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SAMPLE  
2008 MEDICARE  
HEALTH OUTCOMES  
SURVEY-MODIFIED  
REPORT

**MEDICARE HEALTH**

**OUTCOMES SURVEY**



CENTERS  
FOR MEDICARE  
& MEDICAID  
SERVICES

HEALTH  
SERVICES  
ADVISORY  
GROUP



DEPARTMENT OF HEALTH & HUMAN SERVICES  
Centers for Medicare & Medicaid Services  
7500 Security Boulevard  
Baltimore, Maryland 21244-1850



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July 2009

PACE Organizations and Special Needs Plans,

The Centers for Medicare & Medicaid Services (CMS) is pleased to provide you with your Organization's results from the *2008 Medicare Health Outcomes Survey-Modified (HOS-M)*. The HOS-M, which is an abbreviated version of the Medicare Health Outcomes Survey (HOS), assesses the physical and mental health functioning of enrollees in Program of All-Inclusive Care for the Elderly (PACE) Organizations and targeted dual eligible Special Needs Plans (SNPs) to generate information for payment adjustment.

The HOS-M report focuses on specialized plans serving frail and elderly beneficiaries, and provides a summary of demographic information, physical and mental health status, and selected health status measures. Additionally, in each respective plan report, the health status of the plan's frail and elderly enrollees is compared to the combined Medicare HOS-M sample averages (HOS-M Total).

CMS encourages each participating PACE Organization and SNP to examine their results for use in quality improvement activities. You may submit inquiries to [hos@azqio.sdps.org](mailto:hos@azqio.sdps.org), or contact Health Services Advisory Group through the HOS Information and Technical Support telephone line at (888) 880-0077, and you may visit the CMS website at [www.cms.hhs.gov/hos](http://www.cms.hhs.gov/hos) for more program information.

Sincerely,

Timothy P. Love  
Director

# Medicare Health Outcomes Survey-Modified **Sample** Plan Report

The following is a **sample** version of the 2008 Health Outcome Survey-Modified (HOS-M) Report made available to all PACE Organizations and Special Needs Plans participating in the 2008 Medicare Health Outcomes Survey-Modified.

The figures, tables, and text in this document contain sample plan level data; however, all references to the *HOS-M Total* reflect **actual** data.

The Medicare HOS Information and Technical Support Telephone Line (1-888-880-0077), as well as the HOS e-mail address ([hos@azqio.sdps.org](mailto:hos@azqio.sdps.org)), are available to provide assistance with report questions and interpretation. A full description of the HOS program may be found at [www.hosonline.org](http://www.hosonline.org).

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## **PROGRAM HIGHLIGHTS**

### **MEDICARE HEALTH OUTCOMES SURVEY**

The Centers for Medicare & Medicaid Services (CMS) is committed to monitoring healthcare quality provided by its programs. The overall focus of the Medicare Health Outcomes Survey (HOS), in particular, is to gather valid and reliable health status data to assess a Medicare Advantage Organization's (MAO) ability to maintain or improve the physical and mental health of its Medicare beneficiaries over time. Baseline data are collected from a new cohort annually with one remeasurement two years later.

Section 722 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 mandates the collection, analysis, and reporting of health outcomes information. This legislation also specifies that data collected on quality, outcomes, and beneficiary satisfaction to facilitate consumer choice and program administration must utilize the types of data collected prior to November 1, 2003. Collected since 1998, the HOS remains an important component of CMS' performance assessment system for the Medicare Advantage program.

### **MEDICARE HEALTH OUTCOMES SURVEY-MODIFIED**

The Medicare Health Outcomes Survey-Modified (HOS-M) was fielded for the first time in the spring of 2005. It is a modified version of the Medicare HOS that is administered by CMS to frail elderly and dual-eligible beneficiaries (i.e., recipients of both Medicare and Medicaid) in Program of All-Inclusive Care for the Elderly (PACE) Organizations, as well as Minnesota Senior Health Options, Minnesota Disability Health Options, Wisconsin Partnership Program, and Massachusetts Health Senior Care Options Special Needs Plans (SNPs) for the purpose of adjusting plan payments based on the frailty of their members.

Similar to HOS, the HOS-M design is based on a randomly selected sample of individuals from each participating PACE Organization and SNP. Unlike the HOS, the HOS-M is a cross-sectional survey that measures the physical and mental health functioning of beneficiaries at a single point in time without a follow-up.

The HOS-M instrument contains Activities of Daily Living (ADL) items as the core items used to calculate the frailty adjustment factor.<sup>1</sup> The HOS-M instrument also contains the Veterans RAND 12-Item Health Survey (VR-12) to further assess the physical and mental health functioning of the PACE Organization and SNP members.<sup>2,3</sup> In addition, the HOS-M includes questions about the following: lifting or carrying objects as heavy as 10 pounds; walking a quarter mile; health or physical problems interfering with daily activities, receiving help with ADLs; physical and emotional health compared to one year ago; memory loss; urinary incontinence; and a question on whether the survey was self-completed or completed by a proxy. If the participant received assistance completing the survey, the respondent was asked information about the proxy respondent. A copy of the 2008 HOS-M questionnaire may be downloaded from the Survey Instrument section on the HOS website at [www.hosonline.org](http://www.hosonline.org).

Note that the Minnesota Senior Health Options, Minnesota Disability Health Options, Wisconsin Partnership Program, and Massachusetts Health Senior Care Options transitioned from Medicare dual eligible demonstration status into the Medicare Advantage program in 2008. As a result, frailty adjusted payment rates for these SNPs are being phased out after 2010. Starting in 2010, these SNPs will be required to participate in HOS as part of CMS' standard Medicare Advantage reporting requirements. PACE Organizations will continue to participate in HOS-M and receive frailty-adjusted payments based on the survey data collected.

Together, the HOS and the HOS-M are the only patient-reported outcomes measures in Medicare managed care, and therefore are a critical part of assessing health plan quality.

### **USES OF MEDICARE HOS-M DATA**

The Medicare HOS-M instrument assesses the physical and mental health functioning of frail elderly Medicare beneficiaries, who are often physically weak and have many complex medical problems. Participating PACE Organizations and SNPs are encouraged to review the results presented in this report in order to identify measures that had substantially lower rates when compared to national averages. These areas may represent opportunities for:

- Physician education, including the dissemination of clinical practice guidelines
- Patient education and outreach through a website, newsletters, mailings, or telephone outreach and reminders
- Monitoring health status and treatment outcomes over time
- Quality improvement initiatives

Visit the Medicare HOS website for more information on the uses of the Medicare HOS data at [www.hosonline.org](http://www.hosonline.org). A section of the website entitled "Real World Uses of HOS Data" provides links to webinars that feature topics such as:

- Overview of the Medicare Health Outcomes Survey and Strategies For Using HOS Data to Improve Quality
- Using the Medicare HOS Data to Identify Strategies for Managing Chronic Conditions and to Identify At-Risk Beneficiaries

### **TECHNICAL ASSISTANCE**

The Medicare HOS Information and Technical Support Telephone Line (1-888-880-0077), as well as the HOS e-mail address [hos@azqio.sdps.org](mailto:hos@azqio.sdps.org), are available to provide assistance with report questions and interpretation. For general information about the HOS program, you may visit the CMS website at [www.cms.hhs.gov/hos](http://www.cms.hhs.gov/hos). A full description of the program may be found on the HOS website at [www.hosonline.org](http://www.hosonline.org), and the HOS glossary of terms used in the survey and reports may be accessed from the Program Overview section.

## EXECUTIVE SUMMARY

Originally entitled the PACE Health Survey, the HOS-M is administered to vulnerable Medicare beneficiaries at greatest risk for poor health outcomes.<sup>4,5</sup> These beneficiaries are enrolled in Program of All-Inclusive Care for the Elderly (PACE) programs, and Minnesota Senior Health Options, Minnesota Disability Health Options, Wisconsin Partnership Program, and Massachusetts Health Senior Care Options Special Needs Plans (SNPs). The main goal of the HOS-M is to assess the frailty of this population in order to adjust Medicare payments to the PACE Organizations and SNPs.

