



# **MEDICARE HEALTH OUTCOMES SURVEY (HOS)**

## **Understanding the Health Needs of Hispanic Medicare Beneficiaries**

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## Executive Summary

The ability to analyze health data for detailed racial and ethnic groups is fundamental to identify the underlying factors that contribute to disparities and to develop appropriate strategies to eliminate them, especially among the Medicare beneficiaries. As the population of Medicare beneficiaries becomes more diverse, this information becomes more critical, especially for the Hispanic population. Hispanics constituted 17.8 percent (57.5 million) of the nation's population in 2016, making people of Hispanic origin the nation's largest ethnic or racial minority.<sup>1</sup> From 2000-2010, the Hispanic population grew by 43 percent and is expected to make up 28.6 percent of the total population in 2060.<sup>2, 3</sup>

In 2016, among the groups of Hispanics in the U.S., Mexicans (63.2 percent) were the largest group, followed by Puerto Ricans, Salvadorans, and Cubans. Additionally, majority of Hispanics reside in California (15.3 million), Texas (10.9 million), and Florida (5.1 million).<sup>1</sup> In general, the median age of the 2016 U.S. Hispanic population was 29 years compared to 40.4 years for the non-Hispanic population, and nearly 8 percent of the Hispanic population was 65 years and older compared to 19.3 percent of the non-Hispanic population.<sup>1</sup>

Therefore, in an effort to have a better understanding of the health needs of this diverse population, this report examines the health needs of the Hispanic Medicare beneficiaries by using the Medicare Health Outcomes Survey (HOS). Since 2013, the Medicare HOS has been reporting disaggregated results for Hispanic beneficiaries who self-identified as Cuban, Puerto Rican, Mexican, Other Hispanic, or Multi-ethnic. The HOS collects sufficient data to analyze the health status of Hispanic Medicare Part C and D beneficiaries by these distinct groups.

In general, one-half of Hispanics (50.2 percent) reported "Fair" or "Poor" health with significant differences reported across groups, ranging from 42.5 percent for Cubans to 55.8 percent for Puerto Ricans. Experiencing pain with daily activities from "Quite a bit" or "Very much" ranged from 24.3 percent of Cubans to 33.4 percent of Multi-ethnic Hispanics, and pain interfering with socializing reported as "Often" or "Always" ranged from 17.8 percent of Cubans to 27.8 percent of Puerto Ricans. More than half of Hispanics (68.4 percent) had been diagnosed with hypertension and a quarter (25.4) reported having osteoporosis. Two or more chronic conditions were reported by more than three quarters of beneficiaries in each Hispanic group, ranging from 78.4 percent of Other Hispanics to 83.3 percent of Puerto Ricans. Additionally, the prevalence of obesity among Hispanics was 35.3 percent. Rates of obesity for Hispanic groups varied significantly from 31.0 percent for Cubans to 39.8 percent for Mexicans.

The findings presented in this report demonstrate that stratifying health data for detailed Hispanic groups reveals unique and significant differences otherwise masked by aggregate analyses. The significant differences in health status across the many measures emphasize the importance of collecting demographic data at the granularity level for ethnicity, sex, primary language, and disability status in population health surveys. This added level of detail enhances the ability of public health professionals to identify and monitor the health and health care status of diverse population groups.

## Introduction

### Population

The Hispanic population of the United States constituted 17.8 percent (57.5 million) of the nation's total population in 2016, making people of Hispanic origin the nation's largest ethnic or racial minority.<sup>1</sup> From 2000-2010, the Hispanic population grew by 43 percent and is expected to make up 28.6 percent of the total population in 2060.<sup>2,3</sup>

From a demographic perspective, among detailed groups of Hispanics in the U.S. in 2016, Mexicans (63.2 percent) were the largest group, followed by Puerto Ricans (9.5 percent), Salvadorans (3.8 percent), Cubans (3.9 percent), Dominicans (3.3 percent), and Guatemalans (2.5 percent).<sup>1</sup> A majority of Hispanics also self-identified as White (88.0 percent), followed by Black or African American (4.8 percent), American Indian and Alaska Native (2.9 percent), Asian (1.0 percent), or Native Hawaiian and Other Pacific Islander (< 1.0 percent). The remainder of Hispanics self-identified as two or more races (3.0 percent).<sup>1</sup> The median age of the 2016 U.S. Hispanic population was 29 years compared to 40.4 years for the non-Hispanic population.<sup>1</sup> Nearly 8 percent (7.7 percent) of the Hispanic population was 65 years and older compared to 19.3 percent of the non-Hispanic population.<sup>1</sup>

From a geographic perspective, in 2016, nine states had at least one million individuals self-identifying as Hispanic, and half of counties in the U.S. had at least one thousand Hispanics. More than half (54.4 percent) of the U.S. Hispanic population resided in three states: California (15.3 million), Texas (10.9 million), and Florida (5.1 million).<sup>1</sup>

### Economics and Education

According to the 2016 Current Population Survey, median household income among Hispanics of any race in 2015 was \$45,719 (adjusted to 2016 dollars).<sup>4</sup> This was significantly lower compared to Asian (\$78,141) and non-Hispanic White (\$63,745) households of any ethnicity, but significantly higher compared to Black (\$37,364) households of any ethnicity.<sup>4</sup> Among Hispanics, 21.4 percent were living below the poverty threshold in 2015, compared to 9.1 percent of non-Hispanic Whites, 11.4 percent of Asians, and 24.1 percent of Blacks.<sup>5</sup> The poverty rate was 17.8 percent for Hispanics age 18 to 64 years old and 17.5 percent for Hispanics age 65 years and older.<sup>5</sup> According to the 2015 American Community Survey (ACS), the poverty rates varied across detailed Hispanic groups, with Cubans having the lowest rate (17.6 percent), followed by Other Hispanics (20.0 percent), Central Americans (22.2 percent), Mexicans (23.5 percent), Puerto Ricans (24.6 percent), and Dominicans (26.7 percent).<sup>6</sup>

Two-thirds (66 percent) of Hispanics reported obtaining at least a high school diploma or greater, and 14.8 percent of Hispanics obtained a bachelor's degree or higher.<sup>1</sup> Rates of high school graduation or higher ranged from 60.9 percent for Mexican respondents to 79.2 percent

for Cubans,<sup>a</sup> and obtaining a bachelor's degree or higher ranged from 10.8 percent for Mexicans to 26.1 percent for Cubans.<sup>6</sup>

## Health and Healthcare

In the U.S., persons with disabilities are disproportionately covered by Medicaid and, depending on whether they qualify for certain federal disability benefits, are eligible for Medicare before age 65. In 2015, the disability rate for Hispanics was 8.1 percent. For Mexican and Cuban respondents, rates were 7.5 percent and 8.2 percent respectively, and the disability rate for Puerto Ricans was 14.0 percent.<sup>6</sup>

Health care insurance coverage is instrumental to mitigate expenses related to healthcare needs. In 2015, 83.8 percent of Hispanics reported having health insurance coverage and 16.2 percent lacked coverage.<sup>7</sup> Private health insurance coverage was reported by slightly more than half (51.6 percent) of Hispanics compared to 41.2 percent who reported federal health insurance coverage.<sup>7</sup> Between 2014 and 2015, health insurance coverage rates increased for most racial and Hispanic groups, with the greatest increased observed for Hispanics (3.6 percentage points).<sup>7</sup> According to the 2015 ACS, lack of health insurance varied among Hispanic groups with 8.5 percent of Puerto Ricans reporting no health insurance coverage, compared to 13.9 percent of Cubans and 21.5 percent of Mexicans.<sup>6</sup>

According to data from the 2014 National Vital Statistic Reporting System from the Centers for Disease Control and Prevention (CDC), cancer and heart disease (in that order) are the two leading causes of death for individuals who identified as Hispanic. This is somewhat similar to the non-Hispanic White and Black populations, who share the same two leading causes of death, but with heart disease first and cancer second. Unintentional injuries, stroke, diabetes, chronic liver disease and cirrhosis, Alzheimer's disease, chronic lower respiratory disease, influenza and pneumonia, kidney disease, cancer, and heart disease comprised the top ten leading causes of death for Hispanics. Most of these were also found to be among the top ten causes of death for either non-Hispanic Whites or Blacks, except for chronic liver disease and cirrhosis, which was specific to Hispanics.<sup>8</sup>

The ability to analyze health data for detailed racial and ethnic groups is fundamental to identify the underlying factors that contribute to disparities and to develop appropriate strategies to eliminate them. However, limited national data resources are available that provide this information specifically for Medicare beneficiaries. As the population of Medicare beneficiaries becomes more diverse, this information becomes more critical. Consequently, databases such as the Medicare Health Outcomes Survey (HOS) provide valuable information on detailed [Asian, Native Hawaiian, and Other Pacific Islanders](#) as well as detailed Hispanic groups. Having access to reliable and specific health information made readily available through databases and national assessments like the HOS becomes beneficial in examining the health needs of diverse older populations.

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<sup>a</sup> Hispanic groups examined were Mexican, Puerto Rican, Cuban, Other Hispanic or Latino, Dominican, and Central American (excluding Mexican).

## Factors with Potential to Influence Health

There are many factors that interact to affect an individual's health status, including length of time residing in the U.S. According to data from the 2015 ACS, 34.5 percent of Hispanics in the U.S. were foreign born and more than half (58.2 percent) had entered the U.S. before the year 2000. Similar estimates of time residing in the U.S. were observed across detailed Hispanic groups, including 61.2 percent of Mexicans and 57.1 of Cubans who had entered before 2000.<sup>6</sup> The U.S. Hispanic population has lower mortality rates than non-Hispanic Whites despite lower socioeconomic status,<sup>9</sup> especially for new Hispanic immigrants.<sup>10</sup> However, some research has shown increased risks for disability and chronic disease morbidity, and lower self-reported health status among Hispanic immigrants the longer they reside in the U.S.<sup>11, 12</sup>

Language also can play a critical role in health. Barriers can be created when people do not speak the same language as their health provider or when their level of ability in speaking English is limited. Ultimately, this language barrier could prevent people from receiving timely medical screenings and care, as well as fully understanding their health prognosis or any related health literature they may receive.<sup>13, 14, 15</sup>

Despite the heterogeneity of the U.S. Hispanic population, 72.9 percent of all Hispanics reported that Spanish language was spoken at home.<sup>1</sup> Overall, 73.3 percent of Hispanics reported speaking a language other than English at home, ranging from 60.7 percent of Puerto Ricans to over three quarters (79.3 percent) of Cubans. Among Hispanics, 31.1 percent reported that they were Limited English Proficient and spoke English "less than very well" in 2015. Limited English proficiency varied among Hispanic groups, from 16.7 percent of Puerto Rican respondents to 39.8 percent of Cubans reporting speaking English "less than very well."<sup>6</sup>

Additionally, income and education are other social determinants that can have an influence on an individual's health status. In 2015, the estimate median income for Hispanics was \$45,719 compared to \$57,230 for all households (adjusted to 2016 dollars) and poverty rate was 21.4 percent for Hispanics compared to 13.5 percent nationwide. However, 66 percent of Hispanics age 25 or older had at least a high school education and 14.8 percentage had a bachelor's degree or higher.<sup>4</sup>

## Methods

### Survey and Sample

The Medicare Health Outcomes Survey (HOS) is a national longitudinal survey that measures health plans' success in maintaining or improving beneficiaries' physical and mental health.<sup>16</sup> The HOS is the first patient-reported outcomes survey used in Medicare managed care. Each spring, a random sample of Medicare beneficiaries is drawn and surveyed from each participating Medicare Advantage Organization (MAO) with a minimum of 500 enrollees (i.e., a survey is administered to a different baseline cohort, or group, each year). Two years later, the baseline respondents are surveyed again (i.e., follow up measurement). The HOS is a patient-reported survey with mail and, in those instances when beneficiaries fail to respond, telephone components. In April 2013, the HOS became the first large scale CMS survey to collect expanded measures of race, ethnicity, sex, primary language, and disability status. More information about the HOS is available at [www.hosonline.org/](http://www.hosonline.org/).

