

## Risk Adjustment and the Health of the Medicare HMO Population

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### INTRODUCTION

Before the changes instituted by the Balanced Budget Act (BBA) of 1997, Medicare payments to managed care organizations were based on per capita fee-for-service (FFS) costs in each county for the aged and disabled populations. Within each county Medicare payments were adjusted by demographic factors including age and sex, as well as welfare and institutional status. This payment system, which is called the adjusted average per capita cost (AAPCC) methodology, was implemented in 1985.

Since that time critics of the AAPCC methodology challenged that selection bias was prevalent. Selection bias occurs when enrollees of Medicare health maintenance organizations (HMOs) are, on average, healthier than those in FFS, after controlling for the demographic factors used in AAPCC-based reimbursement. Ultimately, these concerns about selection bias lead to the reforms mandated by the BBA.

The BBA requires a risk adjusted payment system be implemented for Medicare+Choice plans, with phase-in beginning on January 1, 2000. Risk adjustment will replace the demographic adjustments with relative health status risk adjusters. The goal is to pay Medicare HMOs better estimates of health care costs of the enrolled population, thereby addressing the problem of selection bias.

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An analysis of 1998 data from the Medicare Current Beneficiary Survey (MCBS) shows that beneficiaries in HMOs were, in fact, healthier than the FFS population, even when controlling for age and dual eligibility. Based on a stratified random sample, the MCBS provides information about the health care use, expenditure, and financing of Medicare's beneficiaries. Figures 1-8 compare the health status of Medicare HMO enrollees with FFS beneficiaries. Some of these figures show comparisons controlled by age and dual eligibility.

### FINDINGS

Data from the MCBS Access to Care File for 1998 were used to examine the Medicare HMO population. The results show that Medicare beneficiaries enrolled in HMOs tend to be healthier than those in FFS. This is illustrated in Figures 1-3, which show beneficiaries' health status, functional limitations, and chronic conditions. Figure 1 shows that the percentage of HMO enrollees in excellent or very good health is larger, while the percentage of beneficiaries in fair or poor health is smaller. Similarly, HMO members tend to have fewer or no functional limitations and fewer or no chronic conditions/diseases (Figures 2 and 3).

Since HMO members are less likely to be disabled or elderly—with most being age 65-85—health status comparisons were made while controlling for age. Using all MCBS beneficiaries enrolled in HMOs as a comparative base, HMO membership was

evaluated on the basis of age and dual eligibility of beneficiaries. Figures 4-6 illustrate that when MCBS respondents are broken into age groups, the percentage of those in excellent health is greater than the percentage of beneficiaries in poor or fair health.

Similarly, when Medicaid eligibility is controlled, the health status of the HMO and FFS populations shows little variance from all MCBS beneficiaries. Figures 7 and 8 show the same pattern as Figure 1, where beneficiaries in HMOs are healthier, regardless of their Medicaid status.

Therefore, regardless of age and dual eligibility, beneficiaries in HMOs tend to be healthier. Beneficiaries in HMOs are in

better health, with fewer or no functional limitations and fewer or no chronic conditions/diseases.

