

## STATISTICAL BRIEF #97

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# Trends in Statin Use in the Civilian Noninstitutionalized Medicare Population, 1997 and 2002

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### Introduction

Statins are prescribed medications that are used to lower levels of cholesterol and other fats in the blood. This may help prevent medical problems caused by cholesterol clogging the blood vessels.<sup>1</sup> The first drug in this class, lovastatin (Mevacor), was approved by the U.S. Food and Drug Administration in 1987 and was followed by five other statins that were approved between 1991 and 1997. Use of these drugs has increased rapidly since their introduction. By 2002, atorvastatin (Lipitor), simvastatin (Zocor), and pravastatin (Pravachol) ranked first, second, and third, respectively, in total expenditures among drugs purchased by the U.S. civilian noninstitutionalized elderly population.<sup>2</sup>

This Statistical Brief presents data from the Household Component of the Medical Expenditure Panel Survey (MEPS-HC) on statin use in the U.S. civilian noninstitutionalized Medicare population in 1997 and 2002. Estimates are presented for subgroups of the Medicare population defined by age, race/ethnicity, sex, poverty status, insurance status, and health status. All differences discussed in the text are statistically significant at the 0.05 level.

### Findings

In 1997, 11.6 percent of the 38.0 million persons in the civilian noninstitutionalized Medicare population used at least one statin during the year. By 2002, the Medicare population had grown to 41.1 million persons, and the proportion of persons using a statin had increased to 27.1 percent. (figure 1) As a result, the number of statin users in the Medicare population increased from 4.4 million in 1997 to 11.1 million in 2002.

Rapid increases in the use of statins were widespread. From 1997 to 2002, the proportion of beneficiaries who used at least one statin

### Highlights

- The proportion of the civilian noninstitutionalized Medicare population using statins increased from 11.6 percent in 1997 to 27.1 percent in 2002.
- From 1997 to 2002, the proportion of beneficiaries who used at least one statin during the year more than doubled for both men and women and for all age, insurance status, and health status categories examined.
- Among beneficiaries who reported that they were in excellent health, the proportion with statin use more than tripled, from 5.6 percent in 1997 to 20.0 percent in 2002.
- From 1997 to 2002, statin use increased for Hispanic beneficiaries from 10.9 to 18.2 percent, for white non-Hispanic beneficiaries from 12.3 to 28.5 percent, and for black non-Hispanic beneficiaries from 6.9 to 20.7 percent.
- Statin use also increased across all poverty categories from 1997 to 2002: from 9.7 to 22.5 percent for the poor/near poor, 9.2 to 27.8 percent for those with low incomes, 13.9 to 27.4 percent for those with middle incomes, and 12.0 to 29.3 percent for those with high incomes.

<sup>1</sup> Medline Plus <http://www.nlm.nih.gov/medlineplus/druginfo/uspdi/202284.html>

<sup>2</sup> Stagnitti, M. N. *Top 10 Outpatient Prescription Medicines Ranked by Utilization and Expenditures for the Elderly in the U.S. Community Population, 2002*. Statistical Brief #66. February 2005. Agency for Healthcare Research and Quality, Rockville, Md.

during the year more than doubled for both men and women and for all age, insurance status, and health status categories examined. There were also large increases in statin use in all race/ethnicity and poverty categories. There were only two groups—Hispanics and middle income beneficiaries—for whom the proportion with use did not at least double.

There were increases in statin use by both male and female beneficiaries from 1997 to 2002. The proportion with use increased from 11.8 to 29.6 percent for males and from 11.5 to 25.1 percent for females. (figure 2)

Statin use increased for non-elderly beneficiaries (those under age 65) from 7.1 percent in 1997 to 16.9 percent in 2002. Increased use was also observed for all three age categories of elderly beneficiaries: age 65–74 (14.6 versus 30.9 percent), age 75–84 (10.6 versus 30.5 percent), and 85 years old and older (4.5 versus 11.8 percent). (figure 3)