This report describes the health of Hispanic respondents from combined survey data in the HOS 2013-2015 Baseline Cohorts 16, 17, and 18. The HOS health status items were collected with the HOS 2.5 instrument for Cohort 16 and Cohort 17, and the HOS 3.0 instrument for Cohort 18.<sup>b</sup> The eligible sample for these analyses was derived from beneficiaries who completed the HOS survey in Baseline Cohort 16 (n=272,936), Baseline Cohort 17 (n=261,638), and Baseline Cohort 18 (n=256,735). For the purposes of this report, a completed survey is defined as one that could be used to calculate a physical component summary (PCS) score or mental component summary (MCS) score. Eligible respondents (n=791,309) included both beneficiaries age 65 years and older (n=663,119) and beneficiaries under age 65 years who were classified as disabled (n=128,190). In this report, age under 65 is used as a robust proxy for disability status, and successfully identifies 99.9 percent of beneficiaries who are classified by CMS administrative data as disabled with, and disabled without, End Stage Renal Disease (ESRD). For those beneficiaries who were respondents in more than one baseline cohort (n=35,056), their first complete survey was used for these analyses. Of the remaining respondents in Baseline Cohorts 16–18 (n=756,253), the analytic sample was drawn from beneficiaries who selected one or more Hispanic ethnicity categories (n=89,008). The Hispanic category includes beneficiaries who self-identified as Cuban, Puerto Rican, Mexican, Another Hispanic, or Multi-ethnic. The Multi-ethnic category includes respondents who selected more than one Hispanic group. The Hispanic category also includes beneficiaries who selected one or more race categories (n=64,058) from the race question in the HOS. Using ANOVA for continuous measures and chi-square test for categorical measures, statistically significant differences (p-value <0.05) across groups are noted. Appendix tables are provided to show health status measures by detailed group and gender.

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<sup>b</sup> Where referenced, HOS questions are derived from the HOS 3.0.

## **Limitations and Sample Recommendations**

The analyses presented in this report use cross-sectional baseline data, not the longitudinal data that are available in the HOS. Therefore, trends and changes in health status are not presented in this report.

Disabled beneficiaries (beneficiaries less than 65 years old) are included in the analytic sample and results are presented for all Hispanic respondents. Disabled beneficiaries often report lower health status compared to beneficiaries ages 65 years and older across most HOS health status measures. Analyses that use data aggregated from both disabled and older respondents should be interpreted with caution as a higher proportion of disabled respondents may result in lower health status estimates for some groups. For example, Table 1 shows significant differences ( $p < 0.0001$ ) across Hispanic groups among beneficiaries under 65 years of age. Future descriptive analyses should consider stratifying results by age when sample sizes permit. In addition, any predictive modeling of health status measures should control for disability status using the age category of under 65 years old.

# Results

## Demographics

Demographic characteristics for Hispanic beneficiaries are outlined in Table 1. HOS demographics in the tables are detailed by sub-categories within the CMS administrative variables of age, gender, and Medicaid status; and beneficiary reported variables of marital status, education, English proficiency, English spoken at home, and annual household income. Among Hispanic beneficiaries, the mean age was 69.2 years (not shown in table). When excluding disabled Hispanic beneficiaries less than age 65, the observed mean age for respondents was 73.7 years (also not shown in tables). In general, disabled beneficiaries report poorer health status and have lower sociodemographic status compared to older beneficiaries who are not disabled.

As shown in Table 1, significant differences exist across all Hispanic groups for each of the demographic measures. Disabled beneficiaries comprised 26.9 percent of Multi-ethnic Hispanic compared to 9.6 percent of Cuban respondents. Beneficiaries 80 years or older accounted for 23.5 percent of Cuban and 13.8 percent of Puerto Rican respondents. Across Hispanic groups, females encompassed over half of all respondents, with percentages ranging from 52.7 percent of Cubans to 59.9 percent of Other Hispanics. All groups of Hispanic beneficiaries most commonly reported being married, ranging from 43.2 percent of Multi-ethnic Hispanic to 50.6 of Cuban beneficiaries reporting the marital status of married. Different patterns of English proficiency were observed across Hispanic groups. Almost two thirds of Hispanics beneficiaries, (65.8 percent) reported speaking English “less than very well.” Significant differences were reported across Hispanic groups, ranging from 52.7 percent of Multi-ethnic Hispanic beneficiaries to 82.5 percent of Puerto Ricans defining their English proficiency as “less than very well.” English being spoken in the home varied across Hispanic groups, with nearly half (48.9 percent) of Mexican beneficiaries reporting English being spoken at home, compared to 12.7 percent of Puerto Rican beneficiaries. Less than half of Hispanic beneficiaries (47.4 percent) reported receiving Medicaid coverage. Within Hispanic groups, the percentage reporting Medicaid coverage varied from 43.7 percent of Puerto Ricans to 51.3 percent of Multi-ethnic Hispanics.

**Table 1: Hispanic<sup>1</sup> beneficiary demographics**

Demographics	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>Age</b>						
<65 <sup>2</sup>	19,395 (21.8%)	469 (9.6%)	6,439 (23.5%)	6,136 (22.4%)	1,620 (26.9%)	4,731 (20.3%)
65-69	23,828 (26.8%)	1,197 (24.4%)	7,648 (28.0%)	7,102 (25.9%)	1,508 (25.0%)	6,373 (27.3%)
70-74	19,085 (21.4%)	1,085 (22.1%)	5,765 (21.1%)	5,815 (21.2%)	1,174 (19.5%)	5,246 (22.5%)
75-79	12,916 (14.5%)	999 (20.4%)	3,717 (13.6%)	4,013 (14.7%)	729 (12.1%)	3,458 (14.8%)
80-84	7,834 (8.8%)	625 (12.7%)	2,144 (7.8%)	2,450 (8.9%)	554 (9.2%)	2,061 (8.8%)
85 and over	5,950 (6.7%)	531 (10.8%)	1,647 (6.0%)	1,882 (6.9%)	437 (7.3%)	1,453 (6.2%)
<b>Gender</b>						
Male	38,625 (43.4%)	2,321 (47.3%)	12,124 (44.3%)	12,311 (44.9%)	2,520 (41.9%)	9,349 (40.1%)
Female	50,383 (56.6%)	2,585 (52.7%)	15,236 (55.7%)	15,087 (55.1%)	3,502 (58.2%)	13,973 (59.9%)
<b>Marital Status</b>						
Married	41,030 (46.9%)	2,441 (50.6%)	12,864 (47.8%)	13,123 (48.7%)	2,544 (43.2%)	10,058 (43.9%)
Widowed	17,794 (20.3%)	991 (20.5%)	5,347 (19.9%)	5,776 (21.4%)	1,221 (20.7%)	4,459 (19.5%)
Divorced or Separated	19,954 (22.8%)	1,066 (22.1%)	6,035 (22.4%)	5,366 (19.9%)	1,390 (23.6%)	6,097 (26.6%)
Never Married	8,738 (10.0%)	330 (6.8%)	2,669 (9.9%)	2,692 (10.0%)	735 (12.5%)	2,312 (10.1%)

Demographics	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>Education</b>						
Did Not Graduate HS	43,536 (51.2%)	2,130 (44.8%)	13,206 (50.4%)	15,448 (59.3%)	2,777 (49.3%)	9,975 (44.4%)
High School Graduate	20,602 (24.2%)	1,005 (21.2%)	6,045 (23.1%)	6,092 (23.4%)	1,525 (27.1%)	5,935 (26.4%)
Some College	12,741 (15.0%)	805 (17.0%)	3,674 (14.0%)	3,224 (12.4%)	905 (16.1%)	4,133 (18.4%)
4 Yr College Degree or more	8,204 (9.6%)	810 (17.1%)	3,279 (12.5%)	1,276 (4.9%)	429 (7.6%)	2,410 (10.7%)
<b>English Proficiency<sup>3</sup></b>						
Very Well	20,471 (34.2%)	660 (19.5%)	3,168 (17.5%)	8,166 (43.7%)	1,712 (47.3%)	6,765 (42.2%)
Less than very well	39,341 (65.8%)	2,730 (80.5%)	14,919 (82.5%)	10,505 (56.3%)	1,910 (52.7%)	9,277 (57.8%)
<b>English Spoken at Home<sup>3</sup></b>						
Yes	8,642 (33.9%)	212 (16.0%)	1,029 (12.7%)	3,708 (48.9%)	807 (37.1%)	2,886 (46.2%)
No	16,831 (66.1%)	1,116 (84.0%)	7,106 (87.4%)	3,883 (51.2%)	1,371 (63.0%)	3,335 (53.8%)
<b>Annual Household Income</b>						
Less than \$10,000	23,285 (28.0%)	1,065 (23.4%)	8,045 (31.3%)	6,465 (25.4%)	1,565 (28.3%)	6,145 (28.2%)
\$10,000-\$19,999	20,724 (24.9%)	1,072 (23.6%)	7,140 (27.8%)	6,037 (23.7%)	1,186 (21.4%)	5,289 (24.2%)
\$20,000-\$29,999	10,672 (12.8%)	695 (15.3%)	3,191 (12.4%)	3,440 (13.5%)	616 (11.1%)	2,730 (12.5%)
\$30,000-\$49,999	8,385 (10.1%)	555 (12.2%)	2,221 (8.6%)	2,751 (10.8%)	430 (7.8%)	2,428 (11.1%)
\$50,000 or More	4,849 (5.8%)	427 (9.4%)	1,000 (3.9%)	1,501 (5.9%)	277 (5.0%)	1,644 (7.5%)
Don't Know	15,170 (18.3%)	732 (16.1%)	4,098 (16.0%)	5,282 (20.7%)	1,464 (26.4%)	3,594 (16.5%)
<b>Medicaid Status</b>						
Medicaid	42,194 (47.4%)	2,214 (45.1%)	11,947 (43.7%)	13,345 (48.7%)	3,089 (51.3%)	11,599 (49.8%)
Non-Medicaid	46,802 (52.6%)	2,692 (54.9%)	15,408 (56.3%)	14,052 (51.3%)	2,933 (48.7%)	11,717 (50.3%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

<sup>2</sup> Beneficiaries less than 65 years old are classified as disabled.

<sup>3</sup> English language is measured by two different questions across this 3 cohort sample: "How well do you speak English (very well, well, not well, or not at all)?" for Cohort 16 and Cohort 17 respondents, and "What language do you mainly speak at home (English, Spanish, Chinese, some other language)?" for Cohort 18.

## Physical and Mental Component Summary Scores

### Definition of Measures

- The HOS health status measures are the physical component summary (PCS) score and the mental component summary (MCS) score. These scores are calculated from the VR-12 (Questions 1-7 in the 2015 HOS 3.0) which asks respondents about their usual activities and how they would rate their health. A mean score of 50 represents the national average; a 10-point difference above and below the mean score is one standard deviation; and with few exceptions, the PCS and MCS scores have a range of 0 through 100 (higher being better).
- The VR-12 is a barometer of physical and mental health status. Concepts included in the measures are: physical functioning, role limitations due to physical problems (role-physical), bodily pain, general health, vitality, role limitations due to emotional problems (role-emotional), social functioning, and mental health.
- For the PCS measure, very high scores indicate no physical limitations, disabilities, or decline in well-being; high energy level; and a rating of health as excellent.
- For the MCS measure, very high scores indicate frequent positive affect, absence of psychological distress and no limitations in usual social and role activities due to emotional problems.

## How are Hispanics Doing?

The mean unadjusted PCS and MCS scores for Hispanic beneficiaries are presented in Table 2. Among Hispanic beneficiaries, average PCS scores were 36.0 while average MCS scores were 45.9. There were significant differences ( $p < 0.0001$ ) across Hispanic groups in both PCS and MCS scores. Mean values of PCS scores ranged from 33.8 for Multi-Ethnic Hispanics to 38.1 for Cubans. The range of mean MCS scores was from 43.9 for Puerto Ricans to 47.4 for Cubans.

**Table 2: Mean unadjusted PCS and MCS scores among Hispanics<sup>1</sup>**

	Total Hispanic Mean (SD)	Cuban Mean (SD)	Puerto Rican Mean (SD)	Mexican Mean (SD)	Multi-ethnic Mean (SD)	Other Hispanic Mean (SD)
PCS	36.0 (12.0)	38.1 (12.0)	35.4 (11.6)	36.0 (12.0)	33.8 (12.0)	36.9 (12.1)
MCS	45.9 (13.2)	47.4 (13.2)	43.9 (13.4)	46.9 (12.8)	44.8 (13.3)	47.0 (12.9)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). ANOVA was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

PCS and MCS scores are not case-mix adjusted for this beneficiary-level report. Case-mix adjustment of PCS and MCS scores is done to enable plan-level comparisons between MAOs in other reports.

## General Health and Comparative Health

### Definition of Measures

- General health status is a self-reported measure of health perception using ratings of “Excellent,” “Very good,” “Good,” “Fair,” or “Poor.”<sup>17</sup> This measure is found in Question 1 of the HOS.
- Two measures of physical and mental health compared to one year ago use ratings of “Much better,” “Slightly better,” “About the same,” “Slightly worse,” or “Much worse.” These measures are found in Questions 8 and 9 of the HOS.