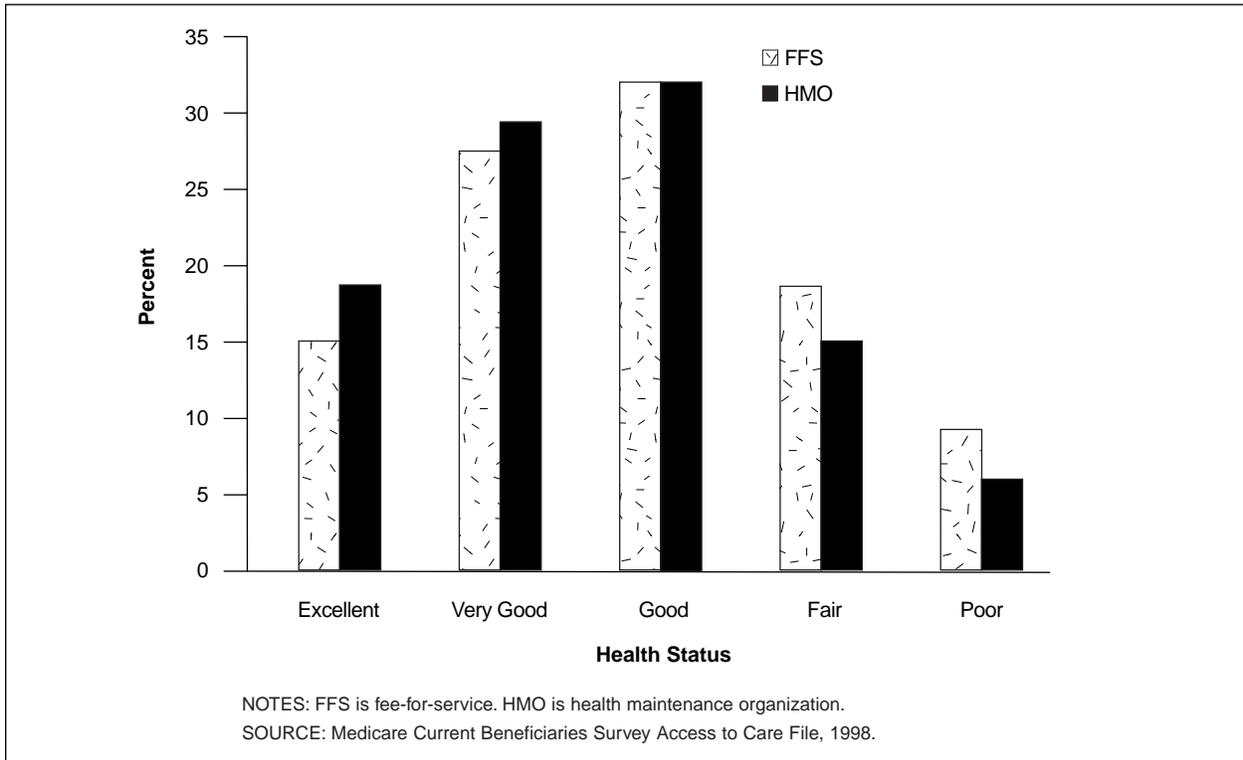
## **ACKNOWLEDGMENTS**

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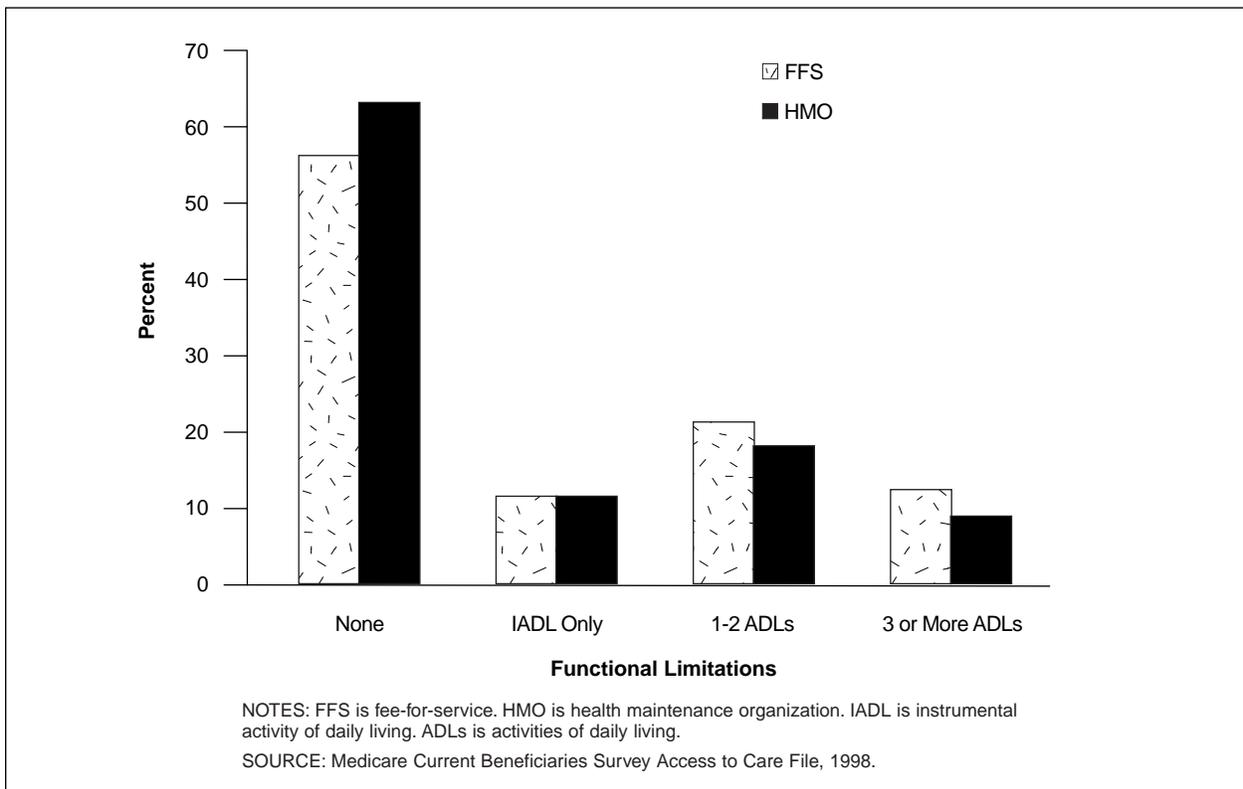
