Alaska Natives (non-Hispanic), Native Hawaiians/Pacific Islanders (non-Hispanic), and Hispanics/Latinos. The study consisted of the following analyses: 1) a table showing the differences in past and current smoking behavior by race, ethnicity, and gender in the MMC CAHPS population; 2) tables showing the relation between smoking behavior and certain health conditions in the MMC population; and 3) a table and multivariate analyses showing the relation between smoking cessation counseling (in the last six months) and the propensity to quit smoking in the MMC population. Note: The five health conditions considered in the second table analysis were heart disease, cancer, stroke, chronic obstructive pulmonary disease (COPD), and diabetes. Overall findings in the MMC population were as follows:

1. Differences in Smoking Behavior, by Race, Ethnicity, and Gender

- Current smoking is most prevalent among American Indians/Alaska Natives and blacks and least prevalent among Asians and Native Hawaiians/Pacific Islanders.
 - Whites and Hispanics fall in the middle range with respect to current smokers.

- Males are more likely to smoke than females (in all racial/ethnic groups).
 - The greatest difference between men and women occurs for Hispanics, followed by Asians, and blacks.
 - Only small, insignificant differences in smoking exist between men and women for whites and Native Hawaiians/Pacific Islanders.
- White men and women have the greatest proportion of former smokers, compared with their counterparts in other racial/ethnic groups.
- Asian men and women have the lowest proportion of former smokers, compared with their counterparts in other racial/ethnic groups.
 - This is due in part to the fact that so few Asians take up smoking in the first place.
- Men in every racial/ethnic group have a much higher proportion of former smokers, compared to women.
- Asians and Hispanics are most likely never to have smoked.
- American Indians/Alaska Natives are least likely never to have smoked.
- Women in every racial/ethnic group are much more likely to be nonsmokers than men.

2. Relationship between Smoking Behavior and Health Condition

- Former smokers are much more likely to have a health condition, compared to current smokers or nonsmokers.
 - Clearly, current or past use of cigarettes is a health risk factor for MMC enrollees.
- American Indians/Alaskan Natives have the highest incidence of the five health conditions, irrespective of smoking behavior, followed by blacks and Hawaiians/Pacific Islanders.
 - Hispanics have about the same incidence as whites.

- Asians are much less likely than any other group to incur one of these health conditions.
- These disparities suggest that MMC plans could do more for the higher-incidence groups.
- Men are more likely to have one of these health conditions, compared to women.
 - This difference is much more pronounced for current smokers than it is for former smokers and nonsmokers.
 - This implies that women smokers who contract one of these diseases are more likely to quit than men who contract one.
 - The difference between genders is greatest for Asians and whites, and lowest for blacks.
- Heart disease and diabetes are the most common diseases for most racial/ethnic groups in the MMC population, regardless of smoking behavior.
 - COPD and stroke are the least common.
- Former smokers are much more likely than nonsmokers to have each of the five health conditions.
 - The greatest difference is for heart disease, followed by COPD and cancer.
- Former smokers are more likely to have a health condition, compared with current smokers.
 - This holds for every racial/ethnic group and both genders, although not for every disease.
 - This strongly suggests that incurrence of disease—especially heart disease, cancer, and diabetes—influences smokers to quit.
- Surprisingly, current smokers have virtually the same incidence of disease as nonsmokers when generalizing over all conditions, racial/ethnic groups, and both genders.
 - However, there are considerable variations among conditions:

- Current smokers incur a higher incidence of COPD and stroke than is the case for nonsmokers.
 - On the other hand, current smokers are much less likely to have diabetes and somewhat less likely to have heart disease, compared with nonsmokers.
 - Taken with other findings, this implies that smokers tend not to quit until they get a disease, and suggests a direction that smoking cessation counseling should take.
 - For reasons uncertain, the incidence of diabetes is less for current smokers than it is for nonsmokers, a finding that holds for 9 of 12 racial/ethnic/gender groups.
 - It is unlikely that taking up smoking somehow lessens the likelihood of contracting diabetes.
3. Differences in Physician Counseling to Quit Smoking (in the Last Six Months), by Race, Ethnicity, and Gender

