

## Appendix. Data Sources and Methods

The Medicare Consumer Assessment of Healthcare Providers and Systems (CAHPS) 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 2015 Medicare CAHPS survey attempted to contact 750,602 Medicare beneficiaries and received responses from 291,922, a 39-percent response rate. The 2015 survey represents all FFS beneficiaries and Medicare Advantage (MA) beneficiaries from the 531 MA contracts that had at least 600 eligible enrollees.

The Healthcare Effectiveness Data and Information Set (HEDIS) consists of 81 clinical care measures across 5 domains (National Committee for Quality Assurance [NCQA], 2016). 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. Although 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). In selecting the 24 HEDIS measures to include in this report, we excluded measures that were gender-specific (e.g., breast cancer screening), underwent a recent change in specification, were similar to reported measures preferred by the Centers for Medicare and Medicaid Services (CMS), or were designated as unsuitable for this application by CMS experts.

Gender is self-reported by Medicare beneficiaries on the CAHPS survey. For HEDIS, information on gender is gathered from administrative records.

The CAHPS measures presented in this report are composite measures that summarize, through averaging, the answers to 2 or more related CAHPS survey questions, or items. The annual flu vaccine measure, which is included in the CAHPS survey, is considered to be a HEDIS measure. This is a single-item measure rather than a composite.

CAHPS estimates are from case-mix adjusted linear regression models that contained health contract intercepts, an indicator for female gender (with male as the reference group), and the following case-mix adjustors: age, education, self-rated health and mental health, dual eligibility/low-income subsidy, and proxy status. No adjustment was made for survey language.

None of the HEDIS measures reported is case-mix adjusted.

Statistical significance tests were used to compare the model-estimated scores for women and men. A difference in scores is denoted as statistically significant if there is less than a 5-percent chance that the difference could have resulted because of sampling error alone. Differences that are statistically significant and larger than 3 points on a 0–100 scale (CAHPS) or 3 percentage points (HEDIS) are further denoted as practically significant (in all cases, practically significant differences are statistically significant). That is, in the charts that present national data on gender 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)." As of February 24, 2017:  
<http://archive.ahrq.gov/research/findings/nhqrdr/nhqrdr09/datasources/ncqa.html>

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.

National Committee for Quality Assurance (NCQA). (2016). "HEDIS & Performance Measurement." As of February 24, 2017:  
<http://www.ncqa.org/hedis-quality-measurement>