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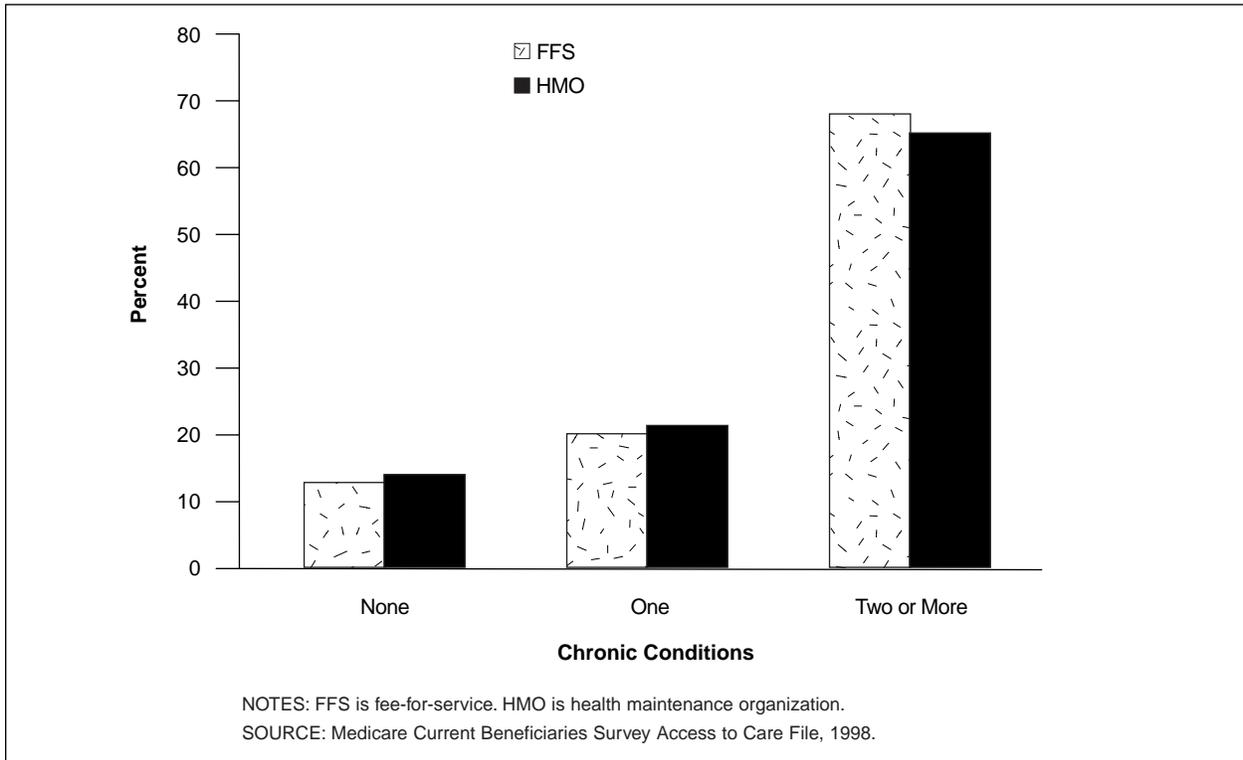
**Figure 1**  
**Health Status of FFS and HMO Medicare Beneficiaries: 1998**