From 1997 to 2002, the proportion of black non-Hispanic beneficiaries using statins tripled, rising from 6.9 to 20.7 percent. For white non-Hispanic beneficiaries, the percentage with use more than doubled from 12.3 to 28.5 percent; and for Hispanic beneficiaries, the proportion with use rose by about two-thirds, from 10.9 to 18.2 percent. (figure 4)

Statin use more than doubled from 1997 to 2002 for beneficiaries with each type of supplementary insurance. For beneficiaries with a private group policy, use increased from 14.1 to 32.4 percent; and for beneficiaries with a private non-group policy, use increased from 11.0 to 26.4 percent. For beneficiaries with public insurance in addition to Medicare, use increased from 7.9 to 17.4 percent. Finally, for beneficiaries who were enrolled in a Medicare HMO or who had Medicare fee-for-service coverage only, use increased from 10.3 to 25.1 percent. (figure 5)

Statin use among Medicare beneficiaries increased for all poverty status classifications when comparing the years 1997 and 2002. Statin use increased from 9.7 to 22.5 percent for the poor/near poor, from 9.2 to 27.8 percent for those with low incomes, from 13.9 to 27.4 percent for those with middle incomes, and from 12.0 to 29.3 percent for those with high incomes. (figure 6)

Among beneficiaries who reported that they were in excellent health, the proportion with statin use more than tripled, from 5.6 percent in 1997 to 20.0 percent in 2002. Statin use also increased for beneficiaries reporting good/very good health (13.6 versus 29.1 percent) and beneficiaries reporting fair/poor health (11.1 versus 27.3 percent). (figure 7)

## Data Source

The estimates presented in this Statistical Brief were derived from the 1997 and 2002 full-year consolidated data files and the 1997 and 2002 MEPS prescribed medicines (PMED) files. Statins were identified by linking the PMED files to the Multum Lexicon. Individuals were classified as using statins if they had one or more purchases of these drugs during the year.

## Definitions

### *Use*

Use was defined as one or more purchases of a prescribed statin medicine. The group of drugs commonly known as statins is more formally referred to as 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors.<sup>1</sup> This brief focuses solely on this class of drugs. Other cholesterol-lowering drugs, such as fibric acid derivatives and bile acid sequestrants, were not included. For this brief, statins were determined by using the Multum Lexicon therapeutic classification variables from Cerner Multum, Inc. Statins were defined as those prescribed drugs in the Multum Lexicon therapeutic sub-class, HMG-CoA Reductase Inhibitors.

### *Medicare population*

Individuals were included in the Medicare population if they reported Medicare coverage in at least one month during the year. A small number of persons 65 and older never reported Medicare coverage during the year. These persons were excluded from the analysis.

### *Age*

Age is the last available age for the sampled person. For most persons, this was their age at the end of the year.

### *Racial and ethnic classifications*

Classification by race and ethnicity was based on information reported for each family member. Respondents were asked if each family member's race was best described as American Indian, Alaska Native, Asian or Pacific Islander, black, white, or other. They also were asked if each family member's main national origin or ancestry was Puerto Rican; Cuban; Mexican, Mexicano, Mexican American, or Chicano; other Latin American; or other Spanish. All persons whose main national origin or ancestry was reported in one of these Hispanic groups, regardless of racial background, were classified as Hispanic. Since the Hispanic grouping can include black Hispanic, white Hispanic, Asian and Pacific Islanders Hispanic, and other Hispanic, the race categories of black, white, Asian and Pacific Islanders, and other do not include Hispanic. Beginning in 2002, MEPS respondents were allowed to report multiple races, and these persons were included in the other non-Hispanic category. As a result, there was a slight increase in the percentage of persons classified in this category in 2002 compared with prior years.

