

## Appendix A: Data Sources and Methods

The Medicare Consumer Assessment of Healthcare Providers and Systems (MCAHPS) surveys are mail surveys with telephone follow-ups based on a stratified random sample of Medicare beneficiaries, with states serving as strata for beneficiaries with Fee-For-Service (FFS) coverage who are not enrolled in a prescription drug plan and with contracts serving as strata for all others. The 2014 MCAHPS survey attempted to contact 837,817 Medicare beneficiaries and received responses from 340,776, a 41-percent response rate. The 2014 surveys represent all FFS beneficiaries and Medicare Advantage (MA) beneficiaries from the 531 MA contracts with more than 600 eligible enrollees.

The MCAHPS surveys ask beneficiaries, “Are you of Hispanic or Latino origin or descent?” with response options of “Yes, Hispanic or Latino” and “No, not Hispanic or Latino.” The survey then asks, “What is your race? Please mark one or more,” with response options of “White,” “Black or African American,” “Asian,” “Native Hawaiian or other Pacific Islander,” and “American Indian or Alaska Native.” Following a U.S. Census approach, answers to these two questions were used to classify respondents into one of seven mutually exclusive categories: Hispanic, multiracial, American Indian/Alaska Native (AI/AN), Asian/Pacific Islander (API), Black, White, or unknown.

- Respondents who endorsed Hispanic ethnicity were classified as Hispanic regardless of races endorsed.
- Non-Hispanic respondents who endorsed two or more races were classified as multiracial, with a single exception: those who selected both “Asian” and “Native Hawaiian or other Pacific Islander” but no other race were classified as API.
- Non-Hispanic respondents who selected exactly one race were classified as AI/AN, API, Black, or White, according to their response.
- Respondents without data regarding race/ethnicity were classified as unknown.
- We do not include estimates for the multiracial and unknown subgroups in this document.

The Healthcare Effectiveness Data and Information Set (HEDIS) consists of 81 clinical care measures across five domains (National Committee for Quality Assurance [NCQA], 2015). These domains include effectiveness of care, access/availability of care, experience of care, utilization and relative resource use, and health plan descriptive information. HEDIS measures are developed, tested, and validated under the direction of the NCQA. Whereas CAHPS data are collected only through surveys, HEDIS data are gathered both through surveys and through medical charts and insurance claims for hospitalizations, medical office visits, and procedures (Agency for Healthcare Research and Quality, 2015). HEDIS data, unlike CAHPS data, do not contain the patient’s self-reported race/ethnicity. Therefore, race/ethnicity was imputed for the HEDIS data using a methodology that combines information from administrative data, surname, and residential location (Martino et al., 2013). In 2014, there were 473 MA contracts with a total enrollment of 13.2 million that supplied at least one reported HEDIS measure.

Scores on CAHPS measures (excluding the flu immunization HEDIS measure which is collected as part of the CAHPS survey) are case-mix adjusted in linear regression models that contain health contract-intercepts, racial/ethnic indicators (as the primary independent variable), and the following case-mix adjustors: age, education, self-rated health and mental health, dual eligibility/low-income subsidy, and proxy status. There is no adjustment for survey language. Race/ethnicity is coded as Hispanic, Black, API, AI/AN, multiracial, and unknown, with White omitted.

HEDIS measures use predicted probabilities of race/ethnicity as weights to develop estimates for each racial/ethnic group (Elliott et al., 2009).

Statistical significance tests were used to compare the model-estimated scores for each racial/ethnic minority group to the score for Whites. A difference in scores is denoted as statistically significant if there is less than a 5-percent chance that the difference could have resulted due to sampling error alone. Differences that are statistically significant and larger than three points on a 0-100 scale (CAHPS) or 3 percentage points (HEDIS) are further denoted as practically significant. That is, in the charts that present national data on racial/ethnic differences in patient experience (CAHPS) and clinical care (HEDIS), differences that are not statistically significant or statistically significant but less than 3 points in magnitude are distinguished (through the use of symbols and labeling) from differences that are both statistically significant and 3 points in magnitude or larger. The 3-point criterion was selected because a 3-point increase in some CAHPS measures has been shown to be associated with a 30-percent reduction in disenrollment from health plans (Lied et al., 2003).

## References

Agency for Healthcare Research and Quality. (2015). "Data Sources—National Committee for Quality Assurance (NCQA)."

<http://archive.ahrq.gov/research/findings/nhqrdn/nhqrdn09/datasources/ncqa.html>

Elliott MN, Morrison PA, Fremont A, McCaffrey DM, Pantoja P, Lurie N. (2009). "Using the Census Bureau's Surname List to Improve Estimates of Race/Ethnicity and Associated Disparities." *Health Services and Outcomes Research Methodology*, 9(2):69-83.

Lied TR, Sheingold SH, Landon BE, Shaul JA, Cleary PD. (2003). "Beneficiary Reported Experiences and Voluntary Disenrollment in Medicare Managed Care." *Health Care Financing Review*, 25(1):55-66.

Martino S, Weinick R, Kanouse DE, Brown J, Haviland AM, Goldstein E, Adams JL, Hambarsoomian K, Elliott MN. (2013). "Reporting CAHPS and HEDIS Data by Race/Ethnicity for Medicare Beneficiaries." *Health Services Research*, 48(2):417-434.

National Committee for Quality Assurance (NCQA). (2015). "HEDIS & Performance Measurement."

<http://www.ncqa.org/HEDISQualityMeasurement.aspx>