### HOS-M SAMPLE

For the 2008 Medicare HOS-M, plans with fewer than 1,400 members surveyed the full enrollment eligible for frailty payment adjustments. For larger plans having more than 1,400 members eligible for frailty payment adjustments, a random sample of 1,200 members was selected. The combined total sample included 25,194 beneficiaries from 52 PACE Organizations and SNPs. This marked a slight increase from the 23,682 beneficiaries who were included in the 2007 Medicare HOS-M. Initial eligibility for payment purposes is based on community-residing members who do not have end-stage renal disease (ESRD) and are age 65 or over in some plan categories, and age 55 or over in others. After excluding an additional 3,236 ineligible beneficiaries, the eligible sample was 21,958. For details on sampling eligibility see Appendix 1. From the eligible sample of 21,958 a total of 16,360 beneficiaries completed the survey, representing a response rate of 74.5%. These 16,360 beneficiaries comprise the 2008 HOS-M analytic sample. The mean age of beneficiaries in the analytic sample was 78.5. For the HOS-M total, 73.6% of the respondents were female, 67.8% were white, and proxy respondents filled out 57.2% of the surveys.

### HEALTH STATUS MEASURES

The primary health status measures for the HOS-M are the Physical Component Summary (PCS) and Mental Component Summary (MCS) scores. Norm-based algorithms with 1990 norms were used to score PCS and MCS. These algorithms yield favorably scored (i.e., higher is better) measures that have a mean of 50 and a standard deviation of 10 in the general U.S. population. For the HOS-M analytic sample, the mean PCS score was 29.9 and the mean MCS score was 44.2. In general, functional health status as measured by the PCS score is expected to decline in older age groups, while mental health status as measured by the MCS score is not.<sup>6</sup> PCS scores decreased with increasing age across all respondents in the HOS-M analytic sample from a mean of 32.2 for those aged 65-69 to 27.3 for the 85 and older age group. For MCS, however, scores decreased only slightly with age, as indicated by mean scores of 44.2 for those aged 65-69 and 43.8 in the 85 and older group. For those aged 55-64, a slightly different pattern was noted with a mean PCS score of 28.1 and a mean MCS score of 40.3.

For the HOS-M Total, 58.5% of the respondents indicated that their *general health* was “Fair” or “Poor.” Some 43.0% indicated that their *physical health compared to one year ago* was

“Slightly Worse” or “Much Worse,” while a smaller percentage of 25.9% responded that their *mental health compared to one year ago* was “Slightly Worse” or “Much Worse.”

Among the six ADLs that were assessed, the largest percentage of beneficiaries reported impairment with walking (70.0%), followed by bathing (56.5%) and chair transfers (53.9%). The smallest percentage reported impairment with eating (19.7%). Only 22.5% of respondents reported having no ADL impairment, 13.5% reported one ADL impairment, 13.5% reported two impairments, and 50.5% had three or more ADL impairments.

Because of the frailty of the HOS-M plan members, proxy respondents were allowed to complete the surveys on behalf of the Medicare participant. Approximately 57.2% of surveys were completed by a proxy respondent (family member, friend, or health professional). The reasons given for requiring a proxy include: beneficiary having physical problems (40.9%); memory loss (43.5%); beneficiary not able to speak or read English (23.5%), beneficiary not available (13.2%); and other reasons (31.7%). Note that percentages add to more than 100% since respondents could provide more than one reason.

## RESULTS

This report presents the 2008 Medicare HOS-M results for PACE Organization HXXXB and the HOS-M Total, which represents the aggregated results for all participating PACE Organizations and SNPs. *Please be advised that the information in this report is not suitable for contract level comparisons. Therefore, these data should not be utilized for public release or marketing purposes.*

### RESPONSE RATES AND DISTRIBUTION OF THE SAMPLE

The 2008 HOS-M included a sample of 25,194 beneficiaries, including both the aged and disabled, from 52 specialized PACE Organizations and SNPs. Of the 25,194 sampled, 3,236 were determined to be ineligible members during the survey administration. Ineligible members of the sample meet one of the following criteria: deceased; not enrolled in the health plan; have an incorrect address and phone number; or have a language barrier. The removal of the ineligible members from the total sample yields the 2008 HOS-M eligible sample of 21,958.

From the eligible sample of 21,958 a total of 16,360 beneficiaries completed the survey, representing a response rate of 74.5%. These 16,360 beneficiaries comprise the 2008 HOS-M analytic sample. For the purposes of this report, a completed survey is defined as one that could be used to calculate a PCS or MCS score. Refer to Table 1 on the following page for a tabular depiction of the response rates and distribution of the sample.

Note that the definition of a completed survey, and hence the response rates, are calculated differently for frailty payments. For frailty adjustment purposes, a survey is defined as complete if all 6 ADL items are answered. Response rates and ADL distributions considered for payment purposes are reported separately in CMS' Health Plan Management System (HPMS).

For the analytic sample in 52 PACE Organizations and SNPs, the average number of respondents per organization was 315, with a range of 42 to 782 respondents. Fifty percent of the organizations (the interquartile range) had between 105 and 548 respondents. Ten percent of the organizations had 735 or more respondents and ten percent had 71 or fewer respondents. For organizations with a small number of respondents caution should be exercised when interpreting the results.

Table 1 illustrates the distribution of the eligible sample, the process for determining the number of beneficiaries in the analytic sample and the response rates for the HOS-M Total and PACE Organization HXXXB. The HOS-M Total analytic sample is used for all analyses in this report. The denominator for percentages reported in the tables and figures is the number of non-missing responses for each question. Note that this denominator may be less than the 16,360 respondents in the analytic sample due to missing data.

<b>TABLE 1</b> <b>2008 HOS-M RESPONSE RATES</b> <b>FOR PACE HXXXB AND HOS-M TOTAL</b>						
	SAMPLE SIZE	INELIGIBLE <sup>A</sup>	ELIGIBLE SAMPLE	NON-RESPONDENTS	ANALYTIC SAMPLE <sup>B</sup>	RESPONSE RATE <sup>C</sup>
HOS-M Total	25,194	3,236	21,958	5,598	16,360	74.5%
HXXXB	1,370	125	1,245	282	963	77.3%

<sup>A</sup> Ineligible includes deceased, not enrolled in health plan, incorrect address and phone number, or language barrier. Individuals are not sampled unless they are community-residing, non-ESRD, and meet certain age requirements.

<sup>B</sup> Analytic sample includes respondents for whom PCS or MCS scores can be calculated. This definition is different from that used in frailty payment calculations in which a survey is defined as complete if all 6 ADL items are answered.

<sup>C</sup> Response Rate = [(Analytic Sample/Eligible Sample) x 100%]

## DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

Table 2 presents the distribution of survey respondents by demographic characteristics for your PACE Organization and the Medicare HOS-M Total. The largest percentages of the HOS-M Total respondents within each demographic category were: age 85 and older (28.0%); female (73.6%); and White (67.8%). The HOS-M Total sample had 67.8% White, 15.0% Black, and 17.2% of Other/Unknown race. These demographics were somewhat different for the 202,382 Medicare Advantage respondents in the *2008 HOS Cohort 11 Baseline* analytic sample in which 11.5% of respondents were 85 or older, 58.8% were female, 82.7% White, 10.0% Black, and 7.3% of Other/Unknown race. It is apparent from this comparison that HOS-M had substantially more minorities, more females, and older members.

<b>TABLE 2</b> <b>2008 HOS-M DEMOGRAPHICS</b> <b>FOR PACE HXXXB AND HOS-M TOTAL</b>				
	<b>HXXXB</b>		<b>HOS-M Total</b>	
	<b>N</b>	<b>Percent (%)</b>	<b>N</b>	<b>Percent (%)</b>
<b>Age</b>	(N=963)		(N=16,360)	
55-64	117	12.1	797	4.9
65-69	112	11.6	2,117	12.9
70-74	102	10.6	2,912	17.8
75-79	141	14.6	2,948	18.0
80-84	159	16.5	3,010	18.4
85+	332	34.5	4,576	28.0
<b>Gender</b>	(N=963)		(N=16,360)	
Male	214	22.2	4,321	26.4
Female	749	77.8	12,039	73.6
<b>Race</b>	(N=963)		(N=16,360)	
White	724	75.2	11,091	67.8
Black	163	16.9	2,456	15.0
Asian	8	0.8	1,051	6.4
Hispanic	60	6.2	1,236	7.6
Other/Unknown	8	0.8	526	3.2

## PHYSICAL (PCS) AND MENTAL (MCS) COMPONENT SUMMARY SCORES

The PCS score is derived from the VR-12, the core outcome measure included in the HOS-M, and is a reliable and valid measure of physical health. For the PCS, very high scores indicate no physical limitations, disabilities or decline in well-being; high energy level; and a rating of health as “excellent.”