### *Health insurance status*

Respondents were asked about health insurance coverage for themselves and all household members at each round of interviewing. The insurance variables reflect supplemental coverage, in addition to Medicare, that beneficiaries had for hospital and physician services. Persons categorized as having supplemental insurance coverage may or may not have coverage for prescription drugs. The insurance categories are mutually exclusive and hierarchical. Persons with more than one type of supplemental coverage were placed into an insurance category in the following order:

- Private group insurance: This group includes those who, at any time in the survey year, had group plan coverage for medical or related expenses. It also includes persons who were covered by CHAMPUS/TRICARE (which covers retired members of the uniformed services and the spouses and children of active-duty military).
- Private non-group: This group includes those who at any time in the survey year had individually purchased private coverage for medical or related expenses. The private group and non-group definitions both include prepaid health plans (such as health maintenance organizations) but exclude extra cash coverage plans, medical benefits linked only to specific diseases (dread disease plans), and casualty benefit plans (such as automobile insurance).
- Other public insurance: This group includes those who at any time in the survey year had coverage from Medicaid or other State and local medical assistance programs.
- Medicare HMO/Medicare only: This group includes persons who did not report any private or public supplemental insurance coverage and were enrolled in Medicare HMOs or had Medicare fee-for-service coverage only.

### *Poverty status*

Each year, persons were classified according to their family's income in terms of poverty status. In this report, poverty status is the ratio of the family's income to the Federal poverty thresholds, which control for the size of the family and the age of the head of the family. The following classification of poverty status was used:

- Poor/near poor: Persons in families with income of 125 percent of the poverty line or less, including those who reported negative income.
- Low income: Persons in families with income from over 125 percent through 200 percent of the poverty line.
- Middle income: Persons in families with income from over 200 percent through 400 percent of the poverty line.
- High income: Persons in families with income over 400 percent of the poverty line.

### *Perceived health status*

During each round of interviewing, the household respondent was asked to rate the health of each person in the family according to the following categories: excellent, very good, good, fair, or poor. For this report, the response categories "very good" and "good" were collapsed, as were "fair" and "poor." Health status was missing for approximately 1 percent of beneficiaries.

## About MEPS-HC

MEPS-HC is a nationally representative longitudinal survey that collects detailed information on health care utilization and expenditures, health insurance, and health status, as well as a wide variety of social, demographic, and economic characteristics for the civilian noninstitutionalized population. It is cosponsored by the Agency for Healthcare Research and Quality and the National Center for Health Statistics.

For more information about MEPS, call the MEPS information coordinator at AHRQ (301-427-1656) or visit the MEPS Web site at <http://www.meps.ahrq.gov/>.

## References

For a detailed description of the MEPS survey design, sample design, and methods used to minimize sources of nonsampling error, see the following publications:

Cohen, J. *Design and Methods of the Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 1. AHCPR Pub. No. 97-0026. Rockville, Md.: Agency for Health Care Policy and Research, 1997.

Cohen, S. *Sample Design of the 1996 Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 2. AHCPR Pub. No. 97-0027. Rockville, Md.: Agency for Health Care Policy and Research, 1997.

Cohen, S. Design Strategies and Innovations in the Medical Expenditure Panel Survey. *Medical Care*, July 2003: 41(7) Supplement: III-5–III-12.

## Suggested Citation

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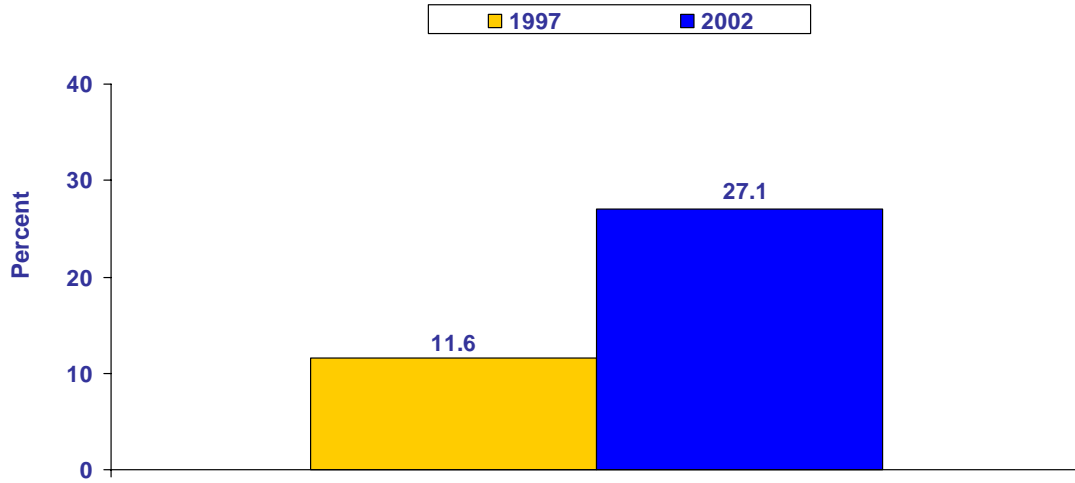
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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Statistical Brief and other MEPS data and tools and to share suggestions on how MEPS products might be enhanced to further meet your needs. Please e-mail us at [mepspd@ahrq.gov](mailto:mepspd@ahrq.gov) or send a letter to the address below:

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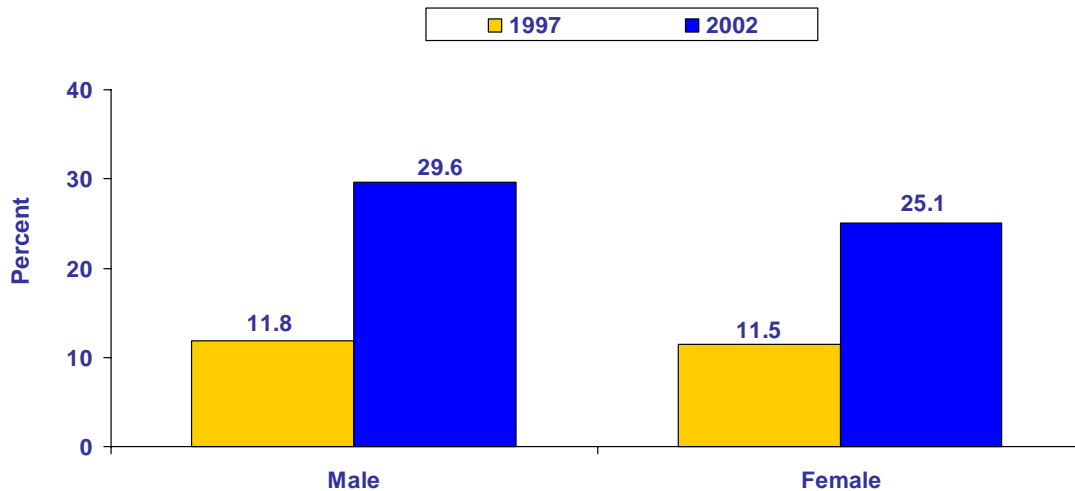
**Figure 1. Percentage of the Medicare population with at least one statin purchase, 1997 and 2002**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1997 and 2002.



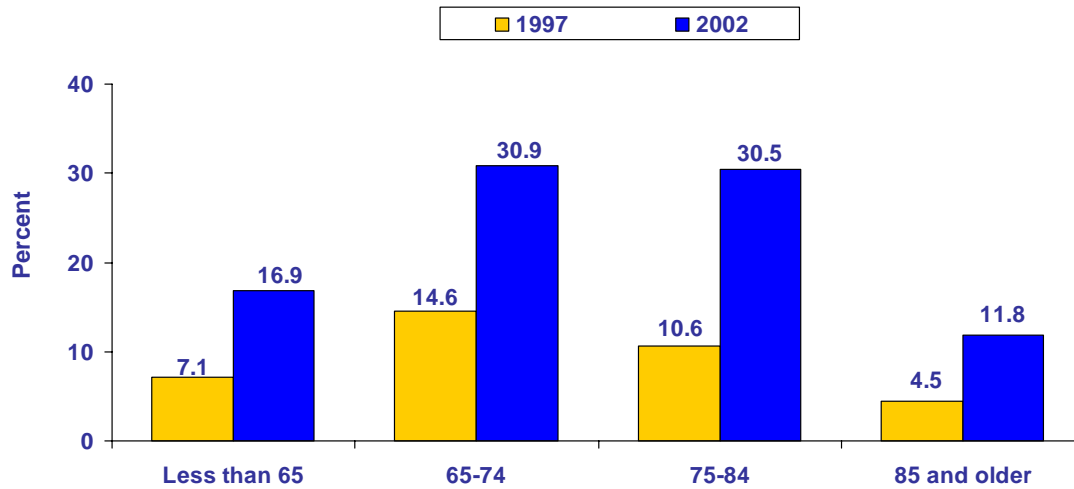
**Figure 2. Percentage of the Medicare population with at least one statin purchase, by sex, 1997 and 2002**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1997 and 2002.