Descriptive Analysis

- 35 – 49 percent of smokers did not receive smoking cessation advice by their doctor or other health plan provider even once in the last six months.
 - Even if they did not see a doctor in that time, it suggests that Medicare managed care organizations are not doing enough to give smokers badly needed advice.
 - For smokers that did see a doctor, the picture is not much better: Between 27 – 38 percent were not advised to quit, even though they had at least one and possibly multiple doctor visits.
- Black smokers are the most likely racial/ethnic group to be advised to quit, followed closely by whites.
- Asian and American Indians/Alaska Natives are least likely to be advised to quit.
- Female blacks and female whites are counseled to quit slightly more frequently than their male counterparts, whereas the opposite is the case for the other racial/ethnic groups.

- However, the differences between genders for a given racial/ethnic group are small.
- Differences between individuals in the average number of times they were advised to quit are greater across racial/ethnic groups than they are across genders.
 - Blacks, American Indians/Alaska Natives, and Hispanics are advised to quit more frequently, on average, than Whites.
 - Asian smokers receive substantially less advice to quit smoking cessation than their White counterparts.
- In terms of the likelihood of a smoker being advised to quit during a doctor visit:
 - American Indian/Alaska Native, black, and Asian men were most likely to be so advised.
 - Asian, Hispanic, and American Indian/Alaska Native women were least likely to be so advised.
 - Men had higher likelihood percentages than women for all racial/ethnic groups.
 - Differences between men and women were higher for Asians and American Indians/Alaska Natives, but much lower for whites, blacks, and Hispanics, suggesting a greater possibility of gender bias among Asians and American Indians/Alaska Natives.

Multivariate Analysis, by Various Factors

- In addition to race/ethnicity and gender, other factors undoubtedly are associated with the likelihood of being counseled to quit.
 - Multivariate analyses were performed to disentangle and identify the influence of the following measurable factors that might be associated with whether or not a smoker is advised to quit: race/ethnicity, gender, age, educational attainment, Medicaid buy-in status, U.S. geographic region, for-profit versus non-profit Medicare managed care organization (MCO), presence of a serious health condition, and number of visits to doctor's office or clinic in the last six months.
- With regard to race, when other measurable factors are controlled for:

- Nonwhite smokers are neither more nor less likely to receive advice about quitting smoking than white smokers are.
- None of the nonwhite groups differ from the others.
- Thus, race/ethnicity is not a causal factor in explaining the differences in whether a smoker is advised to quit or not.
- Gender is not a significant factor in accounting for whether a smoker is advised to quit.
 - The small differences in genders are not significant in a statistical sense.
- Medicare buy-in status is not a significant factor in accounting for whether a smoker is advised to quit.
 - The poverty implied by dual-eligible status is apparently not an impediment to equal treatment for smoking cessation counseling.
- Compared with MMC enrollees having eight or fewer years of education, none of the higher educational groups of enrollees is more or less likely to receive smoking cessation counseling, and neither are any of these higher education groups statistically different from one another.
- Older smokers in the MMC population are less likely to be advised to quit, holding other factors constant.
 - The explanation for this might be due to the fact that older MMC enrollees have fewer years of life remaining, over which to reap health and other benefits from quitting smoking.
- Regionally, there is a stronger emphasis on smoking cessation and prevention in the Northeast than in other parts of the country.
- For-profit MCOs do less smoking cessation counseling than other organizational forms.
 - It might reflect a lower emphasis on prevention in for-profit MCOs, or it could be capturing some other unobserved effects.
- Smokers who have been told by a doctor that they have a heart condition, cancer, stroke, COPD, or diabetes are significantly more likely to be advised to quit than are persons without these illnesses.