General self-rated health status is a valid and reliable method for assessing health across different populations.<sup>18</sup> Individuals who indicate 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 future hospitalization, use of mental health services, and mortality.<sup>19, 20</sup>

### How are Hispanics Doing?

The categories found in Table 3 describe self-rated general health as well as physical and mental health compared to one year ago. Significant differences exist in self-reported general health among Hispanic groups. A majority of Puerto Rican beneficiaries (55.8 percent) reported their health as “Fair” or “Poor” in comparison to 42.5 percent of Cubans. About half (49.8 percent) of all Hispanic beneficiaries considered their general health was “Excellent” to “Good” while the remaining half reported “Fair” or “Poor” health. Nearly seven out of ten Hispanic beneficiaries (69.0 percent) reported that their physical health was “Much better” to “About the same” when compared to a year ago. The percentage of respondents who indicated their health was “Much

better” to “About the same” ranged from 72.5 percent of Cubans to 66.0 percent of Multi-ethnic Hispanic.

The third component of Table 3, comparative mental health, was also found to be significantly different among Hispanic groups. Over three-fourths of Hispanic beneficiaries (79 percent) reported that their mental health was “Much better” to “About the same” when compared to a year ago. Respondents who selected “Slightly worse” to “Much worse” varied among groups, from 18.8 percent of Cubans to 22.8 percent of Multi-ethnic Hispanics .

**Table 3: Self-rated general and comparative health status among Hispanics<sup>1</sup>**

Self-Rated Health	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>General Health</b>						
Excellent to Good	43,455 (49.8%)	2,761 (57.5%)	11,834 (44.2%)	13,733 (51.2%)	2,748 (46.4%)	12,379 (54.1%)
Fair or Poor	43,730 (50.2%)	2,044 (42.5%)	14,921 (55.8%)	13,099 (48.8%)	3,176 (53.6%)	10,490 (45.9%)
<b>Comparative Physical Health</b>						
Much Better to About the Same	60,421 (69.0%)	3,484 (72.5%)	18,522 (69.0%)	18,570 (68.8%)	3,881 (66.0%)	15,964 (69.4%)
Slightly Worse or Much Worse	27,088 (31.0%)	1,324 (27.5%)	8,327 (31.0%)	8,412 (31.2%)	2,000 (34.0%)	7,025 (30.6%)
<b>Comparative Mental Health</b>						
Much Better to About the Same	68,373 (79.0%)	3,851 (81.2%)	20,637 (77.8%)	21,314 (79.7%)	4,469 (77.2%)	18,102 (79.5%)
Slightly Worse or Much Worse	18,219 (21.0%)	893 (18.8%)	5,887 (22.2%)	5,445 (20.3%)	1,321 (22.8%)	4,673 (20.5%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

## Depression

### Definition of Measure

- The HOS includes two questions (Questions 39a and 39b) that serve as a screening measure for depression. Each question is assigned points depending on the response given, from 0 (“Not at all”) to 3 (“Nearly every day”). For this report, a Medicare beneficiary is considered to have a positive depression screen when he or she scores three points or greater across both depression questions.

Individuals with a positive depression screen may be at risk for depressive disorders. Depression is undetected and under-diagnosed in the majority of the older Medicare population and is an important health problem that has been linked to poor health outcomes.<sup>21, 22</sup> Additionally, depression is significantly associated with other psychological dysfunction, as well as the presence of common chronic medical conditions, such as diabetes.<sup>23, 24</sup>

### How are Hispanics Doing?

Based on Table 4, there were significant differences (p<0.0001) in the responses to the two depression screening questions across all Hispanic groups. The most frequent response for both depression items was “Not at all” (48.1% for the first item and 55.1% for the second item). Significant differences were also found in the depression screen. Positive depression screens were found for 28.6 percent of Hispanics. The rate of positive depression screens ranged from 25.2 percent of Cubans to 34.9 percent of Multi-ethnic Hispanics.

**Table 4: Frequency of positive depression screen responses among Hispanics<sup>1</sup>**

Depression Screen	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>Little interest or pleasure in doing things in past two weeks</b>						
Not at all (0 points)	41,128 (48.1%)	2,496 (53.3%)	10,463 (39.8%)	13,861 (52.7%)	2,489 (43.5%)	11,819 (52.4%)
Several days (1 point)	21,297 (24.9%)	1,101 (23.5%)	7,833 (29.8%)	5,725 (21.8%)	1,378 (24.1%)	5,260 (23.3%)
More than half the days (2 points)	11,135 (13.0%)	474 (10.1%)	3,624 (13.8%)	3,451 (13.1%)	761 (13.3%)	2,825 (12.5%)
Nearly every day (3 points)	11,997 (14.0%)	615 (13.1%)	4,373 (16.6%)	3,273 (12.4%)	1,096 (19.1%)	2,640 (11.7%)
<b>Feeling down, depressed, or hopeless in past two weeks</b>						
Not at all (0 points)	46,934 (55.1%)	2,741 (58.5%)	12,446 (47.7%)	15,556 (59.1%)	3,008 (52.2%)	13,183 (58.8%)
Several days (1 point)	20,218 (23.7%)	1,037 (22.1%)	7,122 (27.3%)	5,741 (21.8%)	1,362 (23.6%)	4,956 (22.1%)
More than half the days (2 points)	9,066 (10.6%)	405 (8.6%)	3,109 (11.9%)	2,669 (10.1%)	625 (10.8%)	2,258 (10.1%)
Nearly every day (3 points)	9,028 (10.6%)	504 (10.8%)	3,404 (13.1%)	2,345 (8.9%)	769 (13.3%)	2,006 (9.0%)
<b>Depression Screen*</b>						
Positive	23,832 (28.6%)	1,155 (25.2%)	8,370 (32.8%)	6,769 (26.4%)	1,941 (34.9%)	5,597 (25.4%)
Negative	59,593 (71.4%)	3,426 (74.8%)	17,178 (67.2%)	18,918 (73.6%)	3,626 (65.1%)	16,445 (74.6%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent. A positive depression screen is defined as scoring 3 points or greater on the sum total of the two depression questions listed. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in first cohort in which they appear for all table analyses.

## Pain

### *Definition of Measure*

- The HOS includes questions to measure self-reported pain over the previous seven days. Question 36 asks how much pain interfered with day-to-day activities and Question 37 asks how often pain kept the beneficiary from socializing. Each question has five possible categorical responses. Question 36 responses include “Not at all,” “A little bit,” “Somewhat,” “Quite a bit,” or “Very much.” Question 37 responses include “Never,” “Rarely,” “Sometimes,” “Often,” or “Always.”

Self-reported pain is common among older adults. Without proper pain management, opioid abuse<sup>25, 26</sup> and alcohol abuse<sup>27</sup> are increasing in this population as they attempt to control their pain. Pain screening is the initial step in establishing an appropriate pain management program for older beneficiaries. In fact, The Joint Commission requires assessment of pain when clinically indicated for patients in accredited hospitals, clinics, and long-term care facilities.<sup>28</sup>

### *How are Hispanics Doing?*

Significant differences were found in both pain interfering with daily activities and pain interfering with socializing at each level of pain among Hispanic groups. As Table 5 shows, more than half of all beneficiaries across each Hispanic group indicated that pain interfered “Not at all” to “Somewhat” in the past seven days. Similar response levels were seen for pain interfering with socializing “Never” to “Sometimes,” which accounted for at least two-thirds of Hispanic beneficiaries in each group. Experiencing pain with daily activities “Quite a bit” or

“Very much” was reported at various levels, ranging from 24.3 percent of Cubans to 33.4 percent of Multi-ethnic Hispanics. When it came to socializing, pain was reported to interfere “Often” or “Always” at varying rates from 17.8 percent of Cubans to 27.8 percent of Puerto Ricans.

**Table 5: Extent pain interfered with daily activities and socializing among Hispanics<sup>1</sup>**

Pain Questions	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>Pain Interfering with Daily Activities</b>						
Not at all to Somewhat	59,692 (69.0%)	3,577 (75.7%)	16,502 (62.6%)	19,447 (72.6%)	3,918 (66.6%)	16,248 (71.5%)
Quite a bit or Very much	26,760 (31.0%)	1,149 (24.3%)	9,847 (37.4%)	7,330 (27.4%)	1,969 (33.4%)	6,465 (28.5%)
<b>Pain Interfering with Socializing</b>						
Never to Sometimes	66,968 (77.6%)	3,871 (82.2%)	18,969 (72.2%)	21,589 (80.8%)	4,431 (75.7%)	18,108 (79.8%)
Often or Always	19,289 (22.4%)	839 (17.8%)	7,316 (27.8%)	5,115 (19.2%)	1,426 (24.3%)	4,593 (20.2%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

## Chronic Medical Conditions

### *Definition of Measure*

- The HOS includes 15 chronic disease measures that assess health across the beneficiary lifespan. These measures are found in Questions 20-34 of the HOS. This report presents seven of the chronic condition measures found in the HOS, including hypertension, arthritis of the hip or knee, arthritis of the hand or wrist, diabetes, sciatica, osteoporosis, and depression.

For older adults, chronic medical conditions reduce the quality of life, accelerate a decline in functioning, and can lead to conflicting medical advice.<sup>29</sup> The increased cost associated with chronic disease is an important factor driving overall Medicare spending.<sup>30</sup> According to the U.S. Department of Health and Human Services, two out of three adults over the age of 65 have multiple chronic conditions and the need for coordinated care.<sup>31</sup> Medicare beneficiaries with multiple chronic conditions account for more than three times the average per capita costs, with over 140 billion dollars in total spending in 2010.<sup>32</sup>

### *How are Hispanics Doing?*

The prevalence rates of seven chronic conditions for Hispanic beneficiaries were examined. The top three prevalent chronic conditions for Hispanics were hypertension, arthritis of the hip or knee, and arthritis of the hand or wrist.

As Table 6 shows, the prevalence of these seven chronic conditions and the total number of chronic conditions were significantly different ( $p < 0.0001$ ) among Hispanic groups. Nearly seven out of ten (68.4 percent) Hispanics had been diagnosed with hypertension and a one out of four (25.4) reported having osteoporosis. Two or more chronic conditions were reported by more than three quarters of beneficiaries in each Hispanic group, ranging from 78.4 percent of Other Hispanics to 83.3 percent of Puerto Ricans.

**Table 6: Number of most prevalent chronic conditions among Hispanics<sup>1</sup>**

Prevalent Chronic Conditions	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>Prevalent Conditions</b>						
Hypertension	59,792 (68.4%)	3,396 (70.5%)	18,751 (69.9%)	18,431 (68.4%)	3,935 (66.4%)	15,279 (66.5%)
Arthritis - Hip or Knee	42,990 (49.5%)	2,438 (51.0%)	14,103 (53.0%)	12,419 (46.4%)	2,894 (49.1%)	11,136 (48.9%)
Arthritis - Hand or Wrist	36,835 (42.5%)	1,933 (40.5%)	12,197 (46.0%)	10,703 (40.0%)	2,494 (42.5%)	9,508 (41.8%)
Diabetes	34,124 (39.1%)	1,474 (30.6%)	10,922 (40.8%)	11,244 (41.8%)	2,389 (40.3%)	8,095 (35.4%)
Sciatica	28,556 (33.1%)	1,640 (34.4%)	9,952 (37.8%)	7,626 (28.6%)	1,955 (33.4%)	7,383 (32.5%)
Osteoporosis	21,898 (25.4%)	1,155 (24.3%)	7,969 (30.2%)	5,788 (21.7%)	1,446 (24.7%)	5,540 (24.4%)
Depression	30,659 (35.3%)	1,610 (33.8%)	11,087 (41.7%)	8,491 (31.7%)	2,364 (40.0%)	7,107 (31.2%)
<b>Number of Chronic Conditions</b>						
No conditions	6,274 (7.1%)	312 (6.4%)	1,609 (5.9%)	2,116 (7.8%)	415 (6.9%)	1,822 (7.8%)
One condition	11,327 (12.8%)	637 (13.0%)	2,942 (10.8%)	3,821 (14.0%)	732 (12.2%)	3,195 (13.8%)
Two or three conditions	26,949 (30.4%)	1,560 (31.9%)	7,476 (27.4%)	8,824 (32.3%)	1,715 (28.6%)	7,374 (31.7%)
Four or more conditions	44,118 (49.8%)	2,376 (48.6%)	15,225 (55.9%)	12,536 (45.9%)	3,141 (52.3%)	10,840 (46.7%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Total for “yes” responses reported for each chronic condition. Number of chronic conditions based on 15 measures collected by the HOS. Due to rounding sum of cells may not equal 100 percent. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

## Activities of Daily Living

### Definition of Measures

- Activities of daily living (ADL) refer to a set of common daily tasks that are necessary for personal self-care and independent living.<sup>33</sup> ADLs include bathing, dressing, eating, getting in or out of chairs, walking, and using the toilet. These measures are found in Question 10 of the HOS. An ADL impairment is when someone has a difficulty with or is unable to perform an activity (i.e., selects “Yes, I have difficulty” or “I am unable to do this activity”).
- Instrumental activities of daily living (IADLs) assess independent living skills that are more complex than ADLs.<sup>34, 35</sup> IADLs include preparing meals, managing money, and taking medications. These measures are found in Question 11 of the HOS. For IADLs, impairment is defined as beneficiaries who reported having difficulty performing an activity (i.e., “Yes, I have difficulty”).

