

Organization for Economic Co-operation (OECD) Patient-Reported Indicator Surveys (PaRIS) / Medicare Current Beneficiary Survey (MCBS) Public Use File (PUF) Technical Appendix

DATA AND METHODS

This Technical Appendix provides information about the production of the estimates and margins of error (MOEs) presented in the Organization for Economic Co-operation (OECD)-Patient-Reported Indicator Surveys (PaRIS)/Medicare Current Beneficiary Survey (MCBS) Public Use File (PUF). These estimates are based on data from the OECD-PaRIS survey supplemented with socio-demographic and health data previously collected from MCBS respondents.

OECD launched the PaRIS initiative in 2017 to address gaps in health outcomes measures, particularly regarding patient experiences with health care services.¹ OECD member countries, including the U.S., are working together to develop, standardize, and implement indicators that measure outcomes and experiences of health care that matter most to people. The PaRIS International Survey of People Living with Chronic Conditions (referred to as the OECD-PaRIS survey) provides a common set of measures that support policymakers across participating countries to improve health care delivery. The U.S. Department of Health and Human Services (DHHS) Assistant Secretary for Planning and Evaluation (ASPE), with funding from the National Institutes of Health (NIH), selected the Office of Enterprise Data and Analytics (OEDA) in the Centers for Medicare & Medicaid Services (CMS) to lead the U.S. participation in PaRIS using an existing longitudinal survey, the MCBS, as the data collection mechanism.

The MCBS and its existing survey infrastructure were selected as an efficient way to obtain a nationally representative sample of Medicare beneficiaries, aged 65 years and over, a key target population for the analytic use of OECD-PaRIS measures. The MCBS is a nationally representative, longitudinal survey of Medicare beneficiaries sponsored by CMS and directed by OEDA. The MCBS is the most comprehensive and complete survey available on the Medicare population and is essential in capturing data not otherwise collected through operation and administration of the Medicare program. For details about the MCBS sample design, survey operations, and data files, please see the most recent *MCBS Methodology Report, Data User's Guides*, and *Data Year Release Notes* available on the CMS MCBS website at <https://www.cms.gov/data-research/research/medicare-current-beneficiary-survey>.

The OECD-PaRIS survey was conducted as a standalone survey using MCBS sample and data collection methods. It was administered from March 3, 2023, to April 16, 2023, to existing MCBS sampled beneficiaries who met the OECD-PaRIS eligibility criteria. The eligible population included beneficiaries who were ever enrolled in Medicare during 2022, were aged 65 years and over as of January 1, 2023, and were still alive, living in a community setting (e.g., their residence), and eligible for and enrolled in Medicare at the time of their interview. While all beneficiaries meeting these criteria were sampled, only beneficiaries who reported having seen a health care professional (including doctors, nurses, and other health care professionals) in the past six months were invited to complete the survey. Beneficiaries who received an OECD-

¹ <https://www.oecd.org/health/paris/>

PaRIS interview answered questions themselves or by proxy. This PUF combines data from the OECD-PaRIS survey with socio-demographic and health data that were collected from MCBS respondents during prior MCBS interviews.

Some measures in the OECD-PaRIS/MCBS PUF are constructed from survey questions that involve questionnaire skip logic. For these items, unless otherwise noted, if the respondent provided a "No" response and subsequently skipped the follow-up question, the response was still included in the denominator and the follow-up question that was skipped was treated as a "No" response for measure calculation. "Don't know," "Not sure," and "Refused" responses were treated as missing values and excluded from both the numerator and denominator in measure calculation.

The OECD-PaRIS survey weights were used to produce estimates that represent the population that were ever enrolled in Medicare in 2022, were aged 65 and over as of January 1, 2023, and who were still alive, entitled, living in the community, and had seen a health care provider in the last six months as of winter 2023. Balanced repeated replication survey weights were used to account for the complex sample design.

Estimate suppression is used to protect the confidentiality of Medicare beneficiaries by avoiding the release of information that can be used to identify individual beneficiaries. Estimates with a denominator of less than 50 sample persons or with a numerator of zero sample persons are suppressed. In addition, some estimates are suppressed because they do not meet minimum criteria for reliability. For the proportions in these tables, the Clopper-Pearson method was used to compute confidence intervals for each estimate. Estimates with a confidence interval whose absolute width is at least 0.30, with a confidence interval whose absolute width is no greater than 0.05, or with a relative confidence interval width of more than 130 percent of the estimate are suppressed.² MOEs are presented for each estimate. For other estimates such as medians, relative standard errors (RSEs) are calculated as the standard error of the estimate divided by the estimate itself. Estimates with a RSE of greater than 30 percent are suppressed because they do not meet the standards of reliability or precision.