Multivariate Analysis, by Health Condition

- In order to delve more deeply into the relationship between smoking, illness, and cessation counseling, the sample was divided by health condition, and the estimate was repeated for each condition.
- With regard to heart condition:
 - Blacks and Asians with heart disease are less likely than whites with the disease to be advised to quit smoking.
 - Persons with heart disease in the South are not advised differently than those in the Northeast.
 - Persons with heart disease enrolled in a for-profit MCO are not advised differently than those in other forms of managed care plans.
- With regard to cancer:
 - Blacks with cancer are less likely than whites with cancer to be advised to quit smoking.
 - Females with cancer are less likely than males with cancer to be advised to quit smoking.
 - Cancer patients with 8 or fewer years of schooling are less likely to receive cessation advice than are most of those with more schooling.
 - There are no regional differences in being advised to quit for persons with cancer.
 - Persons with cancer who are enrolled in a for-profit MCO are not advised differently than those in other forms of managed care plans.
- With regard to stroke:
 - Hispanics with stroke are more likely to receive smoking cessation counseling than whites with stroke.
 - Age is not a significant factor in explaining differences in smoking cessation advice.

- Persons with stroke who live in the South and Midwest are not advised more or less frequently than those in the Northeast.
- Persons with stroke enrolled in a for-profit MCO are not advised differently than those in other forms of managed care plans.
- With regard to COPD:
 - Age is not a significant factor in explaining differences in smoking cessation advice.
 - Persons with COPD in the South and West are less likely than those in the Northeast to receive smoking cessation advice.
 - The for-profit HMO effect is not significant for persons with COPD, in contrast to the findings for the entire sample.
- With regard to diabetes:
 - None of the regional effects is significant for persons with diabetes in contrast to the findings for the entire sample.
- In summary:
 - There are a few differences across racial/ethnic subgroups, compared with whites, in being advised to quit when we look at persons with each health condition separately, in contrast to what was found when all health conditions were combined.
 - Some of the regional differences disappear, as does the significance of being in a for-profit MCO for all conditions other than diabetes.

Multivariate Analysis, by Racial/Ethnic and Gender Group

- Another approach to learning more about the relationship between smoking and being advised to quit is to segment the sample by racial/ethnic group and gender and to perform the estimates on each subgroup separately.
 - Note: Several racial/ethnic groups could not be estimated because of small sample sizes; so the analysis was limited to whites, blacks, and Hispanics.

- White male smokers with any of the five health conditions, except diabetes, are more likely to receive cessation advice (relative to persons without those conditions), which agrees with the findings for the entire sample.
 - In contrast, for Hispanics this is true for only three conditions; and for blacks this is true for only one condition.
 - In fact, black male smokers with cancer are less likely to be advised to quit than those without cancer.
- Age is negatively associated with advice to quit smoking for white males, but not for black or Hispanic males; and age is negatively associated with advice to quit smoking for white and black females, but not for Hispanic females.
 - This suggests that older white smokers (both male and female) and older black female smokers in the MCC population are less likely to be advised to quit.
- Black male smokers in a for-profit MMC plan are less likely to receive cessation advice than persons in the excluded group.
 - MMC plan profit status is not a significant factor for any of the other racial/ethnic/gender groups.
- Southern and Midwestern Hispanics are more likely to receive cessation counseling, compared with those in the Northeast.
- Whites in the South, Midwest, or West are less likely to receive cessation counseling, compared with Whites in the Northeast.
- There are no regional effects for blacks.
- White female smokers with a heart condition, COPD, or diabetes are more likely to be advised to quit than those without such conditions.
 - This pattern is similar to that for white male smokers.
- Hispanic female smokers with diabetes is one of only two racial/ethnic gender groups with that condition that is not more likely to be advised to quit smoking, compared with those without diabetes.

- However, Hispanic female smokers with stroke or COPD are more likely to receive cessation advice than Hispanic female smokers without either of these conditions.
- These findings are mostly different than those for Hispanic male smokers.
- Among black female smokers, the only significant condition associated with smoking cessation counseling is diabetes.
 - Notably, for black female smokers, there is not the negative relationship that exists for black male smokers between having cancer and receiving cessation advice.
- White female smokers in the Northeast are more likely to be advised to quit smoking than those in the rest of the country.
 - However, there are no such regional differences among female smokers from other racial/ethnic groups.
- As expected, the number of doctor visits is positively and highly significantly related to the number of times a person is advised by a doctor to quit smoking.
 - The only exception is for black women.
- Surprisingly, the for-profit MCO variable is not statistically significant for any racial/ethnic/gender group in this particular analysis.
 - This is partly due to the fact that a sizable portion (15 percent) of women in the sample did not indicate a race.