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SAMPLE

2010 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

May 2011

PACE Organizations,

The Centers for Medicare & Medicaid Services (CMS) is pleased to provide you with your Organization's results from the *2010 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 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 to examine their results for use in quality improvement activities. You may submit inquiries to 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.gov/hos for more program information.

Sincerely,

/s/

Thomas Reilly, PhD
Director,
Data Development and Services Group

Medicare Health Outcomes Survey-Modified
Sample Plan Report

The following is a sample version of the 2010 Health Outcomes Survey-Modified (HOS-M) Report made available to all PACE Organizations participating in the 2010 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*), are available to provide assistance with report questions and interpretation. A full description of the HOS program may be found at *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 predominantly dual-eligible beneficiaries (i.e., recipients of both Medicare and Medicaid) in Program of All-Inclusive Care for the Elderly (PACE) Organizations for the purpose of adjusting plan payments based on the frailty of their members. Note that several targeted Special Needs Plans (SNPs) transitioned to HOS in 2010 and are no longer participating in HOS-M.

Similar to HOS, the HOS-M design is based on a randomly selected sample of individuals from each participating PACE Organization. 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.[1] 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 members.[2,3] 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 2010 HOS-M questionnaire may be downloaded from the Survey Instrument section on the HOS website at 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 were phased out after 2010 and these SNPs were required to participate in HOS as part of CMS' standard Medicare Advantage reporting requirements. PACE Organizations have continued 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 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. 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, 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.gov/hos. A full description of the program may be found on the HOS website at 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.[4,5] These beneficiaries are enrolled in Program of All-Inclusive Care for the Elderly (PACE) programs. 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.

HOS-M SAMPLE

For the *2010 Medicare HOS-M,* all eligible members in plans with fewer than 1,400 eligible members were surveyed. For larger plans having more than 1,400 eligible members, a random sample of 1,200 members was selected. The combined total sample included 14,366 beneficiaries from 58 PACE Organizations. This marked a decrease from the 26,743 beneficiaries who were included in the *2009 Medicare HOS-M*. The decrease is a result of the targeted SNPs that were no longer required to participate in the 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 55 or older. After excluding an additional 1,471 ineligible beneficiaries, the *2010 HOS-M eligible sample* was 12,895. For details on sampling eligibility see Appendix 1. From the eligible sample of 12,895 a total of 9,652 beneficiaries completed the survey, representing a response rate of 74.9%. These 9,652 beneficiaries comprise the *2010 HOS-M analytic sample.* The mean age of beneficiaries in the analytic sample was 79.4. For the HOS-M total, 74.1% of the respondents were female, 58.5% were White, and proxy respondents filled out 64.4% 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 27.9 and the mean MCS score was 41.9.

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.[6] The mean PCS score was highest for the 70-74 year age group (mean PCS of 29.0) and decreased with increasing age with mean PCS scores of 28.6 in the 75-79 year age group and 26.8 for those aged 85 and above. For MCS, however the mean score was highest for the 80-84 year age group (mean MCS of 42.2) and the mean scores were consistently near 42.0 for most age groups. For those aged 55-64, a slightly different pattern was noted with a mean PCS of 27.9 and a mean MCS of 40.8, the lowest scores for any age group.

For the HOS-M Total, 63.2% of the respondents indicated that their *general health* was "Fair" or "Poor." Some 47.0% indicated that their *physical health compared to one year ago* was

"Slightly Worse" or "Much Worse," while 30.9% 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 (79.2%), followed by bathing (70.1%) and chair transfers (63.4%). The smallest percentage reported impairment with eating (25.4%). Only 12.8% of respondents reported having no ADL impairment, 11.2% reported one ADL impairment, 12.8% reported two impairments, and 63.3% 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 64.4% 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 (47.8%); memory loss or mental problems (54.0%); beneficiary not able to speak or read English (15.3%); beneficiary not available (14.5%); and other unspecified reasons (26.3%). Note that percentages add to more than 100% since respondents could provide more than one reason.

RESULTS

This report presents the *2010 Medicare HOS-M* results for PACE Organization HXXXA and the HOS-M Total, which represents the aggregated results for all participating PACE Organizations. *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 *2010 HOS-M* included a sample of 14,366 beneficiaries, including both the aged and disabled, from 58 specialized PACE Organizations. Of the 14,366 sampled, 1,471 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 *2010 HOS-M eligible sample* of 12,895.

From the eligible sample of 12,895 a total of 9,652 beneficiaries completed the survey, representing a response rate of 74.9%. These 9,652 beneficiaries comprise the *2010 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 adjusted 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 58 PACE Organizations, the average number of respondents per organization was 166, with a range of 17 to 729 respondents. Fifty percent of the organizations (the interquartile range) had between 48 and 202 respondents. Ten percent of the organizations had 479 or more respondents and ten percent had 32 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 HXXXA. 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 a denominator may be less than the 9,652 respondents in the analytic sample due to missing data for the measured item (or question).

TABLE 1
***2010 HOS-M* RESPONSE RATES**
FOR PACE HXXXA AND HOS-M TOTAL

	SAMPLE SIZE	INELIGIBLE[A]	ELIGIBLE SAMPLE	NON-RESPONDENTS	ANALYTIC SAMPLE[B]	RESPONSE RATE[C]
HOS-M Total	14,366	1,471	12,895	3,243	9,652	74.9%
HXXXA	831	82	749	205	544	72.6%

[A] 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.

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

[C] 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 (32.9%); female (74.1%); and White (58.5%). The respondents in the HOS-M Total sample were 58.5% White, 22.4% Black, and 19.0% Asian, Hispanic, and other or unknown race. These demographics were somewhat different compared to the 284,262 Medicare Advantage respondents in the *2010 HOS Cohort 13 Baseline* analytic sample in which 11.2% of respondents were 85 or older, 58.6% were female, 81.3% White, 11.0% Black, and 7.6% of other or unknown race. It is apparent from this comparison that HOS-M had substantially more minorities, more females, and older members than the HOS respondents.