CMS obtained approval from the Office of Management and Budget (OMB) for the OECD-PaRIS survey administration on November 22, 2022 (OMB control number 0938-1434, expiration date 11/30/2025). The MCBS is authorized by section 1875 (42 USC 1395II) of the Social Security Act and is conducted by NORC at the University of Chicago for DHHS. The OMB Number for the MCBS is 0938-0568.

Additional technical questions concerning these estimates may be directed to:
MCBS@cms.hhs.gov.

GLOSSARY

This Glossary provides an explanation of key terms and defines the measures for which estimates are presented in this PUF.

² Parker, Jennifer D., Makram Talih, Donald J., Malec, et al. "National Center for Health Statistics Data Presentation Standards for Proportions." National Center for Health Statistics. *Vital Health Stat* 2, no. 175 (2017). Available from: https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf.

Area deprivation index (ADI): ADI is an indicator of the socioeconomic disadvantage of geographic areas. National rankings are based on the Census block group for the beneficiary's primary residence address. ADI values in the first percentile are the least disadvantaged, and those in the hundredth are the most disadvantaged.³

Chronic conditions: Chronic conditions comprise a group of 10 health conditions measures: high blood pressure, cardiovascular or heart condition, diabetes (type 1 or 2), arthritis or ongoing problem with back or joints, breathing condition (e.g., asthma or chronic obstructive pulmonary disease [COPD]), ongoing depression, anxiety, or other mental health condition (e.g., bipolar disorder or schizophrenia), neurological condition (e.g., epilepsy or migraine), chronic kidney disease, cancer (with diagnosis or treatment in the last five years), and other chronic conditions.

Disability status: Respondents were asked whether they have serious difficulty hearing; seeing; concentrating, remembering, or making decisions; walking or climbing stairs; dressing or bathing; or with errands. Beneficiaries who had no serious difficulties with these activities were included in the category "No disability." Beneficiaries who had a serious difficulty in one area were categorized as "One disability" and beneficiaries who had a serious difficulty in more than one area were categorized as "Two or more disabilities."

Dual eligibility status: Annual Medicare-Medicaid dual eligibility was based on the state Medicare Modernization Act (MMA) files. Medicare beneficiaries were considered "dually eligible" if they were enrolled in Medicaid for at least one month. Beneficiaries who were not enrolled in Medicaid for at least one month in the calendar year were categorized as "not dually eligible." This information was obtained from administrative data sources.

Income: Information on income is self-reported by the respondent for the calendar year. Respondents were asked to report the total income the beneficiary and their spouse/partner (if applicable) received from all sources during the year, including Social Security, Railroad Retirement, Supplemental Security Income (SSI), the Veteran's Administration, pensions, retirement accounts, interest, banking accounts, businesses, real estate, and jobs, before any taxes or deductions. Income represents the best source or estimate of income received during the year based on the most recent information reported.

Income to poverty ratio (IPR): IPR is calculated only for household sizes of one (beneficiary living alone) or two (beneficiary living with a spouse/partner only) as the income and asset information is collected only from the beneficiary and the beneficiary's spouse/partner. Medicare beneficiaries have slightly different poverty level indices used for program eligibility. The IPR uses the Medicare poverty thresholds for calculation.

Living arrangement: Living arrangement reflects the beneficiary's household composition. Responses of "Spouse only" and "Partners only" were collapsed as "Lives with spouse/partner only." Responses of "Spouse & children," "Spouse & grandchildren," "Spouse & children & grandchildren," "Partners & children," "Children only," "Grandchildren only," "Children & grandchildren," "Parents only," and "Parents & siblings" were collapsed as "Lives in a

³ "2020 Area Deprivation Index v3.2," University of Wisconsin School of Medicine and Public Health, <https://www.neighborhoodatlas.medicine.wisc.edu/>.

multigenerational household." Responses of "Siblings only," "Other relatives," "Non-relatives only," and "Other" were collapsed as "Other living arrangement."