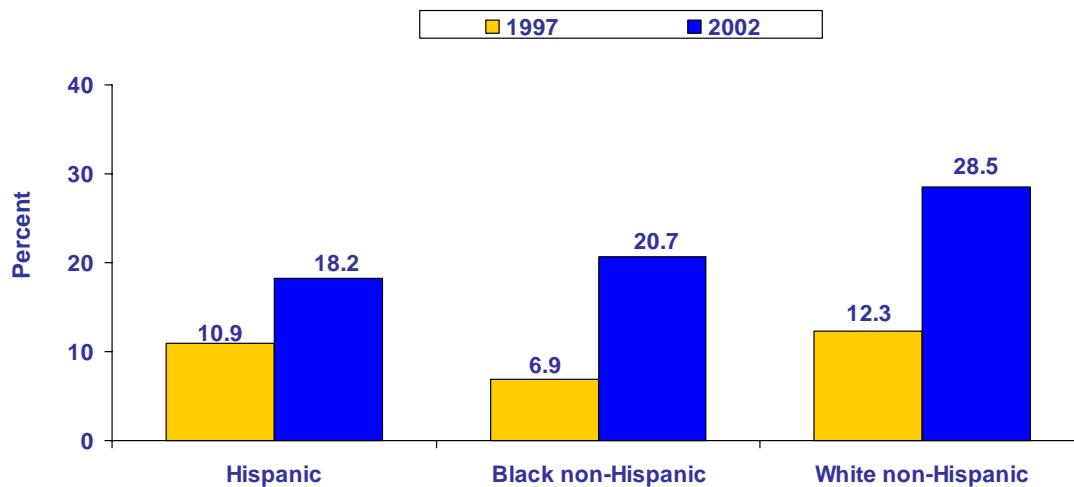
**Figure 3. Percentage of the Medicare population with at least one statin purchase, by age, 1997 and 2002**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1997 and 2002.



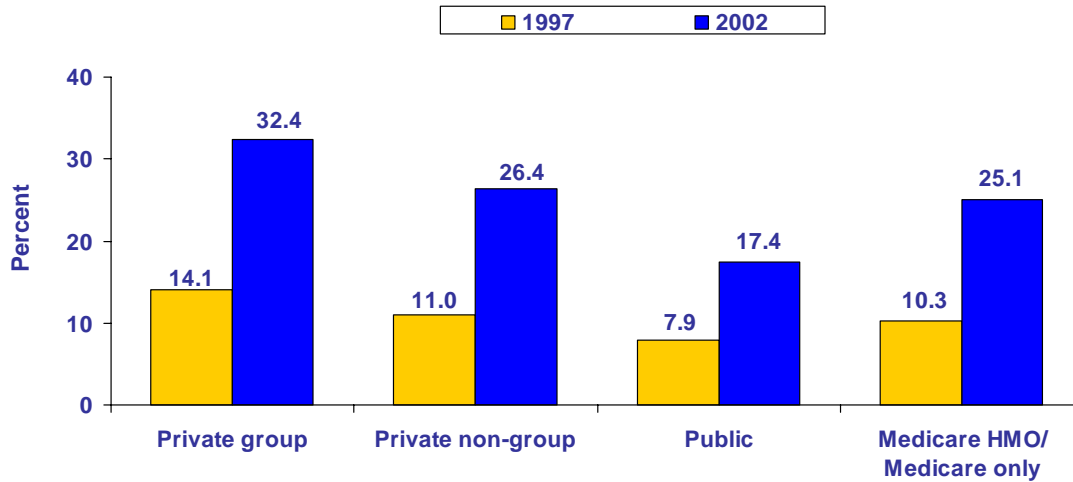
**Figure 4. Percentage of the Medicare population with at least one statin purchase, by race/ethnicity, 1997 and 2002**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1997 and 2002.