The MCS score is also derived from the VR-12, and is a reliable and valid measure of mental health. For the MCS, very high scores indicate frequent positive affect, absence of psychological distress, and no limitations in usual social and role activities due to emotional problems. The MCS may also be used as a screening tool for depression risk. The best all-around cut-off for the MCS is at a score of 42 or below, which achieves a sensitivity and specificity of 73.7% and 80.6%, respectively. However, more recent results suggest an optimal threshold of MCS score of 48 or below as giving a reasonably predictive cut-off for depression risk.<sup>7</sup>

Figure 1 presents the mean PCS and MCS scores for your PACE Organization and the HOS-M Total. For the HOS-M Total, the mean PCS score was 29.9, and the mean MCS score was 44.2. The MCS scores for the HOS-M Total were higher than the PCS scores, suggesting that, in general, mental health status tends to be better than physical health for survey respondents. For the analytic sample of 202,382 seniors who completed the *2008 HOS Cohort 11 Baseline*, the mean PCS score was 38.8 and the mean MCS score was 51.4. Compared to the HOS population, the HOS-M population had substantially lower PCS and MCS scores, which is not unexpected given the frailty of the latter population. These results may differ from those reported on HPMS due to differences in the defined sample for analysis and whether the PCS and MCS scores are case mix adjusted.

**FIGURE 1: 2008 HOS-M MEAN PCS AND MCS SCORES FOR PACE HXXXB AND HOS-M TOTAL**

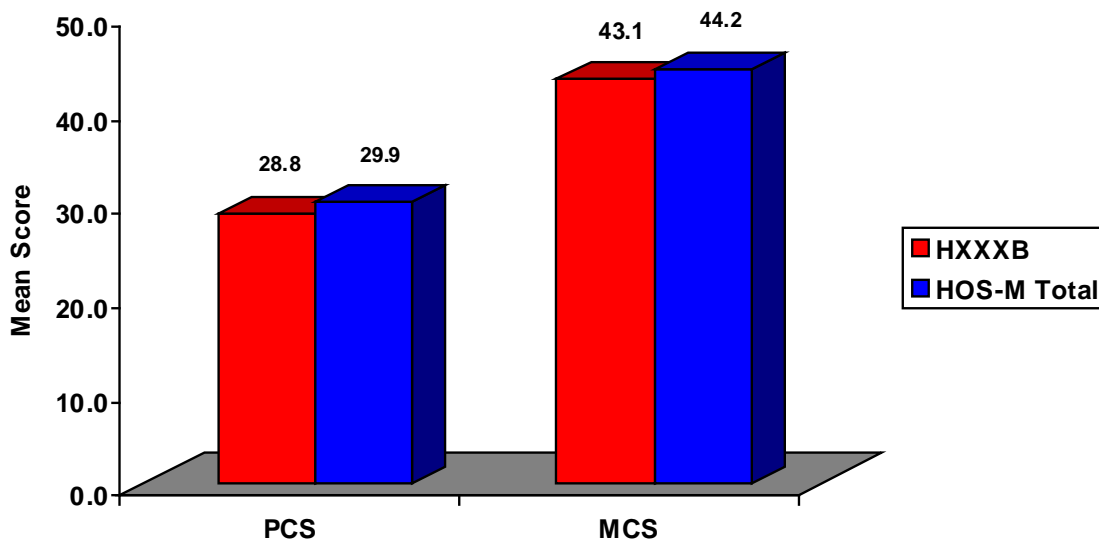


Table 3 depicts the mean PCS and MCS scores and the corresponding standard deviations (SD) by demographic characteristics. For the HOS-M Total, lower mean PCS scores were found for the oldest age group (e.g., a mean of 27.3 in the 85 and older group), and for females (29.3) versus males (31.5). Lower mean MCS scores were found for Hispanics (40.4), Asians (43.1), and Blacks (43.5) compared to Whites (45.0). PCS and MCS scores were relatively lower for those aged between 55-64 (mean PCS of 28.1, and mean MCS of 40.3).

<b>TABLE 3</b>				
<b>2008 HOS-M MEAN PCS AND MCS SCORES</b>				
<b>BY DEMOGRAPHIC CHARACTERISTICS FOR PACE HXXXB AND HOS-M TOTAL</b>				
	PCS Mean (SD)		MCS Mean (SD)	
	HXXXB	HOS-M Total	HXXXB	HOS-M Total
<b>Age</b>				
55-64	29.9 (10.8)	28.1 (10.6)	39.6 (13.8)	40.3 (13.8)
65-69	30.6 (11.0)	32.2 (11.6)	41.3 (13.8)	44.2 (13.5)
70-74	29.3 (11.0)	32.1 (11.6)	44.8 (12.0)	45.1 (12.9)
75-79	29.9 (10.7)	30.8 (11.4)	43.8 (12.8)	44.8 (13.0)
80-84	29.6 (10.7)	29.6 (11.1)	43.8 (14.3)	44.6 (13.5)
85+	26.9 (9.7)	27.3 (10.2)	43.8 (13.0)	43.8 (13.7)
<b>Gender</b>				
Male	31.2 (11.1)	31.5 (11.5)	41.9 (13.6)	44.0 (13.2)
Female	28.1 (10.2)	29.3 (11.1)	43.4 (13.3)	44.3 (13.5)
<b>Race</b>				
White	28.8 (10.5)	29.8 (11.4)	43.5 (13.3)	45.0 (13.6)
Black	28.8 (10.9)	29.6 (11.0)	42.6 (13.6)	43.5 (13.2)
Asian	33.3 (13.0)	30.3 (10.9)	50.6 (11.8)	43.1 (12.6)
Hispanic	28.5 (9.5)	29.9 (10.4)	38.5 (12.4)	40.4 (12.8)
Other/Unknown	25.8 (9.7)	31.1 (11.3)	41.3 (10.4)	42.8 (12.4)

## GENERAL HEALTH AND COMPARATIVE HEALTH

Figures 2, 3, and 4 on the following pages depict the distribution of responses with respect to the following three self-reported health items: the participants' general health status; physical health compared to one year ago; and mental health compared to one year ago. Participants who indicated that their general health was "Fair" or "Poor," or that their physical or mental health compared to one year ago was "Slightly Worse" or "Much Worse" are known to be at increased risk for near future hospitalization, use of mental health services, and/or mortality in five years.<sup>8</sup>

Figures 5 and 6 display the mean PCS and MCS scores by categories of general health status. As expected, scores were lower when self-reported general health status was rated as "Fair" or "Poor."

Figure 2 displays the respondents' self-reported general health status for your PACE Organization and the HOS-M Total. Note that 58.5% of the HOS-M Total reported their general health was "Fair" or "Poor."

**FIGURE 2: 2008 HOS-M GENERAL HEALTH STATUS FOR PACE HXXXB AND HOS-M TOTAL**

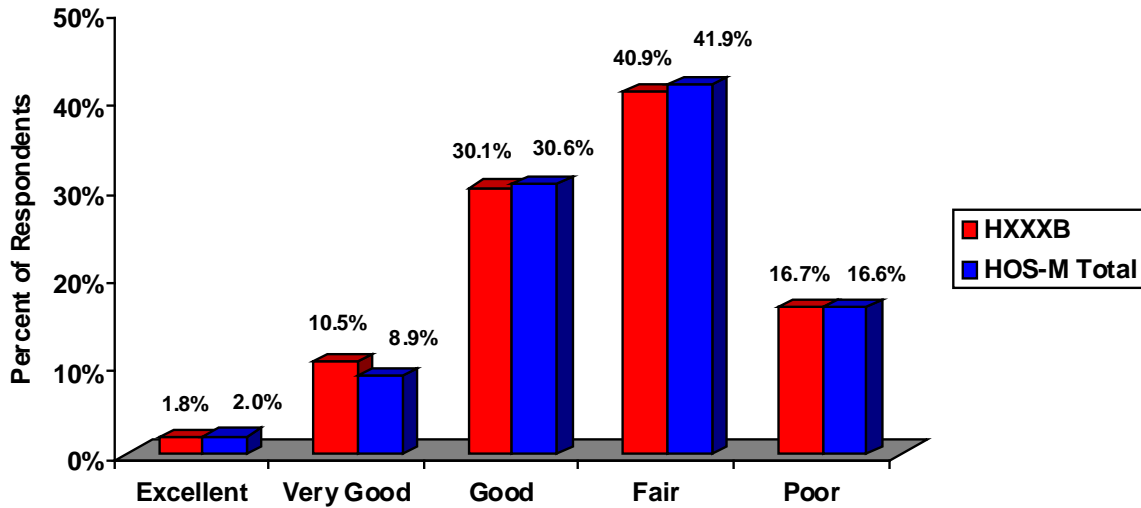


Figure 3 displays the respondents' self-reported physical health status as compared to one year ago for your PACE Organization and the HOS-M Total. Some 43.0% of the HOS-M Total reported that their physical health compared to one year ago was "Slightly Worse" or "Much Worse."