Margin of error (MOE): MOE is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. MOEs are based on standard errors calculated using replicate weights.

Median: Median reflects the center of the data. Exactly half of the data points lie above the median, and half lie below the media. The median is more reliable than an average since it is less influenced by extreme values.

Median WHO-5 global quality of life score (0 to 100): This scale score ranges from zero to 100 using the World Health Organization-Five Well-Being Index (WHO-5).⁴ The index comprises five items measuring mental well-being. Each item asked about the beneficiary's feelings in the past two weeks. Each item received a score from zero to five. The total raw score (ranging from zero to 25) was multiplied by four to calculate the final score. Higher scores represent better well-being.

Median PROMIS® global physical health T-score (16.2 to 67.7): This scale score ranges from four to 20 using the Patient-Reported Outcomes Measurement Information System® (PROMIS®)⁵ Global Physical Health measure. The scale comprises four items measuring overall physical function, pain, and fatigue. Each item received a score from one to five, and the sum of the items provided the raw scale score. Raw scores were converted to a T-score metric in which 50 is the mean of the relevant reference population and 10 is the standard deviation of that population. The final T-scores range from 16.2 to 67.7. Higher scores represent better physical health.

Median PROMIS® global mental health T-score (21.1 to 67.6): This scale score ranges from four to 20 using the PROMIS® Global Mental Health measure. The scale comprises four items measuring quality of life, emotional distress, and social health. Each item received a score from one to five, and the sum of the items provided the raw scale score. Raw scores were converted to a T-score metric in which 50 is the mean of the relevant reference population and 10 is the standard deviation of that population. The final T-scores range from 21.1 to 67.6. Higher scores represent better mental health.

Median coordination of care score (0 to 15): This scale score ranges from zero to 15 using the coordinated care component of the Person-Centered Coordinated Care Experience Questionnaire (P3CEQ).⁶ The coordinated care component comprises eight items from the P3CEQ related to the availability and utility of a care plan (i.e., whether the beneficiary has a care plan and if yes, whether the plan is available to them, is useful, and is followed by all of their providers); the extent to which the beneficiary believes their care is organized and works; whether the beneficiary has a single provider to coordinate care across services; whether the beneficiary has enough support from their providers; and whether the beneficiary has enough

⁴ <https://www.corc.uk.net/outcome-experience-measures/the-world-health-organisation-five-well-being-index-who-5/>

⁵ <https://www.promishealth.org/57461-2/>

⁶ <https://academic.oup.com/intqhc/article/31/7/506/5225143>

information to manage their own health. Each item received a score from zero to three. The items relating to a care plan were averaged, and the sum of the care plan average and all other items provided the final score. Higher scores represent better coordination of care. This measure excludes respondents who reported zero chronic conditions.

Median individualized care score (0 to 24): This scale score ranges from zero to 24 using the person-centeredness component of the P3CEQ.⁶ The person-centeredness component comprises eight items from the P3CEQ related to whether the beneficiary discusses what is important to them with a health professional; whether they have support from a health professional; whether they are involved in making health decisions; whether they believe they are seen as a “whole person;” whether they have to repeat information; whether they believe their care is organized and works; the extent to which the beneficiary receives enough information; and whether the beneficiary is confident in managing their own health. Each item received a score from zero to three, and the sum of the items provided the final score. Higher scores represent better person-centeredness. This measure excludes respondents who reported zero chronic conditions.

Race/ethnicity: Hispanic origin and race are two separate and distinct categories. Persons of Hispanic origin may be of any race or combination of races. Hispanic origin includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or Spanish origin. For the MCBS, responses to beneficiary race and ethnicity questions are reported by the respondent. More than one race may be reported. For conciseness, the text, tables, and figures in this document use shorter versions of the terms for race and Hispanic or Latino origin specified in the Office of Management and Budget 1997 Standards for Data on Race and Ethnicity. Beneficiaries reported as White and not of Hispanic origin were coded as White non-Hispanic; beneficiaries reported as Black/African-American and not of Hispanic origin were coded as Black non-Hispanic; beneficiaries reported as Hispanic, Latino/Latina, or of Spanish origin, regardless of their race, were coded as Hispanic. The “Other Race/Ethnicity” category includes other single races not of Hispanic origin (including American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander), or Two or More Races.

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