TABLE 2
***2010 HOS-M* DEMOGRAPHICS**
FOR PACE HXXXA AND HOS-M TOTAL

	HXXXA		HOS-M Total	
	N	**Percent (%)**	**N**	**Percent (%)**
Age	(N=544)		(N=9,652)	
55-64	35	6.4	742	7.7
65-69	68	12.5	941	9.7
70-74	89	16.4	1,297	13.4
75-79	100	18.4	1,556	16.1
80-84	107	19.7	1,937	20.1
85+	145	26.7	3,179	32.9
Gender	(N=544)		(N=9,652)	
Male	143	26.3	2,500	25.9
Female	401	73.7	7,152	74.1
Race	(N=544)		(N=9,652)	
White	224	41.2	5,648	58.5
Black	252	46.3	2,164	22.4
Asian	43	7.9	775	8.0
Hispanic	13	2.4	791	8.2
Other/Unknown	12	2.2	274	2.8

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. Previous research suggested the best all-around cut-off for depression risk from a sample in the 1998 U.S general population is an MCS score of 42 or below, which achieves sensitivity and specificity of 73.7% and 80.6%, respectively, with an area under the Receiver Operating Characteristics (ROC) curve of 0.77.[6] Generally, the greater the area under the ROC curve (AUC) the better the average predictive performance of the cut-off.[7] 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 in the Medicare population.[8]

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 27.9 and the mean MCS score was 41.9. The mean MCS score for the HOS-M Total was higher than the mean PCS score, suggesting that, in general, mental health status tends to be better than physical health for survey respondents. For the analytic sample of 284,262 seniors who completed the *2010 HOS Cohort 13 Baseline*, the mean PCS score was 38.9 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 HOS-M 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: *2010 HOS-M* MEAN PCS AND MCS SCORES FOR PACE HXXXA AND HOS-M TOTAL

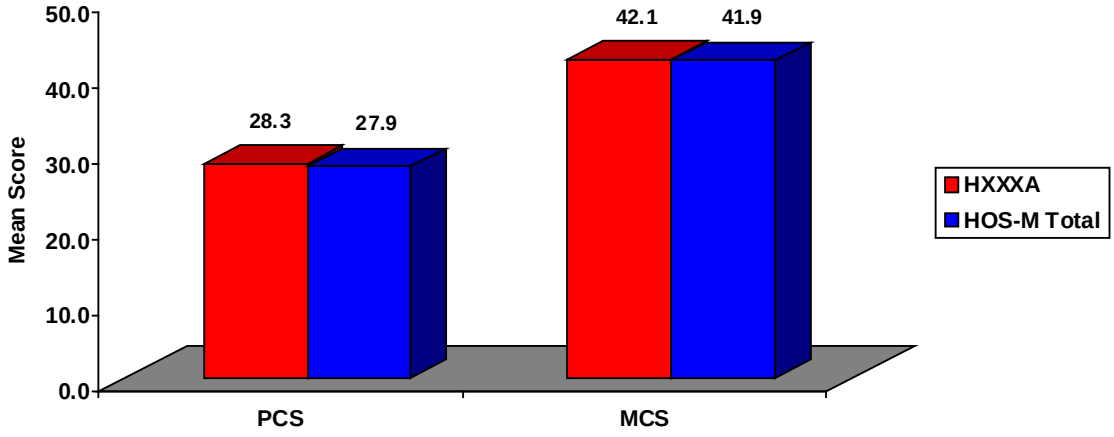


Table 3 depicts the mean PCS and MCS scores and the corresponding standard deviations (SD) by demographic characteristics. For the HOS-M Total, the lowest mean PCS scores were found for the oldest age group (e.g., a mean of 26.8 in the 85 and older group), and for females (27.4) versus males (29.4). Lower mean MCS scores were found for Asians and Hispanics (39.3), other or unknown race (40.6), and Whites (42.2) compared to Blacks (43.0). PCS and MCS scores were lowest for those aged 55-64 (mean PCS of 27.9, and mean MCS of 40.8) compared to older age groups.

TABLE 3
***2010 HOS-M* MEAN PCS AND MCS SCORES**
BY DEMOGRAPHIC CHARACTERISTICS FOR PACE HXXXA AND HOS-M TOTAL

	PCS Mean (SD)		MCS Mean (SD)	
	HXXXA	**HOS-M Total**	**HXXXA**	**HOS-M Total**
Age				
55-64	27.8 (9.2)	27.9 (10.3)	41.2 (13.9)	40.8 (14.0)
65-69	29.6 (10.9)	28.6 (10.0)	45.2 (12.9)	42.0 (13.3)
70-74	29.2 (9.6)	29.0 (10.7)	39.5 (13.2)	41.6 (13.5)
75-79	28.8 (10.3)	28.6 (10.4)	43.3 (13.2)	42.1 (13.0)
80-84	28.9 (10.6)	28.0 (10.1)	43.3 (14.7)	42.2 (13.3)
85+	26.4 (8.7)	26.8 (9.7)	40.9 (12.7)	41.9 (13.7)
Gender				
Male	30.3 (9.4)	29.4 (10.6)	42.3 (13.2)	41.9 (13.7)
Female	27.5 (9.9)	27.4 (9.9)	42.1 (13.5)	41.9 (13.4)
Race				
White	27.4 (9.9)	27.7 (10.1)	40.8 (12.8)	42.2 (13.8)
Black	28.8 (10.0)	28.5 (10.5)	42.8 (13.7)	43.0 (13.1)
Asian	30.4 (9.5)	27.2 (9.5)	44.9 (14.2)	39.3 (12.5)
Hispanic	25.7 (7.8)	28.4 (9.9)	41.5 (12.2)	39.3 (12.0)
Other/Unknown	28.3 (9.3)	27.6 (9.9)	45.1 (16.6)	40.6 (14.1)

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.[9,10]