**FIGURE 3: 2008 HOS-M PHYSICAL HEALTH COMPARED TO ONE YEAR AGO FOR PACE HXXXB AND HOS-M TOTAL**

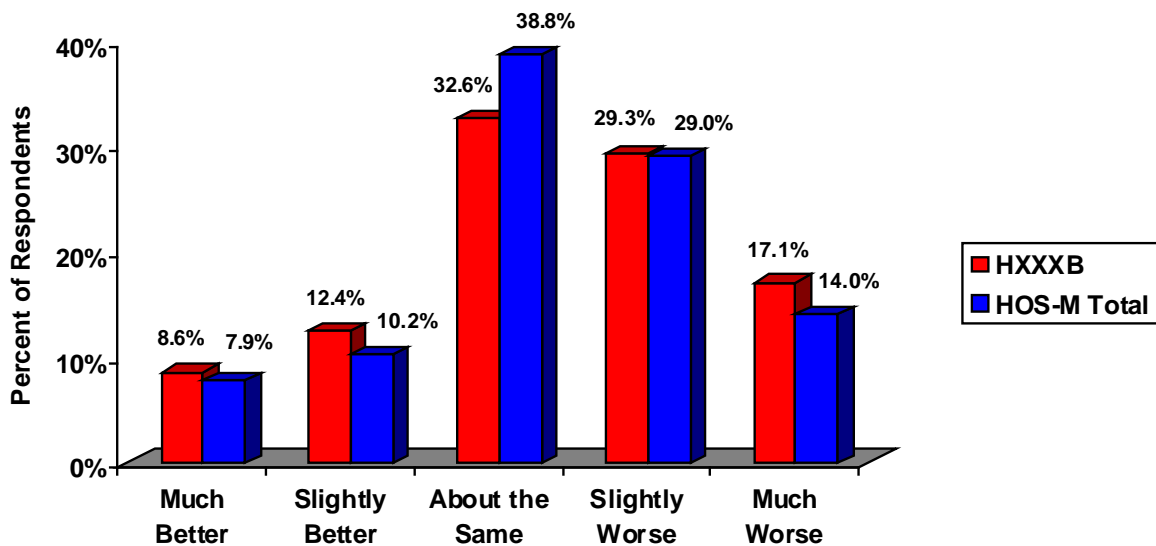


Figure 4 displays the respondents' self-reported mental health status as compared to one year ago for your PACE Organization and the HOS-M Total. While just over half (51.7%) of the HOS-M Total reported that their mental health compared to one year ago was "About the Same," more than one-quarter (25.9%) reported "Slightly Worse" or "Much Worse."

**FIGURE 4: 2008 HOS-M MENTAL HEALTH COMPARED TO ONE YEAR AGO FOR PACE HXXXB AND HOS-M TOTAL**

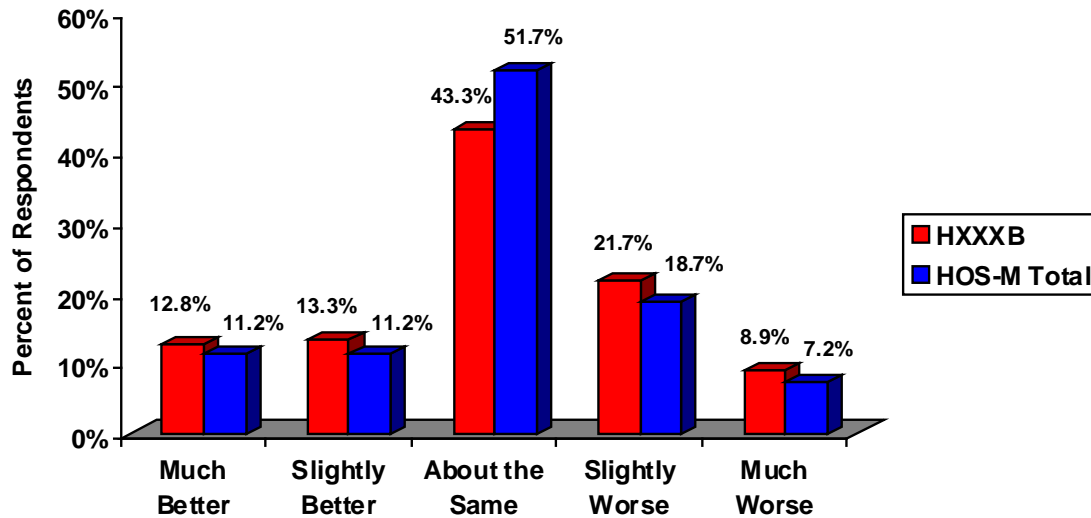


Figure 5 provides the mean PCS scores for your PACE Organization and the HOS-M Total by respondents' self-reported general health status. For the HOS-M Total, PCS scores were substantially lower when self-rated general health was "Fair" or "Poor."

**FIGURE 5: 2008 HOS-M MEAN PCS SCORES BY GENERAL HEALTH STATUS FOR PACE HXXXB AND HOS-M TOTAL**

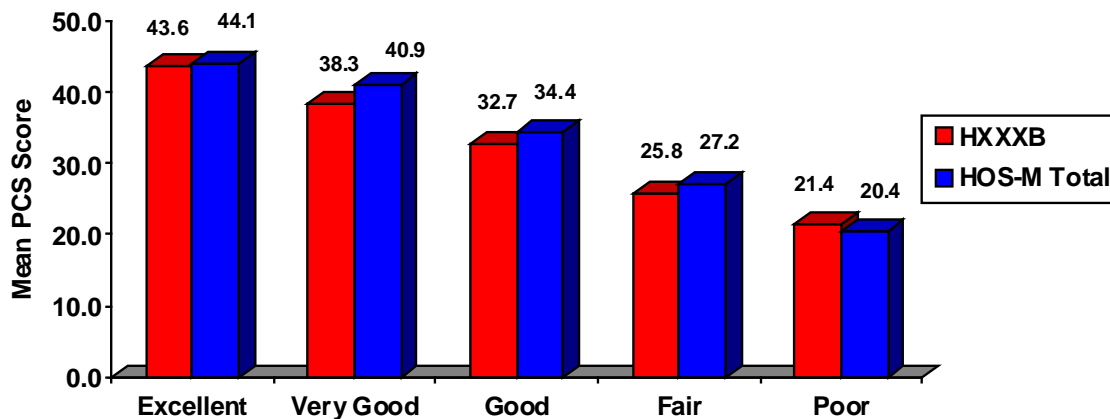
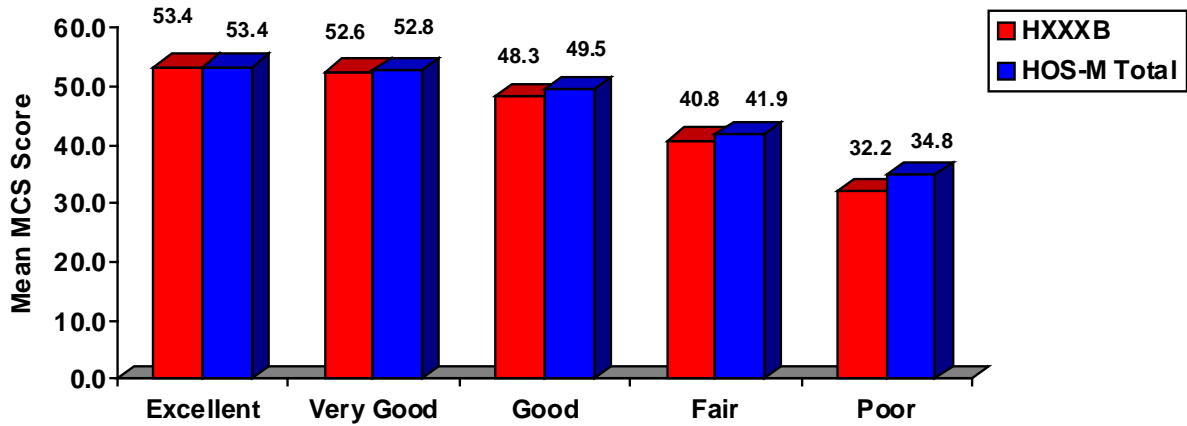


Figure 6 provides the mean MCS scores for your PACE Organization and the HOS-M Total by respondents' general health status. For the HOS-M Total, the MCS scores tend to be lower when self-reported general health status was "Fair" or "Poor."

