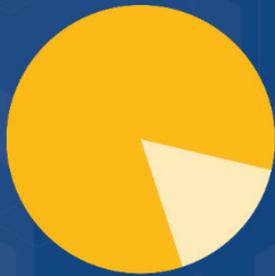


2020 | DATA USER'S GUIDE: SURVEY FILE



Centers for Medicare & Medicaid Services (CMS)
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TABLE OF CONTENTS

ACRONYM LIST	xi
1. INTRODUCTION	1
1.1 Contents of the Data User's Guide: Survey File.....	2
2. GENERAL GUIDELINES FOR DATA USE	4
2.1 Data Access.....	4
2.2 Guidelines for Citation of Data Source	4
3. WHAT'S NEW FOR DATA YEAR 2020?	6
3.1 Sampling	6
3.2 Questionnaires.....	6
3.2.1 General.....	6
3.2.2 Section-Specific Changes.....	7
3.3 Data Collection	10
3.4 Documentation	11
3.5 Data Processing.....	11
3.6 COVID-19 Supplements.....	18
3.6.1 COVID-19 Community Supplement.....	19
3.6.2 COVID-19 Facility Supplement	19
4. SURVEY OVERVIEW	20
4.1 Design of MCBS	20
4.2 Sample Design.....	21
4.3 Case Types.....	22
4.3.1 Incoming and Continuing Cases	22
4.3.2 Community Interviews and Facility Interviews.....	22
4.4 Completed Interviews.....	23
5. QUESTIONNAIRES	24
5.1 Overview.....	24
5.1.1 Items from Validated Scales	24
5.2 Community Questionnaire.....	25
5.2.1 Baseline Interview	26
5.2.2 Continuing Interview.....	27

5.2.3 Core Questionnaire Sections	28
5.2.4 Topical Questionnaire Sections.....	36
5.2.5 Community Questionnaire Section Rotation within a Data Year.....	38
5.3 Facility Instrument	39
5.3.1 Facility Baseline Interview	40
5.3.2 Facility Continuing Interview.....	41
5.3.3 Facility Continuing Core Sections.....	43
6. SAMPLING	47
6.1 Medicare Population Covered by the 2020 MCBS Data	47
6.2 Targeted Population and Sampling Strata	51
6.2.1 Eligibility: Medicare Population Covered by the 2020 LDS.....	52
6.3 Three-Stage Cluster Design	52
6.4 Sample Selection	52
7. DATA PRODUCTS & DOCUMENTATION	54
7.1 Contents of Data Release	54
7.1.1 2020 MCBS Survey File.....	55
7.1.2 2020 MCBS Cost Supplement File.....	63
7.1.3 Using the Data.....	67
7.1.4 Research Claims Files.....	67
7.2 Which File Do I Need?	67
7.2.1 Survey File Only.....	68
7.2.2 Using Both Survey File and Cost Supplement File	68
7.2.3 Using Both Community and Facility Data.....	68
COV. COVID-19 SUPPLEMENT SECTION	70
COV.1 Introduction.....	70
COV.2 Background and Development.....	70
COV.3 COVID-19 Community Supplement Data Collection and Training	73
COV.3.1 Overview of Recruitment of Beneficiaries and Scheduling Procedures.....	73
COV.3.2 Telephone Data Collection.....	73
COV.3.3 Interviewer Training	74
COV.4 COVID-19 Community Supplement Questionnaires.....	74
COV.4.1 Availability and Use of Telemedicine	75
COV.4.2 Access to Computers and Internet.....	75
COV.4.3 Forgone Health Care as a Result of the Pandemic.....	75
COV.4.4 Autoimmune Disease Prevalence	75
COV.4.5 Utilization of COVID-19 Testing	75

COV.4.6 COVID-19 Care 76

COV.4.7 COVID-19 Vaccination..... 76

COV.4.8 Preventive Measures..... 76

COV.4.9 Sources of COVID-19 Information..... 76

COV.4.10 Knowledge and Perceptions of COVID-19 Public Health Guidance..... 76

COV.4.11 Ability to Access Basic Needs During the Pandemic 77

COV.4.12 Impact to Financial and Mental Health 77

COV.5 COVID-19 Community Supplement Sampling 77

COV.6 COVID-19 Community Supplement Data Products and Documentation 78

 COV.6.1 LDS 78

 COV.6.2 PUF 78

 COV.6.3 Other Documentation and Data Tools 78

COV.7 COVID-19 Community Supplement Weighting and Variance Estimation 79

COV.8 COVID-19 Facility Supplement Eligibility 79

COV.9 COVID-19 Facility Supplement Instrument Content 79

 COV.9.1 Suspension of In-Person Health Services Inside and Outside of the Facility..... 80