Figure 2 displays the respondents' self-reported general health status for your PACE Organization and the HOS-M Total. Note that 63.2% of the HOS-M Total reported their general health was "Fair" or "Poor." This result reflects similar findings in a recent research study that compared health status and quality of care received by Medicare beneficiaries enrolled in specialized managed care plans, including PACE plans, to MA beneficiaries enrolled in traditional models of care.[11] The 2008 and 2009 HOS-M and the HOS *2008 Cohort 11 Baseline* and *2009 Cohort 12 Baseline* were used for the analyses. Two-thirds of members in PACE plans from the HOS-M report the worst self-rated general health of "Fair" or "Poor" when compared to one-third of MA beneficiaries in traditional models of care that report in these categories. The study also highlights other areas where PACE members do more poorly compared to the other MA beneficiaries, such as having lower PCS and MCS scores, and having greater difficulty performing all ADLs.[11]

FIGURE 2: *2010 HOS-M* GENERAL HEALTH STATUS FOR PACE HXXXA AND HOS-M TOTAL

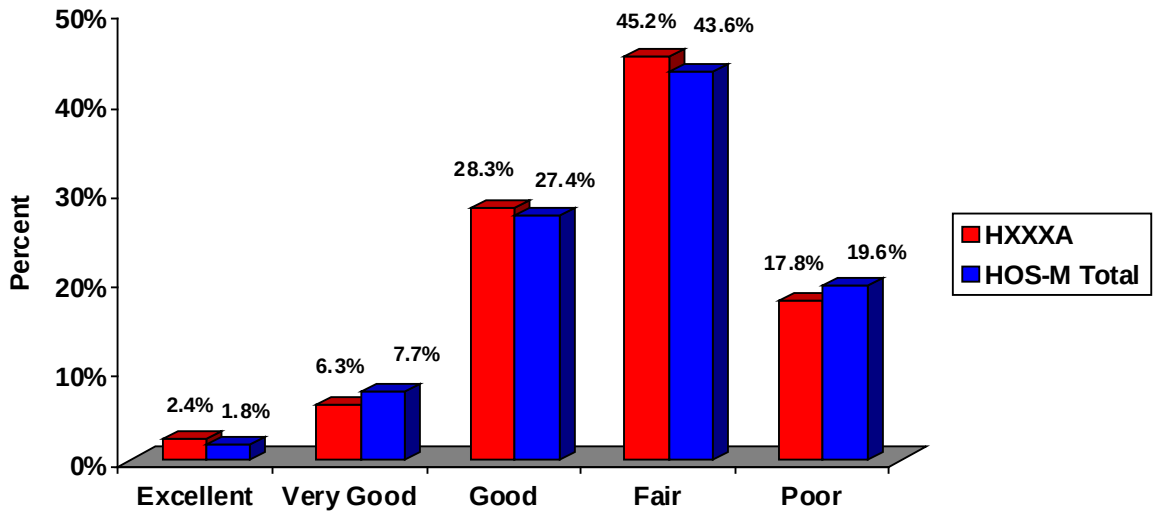


Figure 3 displays the respondents' self-reported physical health status as compared to one year ago for your PACE Organization and the HOS-M Total. Some 47.0% of the HOS-M Total reported that their physical health compared to one year ago was "Slightly Worse" or "Much Worse."

FIGURE 3: *2010 HOS-M* PHYSICAL HEALTH COMPARED TO ONE YEAR AGO FOR PACE HXXXA AND HOS-M TOTAL

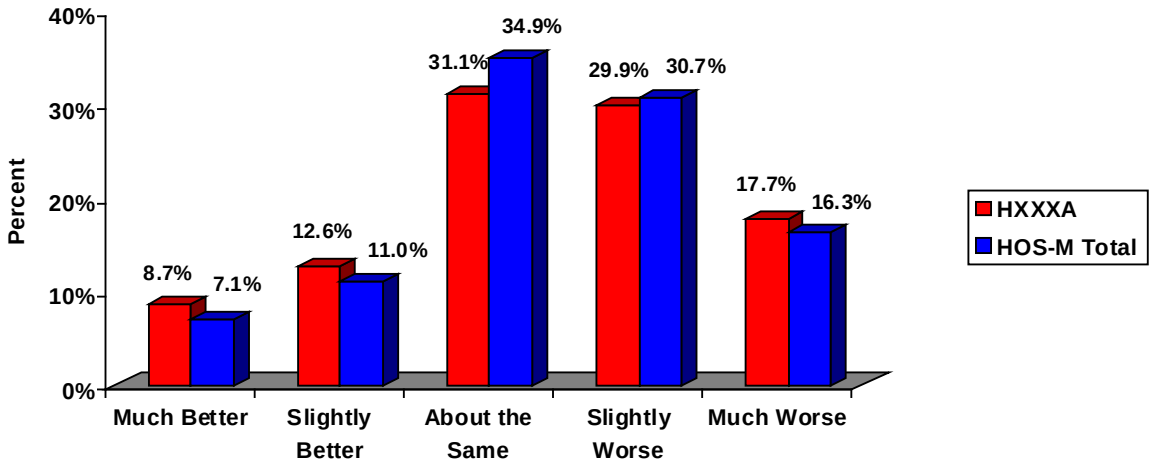


Figure 4 displays the respondents' self-reported mental health status as compared to one year ago for your PACE Organization and the HOS-M Total. While just below half (47.5%) of the HOS-M Total reported that their mental health compared to one year ago was "About the Same," almost a third (30.9%) reported "Slightly Worse" or "Much Worse."

