2020 Medicare Current Beneficiary Survey (MCBS) Preventive Care Public Use File Technical Appendix

DATA AND METHODS

This Technical Appendix provides information about the production of the estimates and standard errors presented in the 2020 MCBS Preventive Care Public Use File (PUF).

These estimates are based on data from the 2020 MCBS, a nationally representative, longitudinal survey of Medicare beneficiaries sponsored by the Centers for Medicare & Medicaid Services (CMS) and directed by the Office of Enterprise Data and Analytics (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 operations and administration of the Medicare program.

MCBS Limited Data Sets (LDS) are available to researchers with a data use agreement. Information on ordering MCBS files from CMS can be obtained through the CMS LDS website at https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/Data-Disclosures-Data-Agreements/DUA_-_NewLDS. MCBS Microdata PUFs are available to the public as free downloads and can be found through the CMS PUF website at https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/MCBS-Public-Use-File/index. The Preventive Care and other PUFs based on MCBS microdata are available here: https://www.cms.gov/research-statistics-data-and-systems/research/mcbs/data-tables.

For details about the MCBS sample design, survey operations, and data files, please see the most recent *MCBS Methodology Report* and *Data User's Guides* available on the CMS MCBS website at https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/index. The *Data User's Guides* also contain information on other types of preventive care measures collected in the MCBS, beyond what is included in this PUF.

The universe for the 2020 MCBS Preventive Care PUF includes Medicare beneficiaries who were ever enrolled in Medicare during 2020 and completed at least one Community interview in Fall 2020, Winter 2021, or Summer 2021. Beneficiaries who received a Community interview answered questions themselves or by proxy.

Some measures 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" and "Refused" responses were treated as missing values and excluded from both the numerator and denominator in measure calculation.

Many items in the MCBS ask respondents whether they have ever had certain conditions or preventive care services. For items that ask about conditions/services that cannot change or reoccur, such as Alzheimer's or shingles vaccination, once an affirmative response is given, respondents are not asked again. However, if a negative response is given, respondents are

asked annually thereafter. For conditions/services that can change or reoccur, such as high blood pressure or annual health screenings, respondents are asked annually. For conditions/services that cannot change or reoccur, data on the beneficiary from the current survey year and all previous years are used to determine whether the beneficiary has ever had the condition/service.

The Survey File ever-enrolled weights were used to produce estimates that represent the population that was ever enrolled in Medicare and still alive, entitled, and residing in the Community during the season in which the corresponding questionnaire item was fielded (Fall 2020, Winter 2021, or Summer 2021). Most estimates in this PUF are based on questionnaire items fielded in Fall 2020. Information on which estimates are based on data collected in Winter 2021 or Summer 2021 can be found in the Glossary below. 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.[1]

The MCBS is authorized by section 1875 (42 USC 139511) of the Social Security Act and is conducted by NORC at the University of Chicago for the U.S. Department of Health and Human Services. The OMB Number for this survey is 0938-0568.

Additional technical questions concerning the 2020 MCBS Preventive Care PUF 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 the 2020 MCBS Preventive Care PUF. This Glossary also provides relevant preventive care screening guidelines from the U.S. Preventive Services Task Force (USPSTF), if available.[2]

Age: Age is obtained from administrative data sources.

[1] 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.

[2] https://uspreventiveservicestaskforce.org/uspstf/home

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]

Beneficiary: Beneficiary refers to a person receiving Medicare services who may or may not be participating in the MCBS. Beneficiary may also refer to an individual selected from the MCBS sample about whom the MCBS collects information.[4]

Blood cholesterol screening: Respondents were asked when was the most recent time they had their blood cholesterol checked. Beneficiaries were coded as "yes" for blood cholesterol screening if they had their blood cholesterol checked at least once in the last 12 months.

Blood pressure screening: Respondents were asked when was the most recent time they had a blood pressure screening taken by a doctor or other health professional. Beneficiaries were coded as "yes" for blood pressure screening if they received at least one screening in the last 12 months. The USPSTF "recommends screening for hypertension in adults aged 18 and over with office blood pressure measurement (OBPM)."[5]

Blood sugar well controlled: Respondents were asked if their blood sugar is well controlled all of the time, most of the time, some of the time, a little of the time, or none of the time. Respondents were given the guidance that well controlled means a recent hemoglobin "A one C" result of 7.5 or less or an average fasting blood test of 140 or less. Responses of "All of the time" and "Most of the time" were categorized as "Blood sugar well controlled."

Chronic conditions: Chronic conditions comprises a group of 13 health conditions measures: heart disease, cancer (other than skin cancer), Alzheimer's disease, dementia other than Alzheimer's disease, depression, mental condition, hypertension, diabetes, osteoporosis/broken hip, pulmonary disease, stroke, high cholesterol, and Parkinson's disease. It is possible for a beneficiary to have "ever" been diagnosed with both Alzheimer's disease and dementia (other than Alzheimer's disease) as previous survey responses are carried forward into subsequent data years. For the purposes of the number of chronic conditions measure, Alzheimer's disease and dementia (other than Alzheimer's disease) are counted as one chronic condition for beneficiaries diagnosed with both conditions. As the definition of mental condition encompasses depression, for the purposes of the number of chronic conditions measure, depression and mental condition are counted as one chronic condition for beneficiaries diagnosed with both conditions.

[3] University of Wisconsin School of Medicine Public Health. 2018 and 2019 Area Deprivation Index v2.0. https://www.neighborhoodatlas.medicine.wisc.edu/.

[4] https://www.cms.gov/Medicare/Medicare-General-Information/MedicareGenInfo/index.html

[5] https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/hypertension-in-adults-screening

Community interview: Survey administered for beneficiaries living in the community (i.e., not in a long-term care facility such as a nursing home) during the reference period covered by the MCBS interview. An interview may be conducted with the beneficiary or a proxy.