Six ADLs are included in the HOS to examine reported difficulty with the performance of daily tasks. The ability to perform these tasks is predictive of current disease status and mortality risk.<sup>36, 37</sup> Difficulties with ADLs are strongly associated with increasing age and with disability status.<sup>38, 39</sup> A study of the Medicare population showed that the total median healthcare costs per year increased as the number of ADL difficulties increased, even after adjustment for sociodemographic characteristics and comorbidities.<sup>40</sup>

There are three IADLs in the HOS that examine reported difficulty with the performance of tasks of independence. In comparison to the ADLs, IADLs are considered to recognize earlier changes in functioning and can be used as an indication of the need for intervention or further medical work-up.<sup>35</sup>

## How are Hispanics Doing?

The prevalence of ADL impairments in Hispanic beneficiaries is outlined in Table 7. There were significant differences ( $p < 0.0001$ ) across Hispanic groups for each of the ADLs. Overall, rates of impairment varied from 42.2 percent for walking to 10.1 percent for eating. The percentage of Hispanic beneficiaries who reported difficulty with walking ranged from 46.2 percent for Puerto Ricans to 34.5 percent for Cubans.

Ranging from zero to three or more, the number of ADL impairments reported by Hispanic groups was also found to be significantly different ( $p < 0.0001$ ). All Hispanic groups most commonly reported zero ADL impairments. Just over half of all Hispanic beneficiaries reported zero ADL impairments compared to one quarter who reported three or more ADL impairments. Three or more ADL impairments were reported by 27.5 percent of Multi-ethnic Hispanics and 20.5 percent of Cubans.

**Table 7: Impairments in Activities of Daily Living (ADL) among Hispanics<sup>1</sup>**

ADL	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>ADL Impairments</b>						
Walking	36,812 (42.2%)	1,663 (34.5%)	12,373 (46.2%)	11,040 (41.1%)	2,461 (41.9%)	9,275 (40.5%)
Getting in/out of chairs	28,639 (32.9%)	1,315 (27.4%)	10,424 (39.0%)	8,051 (30.0%)	1,979 (33.6%)	6,870 (30.0%)
Bathing	21,339 (24.4%)	977 (20.2%)	6,735 (25.1%)	6,681 (24.8%)	1,730 (29.3%)	5,216 (22.7%)
Dressing	20,025 (22.9%)	920 (19.1%)	6,925 (25.9%)	5,905 (22.0%)	1,591 (26.9%)	4,684 (20.4%)
Using the toilet	14,328 (16.4%)	667 (13.8%)	4,894 (18.3%)	4,305 (16.0%)	1,070 (18.2%)	3,392 (14.8%)
Eating	8,803 (10.1%)	394 (8.2%)	2,890 (10.8%)	2,660 (9.9%)	676 (11.4%)	2,183 (9.6%)
<b>Number of ADL Impairments</b>						
None	44,697 (50.6%)	2,831 (58.1%)	12,623 (46.5%)	14,161 (52.0%)	2,811 (46.8%)	12,271 (53.0%)
One ADL	12,119 (13.7%)	630 (12.9%)	3,605 (13.3%)	3,744 (13.8%)	908 (15.1%)	3,232 (14.0%)
Two ADLs	9,523 (10.8%)	412 (8.5%)	3,339 (12.3%)	2,783 (10.2%)	636 (10.6%)	2,353 (10.2%)
Three or More ADLs	22,076 (25.0%)	1,000 (20.5%)	7,584 (27.9%)	6,536 (24.0%)	1,649 (27.5%)	5,307 (22.9%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Total for “yes” responses reported for each ADL impairment. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

Significant differences were found across the three IADLs for Hispanic groups (Table 8;  $p < 0.0001$ ). The percentage of Hispanic beneficiaries who reported having difficulty preparing meals ranged from 15.2 for Cubans to 21.7 percent for Multi-ethnic beneficiaries.

**Table 8: Impairments in Instrumental Activities of Daily Living (IADL) among Hispanics<sup>1</sup>**

IADL	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
Preparing Meals	14,951 (19.6%)	642 (15.2%)	4,622 (20.1%)	4,624 (19.6%)	1,100 (21.7%)	3,963 (19.4%)
Managing Money	10,210 (12.9%)	401 (9.2%)	3,317 (13.7%)	3,132 (12.8%)	762 (14.4%)	2,598 (12.3%)
Taking Medication as Prescribed	11,333 (13.6%)	437 (9.4%)	4,169 (16.3%)	3,297 (12.8%)	788 (13.9%)	2,642 (12.0%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Total for “yes” responses reported for each IADL impairment. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

## Healthy Days Measures

### *Definition of Measures*

- Physically unhealthy days is a self-reported measure of the number of days during the past 30 days when physical health was not good. The measure is found in Question 12 of the HOS.
- Mentally unhealthy days is a self-reported measure of the number of days during the past 30 days when mental health was not good. The measure is found in Question 13 of the HOS.
- Days with activity limitations is a self-reported measure of the number of days during the past 30 days when poor physical or mental health kept the beneficiary from usual activities. The measure is found in Question 14 of the HOS.

Healthy Days Measures provide key information on the functional status of vulnerable sub-populations and are used to assess the Health-Related Quality of Life (HRQOL)<sup>41</sup> across the U.S. According to the CDC, “In recent years, several organizations have found these Healthy Days Measures useful at the national, state, and community levels for (1) identifying health disparities, (2) tracking population trends, and (3) building broad coalitions around a measure of population health compatible with the World Health Organization’s definition of health.”<sup>42</sup> The CDC HRQOL program considers 14 or more unhealthy days in the past 30 days as an indicator of poor well-being.<sup>43</sup>

### *How are Hispanics Doing?*

As Table 9 shows, significant differences were found across each of the three components under the healthy days measures: the number of physically unhealthy days, the number of mentally unhealthy days, and the number of days with activity limitations. Among Hispanic beneficiaries, 35 percent reported having 14-30 physically unhealthy days in the past 30 days. When examined further by specific Hispanic group, 30.6 percent of Cuban beneficiaries reported 14-30 unhealthy days compared to 40.3 percent of Puerto Rican beneficiaries.

Table 9 displays the distribution of mentally unhealthy days, with slightly more than half (53.3 percent) of Hispanic beneficiaries reporting no mentally unhealthy days in the past month. Once again, significant differences were noted across Hispanic groups. For example, 46.4 percent of Multi-ethnic Hispanics and 59.1 percent of Cuban beneficiaries reported no mentally unhealthy days; whereas, 25.8 percent of Hispanics reported 14 or more mentally unhealthy days in the past 30 days. The prevalence of 14-30 mentally unhealthy days among Hispanic beneficiaries ranged from 23.5 percent of Cubans to 29.9 percent of Puerto Ricans.

The third construct of the healthy days measures, days with activity limitations in the past month, was also significantly different across Hispanic groups. Among Hispanic beneficiaries, 28 percent reported that they experienced 14-30 days in the past month with activity limitations. Nearly 24 percent of Cuban (23.6 percent), 32.3 percent of Puerto Rican, and 32.7 percent of Multi-ethnic beneficiaries reported 14 or more days with activity limitations.

**Table 9: Distributions of healthy days measures among Hispanics<sup>1</sup>**

Unhealthy Days and Limitations						

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

## Body Mass Index

### *Definition of Measures*

- Self-reported height and weight values are used to calculate BMI, a measure that correlates with the amount of body fat in adult men and women. BMI is derived from Questions 55 and 56 of the HOS.
- BMI is calculated as:  $BMI = [\text{weight in pounds} / (\text{height in inches})^2] \times 703$ , which uses the height and weight to produce the standard measure of  $\text{kg}/\text{m}^2$  units.

A BMI of 30 or higher is considered obese and increases risk for several chronic conditions including: hypertension, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, and some cancers.<sup>44</sup> Being overweight (BMI 25-29.9) or obese has been shown to accelerate the aging process.<sup>45</sup> A BMI that is under 18.5 is considered underweight.<sup>46</sup> Rapid weight loss often indicates an underlying disease and can accelerate the loss of muscle mass, which naturally occurs with the aging process.<sup>47</sup>

### *How are Hispanics doing?*

The distribution of three of the four BMI categories was found to be significantly different ( $p < 0.0001$ ) among Hispanic groups, as shown in Table 10. With the exception of Cubans (31 percent), at least one third of beneficiaries in each Hispanic group were obese; whereas, the percentages across groups of Hispanic beneficiaries classified as overweight, ranged from 35.6 percent of Multi Ethnic Hispanics to 40.7 percent of Cubans. The underweight classification of BMI was not found to be significantly different across Hispanic groups.

**Table 10: Distribution of BMI categories among Hispanics<sup>1</sup>**

BMI <sup>2</sup>	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
Underweight (<18.50)	1,423 (1.7%)	67 (1.5%)	489 (1.9%)	401 (1.6%)	99 (1.8%)	367 (1.7%)
Normal (18.50-24.99)	20,178 (24.5%)	1,223 (26.8%)	6,563 (25.5%)	5,291 (21.1%)	1,329 (23.8%)	5,772 (26.8%)
Overweight (25-29.99)	31,729 (38.5%)	1,858 (40.7%)	10,234 (39.7%)	9,367 (37.4%)	1,983 (35.6%)	8,287 (38.5%)
Obese (>=30)	29,147 (35.3%)	1,413 (31.0%)	8,494 (32.9%)	9,959 (39.8%)	2,164 (38.8%)	7,117 (33.0%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

<sup>2</sup> BMI is calculated as:  $BMI = [\text{weight in pounds} / (\text{height in inches})^2] \times 703$ , which uses the height and weight to produce the standard measure of  $\text{kg/m}^2$  units. BMI categories include: underweight (<18.5), normal (18.5-24.9), overweight (25-29.9), and obese (30 and above).

## Sleep Measures

### *Definition of Measures*

- Sleep duration is a self-reported measure of the average number of hours of actual sleep at night during the past month. The measure is found in Question 53 of the HOS.
- Sleep quality is a self-reported measure that rates the overall sleep quality during the past month. The measure is found in Question 54 of the HOS.

Two new sleep questions in the HOS 3.0 were drawn from the Pittsburgh Sleep Quality Index (PSQI). The questions focus on “habitual” (i.e., past month) sleep duration and quality, rather than past week measures, in order to capture more chronic sleep disturbances. The PSQI has a high test-retest reliability and good validity in patients with insomnia.<sup>48</sup>

There is substantial evidence linking insufficient sleep duration and poor sleep quality to mental and physical health morbidity, as well as mortality.<sup>49</sup> Various epidemiologic findings associate sleep duration with obesity, diabetes, impaired glucose tolerance, hypertension, and mortality.<sup>50</sup> People who report fair or poor health are less likely to overestimate sleep hours and report shorter sleep hours on average than those with better self-rated health.<sup>51</sup> These observations may provide a basis for future studies on weight control interventions and maintenance of daily routines in sleep habits to increase the quantity and quality of sleep.

### *How are Hispanics Doing?*

Actual number of sleep hours and overall sleep quality over the past month for Hispanics are shown in Table 11. Based on data found only in *Baseline Cohort 18*, there are fewer responses for this measure and results should be considered with caution.

Table 11 illustrate that nearly four out of five Hispanic beneficiaries (78.5 percent) slept for 5-6 or 7-8 hours. There were significant differences in actual hours of sleep among Hispanic groups. For example, the ideal “7-8 hours” of sleep was reported by 43.1 percent of Mexican beneficiaries compared to 33 percent of Puerto Ricans. The extremes of actual hours of sleep (less than 5 or 9 or more) were also found to be significantly different. Less than 5 hours of sleep was reported by 12.1 percent of Mexicans in comparison to 18.4 percent of Puerto Rican respondents. On the other end of the spectrum, 7.5 percent of Mexican beneficiaries and 5.5 percent of Puerto Ricans reported 9 or more hours of sleep.

The highest rating of sleep, “Very good,” was reported at levels varying from 22.5 percent of Puerto Rican beneficiaries to 26.3 of Cubans. The worst level of sleep quality, “Very bad,” was reported the least often, ranging from 6.2 percent of Cuban respondents to 9.0 percent of Multi-ethnic Hispanics.