**FIGURE 6: 2008 HOS-M MEAN MCS SCORES BY GENERAL HEALTH STATUS FOR PACE HXXXB AND HOS-M TOTAL**



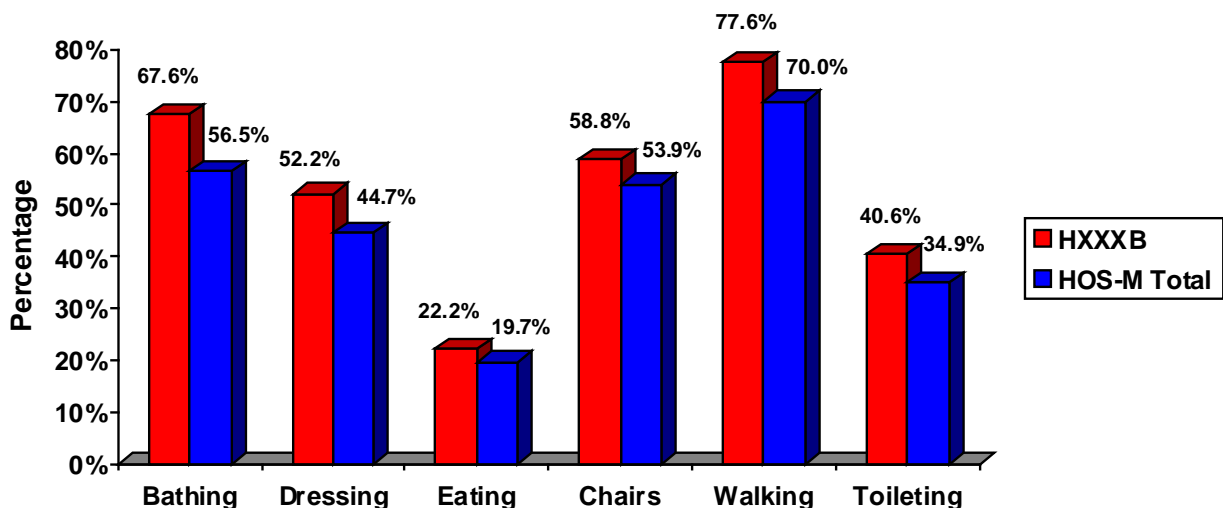
## ACTIVITIES OF DAILY LIVING

Six ADLs are included in the HOS-M to examine reported difficulty with personal care. ADLs include bathing, dressing, eating, getting in or out of chairs, walking, and using the toilet. For the HOS-M report, ADL impairment is defined as beneficiaries reporting either difficulty or inability to perform an ADL. Over 50% of survey respondents reported impairment in the following ADL categories: walking; bathing; and getting in or out of chairs. The lowest reported impairment was with eating at 19.7% of the HOS-M Total.

The HOS-M members were considerably frailer when compared to the HOS seniors. The prevalence of ADL impairments for the *2008 HOS Cohort 11 Baseline* was as follows: walking (33.1%), getting in and out of chairs (23.4%), bathing (16.0%), dressing (12.9%), using the toilet (9.8%), and eating (5.7%). The results of the National Health and Nutrition Examination Survey (NHANES) I Epidemiologic Follow-Up study, which assessed mortality and functional limitations among U.S. adults aged 25-74, indicated a similar pattern of impairment among the seniors, with the greatest proportion of respondents having difficulty with walking and the least proportion of respondents having difficulty with eating.<sup>9</sup>

Figure 7 shows the percentages of respondents who reported difficulty performing each of the ADLs without special equipment or help from another person. These results may differ from the frailty adjustment results reported on HPMS because of differences in the selection criteria for the analytic sample. The results in Figure 7 include respondents for whom PCS or MCS scores could be calculated. The frailty results include respondents for whom all six ADL questions were answered.

**FIGURE 7: 2008 HOS-M DIFFICULTY PERFORMING ACTIVITIES OF DAILY LIVING WITHOUT HELP FOR PACE HXXXB AND HOS-M TOTAL**



The HOS-M also asked whether respondents received help from another person in performing any of the six ADLs. Figure 8 shows the percentages of respondents who reported receiving help with each of the ADLs. The results indicate that the largest percentages of respondents reported receiving help with bathing (47.8%), and the smallest percentage received help with eating (15.0%).

**FIGURE 8: 2008 HOS-M RECEIVING HELP FROM ANOTHER PERSON TO PERFORM ACTIVITIES OF DAILY LIVING FOR PACE HXXXB AND HOS-M TOTAL**

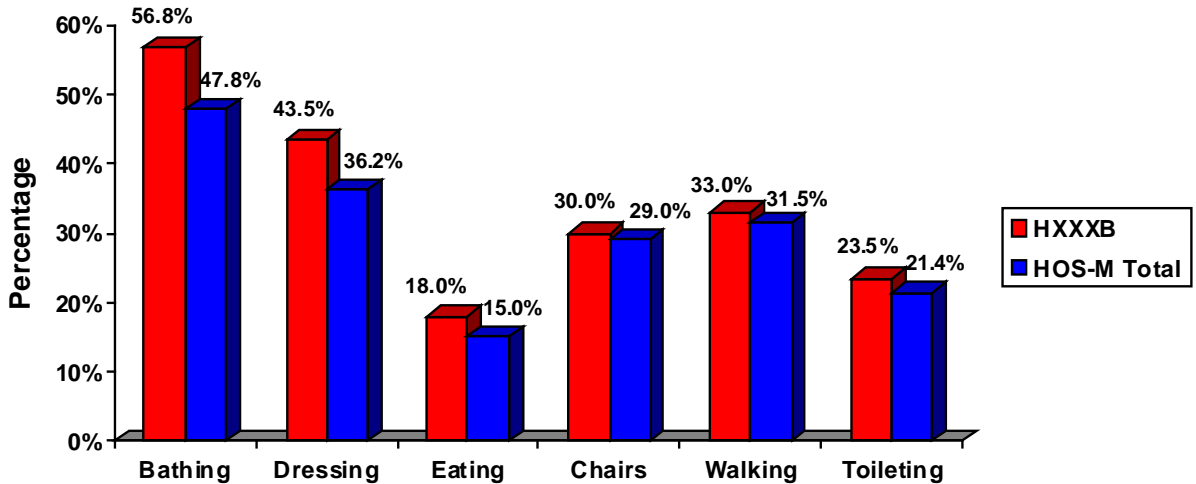


Figure 9, on the following page, shows the distribution of respondents with respect to the number of ADL impairments reported. For the HOS-M Total, 77.5% of beneficiaries reported impairment with one or more daily activities. This percentage is high compared to the 29.4% of non-institutionalized beneficiaries who were found to have at least one ADL limitation in the 2007 Medicare Current Beneficiary Survey, which is a nationally representative sample of all Medicare beneficiaries.<sup>10</sup> The frailty of the HOS-M population is again reflected in the differences in their limitations as compared to the analytic sample of 202,382 seniors who completed the 2008 HOS Cohort 11 Baseline. For the latter survey, 37.8% reported having one or more impairments, while the majority (62.2%) reported having no impairments.