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 those 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" and assigned a dual eligibility status if they were enrolled in Medicaid for at least one month. This information was obtained from administrative data sources.

Education: Education refers to the highest level of education that a beneficiary has completed, as reported by the respondent. Beneficiaries were categorized as "Less than a high school diploma," "High school graduate," "Some college/vocational school," "Bachelor's degree" (e.g., BA, BS), or "Graduate or professional degree" (e.g., MA, MS, MD, DDS, DVM, LLB, JD, PhD).

Ever enrolled: A Medicare beneficiary who was enrolled at any time during the calendar year including people who dis-enrolled or died prior to their fall interview. Excluded from this population are residents of foreign countries and of U.S. possessions and territories.

Fee-for-Service (FFS): FFS Medicare encompasses beneficiaries eligible for Part A and/or Part B Medicare benefits at any time during the data collection year, and who were not enrolled in a Medicare Advantage plan at any time during the year. However, beneficiaries may have had Medicaid coverage or other public insurance coverage, such as a state-sponsored prescription drug plan, or may have been eligible for Department of Veterans Affairs health care benefits. Beneficiaries enrolled in FFS coverage may also have supplemental private insurance coverage. Coverage status is indicated for records for which administrative data are available.

Flu shot: Respondents were asked during their Winter or Summer interview whether they had received a seasonal flu shot in the past year.

Income: Information on income is self-reported by the respondent for the calendar year. Respondents are asked to report the total income the beneficiary and their spouse (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 only) as the income and asset information is collected only from the beneficiary and the beneficiary's spouse. Medicare beneficiaries have slightly different poverty level indices used for program eligibility. The IPR uses the Medicare poverty thresholds for calculation.

Language spoken at home: Respondents were asked if they speak a language other than English at home.

Mammogram: Female respondents were asked if they received a mammogram or breast X-ray in the past year. The USPSTF "recommends biennial screening mammography for women aged 50 to 74 years."[6]

Medicare Advantage (MA): Medicare Advantage Plans, sometimes called "Part C" or "MA Plans," are offered by private companies under contracts with Medicare. In addition, other managed care plans are offered by private companies under contracts with Medicare under different parts of the Medicare statute. These Medicare managed care plans generally cover Medicare Part A and/or Part B benefits and are paid on either a risk-based capitated basis (MA plans) or on a reasonable cost basis (cost plans and health care prepayment plans). Beneficiaries were coded as having Medicare Advantage coverage if they had coverage for one or more months out of the calendar year. This information is obtained from administrative data sources.

Metropolitan/micropolitan area resident: Metropolitan/micropolitan area residence was obtained from administrative data sources and verified in the survey. This classification is based on Core Based Statistical Area (CBSA) designations.[7]

Oral cancer exam: Respondents were asked whether they received an exam for oral cancer in the past year during which the doctor or dentist pulled on their tongue and felt under the tongue and inside the cheeks. The USPSTF "concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for oral cancer in asymptomatic adults."[8]

Pneumonia shot: Respondents were asked in their Summer interview if they had ever received the pneumonia shot.

Prostate exam: Male respondents who had never reported receiving prostate surgery were asked if they received two different types of prostate exams in the past year. These exams may be used to detect prostate cancer or to determine whether cancer has spread beyond the prostate.

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[6] https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening

[7] https://www.federalreserve.gov/apps/mdrm/data-dictionary/search/item?keyword=9153%20&show_short_title=False&show_conf=False&rep_status=All&rep_state=Opened&rep_period=Before&date_start=99991231&date_end=99991231#:~:text=The%20term%20%22Core%20Based%20Statistical,but%20less%20than%2050%2C000)%20population

[8] https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/oral-cancer-screening

- Digital rectal examination of the prostate
- Blood test for detection of prostate cancer, known as a prostate-specific antigen or PSA. The USPSTF notes "for men aged 55 to 69 years, the decision to undergo PSA-based screening for prostate cancer should be an individual one." The USPSTF "recommends against PSA-based screening for prostate cancer in men aged 70 and over."[9]

Proxy: Beneficiaries who were too ill, or who could not complete the interview for other reasons, were asked to designate a proxy, someone very knowledgeable about the beneficiary's health and living habits. In most cases, the proxy was a close relative such as the spouse or a son or daughter. In a few cases, the proxy was a non-relative like a close friend or caregiver. In addition, a proxy was utilized if a beneficiary had been reported as deceased during the current round's reference period or if a beneficiary who was living in the community in the previous round had since entered into a long-term care facility.

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.

Reference period: The timeframe to which a questionnaire item refers.

Respondent: Respondent refers to a person who answers questions for the MCBS; for Community interviews, this person can be the beneficiary or a proxy. If the respondent is a proxy, they answer questions about the beneficiary rather than themself.

Self-reported health status: Respondents were asked to rate their general health compared to other people of the same age. Beneficiaries answered health status questions themselves, unless they were unable to do so.

Sex: Respondents were asked to self-report the beneficiary's sex.

[9] https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/prostate-cancer-screening

Shingles vaccine: Community respondents 60 years of age and over were asked in their Summer interview if they had ever received the shingles vaccine.

Wellness visit: Respondents were asked whether they had a "Welcome to Medicare" or an "Annual Wellness" visit within the past year. Within the first 12 months of a beneficiary's Medicare enrollment, Medicare offers a one-time "Welcome to Medicare" visit with their primary care provider to assess their current health. After a beneficiary has been enrolled in Medicare for 12 months, Medicare offers yearly "Annual Wellness" visits with their primary care provider to update their personalized prevention plan.

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