**Table 11: Distributions of sleep duration and quality among Hispanics,<sup>1</sup> HOS *Baseline Cohort 18***

Sleep Questions	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-ethnic n (%)	Other Hispanic n (%)
<b>Hours of Actual Sleep</b>						
Less than 5 hours	4,125 (15.1%)	172 (12.3%)	1,570 (18.4%)	993 (12.1%)	353 (15.9%)	1,037 (15.1%)
5 – 6 hours	11,018 (40.5%)	564 (40.2%)	3,689 (43.1%)	3,054 (37.2%)	898 (40.4%)	2,813 (41.0%)
7 – 8 hours	10,363 (38.0%)	567 (40.4%)	2,825 (33.0%)	3,535 (43.1%)	821 (36.9%)	2,615 (38.1%)
9 or more hours	1,731 (6.4%)	99 (7.1%)	468 (5.5%)	619 (7.5%)	153 (6.9%)	392 (5.7%)
<b>Overall Sleep Quality</b>						
Very good	6,418 (23.6%)	367 (26.3%)	1,920 (22.5%)	2,027 (24.6%)	523 (23.6%)	1,581 (23.0%)
Fairly good	13,987 (51.3%)	709 (50.8%)	4,272 (50.1%)	4,339 (52.7%)	1,068 (48.2%)	3,599 (52.3%)
Fairly bad	4,872 (17.9%)	234 (16.8%)	1,640 (19.2%)	1,342 (16.3%)	427 (19.3%)	1,229 (17.9%)
Very bad	1,975 (7.2%)	86 (6.2%)	692 (8.1%)	525 (6.4%)	200 (9.0%)	472 (6.9%)

Note: HOS *Baseline Cohort 18* (n=256,735). Due to rounding sum of cells may not equal 100 percent. Chi-square test was used to test for statistical significance across Hispanic groups.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

## NCQA HEDIS Measures

The Medicare HOS includes four Effectiveness of Care measures that are part of the National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS<sup>®</sup>): Management of Urinary Incontinence in Older Adults (MUI), Physical Activity in Older Adults (PAO), Fall Risk Management (FRM), and Osteoporosis Testing in Older Women (OTO).<sup>52, 53</sup> HEDIS process measures gauge how well a MAO manages the quality of care of its beneficiaries ages 65 years or older. For this report, the results for three of the HEDIS measures (PAO, FRM, and OTO) were calculated using the three merged *Baseline Cohorts 16–18*, while one measure (MUI) was calculated using *Baseline Cohorts 16* and *17*. HEDIS rates are typically calculated and reported at the MAO contract level; therefore, caution should be used when interpreting beneficiary-level HEDIS rates, as they are influenced by the effectiveness of care provided at the individual MAO level. HEDIS measures may reflect healthcare differences, rather than health status differences, as reported by beneficiaries. More information about HEDIS measures found in the HOS is available at [www.HOSonline.org](http://www.HOSonline.org).

Based on the results in Table 12, all but one of the HEDIS measures are significantly different across Hispanic groups. Among Hispanic beneficiaries, discussing urinary incontinence (UI) was reported by more than half (60.7 percent) of respondents, and receiving UI treatment was reported by over a third (37.4%). While discussing UI differed significantly across Hispanic groups, varying from 58.6 percent of Mexican beneficiaries to 63.8 percent of Puerto Rican beneficiaries, receiving treatment for UI did not vary significantly.

As components of the PAO measure, both discussing physical activity and advising on physical activity in older adults were found to be significantly different for Hispanic groups. Inclusive of all Hispanic beneficiaries, 52.3 percent reported discussing physical activity with a medical

provider while 55.7 percent reported receiving physical activity advice from a provider. Among Hispanic beneficiaries, discussing physical activity ranged from 49.3 percent of Multi-Ethnic Hispanic to 55.4 percent of Other Hispanics. Receiving physical activity advice ranged from 53.6 percent of Mexican to 60.5 percent of Cuban beneficiaries.

For Hispanic beneficiaries, 40.1 percent reported discussing fall risk with a medical provider, while about two-thirds (67.6 percent) reported management of fall risk with their provider. Both discussing fall risk and managing fall risk were found to be significantly different among Hispanic groups. Across Hispanic groups, discussing fall risk with a medical provider varied from 36.6 of Cuban to 44.7 percent of Puerto Rican beneficiaries. Similarly, managing fall risk ranged from 65.7 percent and 65.8 percent of Other Hispanic and Mexican beneficiaries, respectively, to 73.6 percent of Multi-Ethnic Hispanic beneficiaries.

Increasing age is a risk factor that is related to osteoporosis for female beneficiaries. Like a majority of the previous measures, there were significant differences across Hispanic groups for osteoporosis testing in older women. In all, 69.6 percent of Hispanic respondents reported having received a bone density test to check for osteoporosis. Osteoporosis testing across groups ranged from 63.7 percent of Mexican women to 79.3 percent of Cuban women.

**Table 12: Healthcare Effectiveness Data and Information Set (HEDIS)<sup>1</sup> estimates among a diverse group of Hispanics**

HEDIS <sup>1</sup>	Total Hispanic n (%)	Cuban n (%)	Puerto Rican n (%)	Mexican n (%)	Multi-Ethnic n (%)	Other Hispanic n (%)
<b>Management of Urinary Incontinence (MUI)<sup>2</sup></b>						
Discussing UI	7,257 (60.7%)	417 (63.4%)	1,980 (63.8%)	2,353 (58.6%)	452 (59.2%)	2,055 (60.2%)
Receiving UI Treatment	4,462 (37.4%)	256 (38.7%)	1,146 (37.1%)	1,462 (36.6%)	280 (36.7%)	1,318 (38.6%)
<b>Physical Activity in Older Adults (PAO)</b>						
Discussing PA	32,668 (52.3%)	2,244 (55.1%)	9,079 (49.7%)	10,050 (52.2%)	2,025 (49.3%)	9,270 (55.4%)
Advising PA	35,718 (55.7%)	2,513 (60.5%)	10,753 (56.7%)	10,563 (53.6%)	2,265 (54.4%)	9,624 (56.3%)
<b>Fall Risk Management (FRM)</b>						
Discussing FR	16,270 (40.1%)	1,006 (36.6%)	5,521 (44.7%)	4,580 (37.3%)	1,169 (42.2%)	3,994 (38.2%)
Managing FR	19,478 (67.6%)	1,173 (70.4%)	6,453 (69.0%)	5,601 (65.8%)	1,535 (73.6%)	4,716 (65.7%)
<b>Osteoporosis Testing in Older Women (OTO)</b>						
	27,175 (69.6%)	1,816 (79.3%)	8,587 (74.5%)	7,489 (63.7%)	1,650 (64.0%)	7,633 (69.9%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=634,914). Chi-square test for row differences for groups with reportable HEDIS rates.

<sup>1</sup> HEDIS measures apply only to the respondents  $\geq$  65 years of age.

<sup>2</sup> Cohorts 16 and 17 only (n=438,820).

## Conclusions

This report provides an enhanced understanding of the health needs of diverse groups of Hispanic Medicare beneficiaries. Since 2013, the Medicare HOS has been reporting disaggregated results for Hispanic beneficiaries who self-identified as Cuban, Puerto Rican, Mexican, Other Hispanic, or Multi-ethnic. The HOS collects sufficient data to analyze the health status of Hispanic Medicare Part C and D beneficiaries by these distinct groups. Appendix tables contained in this report provide additional information about the health status of Hispanic groups by gender.

Data from the 2013-2015 HOS *Baseline Cohorts 16, 17, and 18* demonstrate that within the five Hispanic groups there was significant variation in health status across many measures including: self-rated general health, positive depression screen, days with activity limitations, prevalence of obesity, and two new measures available in *Cohort 18*, sleep duration and quality. One-half of Hispanics (50.2 percent) reported “Fair” or “Poor” health with significant differences reported across groups, ranging from 42.5 percent for Cubans to 55.8 percent for Puerto Ricans. More than one-quarter (28.6 percent) of Hispanics screened positive for depression. There were significant differences across groups, with 25.2 percent of Cuban compared to 34.9 percent of Multi-ethnic Hispanic beneficiaries reporting a positive depression screen. The highest number of days with activity limitations was reported by 28.0 percent of Hispanic beneficiaries, with rates varying significantly from 23.6 percent for Cuban to 32.7 percent for Multi-ethnic respondents. The prevalence of obesity among Hispanics was 35.3 percent. Rates of obesity for Hispanic groups varied significantly from 31.0 percent for Cubans to 39.8 percent for Mexicans. Across the two new sleep measures found in *Cohort 18*, 55.6 percent of Hispanic beneficiaries reported less than the ideal “7-8 hours” of sleep, and approximately one-quarter (25.1 percent) reported “Fairly bad” or “Very bad” overall sleep quality in the past month. Less than ideal sleep varied significantly from 49.3 percent among Mexican to 61.5 percent among Puerto Rican beneficiaries. Hispanic beneficiaries reporting the two lowest categories of sleep quality ranged significantly from 22.7 percent for Mexicans to 28.3 percent for Multi-ethnic beneficiaries.

The U.S. Department of Health and Human Services (HHS) demographic data collection standards provide additional granularity for Hispanic or Latino ethnicity, sex, primary language, and disability status collected in population health surveys. This added level of detail enhances the ability of public health professionals to identify and monitor the health and health care status of diverse population groups. The findings presented in this report demonstrate that stratifying health data for detailed Hispanic groups reveals unique and significant differences otherwise masked by aggregate analyses. The Medicare HOS provides CMS with an important data resource for tracking the health status of Medicare Advantage beneficiaries to address disparities in diverse groups. OMH welcomes feedback from stakeholders on these analyses. Feedback and any requests for more detailed analyses can be submitted to [HealthEquityTA@cms.hhs.gov](mailto:HealthEquityTA@cms.hhs.gov).

## Appendix Tables

### Health Status by Gender

Gender is a key social determinant of health in addition to race.<sup>54</sup> CMS administrative data on gender make it possible to stratify self-reported race by gender. Gender affects behavior and lifestyle, both of which can affect overall health.<sup>55</sup> This can be manifested in various ways, such as influencing the risk factors an individual is exposed to or the accessibility of healthcare.<sup>56</sup>

Gender differences in health status and use of health services are well documented. Women constitute a majority of beneficiaries in Medicare Advantage plans (note: in the HOS sample, beneficiaries with disabilities under age 65 are majority male and beneficiaries ages 65 and older are majority female); and differences in wealth, income, and education may influence the use and quality of care women receive relative to men.<sup>57, 58, 59, 60</sup> A gender gap exists as health differences continue to disproportionately affect female Medicare beneficiaries.<sup>60</sup> The following tables present HOS results on health status by gender for detailed groups of Hispanics. The results by gender for the HOS total are also provided for comparison to Hispanic respondents.