FIGURE 4: *2010 HOS-M* MENTAL HEALTH COMPARED TO ONE YEAR AGO FOR PACE HXXXA AND HOS-M TOTAL

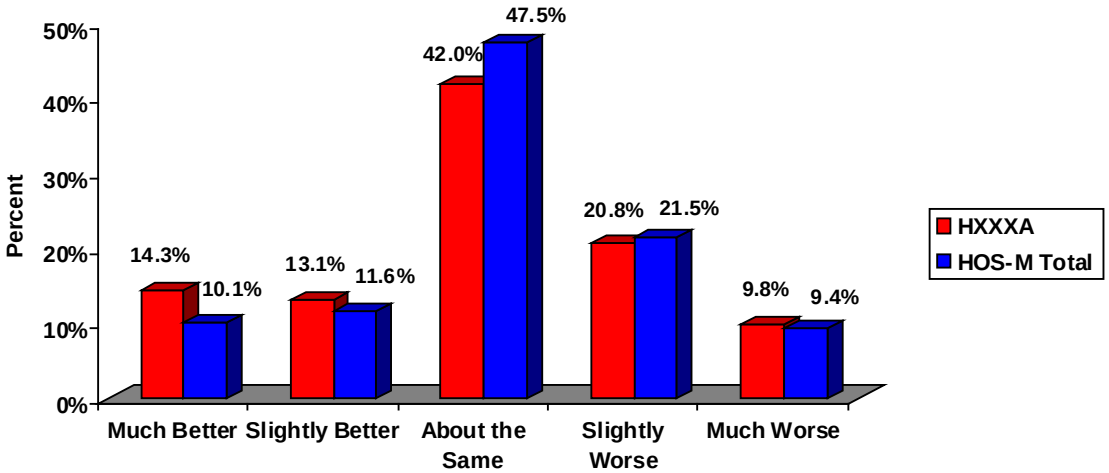


Figure 5 provides the mean PCS scores for your PACE Organization and the HOS-M Total by respondents' self-reported general health status. For the HOS-M Total, PCS scores were substantially lower when self-rated general health was "Fair" or "Poor."

FIGURE 5: *2010 HOS-M* MEAN PCS SCORES BY GENERAL HEALTH STATUS FOR PACE HXXXA AND HOS-M TOTAL

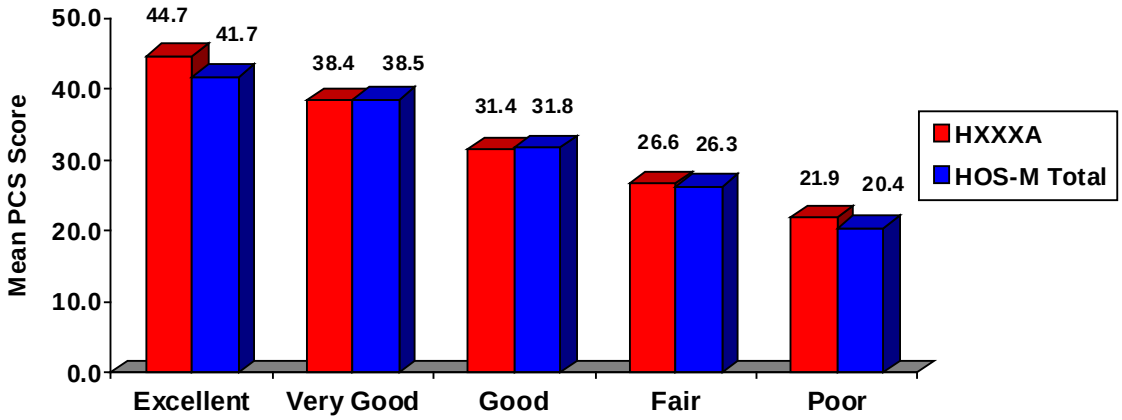
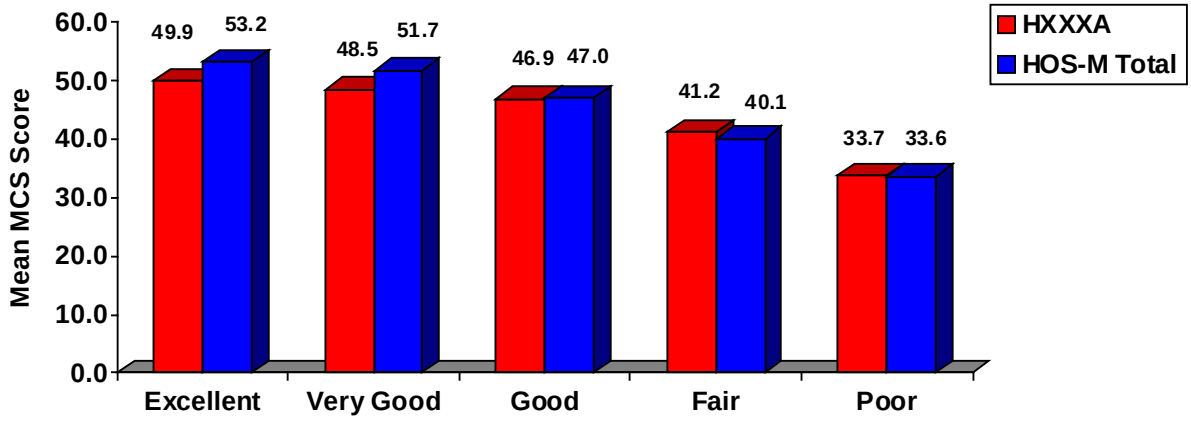


Figure 6 provides the mean MCS scores for your PACE Organization and the HOS-M Total by respondents' general health status. For the HOS-M Total, the MCS scores tend to be lower when self-reported general health status was "Fair" or "Poor."