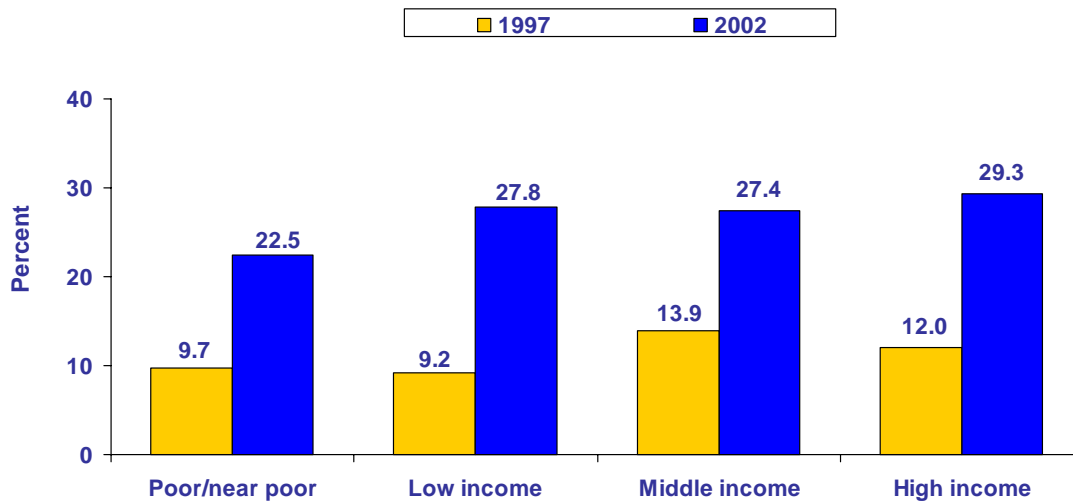
**Figure 5. Percentage of the Medicare population with at least one statin purchase, by supplementary insurance status, 1997 and 2002**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1997 and 2002.



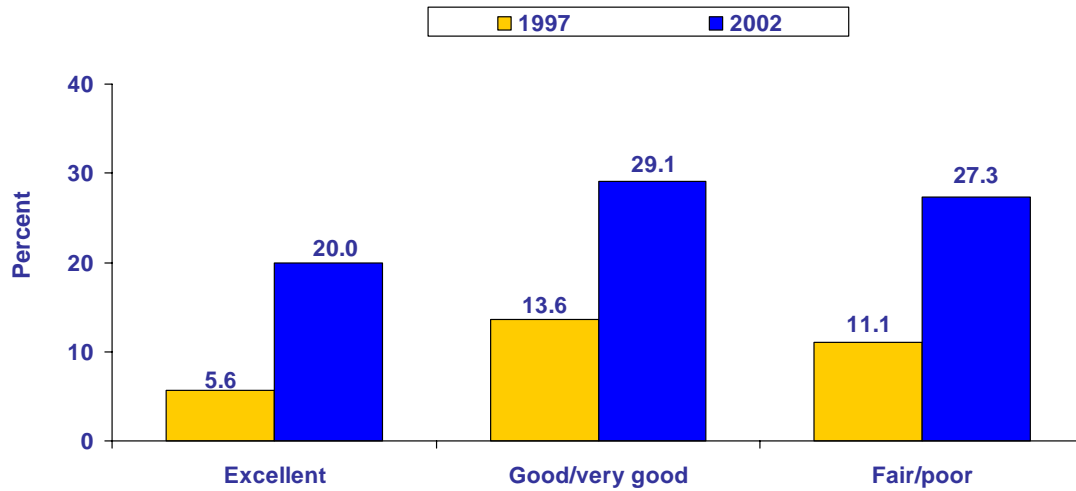
**Figure 6. Percentage of the Medicare population with at least one statin purchase, by poverty status, 1997 and 2002**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1997 and 2002.



**Figure 7. Percentage of the Medicare population with at least one statin purchase, by perceived health status, 1997 and 2002**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1997 and 2002.