**Table 13: Physical Component Summary (PCS) score and the Mental Component Summary (MCS) score (unadjusted) for Hispanic groups<sup>1</sup> by gender**

Race	PCS Mean (SD)	MCS Mean (SD)
HOS Total	38.0 (12.8)	50.4 (12.2)
Male	38.9 (12.6)	50.9 (12.0)
Female	37.3 (12.8)	50.1 (12.3)
Hispanic	36.0 (12.0)	45.9 (13.2)
Male	37.2 (12.0)	46.3 (13.2)
Female	35.1 (11.9)	45.5 (13.1)
Cuban	38.1 (12.0)	47.4 (13.2)
Male	39.6 (11.8)	48.7 (12.9)
Female	36.9 (12.0)	46.2 (13.4)
Puerto Rican	35.4 (11.6)	43.9 (13.4)
Male	36.8 (11.7)	44.5 (13.5)
Female	34.3 (11.4)	43.4 (13.3)
Mexican	36.0 (12.0)	46.9 (12.8)
Male	36.7 (12.0)	47.1 (12.9)
Female	35.4 (12.0)	46.7 (12.8)
Multi-ethnic	33.8 (12.0)	44.8 (13.3)
Male	34.7 (12.0)	44.9 (13.6)
Female	33.2 (11.9)	44.7 (13.1)
Other Hispanic	36.9 (12.1)	47.0 (12.9)
Male	38.3 (12.1)	47.4 (12.8)
Female	35.9 (12.0)	46.7 (13.0)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). The HOS health status measures are the physical component summary (PCS) score and the mental component summary (MCS) score. These scores are calculated from the VR-12 (Questions 1-7 in the 2015 HOS 3.0) which asks respondents about their usual activities and how they would rate their health.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 14: Self-rated general health for Hispanic groups<sup>1</sup> by gender**

Race	Excellent to Good n (%)	Fair or Poor n (%)
<b>HOS Total</b>	<b>498,200 (67.0%)</b>	<b>245,363 (33.0%)</b>
Male	214,622 (67.8%)	101,784 (32.2%)
Female	283,578 (66.4%)	143,579 (33.6%)
<b>Hispanic</b>	<b>43,455 (49.8%)</b>	<b>43,730 (50.2%)</b>
Male	19,900 (52.5%)	18,002 (47.5%)
Female	23,555 (47.8%)	25,728 (52.2%)
Cuban	2,761 (57.5%)	2,044 (42.5%)
Male	1,384 (60.8%)	893 (39.2%)
Female	1,377 (54.5%)	1,151 (45.5%)
Puerto Rican	11,834 (44.2%)	14,921 (55.8%)
Male	5,676 (47.8%)	6,188 (52.2%)
Female	6,158 (41.4%)	8,733 (58.6%)
Mexican	13,733 (51.2%)	13,099 (48.8%)
Male	6,324 (52.3%)	5,767 (47.7%)
Female	7,409 (50.3%)	7,332 (49.7%)
Multi-ethnic	2,748 (46.4%)	3,176 (53.6%)
Male	1,216 (49.0%)	1,266 (51.0%)
Female	1,532 (44.5%)	1,910 (55.5%)
Other Hispanic	12,379 (54.1%)	10,490 (45.9%)
Male	5,300 (57.7%)	3,888 (42.3%)
Female	7,079 (51.7%)	6,602 (48.3%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 15: Physical health compared to one year ago for Hispanic groups<sup>1</sup> by gender**

Race	Much Better to About the Same n (%)	Slightly Worse or Much Worse n (%)
<b>HOS Total</b>	<b>519,524 (71.0%)</b>	<b>212,062 (29.0%)</b>
Male	223,104 (71.8%)	87,799 (28.2%)
Female	296,420 (70.5%)	124,263 (29.5%)
<b>Hispanic</b>	<b>60,421 (69.0%)</b>	<b>27,088 (31.0%)</b>
Male	27,077 (71.2%)	10,949 (28.8%)
Female	33,344 (67.4%)	16,139 (32.6%)
Cuban	3,484 (72.5%)	1,324 (27.5%)
Male	1,731 (75.8%)	553 (24.2%)
Female	1,753 (69.5%)	771 (30.5%)
Puerto Rican	18,522 (69.0%)	8,327 (31.0%)
Male	8,509 (71.4%)	3,408 (28.6%)
Female	10,013 (67.1%)	4,919 (32.9%)
Mexican	18,570 (68.8%)	8,412 (31.2%)
Male	8,532 (70.4%)	3,594 (29.6%)
Female	10,038 (67.6%)	4,818 (32.4%)
Multi-ethnic	3,881 (66.0%)	2,000 (34.0%)
Male	1,694 (68.8%)	770 (31.3%)
Female	2,187 (64.0%)	1,230 (36.0%)
Other Hispanic	15,964 (69.4%)	7,025 (30.6%)
Male	6,611 (71.6%)	2,624 (28.4%)
Female	9,353 (68.0%)	4,401 (32.0%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 16: Mental health compared to one year ago for Hispanic groups<sup>1</sup> by gender**

Race	Much Better to About the Same n (%)	Slightly Worse or Much Worse n (%)
<b>HOS Total</b>	<b>604,427 (83.9%)</b>	<b>116,277 (16.1%)</b>
Male	260,076 (84.7%)	47,121 (15.3%)
Female	344,351 (83.3%)	69,156 (16.7%)
<b>Hispanic</b>	<b>68,373 (79.0%)</b>	<b>18,219 (21.0%)</b>
Male	29,989 (79.6%)	7,702 (20.4%)
Female	38,384 (78.5%)	10,517 (21.5%)
Cuban	3,851 (81.2%)	893 (18.8%)
Male	1,872 (83.1%)	380 (16.9%)
Female	1,979 (79.4%)	513 (20.6%)
Puerto Rican	20,637 (77.8%)	5,887 (22.2%)
Male	9,227 (78.3%)	2,561 (21.7%)
Female	11,410 (77.4%)	3,326 (22.6%)
Mexican	21,314 (79.7%)	5,445 (20.3%)
Male	9,622 (79.9%)	2,423 (20.1%)
Female	11,692 (79.5%)	3,022 (20.5%)
Multi-ethnic	4,469 (77.2%)	1,321 (22.8%)
Male	1,886 (77.4%)	550 (22.6%)
Female	2,583 (77.0%)	771 (23.0%)
Other Hispanic	18,102 (79.5%)	4,673 (20.5%)
Male	7,382 (80.5%)	1,788 (19.5%)
Female	10,720 (78.8%)	2,885 (21.2%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 17: Pain interfering with daily activities for Hispanic groups<sup>1</sup> by gender**

Race	Not at all to Somewhat n (%)	Quite a bit or Very much n (%)
<b>HOS Total</b>	<b>562,197 (78.4%)</b>	<b>154,568 (21.6%)</b>
Male	245,943 (80.8%)	58,615 (19.2%)
Female	316,254 (76.7%)	95,953 (23.3%)
<b>Hispanic</b>	<b>59,692 (69.0%)</b>	<b>26,760 (31.0%)</b>
Male	27,161 (72.3%)	10,384 (27.7%)
Female	32,531 (66.5%)	16,376 (33.5%)
Cuban	3,577 (75.7%)	1,149 (24.3%)
Male	1,811 (80.6%)	437 (19.4%)
Female	1,766 (71.3%)	712 (28.7%)
Puerto Rican	16,502 (62.6%)	9,847 (37.4%)
Male	7,790 (66.5%)	3,917 (33.5%)
Female	8,712 (59.5%)	5,930 (40.5%)
Mexican	19,447 (72.6%)	7,330 (27.4%)
Male	8,981 (74.7%)	3,036 (25.3%)
Female	10,466 (70.9%)	4,294 (29.1%)
Multi-ethnic	3,918 (66.6%)	1,969 (33.4%)
Male	1,710 (69.4%)	753 (30.6%)
Female	2,208 (64.5%)	1,216 (35.5%)
Other Hispanic	16,248 (71.5%)	6,465 (28.5%)
Male	6,869 (75.4%)	2,241 (24.6%)
Female	9,379 (68.9%)	4,224 (31.1%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 18: Positive depression screen for Hispanic groups<sup>1</sup> by gender**

Race	Positive Depression Screen n (%)	Negative Depression Screen n (%)
<b>HOS Total</b>	<b>123,594 (17.8%)</b>	<b>572,641 (82.2%)</b>
Male	50,163 (16.9%)	246,695 (83.1%)
Female	73,431 (18.4%)	325,946 (81.6%)
<b>Hispanic</b>	<b>23,832 (28.6%)</b>	<b>59,593 (71.4%)</b>
Male	10,006 (27.5%)	26,346 (72.5%)
Female	13,826 (29.4%)	33,247 (70.6%)
Cuban	1,155 (25.2%)	3,426 (74.8%)
Male	462 (21.1%)	1,727 (78.9%)
Female	693 (29.0%)	1,699 (71.0%)
Puerto Rican	8,370 (32.8%)	17,178 (67.2%)
Male	3,621 (31.9%)	7,729 (68.1%)
Female	4,749 (33.4%)	9,449 (66.6%)
Mexican	6,769 (26.4%)	18,918 (73.6%)
Male	2,996 (25.9%)	8,569 (74.1%)
Female	3,773 (26.7%)	10,349 (73.3%)
Multi-ethnic	1,941 (34.9%)	3,626 (65.1%)
Male	802 (34.1%)	1,547 (65.9%)
Female	1,139 (35.4%)	2,079 (64.6%)
Other Hispanic	5,597 (25.4%)	16,445 (74.6%)
Male	2,125 (23.9%)	6,774 (76.1%)
Female	3,472 (26.4%)	9,671 (73.6%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent. A positive depression screen is defined as scoring 3 points or greater on the sum total of the two depression questions.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 19: Feeling down, depressed, or hopeless in past two weeks (depression screen) for Hispanic groups<sup>1</sup> by gender**

Race	Not at all n (%)	Several days n (%)	More than half the days n (%)	Nearly every day n (%)
<b>HOS Total</b>	<b>486,028 (68.7%)</b>	<b>132,249 (18.7%)</b>	<b>48,078 (6.8%)</b>	<b>40,946 (5.8%)</b>
Male	214,886 (71.4%)	50,827 (16.9%)	19,292 (6.4%)	16,051 (5.3%)
Female	271,142 (66.7%)	81,422 (20.0%)	28,786 (7.1%)	24,895 (6.1%)
<b>Hispanic</b>	<b>46,934 (55.1%)</b>	<b>20,218 (23.7%)</b>	<b>9,066 (10.6%)</b>	<b>9,028 (10.6%)</b>
Male	21,359 (57.6%)	8,163 (22.0%)	3,767 (10.2%)	3,787 (10.2%)
Female	25,575 (53.1%)	12,055 (25.0%)	5,299 (11.0%)	5,241 (10.9%)
Cuban	2,741 (58.5%)	1,037 (22.1%)	405 (8.6%)	504 (10.8%)
Male	1,433 (64.1%)	446 (20.0%)	153 (6.8%)	202 (9.0%)
Female	1,308 (53.3%)	591 (24.1%)	252 (10.3%)	302 (12.3%)
Puerto Rican	12,446 (47.7%)	7,122 (27.3%)	3,109 (11.9%)	3,404 (13.1%)
Male	5,875 (50.8%)	2,877 (24.9%)	1,357 (11.7%)	1,464 (12.7%)
Female	6,571 (45.3%)	4,245 (29.3%)	1,752 (12.1%)	1,940 (13.4%)
Mexican	15,556 (59.1%)	5,741 (21.8%)	2,669 (10.1%)	2,345 (8.9%)
Male	7,224 (61.0%)	2,428 (20.5%)	1,138 (9.6%)	1,046 (8.8%)
Female	8,332 (57.6%)	3,313 (22.9%)	1,531 (10.6%)	1,299 (9.0%)
Multi-ethnic	3,008 (52.2%)	1,362 (23.6%)	625 (10.8%)	769 (13.3%)
Male	1,299 (53.6%)	535 (22.1%)	279 (11.5%)	309 (12.8%)
Female	1,709 (51.1%)	827 (24.7%)	346 (10.4%)	460 (13.8%)
Other Hispanic	13,183 (58.8%)	4,956 (22.1%)	2,258 (10.1%)	2,006 (9.0%)
Male	5,528 (61.3%)	1,877 (20.8%)	840 (9.3%)	766 (8.5%)
Female	7,655 (57.2%)	3,079 (23.0%)	1,418 (10.6%)	1,240 (9.3%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 20: Little interest or pleasure in doing things in past two weeks (depression screen) for Hispanic groups<sup>1</sup> by gender**

Race	Not at all n (%)	Several days n (%)	More than half the days n (%)	Nearly every day n (%)
<b>HOS Total</b>	<b>443,396 (62.7%)</b>	<b>139,348 (19.7%)</b>	<b>64,334 (9.1%)</b>	<b>60,373 (8.5%)</b>
Male	193,756 (64.3%)	56,012 (18.6%)	26,582 (8.8%)	24,756 (8.2%)
Female	249,640 (61.4%)	83,336 (20.5%)	37,752 (9.3%)	35,617 (8.8%)
<b>Hispanic</b>	<b>41,128 (48.1%)</b>	<b>21,297 (24.9%)</b>	<b>11,135 (13.0%)</b>	<b>11,997 (14.0%)</b>
Male	18,948 (50.9%)	8,482 (22.8%)	4,706 (12.6%)	5,083 (13.7%)
Female	22,180 (45.9%)	12,815 (26.5%)	6,429 (13.3%)	6,914 (14.3%)
Cuban	2,496 (53.3%)	1,101 (23.5%)	474 (10.1%)	615 (13.1%)
Male	1,327 (59.4%)	465 (20.8%)	196 (8.8%)	246 (11.0%)
Female	1,169 (47.7%)	636 (25.9%)	278 (11.3%)	369 (15.0%)
Puerto Rican	10,463 (39.8%)	7,833 (29.8%)	3,624 (13.8%)	4,373 (16.6%)
Male	5,064 (43.4%)	3,101 (26.6%)	1,621 (13.9%)	1,885 (16.2%)
Female	5,399 (36.9%)	4,732 (32.4%)	2,003 (13.7%)	2,488 (17.0%)
Mexican	13,861 (52.7%)	5,725 (21.8%)	3,451 (13.1%)	3,273 (12.4%)
Male	6,412 (54.2%)	2,415 (20.4%)	1,528 (12.9%)	1,471 (12.4%)
Female	7,449 (51.4%)	3,310 (22.9%)	1,923 (13.3%)	1,802 (12.4%)
Multi-ethnic	2,489 (43.5%)	1,378 (24.1%)	761 (13.3%)	1,096 (19.1%)
Male	1,118 (46.4%)	531 (22.0%)	302 (12.5%)	459 (19.0%)
Female	1,371 (41.4%)	847 (25.6%)	459 (13.9%)	637 (19.2%)
Other Hispanic	11,819 (52.4%)	5,260 (23.3%)	2,825 (12.5%)	2,640 (11.7%)
Male	5,027 (55.4%)	1,970 (21.7%)	1,059 (11.7%)	1,022 (11.3%)
Female	6,792 (50.4%)	3,290 (24.4%)	1,766 (13.1%)	1,618 (12.0%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 21: Pain interfering with socializing for Hispanic groups<sup>1</sup> by gender**