FIGURE 6: *2010 HOS-M* MEAN MCS SCORES BY GENERAL HEALTH STATUS FOR PACE HXXXA AND HOS-M TOTAL



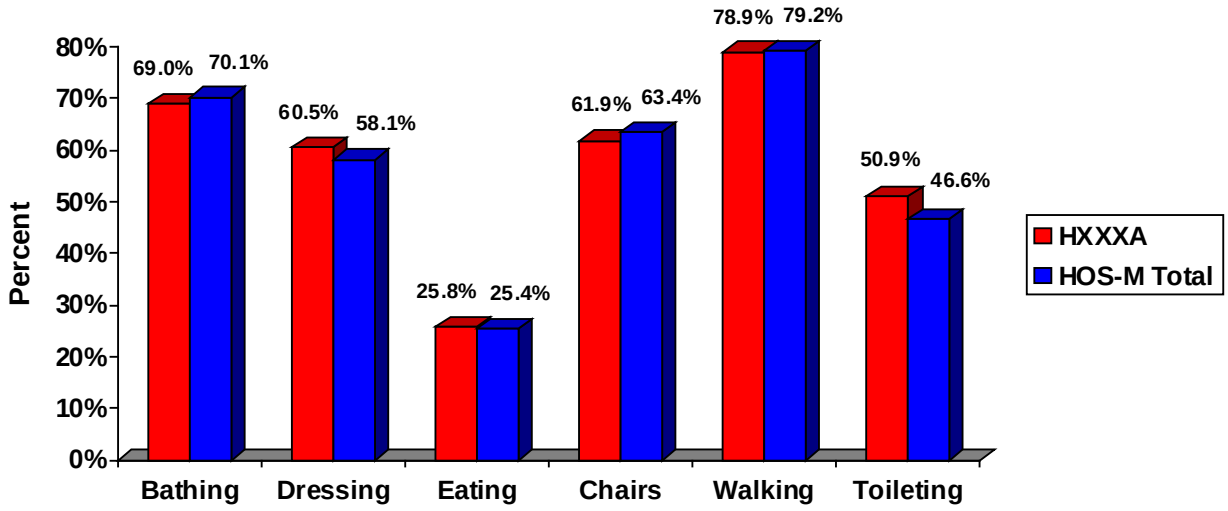
ACTIVITIES OF DAILY LIVING

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; getting in or out of chairs; and dressing. The lowest reported impairment was with eating at 25.4% of the HOS-M Total.

The HOS-M members were considerably frailer when compared to the HOS seniors. The prevalence for each ADL impairment measured in the *2010 HOS Cohort 13 Baseline* was as follows: walking (33.2%), getting in and out of chairs (23.7%), bathing (16.8%), dressing (13.6%), using the toilet (10.4%), and eating (6.0%). 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.[12]

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: *2010 HOS-M* DIFFICULTY PERFORMING ACTIVITIES OF DAILY LIVING WITHOUT HELP FOR PACE HXXXA 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 percentage of respondents reported receiving help with bathing (61.1%), and the smallest percentage received help with eating (20.7%).

FIGURE 8: *2010 HOS-M* RECEIVING HELP FROM ANOTHER PERSON TO PERFORM ACTIVITIES OF DAILY LIVING FOR PACE HXXXA AND HOS-M TOTAL

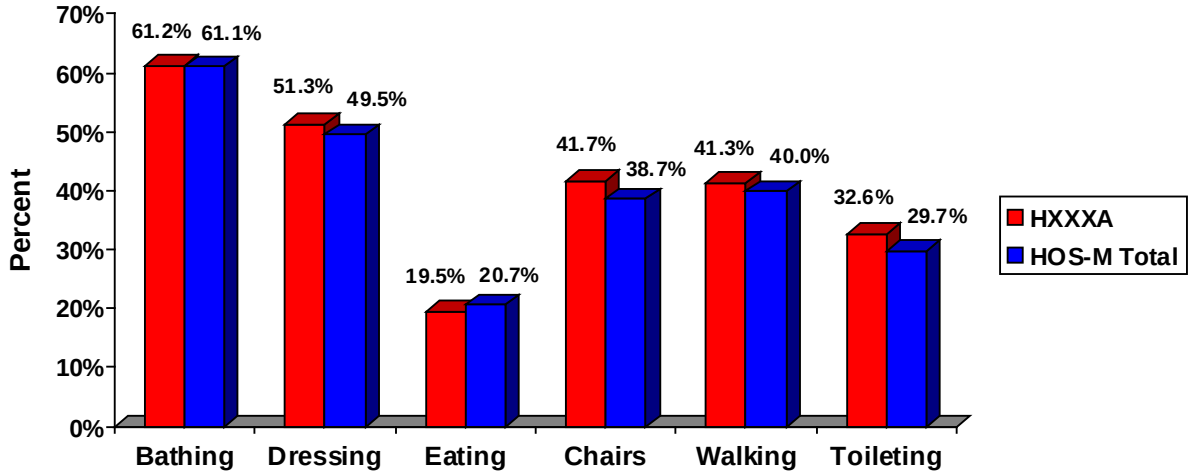


Figure 9, on the following page, shows the distribution of respondents with respect to the number of ADL impairments reported. For the HOS-M Total, 87.2% of beneficiaries reported impairment with one or more daily activities. This percentage is high compared to the 30.5% of non-institutionalized beneficiaries who were found to have at least one ADL limitation in the 2009 Medicare Current Beneficiary Survey, which is a nationally representative sample of all Medicare beneficiaries.[13] The frailty of the HOS-M population is again reflected in the differences in their limitations as compared to the analytic sample of 284,262 seniors who completed the *2010 HOS Cohort 13 Baseline*. For the latter survey, 38.0% reported having one or more impairments, while the majority (62.0%) reported having no impairments.

FIGURE 9: *2010 HOS-M* NUMBER OF ADL IMPAIRMENTS FOR PACE HXXXA AND HOS-M TOTAL

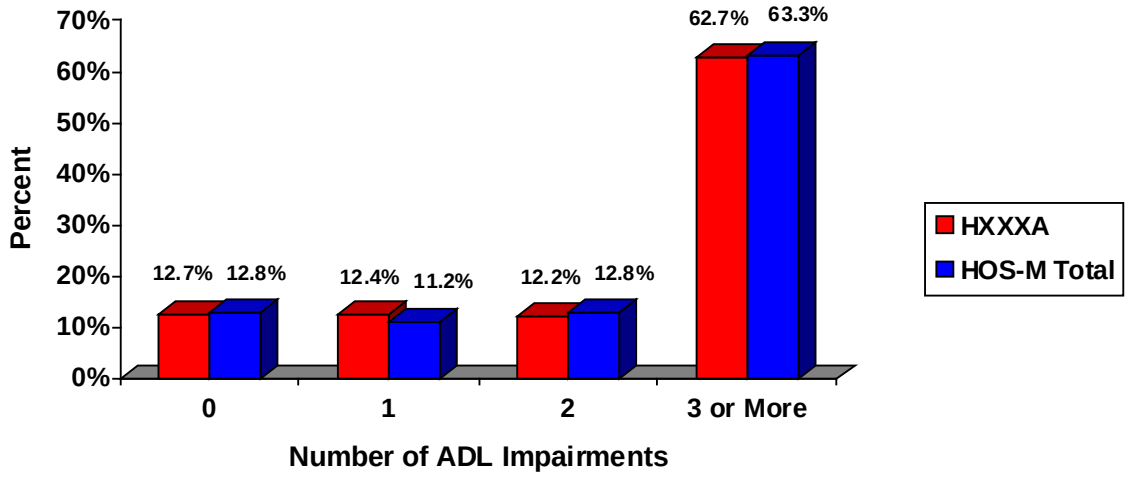


Figure 10 indicates that beneficiaries who have a greater number of ADL impairments tend to have lower PCS scores. There is an inverse linear relationship indicating that mean PCS decreases with increasing numbers of ADL limitations.