 COV.9.2 Availability of Telemedicine Services Inside and Outside of the Facility 80

 COV.9.3 Facility Measures to Prevent and Control the Spread of COVID-19..... 80

 COV.9.4 Facility Staffing Impact due to COVID-19 80

 COV.9.5 Mental Health Services..... 81

 COV.9.6 Social and Recreational Activities 81

 COV.9.7 Utilization of COVID-19 Testing 81

 COV.9.8 COVID-19 Care 81

 COV.9.9 COVID-19 Vaccination..... 81

 COV.9.10 Recent Mood 81

COV.10 COVID-19 Facility Supplement Documentation 82

COV.11 Future Releases..... 82

8. FILE STRUCTURE 83

8.1 LDS Specifications..... 83

8.2 File Structure 83

 Sort Order for Merging the Survey File LDS Segments..... 83

8.3 Claims Files 84

 8.3.1 Utilization Detail Records 84

9. DATA FILE DOCUMENTATION 85

9.1 LDS Contents.....	85
9.2 LDS Components	85
9.2.1 Codebooks	85
9.2.2 Questionnaires.....	86
9.2.3 Data User Resources.....	86
9.3 Data Edits and Imputation	86
9.3.1 Data Edits	86
9.3.2 Imputation	87
9.4 Weighting.....	88
9.4.1 Preparing Statistics (Using the Full Sample Weights)	88
9.5 Using the Data.....	95
9.5.1 Merging Segments within 2020	95
9.6 Variance Estimation (Using the Replicate Weights)	95
9.6.1 Variables Available for Variance Estimation	95
9.6.2 Variance Estimation for Analyses of Single Year of MCBS	96
9.6.3 Subgroup Analysis.....	96
9.7 Combining Multiple Years of Data.....	96
9.7.1 Longitudinal Analysis.....	96
9.7.2 Repeated Cross-Sectional or Pooled Analysis.....	97
10. DATA FILE NOTES.....	100
10.1 Global Information	100
10.1.1 BASEID	100
10.1.2 Missing Values	100
10.1.3 Derived and Administrative Variables.....	100
10.1.4 Initial Interview Variables	100
10.1.5 Ever Variables.....	101
10.1.6 Data Editing.....	101
10.1.7 Other Specify Questions	101
10.1.8 Interview Mode Indicator.....	102
10.1.9 Consistency with Medicare Program Statistics.....	102
10.1.10 Do Administrative Data Override Survey-Reported Data?.....	102
10.2 Survey File Segment Information.....	102
10.3 Survey File Segment Descriptions	103
10.3.1 Access to Care (ACCESSCR).....	103
10.3.2 Access to Care, Medical Appointments (ACCSSMED)	103
10.3.3 Administrative Utilization Summary (ADMNUTLS)	104
10.3.4 Assistance (ASSIST)	110
10.3.5 Chronic Conditions (CHRNCOND)	111