Race	Never to Sometimes n (%)	Often or Always n (%)
<b>HOS Total</b>	<b>621,040 (86.8%)</b>	<b>94,150 (13.2%)</b>
Male	269,061 (88.5%)	34,879 (11.5%)
Female	351,979 (85.6%)	59,271 (14.4%)
<b>Hispanic</b>	<b>66,968 (77.6%)</b>	<b>19,289 (22.4%)</b>
Male	29,891 (79.7%)	7,607 (20.3%)
Female	37,077 (76.0%)	11,682 (24.0%)
Cuban	3,871 (82.2%)	839 (17.8%)
Male	1,930 (85.9%)	317 (14.1%)
Female	1,941 (78.8%)	522 (21.2%)
Puerto Rican	18,969 (72.2%)	7,316 (27.8%)
Male	8,691 (74.4%)	2,994 (25.6%)
Female	10,278 (70.4%)	4,322 (29.6%)
Mexican	21,589 (80.8%)	5,115 (19.2%)
Male	9,854 (82.2%)	2,139 (17.8%)
Female	11,735 (79.8%)	2,976 (20.2%)
Multi-ethnic	4,431 (75.7%)	1,426 (24.3%)
Male	1,921 (78.3%)	532 (21.7%)
Female	2,510 (73.7%)	894 (26.3%)
Other Hispanic	18,108 (79.8%)	4,593 (20.2%)
Male	7,495 (82.2%)	1,625 (17.8%)
Female	10,613 (78.1%)	2,968 (21.9%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 22: Top seven chronic conditions for Hispanic groups<sup>1</sup> by gender**

Race	Hypertension n (%)	Arthritis - Hip or Knee n (%)	Arthritis - Hand or Wrist n (%)	Diabetes n (%)	Sciatica n (%)	Osteoporosis n (%)	Depression n (%)
<b>HOS Total</b>	<b>477,813 (66.2%)</b>	<b>315,244 (44.0%)</b>	<b>262,354 (36.7%)</b>	<b>203,748 (28.3%)</b>	<b>187,873 (26.3%)</b>	<b>140,240 (19.7%)</b>	<b>181,862 (25.4%)</b>
Male	200,921 (65.6%)	111,840 (36.7%)	91,125 (29.9%)	92,705 (30.3%)	74,476 (24.5%)	19,427 (6.4%)	64,464 (21.2%)
Female	276,892 (66.7%)	203,404 (49.4%)	171,229 (41.7%)	111,043 (26.8%)	113,397 (27.7%)	120,813 (29.5%)	117,398 (28.5%)
<b>Hispanic</b>	<b>59,792 (68.4%)</b>	<b>42,990 (49.5%)</b>	<b>36,835 (42.5%)</b>	<b>34,124 (39.1%)</b>	<b>28,556 (33.1%)</b>	<b>21,898 (25.4%)</b>	<b>30,659 (35.3%)</b>
Male	25,552 (67.4%)	15,351 (40.7%)	13,037 (34.6%)	15,291 (40.3%)	11,607 (30.9%)	3,680 (9.8%)	11,920 (31.6%)
Female	34,240 (69.1%)	27,639 (56.3%)	23,798 (48.7%)	18,833 (38.1%)	16,949 (34.8%)	18,218 (37.4%)	18,739 (38.2%)
Cuban	3,396 (70.5%)	2,438 (51.0%)	1,933 (40.5%)	1,474 (30.6%)	1,640 (34.4%)	1,155 (24.3%)	1,610 (33.8%)
Male	1,595 (70.1%)	952 (41.9%)	753 (33.3%)	757 (33.2%)	695 (30.8%)	181 (8.0%)	604 (26.7%)
Female	1,801 (70.9%)	1,486 (59.1%)	1,180 (47.1%)	717 (28.2%)	945 (37.8%)	974 (39.0%)	1,006 (40.2%)
Puerto Rican	18,751 (69.9%)	14,103 (53.0%)	12,197 (46.0%)	10,922 (40.8%)	9,952 (37.8%)	7,969 (30.2%)	11,087 (41.7%)
Male	8,147 (68.6%)	5,047 (42.8%)	4,415 (37.5%)	5,011 (42.2%)	4,122 (35.2%)	1,461 (12.4%)	4,567 (38.7%)
Female	10,604 (71.0%)	9,056 (61.1%)	7,782 (52.9%)	5,911 (39.7%)	5,830 (39.9%)	6,508 (44.3%)	6,520 (44.1%)
Mexican	18,431 (68.4%)	12,419 (46.4%)	10,703 (40.0%)	11,244 (41.8%)	7,626 (28.6%)	5,788 (21.7%)	8,491 (31.7%)
Male	8,133 (67.3%)	4,688 (38.9%)	3,935 (32.7%)	5,135 (42.4%)	3,286 (27.4%)	1,020 (8.5%)	3,331 (27.7%)
Female	10,298 (69.3%)	7,731 (52.5%)	6,768 (46.1%)	6,109 (41.2%)	4,340 (29.7%)	4,768 (32.6%)	5,160 (35.0%)
Multi-ethnic	3,935 (66.4%)	2,894 (49.1%)	2,494 (42.5%)	2,389 (40.3%)	1,955 (33.4%)	1,446 (24.7%)	2,364 (40.0%)
Male	1,631 (65.8%)	1,014 (41.1%)	849 (34.5%)	1,021 (41.1%)	788 (32.1%)	244 (9.9%)	901 (36.4%)
Female	2,304 (66.9%)	1,880 (54.9%)	1,645 (48.2%)	1,368 (39.7%)	1,167 (34.3%)	1,202 (35.4%)	1,463 (42.6%)
Other Hispanic	15,279 (66.5%)	11,136 (48.9%)	9,508 (41.8%)	8,095 (35.4%)	7,383 (32.5%)	5,540 (24.4%)	7,107 (31.2%)
Male	6,046 (65.7%)	3,650 (39.8%)	3,085 (33.7%)	3,367 (36.6%)	2,716 (29.8%)	774 (8.5%)	2,517 (27.5%)
Female	9,233 (67.1%)	7,486 (55.0%)	6,423 (47.3%)	4,728 (34.5%)	4,667 (34.4%)	4,766 (35.2%)	4,590 (33.7%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 23: Number of chronic conditions for Hispanic groups<sup>1</sup> by gender**

Race	No conditions n (%)	One condition n (%)	Two or three conditions n (%)	Four or more conditions n (%)
<b>HOS Total</b>	<b>58,762 (8.1%)</b>	<b>107,958 (14.8%)</b>	<b>249,448 (34.2%)</b>	<b>312,527 (42.9%)</b>
Male	30,058 (9.7%)	51,848 (16.8%)	108,664 (35.1%)	118,642 (38.4%)
Female	28,704 (6.8%)	56,110 (13.4%)	140,784 (33.6%)	193,885 (46.2%)
<b>Hispanic</b>	<b>6,274 (7.1%)</b>	<b>11,327 (12.8%)</b>	<b>26,949 (30.4%)</b>	<b>44,118 (49.8%)</b>
Male	3,556 (9.2%)	5,887 (15.3%)	12,321 (32.0%)	16,704 (43.4%)
Female	2,718 (5.4%)	5,440 (10.8%)	14,628 (29.1%)	27,414 (54.6%)
Cuban	312 (6.4%)	637 (13.0%)	1,560 (31.9%)	2,376 (48.6%)
Male	183 (7.9%)	360 (15.6%)	797 (34.5%)	973 (42.1%)
Female	129 (5.0%)	277 (10.8%)	763 (29.7%)	1,403 (54.5%)
Puerto Rican	1,609 (5.9%)	2,942 (10.8%)	7,476 (27.4%)	15,225 (55.9%)
Male	960 (7.9%)	1,642 (13.6%)	3,589 (29.7%)	5,885 (48.7%)
Female	649 (4.3%)	1,300 (8.6%)	3,887 (25.6%)	9,340 (61.5%)
Mexican	2,116 (7.8%)	3,821 (14.0%)	8,824 (32.3%)	12,536 (45.9%)
Male	1,212 (9.9%)	1,990 (16.2%)	4,154 (33.9%)	4,901 (40.0%)
Female	904 (6.0%)	1,831 (12.2%)	4,670 (31.1%)	7,635 (50.8%)
Multi-ethnic	415 (6.9%)	732 (12.2%)	1,715 (28.6%)	3,141 (52.3%)
Male	232 (9.2%)	355 (14.1%)	748 (29.8%)	1,174 (46.8%)
Female	183 (5.2%)	377 (10.8%)	967 (27.7%)	1,967 (56.3%)
Other Hispanic	1,822 (7.8%)	3,195 (13.8%)	7,374 (31.7%)	10,840 (46.7%)
Male	969 (10.4%)	1,540 (16.5%)	3,033 (32.6%)	3,771 (40.5%)
Female	853 (6.1%)	1,655 (11.9%)	4,341 (31.2%)	7,069 (50.8%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent. Total for “yes” responses reported for each chronic condition. Number of chronic conditions based on 15 measures collected by the HOS.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 24: Days with activity limitations during the past 30 days for Hispanic groups<sup>1</sup> by gender**

Race	None n (%)	1-13 Unhealthy Days n (%)	14-30 Unhealthy Days n (%)
<b>HOS Total</b>	<b>443,903 (63.7%)</b>	<b>115,147 (16.5%)</b>	<b>138,184 (19.8%)</b>
Male	194,688 (65.4%)	46,485 (15.6%)	56,374 (18.9%)
Female	249,215 (62.4%)	68,662 (17.2%)	81,810 (20.5%)
<b>Hispanic</b>	<b>44,495 (54.2%)</b>	<b>14,621 (17.8%)</b>	<b>22,983 (28.0%)</b>
Male	19,955 (55.7%)	6,103 (17.0%)	9,763 (27.3%)
Female	24,540 (53.0%)	8,518 (18.4%)	13,220 (28.6%)
Cuban	2,814 (61.9%)	661 (14.5%)	1,071 (23.6%)
Male	1,410 (64.8%)	320 (14.7%)	446 (20.5%)
Female	1,404 (59.2%)	341 (14.4%)	625 (26.4%)
Puerto Rican	12,446 (50.0%)	4,417 (17.7%)	8,040 (32.3%)
Male	5,777 (52.1%)	1,850 (16.7%)	3,466 (31.2%)
Female	6,669 (48.3%)	2,567 (18.6%)	4,574 (33.1%)
Mexican	14,442 (56.7%)	4,472 (17.6%)	6,535 (25.7%)
Male	6,593 (57.5%)	1,937 (16.9%)	2,939 (25.6%)
Female	7,849 (56.1%)	2,535 (18.1%)	3,596 (25.7%)
Multi-ethnic	2,528 (47.4%)	1,065 (20.0%)	1,744 (32.7%)
Male	1,076 (47.8%)	432 (19.2%)	742 (33.0%)
Female	1,452 (47.0%)	633 (20.5%)	1,002 (32.5%)
Other Hispanic	12,265 (56.1%)	4,006 (18.3%)	5,593 (25.6%)
Male	5,099 (57.7%)	1,564 (17.7%)	2,170 (24.6%)
Female	7,166 (55.0%)	2,442 (18.7%)	3,423 (26.3%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 25: Physically unhealthy days during the past 30 days for Hispanic groups<sup>1</sup> by gender**