**FIGURE 9: 2008 HOS-M DISTRIBUTION OF RESPONDENTS FOR PACE HXXXB AND HOS-M TOTAL BY NUMBER OF ADL IMPAIRMENTS**

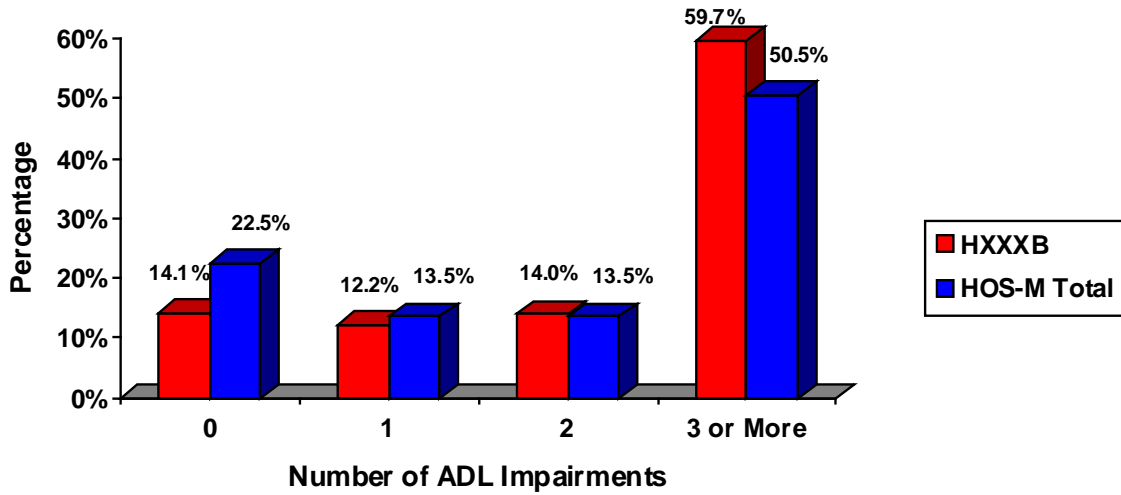


Figure 10 indicates that beneficiaries who have a greater number of ADL impairments tend to have lower PCS scores.

**FIGURE 10: 2008 HOS-M MEAN PCS BY NUMBER OF ADL IMPAIRMENTS FOR PACE HXXXB AND HOS-M TOTAL**

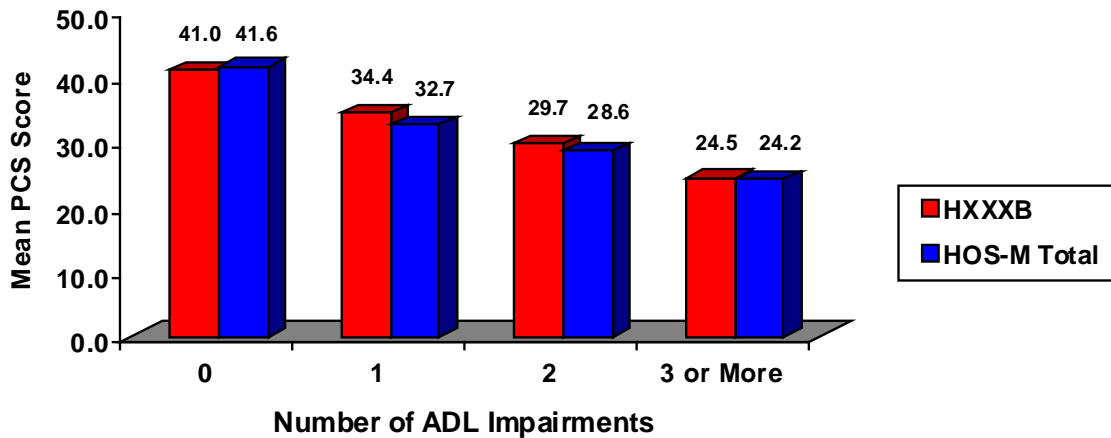
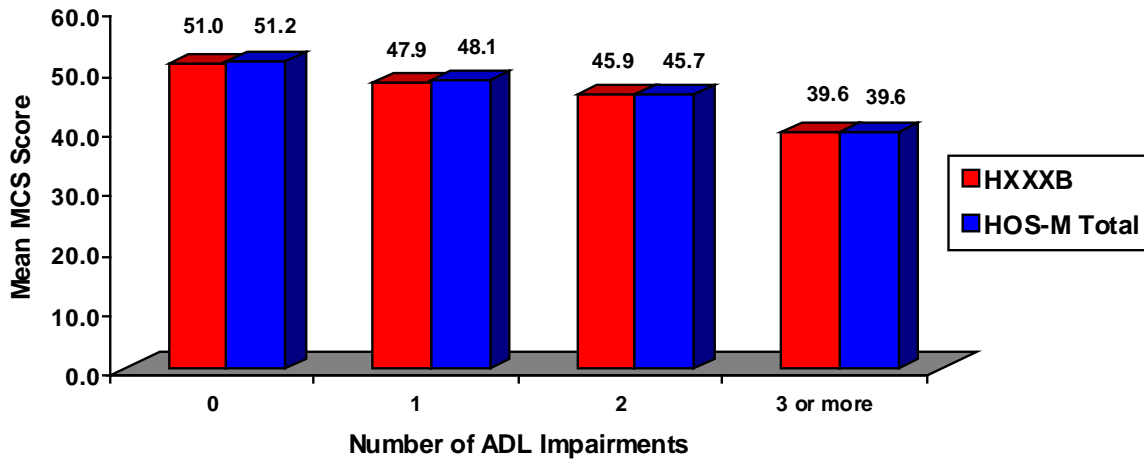


Figure 11 indicates that MCS scores are also lower for those with a greater number of ADL impairments.

**FIGURE 11: 2008 HOS-M MEAN MCS BY NUMBER OF ADL IMPAIRMENTS FOR PACE HXXXB AND HOS-M TOTAL**



**OTHER CLINICAL MEASURES**

Pain is one of the most common chronic medical conditions among seniors. Figure 12 shows the relationship between mean PCS scores and categories of pain that interfered with normal work during the past four weeks for PACE Organization HXXXB and the HOS-M Total. The lowest PCS scores were found for beneficiaries who responded “Quite a Bit” or “Extremely.”

**FIGURE 12: 2008 HOS-M MEAN PCS SCORES BY THE EXTENT PAIN INTERFERED WITH NORMAL WORK FOR PACE HXXXB AND HOS-M TOTAL**

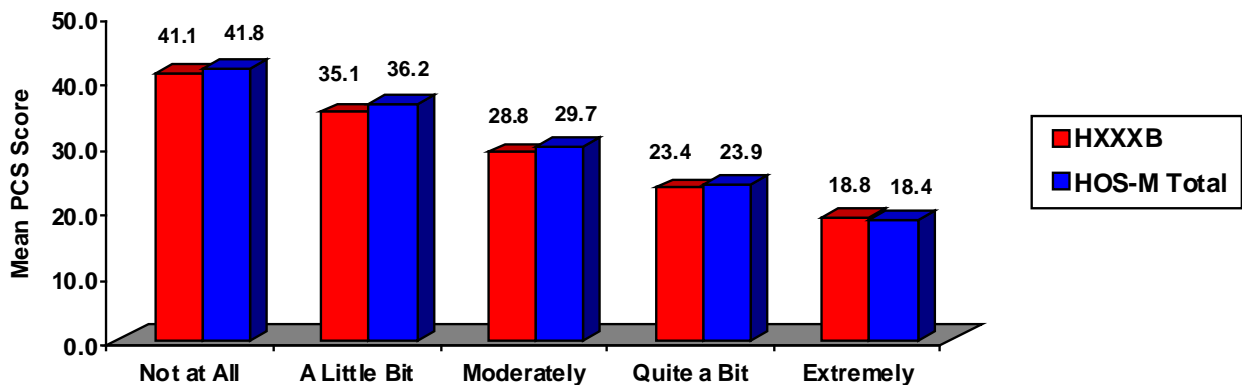


Table 4 provides the number and percentage of respondents who experienced memory loss or difficulty controlling urination, as well as the proxy status of the respondents. For the HOS-M Total, 44.0% of respondents reported having memory loss, and the majority (62.4%) reported having some difficulty controlling urination ranging from less than once a week to daily. Of note, more than one quarter (29.6%) reported daily difficulty with controlling urination.

Approximately 57.2% of surveys were completed by a proxy respondent (family member, friend, or health professional). The reasons given for requiring a proxy include: beneficiary having physical problems (40.9%); memory loss (43.5%); beneficiary not able to speak or read English (23.5%), beneficiary not available (13.2%); and other reasons (31.7%). Note that percentages add to more than 100% since respondents could provide more than one reason. Information on the reason why the proxy was needed is not included in Table 4.