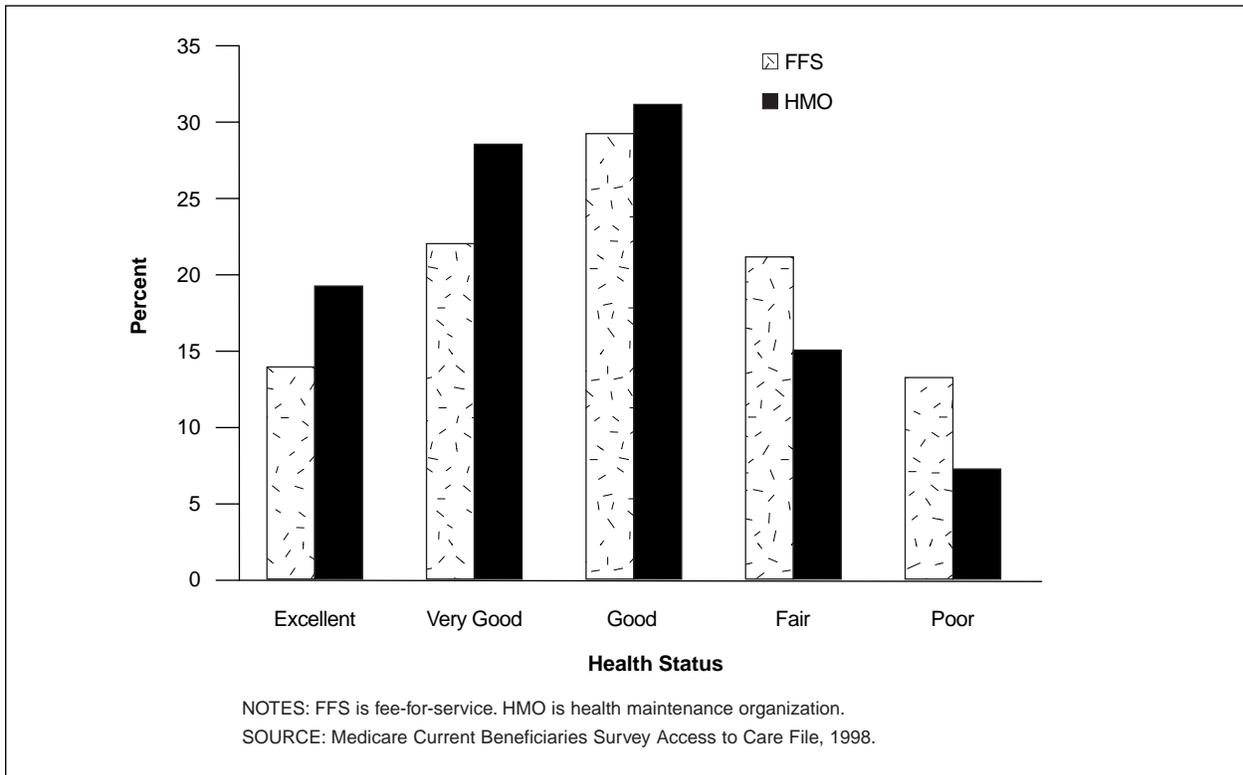
**Figure 2**  
**Functional Limitations of FFS and HMO Medicare Beneficiaries: 1998**