Race	None n (%)	1-13 Unhealthy Days n (%)	14-30 Unhealthy Days n (%)
<b>HOS Total</b>	<b>340,788 (49.0%)</b>	<b>174,850 (25.1%)</b>	<b>179,737 (25.8%)</b>
Male	154,384 (52.0%)	70,019 (23.6%)	72,530 (24.4%)
Female	186,404 (46.8%)	104,831 (26.3%)	107,207 (26.9%)
<b>Hispanic</b>	<b>32,964 (40.1%)</b>	<b>20,536 (25.0%)</b>	<b>28,781 (35.0%)</b>
Male	15,522 (43.2%)	8,533 (23.8%)	11,852 (33.0%)
Female	17,442 (37.6%)	12,003 (25.9%)	16,929 (36.5%)
Cuban	2,064 (45.5%)	1,088 (24.0%)	1,388 (30.6%)
Male	1,088 (50.1%)	506 (23.3%)	576 (26.5%)
Female	976 (41.2%)	582 (24.6%)	812 (34.3%)
Puerto Rican	8,847 (35.2%)	6,136 (24.4%)	10,118 (40.3%)
Male	4,397 (39.4%)	2,593 (23.2%)	4,178 (37.4%)
Female	4,450 (31.9%)	3,543 (25.4%)	5,940 (42.6%)
Mexican	11,026 (43.5%)	6,257 (24.7%)	8,088 (31.9%)
Male	5,192 (45.3%)	2,691 (23.5%)	3,568 (31.2%)
Female	5,834 (41.9%)	3,566 (25.6%)	4,520 (32.5%)
Multi-ethnic	1,806 (33.7%)	1,463 (27.3%)	2,087 (39.0%)
Male	815 (36.1%)	598 (26.5%)	846 (37.5%)
Female	991 (32.0%)	865 (27.9%)	1,241 (40.1%)
Other Hispanic	9,221 (42.1%)	5,592 (25.5%)	7,100 (32.4%)
Male	4,030 (45.5%)	2,145 (24.2%)	2,684 (30.3%)
Female	5,191 (39.8%)	3,447 (26.4%)	4,416 (33.8%)

Note: HOS *Baseline Cohorts 16, 17, and 18* (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 26: Mentally unhealthy days during the past 30 days for Hispanic groups<sup>1</sup> by gender**

Race	None n (%)	1-13 Unhealthy Days n (%)	14-30 Unhealthy Days n (%)
<b>HOS Total</b>	<b>427,906 (61.3%)</b>	<b>150,235 (21.5%)</b>	<b>119,620 (17.1%)</b>
Male	194,434 (65.4%)	56,224 (18.9%)	46,714 (15.7%)
Female	233,472 (58.3%)	94,011 (23.5%)	72,906 (18.2%)
<b>Hispanic</b>	<b>43,900 (53.3%)</b>	<b>17,249 (20.9%)</b>	<b>21,265 (25.8%)</b>
Male	20,016 (55.8%)	6,894 (19.2%)	8,987 (25.0%)
Female	23,884 (51.3%)	10,355 (22.3%)	12,278 (26.4%)
Cuban	2,672 (59.1%)	790 (17.5%)	1,062 (23.5%)
Male	1,390 (64.4%)	344 (15.9%)	423 (19.6%)
Female	1,282 (54.2%)	446 (18.8%)	639 (27.0%)
Puerto Rican	12,651 (50.3%)	4,971 (19.8%)	7,515 (29.9%)
Male	5,908 (52.9%)	2,031 (18.2%)	3,226 (28.9%)
Female	6,743 (48.3%)	2,940 (21.0%)	4,289 (30.7%)
Mexican	14,112 (55.5%)	5,426 (21.3%)	5,910 (23.2%)
Male	6,557 (57.1%)	2,233 (19.5%)	2,684 (23.4%)
Female	7,555 (54.1%)	3,193 (22.8%)	3,226 (23.1%)
Multi-ethnic	2,490 (46.4%)	1,334 (24.9%)	1,540 (28.7%)
Male	1,096 (48.2%)	529 (23.3%)	647 (28.5%)
Female	1,394 (45.1%)	805 (26.0%)	893 (28.9%)
Other Hispanic	11,975 (54.6%)	4,728 (21.5%)	5,238 (23.9%)
Male	5,065 (57.4%)	1,757 (19.9%)	2,007 (22.7%)
Female	6,910 (52.7%)	2,971 (22.7%)	3,231 (24.6%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 27: BMI<sup>1</sup> categories for Hispanic groups<sup>2</sup> by gender**

Race	Underweight (<18.50) n (%)	Normal (18.50-24.99) n (%)	Overweight (25-29.99) n (%)	Obese (>=30) n (%)
<b>HOS Total</b>	<b>14,319 (2.1%)</b>	<b>195,059 (28.3%)</b>	<b>249,302 (36.2%)</b>	<b>230,357 (33.4%)</b>
Male	4,010 (1.4%)	74,583 (25.3%)	124,379 (42.2%)	91,954 (31.2%)
Female	10,309 (2.6%)	120,476 (30.6%)	124,923 (31.7%)	138,403 (35.1%)
<b>Hispanic</b>	<b>1,423 (1.7%)</b>	<b>20,178 (24.5%)</b>	<b>31,729 (38.5%)</b>	<b>29,147 (35.3%)</b>
Male	506 (1.4%)	8,378 (23.2%)	15,683 (43.4%)	11,529 (31.9%)
Female	917 (2.0%)	11,800 (25.4%)	16,046 (34.6%)	17,618 (38.0%)
Cuban	67 (1.5%)	1,223 (26.8%)	1,858 (40.7%)	1,413 (31.0%)
Male	22 (1.0%)	534 (24.7%)	988 (45.7%)	617 (28.6%)
Female	45 (1.9%)	689 (28.7%)	870 (36.3%)	796 (33.2%)
Puerto Rican	489 (1.9%)	6,563 (25.5%)	10,234 (39.7%)	8,494 (32.9%)
Male	179 (1.6%)	2,848 (24.8%)	5,067 (44.1%)	3,393 (29.5%)
Female	310 (2.2%)	3,715 (26.0%)	5,167 (36.2%)	5,101 (35.7%)
Mexican	401 (1.6%)	5,291 (21.1%)	9,367 (37.4%)	9,959 (39.8%)
Male	156 (1.4%)	2,260 (19.9%)	4,854 (42.7%)	4,098 (36.0%)
Female	245 (1.8%)	3,031 (22.2%)	4,513 (33.1%)	5,861 (42.9%)
Multi-ethnic	99 (1.8%)	1,329 (23.8%)	1,983 (35.6%)	2,164 (38.8%)
Male	27 (1.1%)	538 (22.7%)	960 (40.5%)	847 (35.7%)
Female	72 (2.2%)	791 (24.7%)	1,023 (31.9%)	1,317 (41.1%)
Other Hispanic	367 (1.7%)	5,772 (26.8%)	8,287 (38.5%)	7,117 (33.0%)
Male	122 (1.4%)	2,198 (25.2%)	3,814 (43.8%)	2,574 (29.6%)
Female	245 (1.9%)	3,574 (27.8%)	4,473 (34.9%)	4,543 (35.4%)

Note: HOS Baseline Cohorts 16, 17, and 18 (n=756,253). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> BMI is calculated as: BMI = [weight in pounds / (height in inches)<sup>2</sup>] x 703, which uses the height and weight to produce the standard measure of kg/m<sup>2</sup> units.

<sup>2</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 28: Sleep hours for Hispanic groups<sup>1</sup> by gender, HOS *Baseline Cohort 18***

Race	Less than 5 hours n (%)	5 – 6 hours n (%)	7 – 8 hours n (%)	9 or more hours n (%)
<b>HOS Total</b>	<b>22,798 (10.4%)</b>	<b>82,874 (37.9%)</b>	<b>98,974 (45.2%)</b>	<b>14,216 (6.5%)</b>
Male	9,281 (10.0%)	34,216 (36.8%)	43,413 (46.6%)	6,186 (6.6%)
Female	13,517 (10.7%)	48,658 (38.7%)	55,561 (44.2%)	8,030 (6.4%)
<b>Hispanic</b>	<b>4,125 (15.1%)</b>	<b>11,018 (40.5%)</b>	<b>10,363 (38.0%)</b>	<b>1,731 (6.4%)</b>
Male	1,654 (14.1%)	4,625 (39.5%)	4,625 (39.5%)	817 (7.0%)
Female	2,471 (15.9%)	6,393 (41.2%)	5,738 (37.0%)	914 (5.9%)
Cuban	172 (12.3%)	564 (40.2%)	567 (40.4%)	99 (7.1%)
Male	52 (8.0%)	266 (41.0%)	283 (43.6%)	48 (7.4%)
Female	120 (15.9%)	298 (39.6%)	284 (37.7%)	51 (6.8%)
Puerto Rican	1,570 (18.4%)	3,689 (43.1%)	2,825 (33.0%)	468 (5.5%)
Male	649 (17.2%)	1,554 (41.2%)	1,332 (35.3%)	239 (6.3%)
Female	921 (19.3%)	2,135 (44.7%)	1,493 (31.2%)	229 (4.8%)
Mexican	993 (12.1%)	3,054 (37.2%)	3,535 (43.1%)	619 (7.5%)
Male	425 (11.6%)	1,334 (36.3%)	1,602 (43.6%)	312 (8.5%)
Female	568 (12.5%)	1,720 (38.0%)	1,933 (42.7%)	307 (6.8%)
Multi-ethnic	353 (15.9%)	898 (40.4%)	821 (36.9%)	153 (6.9%)
Male	142 (14.9%)	374 (39.2%)	377 (39.6%)	60 (6.3%)
Female	211 (16.6%)	524 (41.2%)	444 (34.9%)	93 (7.3%)
Other Hispanic	1,037 (15.1%)	2,813 (41.0%)	2,615 (38.1%)	392 (5.7%)
Male	386 (14.4%)	1,097 (41.1%)	1,031 (38.6%)	158 (5.9%)
Female	651 (15.6%)	1,716 (41.0%)	1,584 (37.8%)	234 (5.6%)

Note: HOS *Baseline Cohort 18* (n=256,735). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

**Table 29: Sleep quality for Hispanic groups<sup>1</sup> by gender, HOS *Baseline Cohort 18***

Race	Very good n (%)	Fairly good n (%)	Fairly bad n (%)	Very bad n (%)
<b>HOS Total</b>	<b>52,656 (24.0%)</b>	<b>122,581 (55.8%)</b>	<b>33,758 (15.4%)</b>	<b>10,602 (4.8%)</b>
Male	23,008 (24.7%)	52,357 (56.2%)	13,695 (14.7%)	4,159 (4.5%)
Female	29,648 (23.5%)	70,224 (55.6%)	20,063 (15.9%)	6,443 (5.1%)
<b>Hispanic</b>	<b>1,415 (20.9%)</b>	<b>4,048 (59.7%)</b>	<b>1,056 (15.6%)</b>	<b>265 (3.9%)</b>
Male	660 (20.9%)	1,930 (61.1%)	462 (14.6%)	106 (3.4%)
Female	755 (20.8%)	2,118 (58.4%)	594 (16.4%)	159 (4.4%)
Cuban	6,418 (23.6%)	13,987 (51.3%)	4,872 (17.9%)	1,975 (7.2%)
Male	3,043 (26.0%)	5,929 (50.6%)	1,967 (16.8%)	780 (6.7%)
Female	3,375 (21.7%)	8,058 (51.9%)	2,905 (18.7%)	1,195 (7.7%)
Puerto Rican	367 (26.3%)	709 (50.8%)	234 (16.8%)	86 (6.2%)
Male	172 (26.9%)	349 (54.6%)	94 (14.7%)	24 (3.8%)
Female	195 (25.8%)	360 (47.6%)	140 (18.5%)	62 (8.2%)
Mexican	1,920 (22.5%)	4,272 (50.1%)	1,640 (19.2%)	692 (8.1%)
Male	973 (25.9%)	1,832 (48.7%)	673 (17.9%)	285 (7.6%)
Female	947 (19.9%)	2,440 (51.2%)	967 (20.3%)	407 (8.5%)
Multi-ethnic	2,027 (24.6%)	4,339 (52.7%)	1,342 (16.3%)	525 (6.4%)
Male	989 (26.8%)	1,911 (51.7%)	577 (15.6%)	220 (6.0%)
Female	1,038 (22.9%)	2,428 (53.5%)	765 (16.9%)	305 (6.7%)
Other Hispanic	523 (23.6%)	1,068 (48.2%)	427 (19.3%)	200 (9.0%)
Male	235 (24.8%)	468 (49.5%)	159 (16.8%)	84 (8.9%)
Female	288 (22.6%)	600 (47.2%)	268 (21.1%)	116 (9.1%)

Note: HOS *Baseline Cohort 18* (n=256,735). Due to rounding sum of cells may not equal 100 percent.

<sup>1</sup> Total includes all Hispanic beneficiaries who returned a baseline survey and had a physical component summary (PCS) score and/or mental component summary (MCS) score. Beneficiaries who responded in multiple cohorts are counted in the first cohort in which they appear for all table analyses.

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