<b>TABLE 4</b>				
<b>2008 HOS-M HEALTH LIMITATIONS</b>				
<b>FOR PACE HXXXB AND HOS-M TOTAL</b>				
	<b>HXXXB</b>		<b>HOS-M Total</b>	
	<b>N</b>	<b>Percent (%)</b>	<b>N</b>	<b>Percent (%)</b>
<b>Memory Loss</b>	(N=910)		(N=15,444)	
Yes	409	44.9	6,797	44.0
No	501	55.1	8,647	56.0
<b>Difficulty Controlling Urination</b>	(N=918)		(N=15,559)	
Never	264	28.8	5,620	36.1
Less than once a week	169	18.4	2,573	16.5
Once a week or more often	167	18.2	2,539	16.3
Daily	303	33.0	4,611	29.6
Catheter	15	1.6	216	1.4
<b>Proxy Status</b>	(N=806)		(N=13,738)	
Medicare participant	326	40.4	5,874	42.8
Family member or friend	364	45.2	6,232	45.4
Health professional	116	14.4	1,632	11.9

# APPENDIX 1

## BACKGROUND INFORMATION

All Program of All-Inclusive Care for the Elderly (PACE) plans, Massachusetts Health Senior Care Options, Minnesota Senior Health Options, Minnesota Disability Health Options, and Wisconsin Partnership Program plans, regardless of contract effective date, were required to administer the HOS-M in 2008. In addition, all Medicare Advantage Organizations (MAOs) with a minimum enrolment of 500 members, including local and regional preferred provider organizations (PPOs), and continuing cost contracts that held §1876 risk and cost contracts with Medicare in effect on or before January 1, 2007, and all Social HMOs (SHMOs) regardless of contract effective date, were required by CMS to administer the *Cohort 11 Baseline* HOS in 2008. Private Fee-For Service (PFFS) plans could voluntarily report HOS in 2008. Furthermore, all MAOs that administered the *Cohort 9 Baseline* HOS in 2006, were required to administer the *Cohort 9 Follow up* survey in 2008 as well.

The HOS-M was administered following a protocol similar to that used for the Medicare HOS. The National Committee for Quality Assurance (NCQA) assisted CMS with oversight for the survey administration of the HOS-M in 2008. RTI International (RTI) generated the samples for each PACE Organization and SNP, provided additional survey support in the administration of the HOS-M, calculated ADL distributions for payment adjustments, and developed reports posted on HPMS related to frailty. DataStat, Inc., an NCQA-Certified survey vendor, fielded the HOS-M. Health Services Advisory Group (HSAG) provided data cleaning, data analysis, and prepared the *2008 HOS-M Report*.

## 2008 HOS-M SAMPLING

A total of 25,194 beneficiaries from 52 PACE Organizations and SNPs participated in the HOS-M in 2008. Members were defined as eligible for the HOS-M if they were enrolled in a participating HOS-M plan, resided in the community, did not have End Stage Renal Disease (ESRD), and were over age 65 in some plan categories and age 55 and over in others. Except for the SNPs under the Massachusetts Health Senior Care Options, which enrolled members aged 65 and over, all other plans had members aged 55 and over. In general, for eligible plans with Medicare populations of 1,400 or more members, a simple random cross-sectional sample of 1,200 members was selected for the survey (i.e., the survey is not a cohort study). For eligible plans with populations of less than 1,400 members, all eligible members were included in the HOS-M sample.

From the 25,194 beneficiaries, 3,236 beneficiaries were found to be ineligible. Ineligible beneficiaries include deceased, members not enrolled in the health plan, members with incorrect address and phone number, or members having a language barrier. After excluding the 3,236 ineligible beneficiaries, the eligible sample was 21,958. From the eligible sample of 21,958, a total of 16,360 beneficiaries completed the survey, representing a response rate of 74.5%. These 16,360 beneficiaries comprise the *2008 HOS-M analytic sample*.

## **SURVEY ADMINISTRATION**

Participating PACE Organizations and SNPs contracted with the NCQA-Certified survey vendor to administer the survey following the HOS-M protocol specified in the *HEDIS® 2008, Volume 6, Specifications for the Medicare Health Outcomes Survey Manual*, which is available from the NCQA website at [www.ncqa.org](http://www.ncqa.org).<sup>11,12</sup> The manual provides details for the mail and telephone follow up methods of data collection. The mail component of the survey used a standardized questionnaire, survey letters, and prenotification and reminder/thank you postcards. The survey vendor attempted telephone follow up, with six or more attempts, in those instances when beneficiaries failed to respond after the second mail survey. The survey vendor also performed telephone follow up for members who returned an incomplete mail survey in order to obtain responses that were missing on the survey. The survey vendor used a standardized version of a Computer Assisted Telephone Interviewing (CATI) script to collect telephone interview data for the survey. To ensure a high response rate to support accurate frailty adjustments for payment, the protocol encourages proxy respondents when needed. Survey support provided by RTI International included working with smaller plans to develop a detailed contact information file that included the name and contact information for potential proxies where available.

Members responded to English, Spanish or Chinese language versions of the survey. If a member belonged to a Minnesota plan and requested to receive the survey materials in another language, the vendor referred the member to his/her health plan for telephone assistance in the other language.

## **DATA CLEANING**

Data consistency checks were performed to identify out of range dates and response values, duplicate Health Insurance Claim (HIC) numbers or Social Security Numbers, data shifts in value assignment, and inconsistent assignment of survey fields (such as survey disposition, survey round number, and survey language). In addition, response consistency checks between related items were performed to validate the integrity of the data.

## **2008 HOS-M SURVEY INSTRUMENT AND SUMMARY SCORES**

The core component of the HOS-M is the VR-12 health survey. The VR-12 was developed from the Veterans RAND 36-Item Health Survey (VR-36; formerly called the Veterans SF-36). The VR-12 is a generic, multipurpose health survey, which consists of selected items from the eight domains of health in the earlier 36-item survey. These domains include: physical functioning; role-physical; bodily pain; general health; vitality; social functioning; role-emotional; and mental health. The VR-12 has been administered in national Veterans Administration (VA) surveys since 1997. Since 2002, the VA has administered the VR-12 to over 400,000 patients annually as part of its quality management program.

The VR-12 has undergone extensive testing which has shown it to be reliable and valid in ambulatory care patient populations. The taxonomy underlying the construction of the VR-12 summary measures is comprised of a total of 14 items from which the eight domains aggregate one or two items each, and the PCS and MCS scores. Twelve of the 14 items are used to

calculate the scores and the other two items are used to assess change in health status, one focusing on physical health and one on emotional problems. The VR-12 explains 90% of the reliable variance of the VR-36. PCS and MCS scores are standardized to the U.S. population and are 1990 norm-based, so that scores have a direct interpretation in relation to the distribution of scores in the U.S. population, with a mean of 50 and a standard deviation of 10.

The PCS and MCS scores were calculated using the Modified Regression Estimate (MRE).<sup>13</sup> The MRE is a general method for obtaining scale scores for the eight domains in the context of missing data. The MRE uses complete cases to estimate a regression equation where only those items that are present are used. Depending on the pattern of missing item responses, a different set of regression weights is required. For the HOS-M report, the PCS and MCS scores were *not* adjusted for case mix variables, i.e., demographic characteristics.