10.3.6 Chronic Condition Flags (CHRNCDL).....	112
10.3.7 Chronic Pain (CHRNPAI).....	113
10.3.8 Cognitive Measures (COGNFUNC).....	113
10.3.9 COVID-19 Vaccination (COVIDVAC).....	113
10.3.10 Demographics (DEMO).....	114
10.3.11 Diabetes (DIABETES).....	119
10.3.12 Facility Assessments (FACASMNT).....	120
10.3.13 Facility Characteristics (FACCHAR).....	123
10.3.14 Falls (FALLS).....	124
10.3.15 Food Insecurity (FOODINS).....	125
10.3.16 General Health (GENHLTH).....	125
10.3.17 Health Insurance Summary (HISUMRY).....	126
10.3.18 Health Insurance Timeline (HITLINE).....	129
10.3.19 Household Characteristics (HHCHAR).....	131
10.3.20 Income and Assets (INCASSET).....	132
10.3.21 Interview Characteristics (INTERV).....	134
10.3.22 Medicare Advantage Plan Questions (MAPLANQX).....	134
10.3.23 Medicare Plan Beneficiary Knowledge (MCREPLNQ).....	135
10.3.24 Mental Health (MENTHLTH).....	136
10.3.25 Mobility (MOBILITY).....	136
10.3.26 Minimum Data Set (MDS3).....	136
10.3.27 Nagi Disability (NAGIDIS).....	137
10.3.28 Nicotine and Alcohol (NICOALCO).....	139
10.3.29 Outcome and Assessment Information (OASIS).....	139
10.3.30 Patient Activation (PNTACT).....	139
10.3.31 Preventive Care (PREVCARE).....	140
10.3.32 Residence Timeline (RESTMLN).....	141
10.3.33 RX Medications (RXMED).....	142
10.3.34 Satisfaction with Care (SATWCARE).....	143
10.3.35 Usual Source of Care (USCARE).....	143
10.3.36 Vision and Hearing (VISHEAR).....	144
10.3.37 COVID-19 Winter 2021 Community Supplement (COVIDWIN).....	144
10.3.38 COVID-19 Facility Beneficiary-Level Supplement (FBENCVFL).....	145
10.3.39 COVID-19 Facility Facility-Level Supplement (FFACCVFL).....	145
10.3.40 Weights.....	145

11. REFERENCES 146

12. APPENDICES..... 149

Appendix A: MCBS Common Definitions..... 149

Appendix B: MCBS Rounds by Data Year and Season 155

Appendix C: Sample Code 156

Appendix D: Initial Interview Variables 160

Appendix E: Table of Links to MCBS Documentation..... 162

Appendix F: 2020 MCBS Survey File Segments and Historic RIC Segments..... 163

LIST OF EXHIBITS

Exhibit 3.5.1:	2020 MCBS Content Additions.....	11
Exhibit 4.1.1:	Typical MCBS Data Collection Year.....	20
Exhibit 4.1.2:	MCBS Beneficiary Participation Timeline.....	21
Exhibit 4.2:	2016-2020 MCBS Rotating Panel Design	22
Exhibit 4.4:	2020 MCBS Fall Round Completed Interviews: Continuing and Incoming Panels.....	23
Exhibit 5.1:	MCBS Questionnaire Overview.....	24
Exhibit 5.2:	Overview of the MCBS Community Questionnaire Components.....	26
Exhibit 5.2.1:	2020 Data Collection Year MCBS Community Questionnaire Flow for Baseline Interview	27
Exhibit 5.2.2:	2020 Data Collection Year MCBS Community Questionnaire Flow for Continuing Interview	28
Exhibit 5.2.3:	2020 Data Year MCBS Community Core Sections by Data File and Data Collection Schedule*[‡]	29
Exhibit 5.2.4:	Cost Series Section Overview.....	32
Exhibit 5.2.5:	Utilization and Cost Section Flow.....	33
Exhibit 5.2.6:	Example Paths Toward Cost Resolution	34
Exhibit 5.2.7:	Events Collected in the 2020 Data Year	35
Exhibit 5.2.8:	2020 Data Year MCBS Community Topical Sections by Data File and Data Collection Schedule[‡].....	37
Exhibit 5.2.9:	2020 Data Collection Year MCBS Community Questionnaire Section Rotation	39
Exhibit 5.3:	Overview of the MCBS Facility Instrument.....	40
Exhibit 5.3.1:	2020 Data Collection Year MCBS Facility Instrument Flow for Baseline Interview.....	41
Exhibit 5.3.2:	2020 Data Collection Year MCBS Facility Instrument Flow for Continuing Interviews.....	42
Exhibit 5.3.3:	2020 Data Year MCBS Facility Core Sections by Data File and Data Collection Schedule*[‡].....	43
Exhibit 6.1:	2020 MCBS Composition of Panels Contributing to the LDS Data Files.....	47