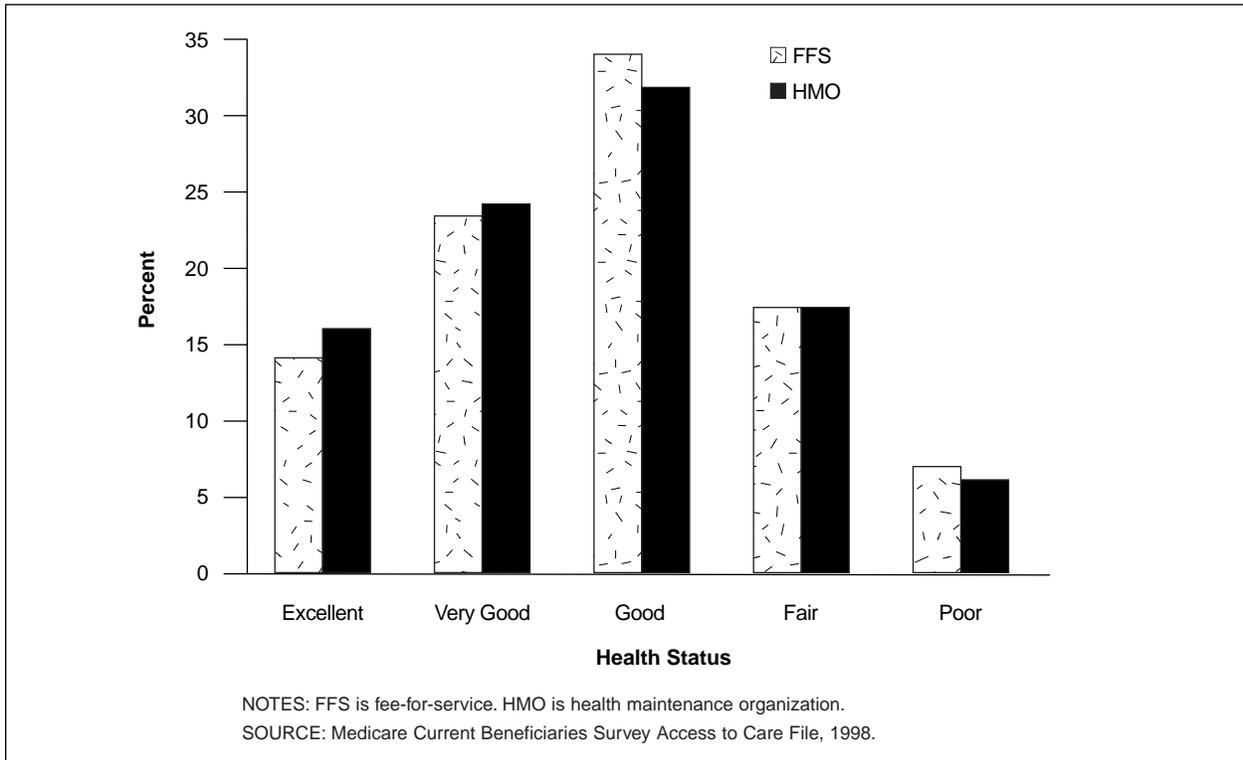
**Figure 3**  
**Chronic Conditions of Medicare FFS and HMO Beneficiaries: 1998**



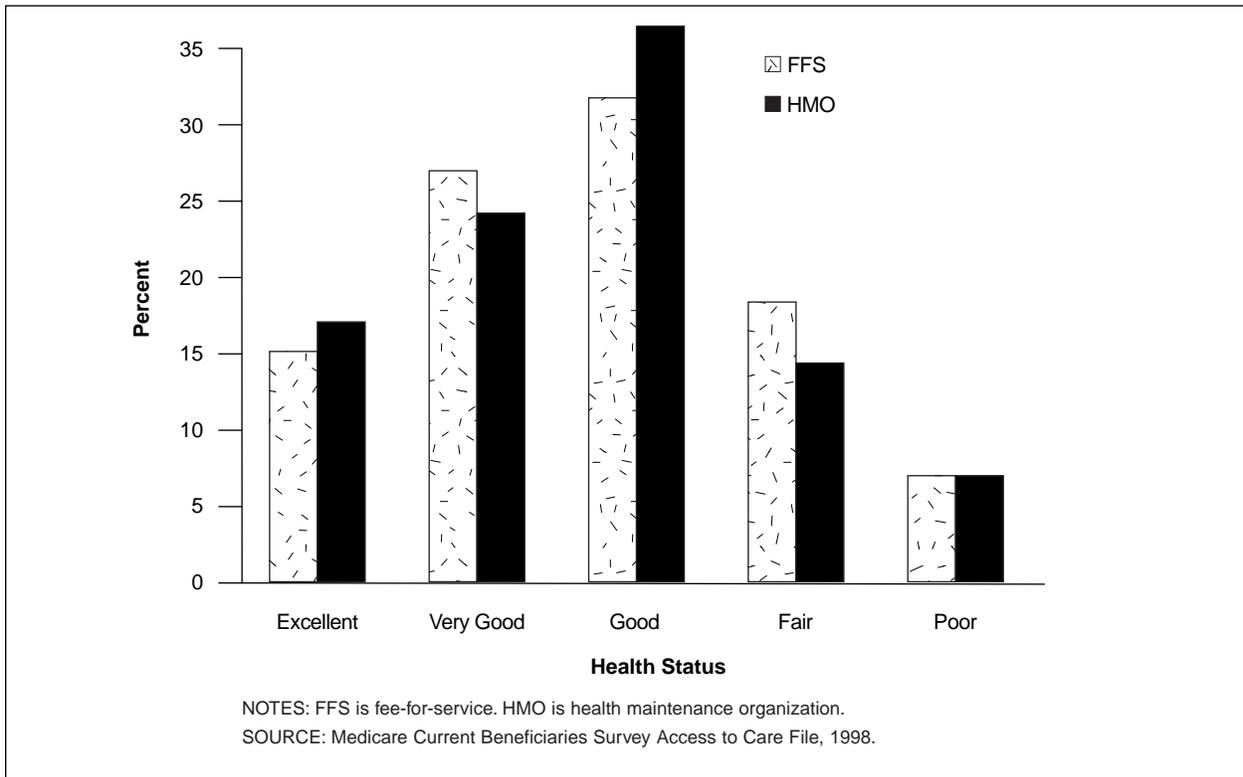
**Figure 4**  
**Health Status of Medicare FFS and HMO Beneficiaries Age 65-74: 1998**