## APPENDIX 2

### FREQUENCIES FOR SELECTED 2008 MEDICARE HOS-M SURVEY FIELDS

<b>TABLE A1</b> <b>2008 HOS-M SELECTED HEALTH STATUS MEASURES</b> <b>FOR PACE HXXXB AND HOS-M TOTAL</b>				
	HXXXB		HOS-M Total	
	N	Percent (%)	N	Percent (%)
<b>Difficulty Lifting or Carrying 10 Pounds</b>	(N=942)		(N=15,971)	
No difficulty	67	7.1	1,933	12.1
A little difficulty	113	12.0	1,921	12.0
Some difficulty	169	17.9	3,221	20.2
A lot of difficulty	210	22.3	3,294	20.6
Not able to do it	383	40.7	5,602	35.1
<b>Difficulty Walking a Quarter Mile</b>	(N=945)		(N=16,055)	
No difficulty	68	7.2	1,799	11.2
A little difficulty	95	10.1	1,757	10.9
Some difficulty	169	17.9	2,669	16.6
A lot of difficulty	196	20.7	3,358	20.9
Not able to do it	417	44.1	6,472	40.3
<b>Health Limits Moderate Activities</b>	(N=919)		(N=15,642)	
Yes, limited a lot	606	65.9	9,477	60.6
Yes, limited a little	216	23.5	3,735	23.9
No, not limited at all	97	10.6	2,430	15.5
<b>Health Limits Climbing Several Flights of Stairs</b>	(N=925)		(N=15,606)	
Yes, limited a lot	686	74.2	10,318	66.1
Yes, limited a little	161	17.4	3,438	22.0
No, not limited at all	78	8.4	1,850	11.9

FREQUENCIES FOR SELECTED 2008 MEDICARE HOS-M SURVEY FIELDS (continued)

<b>TABLE A1 (CONT.)</b>				
<b>2008 HOS-M SELECTED HEALTH STATUS MEASURES FOR PACE HXXXB AND HOS-M TOTAL</b>				
	<b>HXXXB</b>		<b>HOS-M Total</b>	
	<b>N</b>	<b>Percent (%)</b>	<b>N</b>	<b>Percent (%)</b>
<b>Physical Health in the Past 4 Weeks: Accomplished Less</b>	(N=904)		(N=15,514)	
No, none of the time	125	13.8	2,670	17.2
Yes, a little of the time	110	12.2	1,874	12.1
Yes, some of the time	181	20.0	3,045	19.6
Yes, most of the time	174	19.2	2,724	17.6
Yes, all of the time	314	34.7	5,201	33.5
<b>Physical Health in the Past 4 Weeks: Limited in Kind of Work or Activities</b>	(N=913)		(N=15,555)	
No, none of the time	122	13.4	2,728	17.5
Yes, a little of the time	91	10.0	1,642	10.6
Yes, some of the time	152	16.6	2,807	18.0
Yes, most of the time	184	20.2	2,845	18.3
Yes, all of the time	364	39.9	5,533	35.6
<b>Mental Health in the Past 4 Weeks: Accomplished Less</b>	(N=918)		(N=15,530)	
No, none of the time	245	26.7	4,913	31.6
Yes, a little of the time	137	14.9	2,134	13.7
Yes, some of the time	176	19.2	2,798	18.0
Yes, most of the time	151	16.4	1,984	12.8
Yes, all of the time	209	22.8	3,701	23.8
<b>Mental Health in the Past 4 Weeks: Didn't Do Work or Activities As Usual</b>	(N=888)		(N=15,297)	
No, none of the time	300	33.8	5,783	37.8
Yes, a little of the time	107	12.0	1,923	12.6
Yes, some of the time	159	17.9	2,420	15.8
Yes, most of the time	115	13.0	1,584	10.4
Yes, all of the time	207	23.3	3,587	23.4

FREQUENCIES FOR SELECTED 2008 MEDICARE HOS-M SURVEY FIELDS (continued)

<b>TABLE A1 (CONT.)</b>				
<b>2008 HOS-M SELECTED HEALTH STATUS MEASURES FOR PACE HXXXB AND HOS-M TOTAL</b>				
	<b>HXXXB</b>		<b>HOS-M Total</b>	
	<b>N</b>	<b>Percent (%)</b>	<b>N</b>	<b>Percent (%)</b>
<b>Felt Calm and Peaceful During the Past 4 Weeks</b>	(N=916)		(N=15,663)	
All of the time	97	10.6	1,966	12.6
Most of the time	248	27.1	4,756	30.4
A good bit of the time	147	16.0	2,164	13.8
Some of the time	236	25.8	4,096	26.2
A little of the time	150	16.4	1,965	12.5
None of the time	38	4.1	716	4.6
<b>Had a Lot of Energy During the Past 4 Weeks</b>	(N=916)		(N=15,627)	
All of the time	36	3.9	706	4.5
Most of the time	93	10.2	1,978	12.7
A good bit of the time	80	8.7	1,433	9.2
Some of the time	236	25.8	4,150	26.6
A little of the time	257	28.1	4,167	26.7
None of the time	214	23.4	3,193	20.4
<b>Felt Downhearted and Blue During the Past 4 Weeks</b>	(N=915)		(N=15,557)	
All of the time	42	4.6	680	4.4
Most of the time	75	8.2	1,194	7.7
A good bit of the time	86	9.4	1,196	7.7
Some of the time	265	29.0	4,535	29.2
A little of the time	244	26.7	3,836	24.7
None of the time	203	22.2	4,116	26.5
<b>Physical or Emotional Health Interfered With Social Activities During the Past 4 Weeks</b>	(N=926)		(N=15,718)	
All of the time	154	16.6	2,065	13.1
Most of the time	171	18.5	2,530	16.1
Some of the time	249	26.9	4,204	26.7
A little of the time	130	14.0	2,558	16.3
None of the time	222	24.0	4,361	27.7

FREQUENCIES FOR SELECTED 2008 MEDICARE HOS-M SURVEY FIELDS (continued)

<b>TABLE A2</b>				
<b>2008 HOS-M DIFFICULTY WITH ACTIVITIES OF DAILY LIVING FOR PACE HXXXB AND HOS-M TOTAL</b>				
	<b>HXXXB</b>		<b>HOS-M Total</b>	
	<b>N</b>	<b>Percent (%)</b>	<b>N</b>	<b>Percent (%)</b>
<b>Difficulty Bathing</b>	(N=942)		(N=16,020)	
No Difficulty	305	32.4	6,966	43.5
Have Difficulty/Unable To Do	637	67.6	9,054	56.5
<b>Difficulty Dressing</b>	(N=942)		(N=16,073)	
No Difficulty	450	47.8	8,890	55.3
Have Difficulty/Unable To Do	492	52.2	7,183	44.7
<b>Difficulty Eating</b>	(N=943)		(N=16,030)	
No Difficulty	734	77.8	12,871	80.3
Have Difficulty/Unable To Do	209	22.2	3,159	19.7
<b>Difficulty Getting In/Out of Chairs</b>	(N=947)		(N=16,050)	
No Difficulty	390	41.2	7,394	46.1
Have Difficulty/Unable To Do	557	58.8	8,656	53.9
<b>Difficulty Walking</b>	(N=947)		(N=16,022)	
No Difficulty	212	22.4	4,799	30.0
Have Difficulty/Unable To Do	735	77.6	11,223	70.0
<b>Difficulty Using the Toilet</b>	(N=950)		(N=16,059)	
No Difficulty	564	59.4	10,457	65.1
Have Difficulty/Unable To Do	386	40.6	5,602	34.9

FREQUENCIES FOR SELECTED 2008 MEDICARE HOS-M SURVEY FIELDS (continued)

<b>TABLE A3</b>				
<b>2008 HOS-M RECEIVING HELP WITH ACTIVITIES OF DAILY LIVING FOR PACE HXXXB AND HOS-M TOTAL</b>				
	<b>HXXXB</b>		<b>HOS-M Total</b>	
	<b>N</b>	<b>Percent (%)</b>	<b>N</b>	<b>Percent (%)</b>
<b>Receive Help Bathing</b>	(N=938)		(N=15,953)	
No Help	393	41.9	8,136	51.0
Receive Help	533	56.8	7,626	47.8
Do Not Do This Activity	12	1.3	191	1.2
<b>Receive Help Dressing</b>	(N=939)		(N=15,903)	
No Help	521	55.5	9,980	62.8
Receive Help	408	43.5	5,761	36.2
Do Not Do This Activity	10	1.1	162	1.0
<b>Receive Help Eating</b>	(N=934)		(N=15,838)	
No Help	761	81.5	13,293	83.9
Receive Help	168	18.0	2,381	15.0
Do Not Do This Activity	5	0.5	164	1.0
<b>Receive Help Getting In/Out of Chairs</b>	(N=928)		(N=15,793)	
No Help	629	67.8	10,914	69.1
Receive Help	278	30.0	4,585	29.0
Do Not Do This Activity	21	2.3	294	1.9
<b>Receive Help Walking</b>	(N=934)		(N=15,794)	
No Help	550	58.9	9,559	60.5
Receive Help	308	33.0	4,979	31.5
Do Not Do This Activity	76	8.1	1,256	8.0
<b>Receive Help Using the Toilet</b>	(N=937)		(N=15,867)	
No Help	699	74.6	12,128	76.4
Receive Help	220	23.5	3,389	21.4
Do Not Do This Activity	18	1.9	350	2.2

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