FIGURE 10: *2010 HOS-M* MEAN PCS BY NUMBER OF ADL IMPAIRMENTS FOR PACE HXXXA AND HOS-M TOTAL

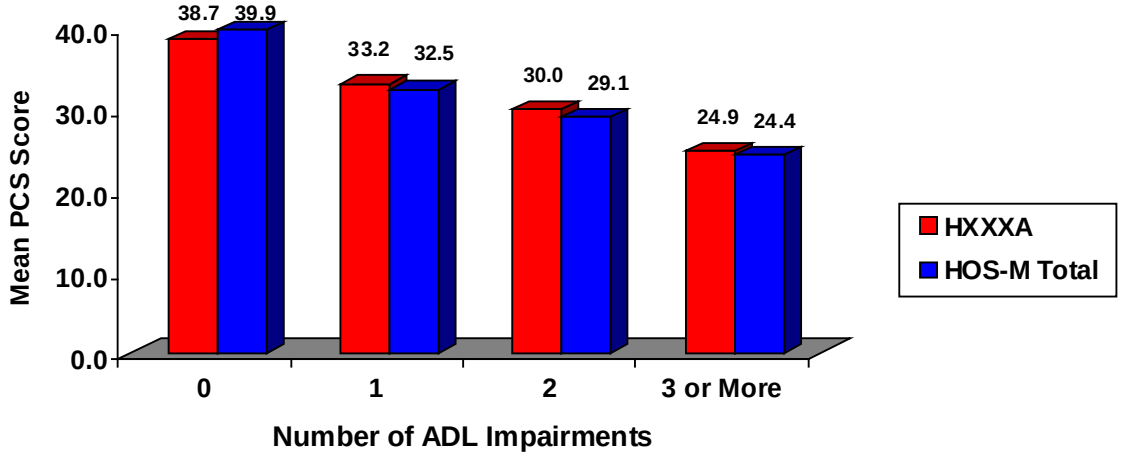
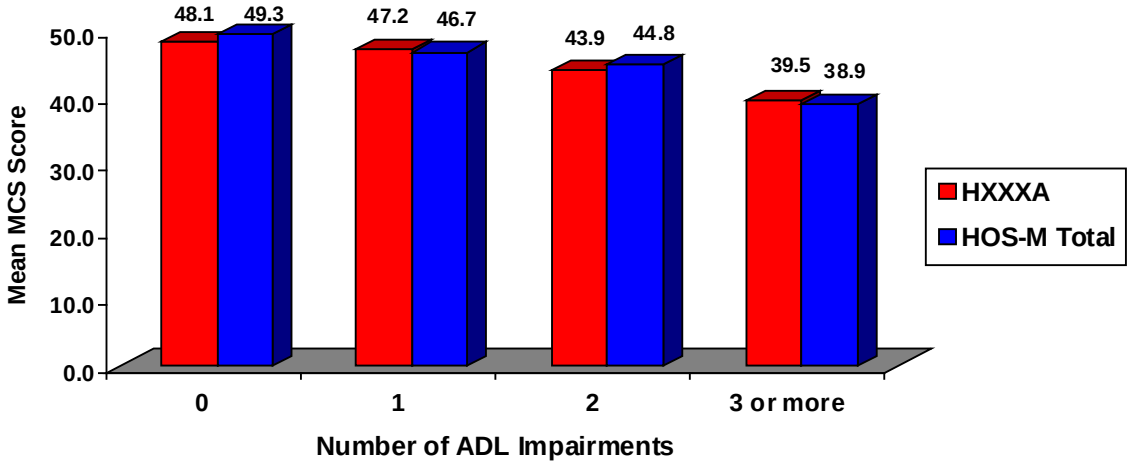


Figure 11 indicates that MCS scores are also lower for those with a greater number of ADL impairments. The relationship is somewhat similar to that for PCS in that mean MCS generally decreases with increasing numbers of ADL limitations.

FIGURE 11: *2010 HOS-M* MEAN MCS BY NUMBER OF ADL IMPAIRMENTS FOR PACE HXXXA 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 HXXXA and the HOS-M Total. The lowest PCS scores were found for beneficiaries who responded "Quite a Bit" or "Extremely."