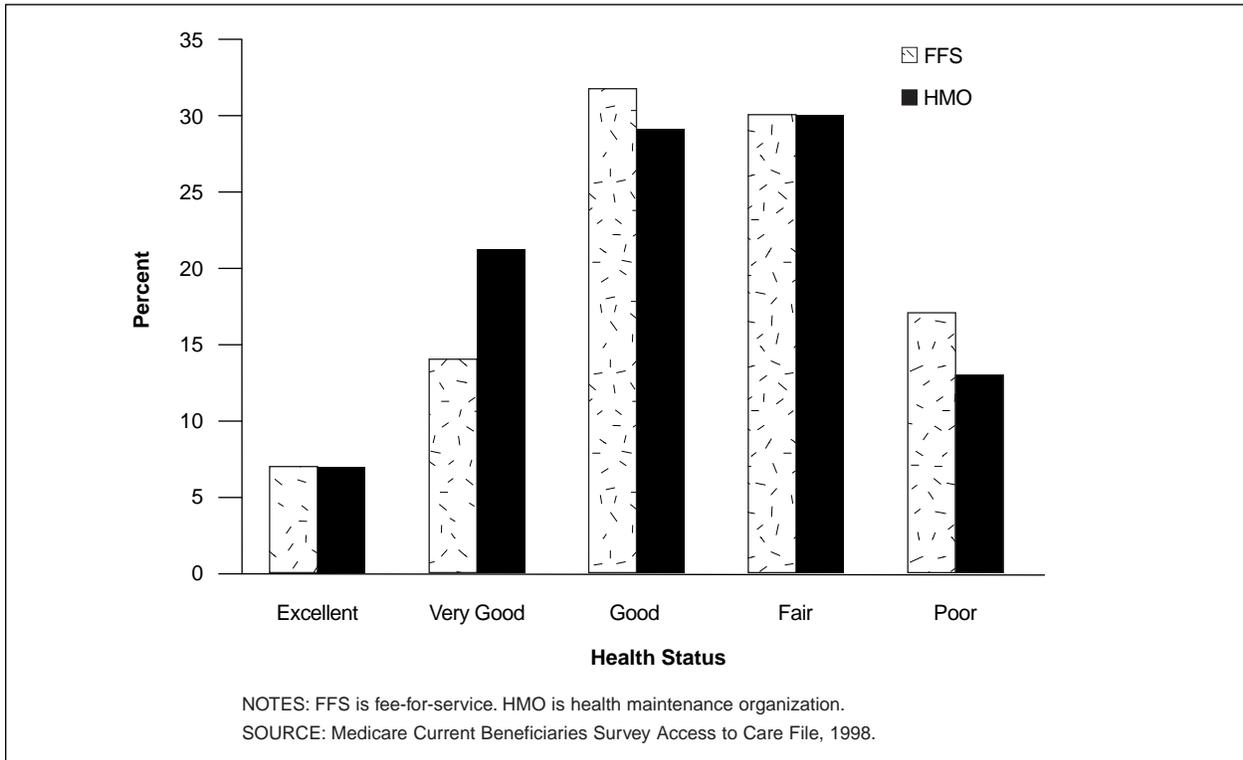
**Figure 5**  
**Health Status of Medicare FFS and HMO Beneficiaries Age 75-84: 1998**



**Figure 6**  
**Health Status of Medicare FFS and HMO Beneficiaries Age 85 or Over: 1998**



**Figure 7**  
**Health Status of Dually Eligible FFS and HMO Medicare Beneficiaries: 1998**



**Figure 8**  
**Health Status of Non-Dually Eligible FFS and HMO Medicare Beneficiaries: 1998**