FIGURE 12: *2010 HOS-M* MEAN PCS SCORES BY THE EXTENT PAIN INTERFERED WITH NORMAL WORK FOR PACE HXXXA AND HOS-M TOTAL

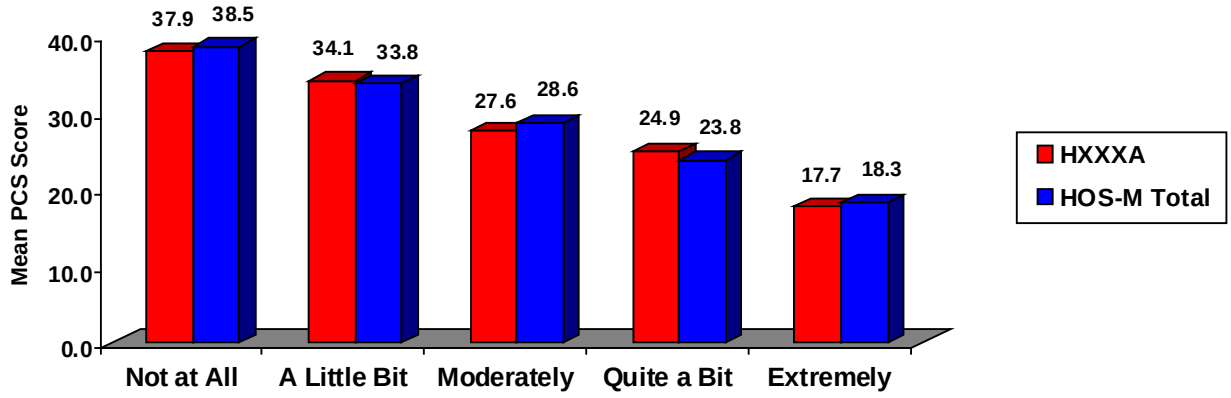


Table 4 provides the number and percentage of respondents who experienced memory loss or difficulty controlling urination, as well as the proxy status of the respondents. For the HOS-M Total, 55.3% of respondents reported having memory loss, and the majority (73.8%) reported having some difficulty controlling urination ranging from less than once a week to daily. Of note, more than one third (36.8%) reported daily difficulty with controlling urination.

Approximately 64.4% 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 (47.8%); memory loss (54.0%); beneficiary not able to speak or read English (15.3%); beneficiary not available (14.5%); and other unspecified reasons (26.3%). 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.

TABLE 4
***2010 HOS-M* HEALTH LIMITATIONS**
FOR PACE HXXXA AND HOS-M TOTAL

	HXXXA		HOS-M Total	
	N	**Percent (%)**	**N**	**Percent (%)**
Memory Loss	(N=509)		(N=9,048)	
Yes	295	58.0	5,003	55.3
No	214	42.0	4,045	44.7
Difficulty Controlling Urination	(N=513)		(N=9,170)	
Never	120	23.4	2,405	26.2
Less than once a week	58	11.3	1,508	16.4
Once a week or more often	111	21.6	1,743	19.0
Daily	219	42.7	3,374	36.8
Catheter	5	1.0	140	1.5
Proxy Status	(N=471)		(N=8,437)	
Medicare participant	160	34.0	3,007	35.6
Family member or friend	235	49.9	4,258	50.5
Health professional	76	16.1	1,172	13.9

APPENDIX 1

BACKGROUND INFORMATION

All Program of All-Inclusive Care for the Elderly (PACE) plans with Medicare contracts in effect on or before January 1, 2009, were required by CMS to administer the HOS-M in 2010. In addition, all Medicare Advantage Organizations (MAOs) with a minimum enrollment 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, 2009, were required by CMS to administer the *Cohort 13 Baseline* HOS in 2010. MAOs composed exclusively of Special Needs Plan (SNP) benefit packages, regardless of institutionalized, chronically ill or dual eligible enrollment, were also included in this requirement. Private Fee-For-Service (PFFS) plans and medical savings accounts with a minimum enrollment of 500 members, with Medicare contracts in effect on or before January 1, 2009, were required by CMS to administer the HOS in 2010.

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. RTI International (RTI) generated the samples for each PACE Organization, 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 *2010 HOS-M* Report.

2010 HOS-M SAMPLING

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 age 55 or older. 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. Ineligible beneficiaries included deceased, members not enrolled in the health plan, members with incorrect address and phone number, or members having a language barrier.

SURVEY ADMINISTRATION

Participating PACE Organizations contracted with the NCQA-Certified survey vendor to administer the survey following the HOS-M protocol specified in the *HEDIS® 2010, Volume 6, Specifications for the Medicare Health Outcomes Survey Manual*, which is available from the NCQA website at www.ncqa.org.[14,15] 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.

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.

2010 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).[2] 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.[2,3]

The VR-12 has undergone extensive testing which has shown it to be reliable and valid in ambulatory care patient populations.[3] 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.[2,3]

The PCS and MCS scores were calculated using the Modified Regression Estimate (MRE).[16] 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 *2010 MEDICARE HOS-M* SURVEY FIELDS

TABLE A1
***2010 HOS-M* SELECTED HEALTH STATUS MEASURES FOR PACE HXXXA AND HOS-M TOTAL**

	HXXXA		HOS-M Total	
	N	**Percent (%)**	**N**	**Percent (%)**
Difficulty Lifting or Carrying 10 Pounds	(N=536)		(N=9,429)	
No difficulty	45	8.4	642	6.8
A little difficulty	55	10.3	894	9.5
Some difficulty	88	16.4	1,743	18.5
A lot of difficulty	119	22.2	2,048	21.7
Not able to do it	229	42.7	4,102	43.5
Difficulty Walking a Quarter Mile	(N=536)		(N=9,460)	
No difficulty	29	5.4	603	6.4
A little difficulty	55	10.3	803	8.5
Some difficulty	83	15.5	1,415	15.0
A lot of difficulty	115	21.5	2,089	22.1
Not able to do it	254	47.4	4,550	48.1
Health Limits Moderate Activities	(N=521)		(N=9,302)	
Yes, limited a lot	371	71.2	6,560	70.5
Yes, limited a little	101	19.4	1,857	20.0
No, not limited at all	49	9.4	885	9.5
Health Limits Climbing Several Flights of Stairs	(N=520)		(N=9,230)	
Yes, limited a lot	375	72.1	6,929	75.1
Yes, limited a little	102	19.6	1,552	16.8
No, not limited at all	43	8.3	749	8.1

TABLE A1 (CONT.)
***2010 HOS-M* SELECTED HEALTH STATUS MEASURES**
FOR PACE HXXXA AND HOS-M TOTAL

	HXXXA		HOS-M Total	
	N	**Percent (%)**	**N**	**Percent (%)**
Physical Health in the Past 4 Weeks: Accomplished Less	(N=513)		(N=9,191)	
No, none of the time	57	11.1	1,102	12.0
Yes, a little of the time	41	8.0	892	9.7
Yes, some of the time	98	19.1	1,592	17.3
Yes, most of the time	118	23.0	1,922	20.9
Yes, all of the time	199	38.8	3,683	40.1
Physical Health in the Past 4 Weeks: Limited in Kind of Work or Activities	(N=513)		(N=9,216)	
No, none of the time	57	11.1	1,127	12.2
Yes, a little of the time	44	8.6	784	8.5
Yes, some of the time	73	14.2	1,457	15.8
Yes, most of the time	133	25.9	1,936	21.0
Yes, all of the time	206	40.2	3,912	42.4
Mental Health in the Past 4 Weeks: Accomplished Less	(N=511)		(N=9,192)	
No, none of the time	125	24.5	2,269	24.7
Yes, a little of the time	51	10.0	1,150	12.5
Yes, some of the time	104	20.4	1,693	18.4
Yes, most of the time	82	16.0	1,346	14.6
Yes, all of the time	149	29.2	2,734	29.7
Mental Health in the Past 4 Weeks: Didn't Do Work or Activities As Usual	(N=507)		(N=9,058)	
No, none of the time	148	29.2	2,803	30.9
Yes, a little of the time	59	11.6	1,044	11.5
Yes, some of the time	93	18.3	1,468	16.2
Yes, most of the time	66	13.0	1,059	11.7
Yes, all of the time	141	27.8	2,684	29.6

TABLE A1 (CONT.)
***2010 HOS-M* SELECTED HEALTH STATUS MEASURES**
FOR PACE HXXXA AND HOS-M TOTAL

	HXXXA		HOS-M Total	
	N	**Percent (%)**	**N**	**Percent (%)**
Felt Calm and Peaceful During the Past 4 Weeks	(N=524)		(N=9,278)	
All of the time	48	9.2	940	10.1
Most of the time	153	29.2	2,455	26.5
A good bit of the time	84	16.0	1,412	15.2
Some of the time	142	27.1	2,746	29.6
A little of the time	75	14.3	1,289	13.9
None of the time	22	4.2	436	4.7
Had a Lot of Energy During the Past 4 Weeks	(N=521)		(N=9,273)	
All of the time	15	2.9	326	3.5
Most of the time	52	10.0	847	9.1
A good bit of the time	50	9.6	752	8.1
Some of the time	111	21.3	2,360	25.5
A little of the time	163	31.3	2,604	28.1
None of the time	130	25.0	2,384	25.7
Felt Downhearted and Blue During the Past 4 Weeks	(N=516)		(N=9,240)	
All of the time	25	4.8	467	5.1
Most of the time	44	8.5	810	8.8
A good bit of the time	44	8.5	796	8.6
Some of the time	147	28.5	2,875	31.1
A little of the time	128	24.8	2,182	23.6
None of the time	128	24.8	2,110	22.8
Physical or Emotional Health Interfered With Social Activities During the Past 4 Weeks	(N=519)		(N=9,349)	
All of the time	80	15.4	1,688	18.1
Most of the time	109	21.0	1,735	18.6
Some of the time	134	25.8	2,570	27.5
A little of the time	79	15.2	1,431	15.3
None of the time	117	22.5	1,925	20.6

TABLE A2
***2010 HOS-M* DIFFICULTY WITH ACTIVITIES OF DAILY LIVING FOR PACE HXXXA AND HOS-M TOTAL**

	HXXXA		HOS-M Total	
	N	**Percent (%)**	**N**	**Percent (%)**
Difficulty Bathing	(N=525)		(N=9,419)	
No Difficulty	163	31.0	2,818	29.9
Have Difficulty/Unable To Do	362	69.0	6,601	70.1
Difficulty Dressing	(N=534)		(N=9,427)	
No Difficulty	211	39.5	3,954	41.9
Have Difficulty/Unable To Do	323	60.5	5,473	58.1
Difficulty Eating	(N=531)		(N=9,406)	
No Difficulty	394	74.2	7,017	74.6
Have Difficulty/Unable To Do	137	25.8	2,389	25.4
Difficulty Getting In/Out of Chairs	(N=536)		(N=9,450)	
No Difficulty	204	38.1	3,463	36.6
Have Difficulty/Unable To Do	332	61.9	5,987	63.4
Difficulty Walking	(N=527)		(N=9,430)	
No Difficulty	111	21.1	1,964	20.8
Have Difficulty/Unable To Do	416	78.9	7,466	79.2
Difficulty Using the Toilet	(N=532)		(N=9,432)	
No Difficulty	261	49.1	5,036	53.4
Have Difficulty/Unable To Do	271	50.9	4,396	46.6

TABLE A3
***2010 HOS-M* RECEIVING HELP WITH ACTIVITIES OF DAILY LIVING FOR PACE HXXXA AND HOS-M TOTAL**

	HXXXA		HOS-M Total	
	N	**Percent (%)**	**N**	**Percent (%)**
Receive Help Bathing	(N=534)		(N=9,448)	
No Help	199	37.3	3,532	37.4
Receive Help	327	61.2	5,777	61.1
Do Not Do This Activity	8	1.5	139	1.5
Receive Help Dressing	(N=530)		(N=9,401)	
No Help	252	47.5	4,639	49.3
Receive Help	272	51.3	4,655	49.5
Do Not Do This Activity	6	1.1	107	1.1
Receive Help Eating	(N=529)		(N=9,332)	
No Help	418	79.0	7,297	78.2
Receive Help	103	19.5	1,929	20.7
Do Not Do This Activity	8	1.5	106	1.1
Receive Help Getting In/Out of Chairs	(N=530)		(N=9,343)	
No Help	295	55.7	5,542	59.3
Receive Help	221	41.7	3,618	38.7
Do Not Do This Activity	14	2.6	183	2.0
Receive Help Walking	(N=528)		(N=9,323)	
No Help	252	47.7	4,683	50.2
Receive Help	218	41.3	3,725	40.0
Do Not Do This Activity	58	11.0	915	9.8
Receive Help Using the Toilet	(N=530)		(N=9,362)	
No Help	338	63.8	6,316	67.5
Receive Help	173	32.6	2,785	29.7
Do Not Do This Activity	19	3.6	261	2.8

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