Exhibit 6.1.1:	2020 Total Estimated Number of Medicare Beneficiaries by Sex and Race*	48
Exhibit 6.1.2:	2020 Estimated Number of Male Medicare Beneficiaries by Race and Age*	49
Exhibit 6.1.3:	2020 Estimated Number of Female Medicare Beneficiaries by Race and Age*	50
Exhibit 6.2.1:	2020 MCBS Sampling Strata	51
Exhibit 6.2.2:	2020 Panel of Selected Beneficiaries by Hispanic and Non-Hispanic Ethnicity Classification and Age Category*	52
Exhibit 6.4:	2020 MCBS Sample Selection for the LDS Releases	53
Exhibit 7.1:	2020 Contents of Data Releases	55
Exhibit 7.1.1:	2020 MCBS Survey File Segments and Contents	57
Exhibit 7.1.2:	2020 MCBS Cost Supplement File Segments and Contents	64
Exhibit 7.2:	MCBS Populations in Data Products	68
Exhibit COV.2.1:	COVID-19 Data Collection and Corresponding Survey File Releases	71
Exhibit COV.2.2:	Schedule of COVID-19 Supplements	72
Exhibit COV.2.3:	A Comparison of the COVID-19 Winter 2021 Supplement PUF and 2020 Survey File LDS COVIDWIN Segment	72
Exhibit COV.3.1:	Timeline of COVID-19 2020 Community Supplement Data Collection	73
Exhibit COV.4.1:	Topics Measured by the COVID-19 Community Supplements	74
Exhibit COV.5.1:	MCBS Composition by Panel in the MCBS COVID-19 Winter 2021 Community Supplement	77
Exhibit 8.2.1:	Sort Order by Segment in the Survey File LDS	83
Exhibit 9.3.1:	Data Review and Editing Codes	87
Exhibit 9.4.1:	2020 MCBS Data Files Summary of Weights	91
Exhibit 9.7.1:	Constructing a Longitudinal Analytic File	97
Exhibit 9.7.2:	Constructing a Repeated Cross-Section or Pooled Analytic File	98
Exhibit 10.3.10.2a:	Primary RUCA (H_RUCA1) Codes, 2010	116
Exhibit 10.3.10.2b:	Secondary RUCA (H_RUCA2) Codes, 2010	117
Exhibit 10.3.12.3a:	FACASMNT Administrative Data Match Outcomes	121
Exhibit 10.3.12.3b:	FACASMNT Variables Populated with Administrative Data	121

Exhibit 10.3.12.3c: Differences between FACASMNT and MDS3 Data.....122

Exhibit 10.3.12.3d: LDS Segments with Similar Topics for Community and Facility Interviews.....123

Exhibit 10.3.31.1: Segment, Questionnaire, and Variable Information for Analyses of 2019-2020 Flu Shot Data.....140

Exhibit D.1: Initial Interview Variables160

ACRONYM LIST

ACCESSCR	Access to Care segment
ACCSSMED	Access to Care, Medical Appointments segment
ACO	Accountable Care Organization
ACQ	Access to Care Questionnaire
ACS	American Community Survey
ADLs	Activities of Daily Living
ADMNUTLS	Administrative Utilization Summary segment
ASSIST	Assistance segment
ATC	Access to Care
AVQ	Address Verification Questionnaire
BQ	Background Questionnaire
BRR	Balanced repeated replication (or Fay's method)
CAPI	Computer-Assisted Personal Interviewing
CASPER	Certification and Survey Provider Enhanced Reports
CATI	Computer-Assisted Telephone Interviewing
CAU	Cost and Use
CCN	CMS Certification Number
CDC	Centers for Disease Control and Prevention
CENWGTS	Continuously enrolled weights
CHRNCDL	Chronic Condition Flags segment
CHRNCOND	Chronic Conditions segment
CHRNPAIN	Chronic Pain segment
CMS	Centers for Medicare & Medicaid Services
CMQ	Cognitive Measures Questionnaire
COGNFUNC	Cognitive Measures segment
COVIDVAC	COVID-19 Vaccination segment
COVIDWIN	COVID-19 Winter 2021 Community Supplement segment
CSEVRWGT	Cost Supplement File Ever Enrolled weights
CSL2WGTS	Cost Supplement File Longitudinal weights (2-year)
CSL3WGTS	Cost Supplement File Longitudinal weights (3-year)
CPS	Charge Payment Summary Questionnaire
CV	COVID-19 Beneficiary Supplement Questionnaire
CVQ	COVID-19 Questionnaire
DEMO	Demographics segment
DIABETES	Diabetes segment
DIQ	Demographics and Income Questionnaire
DME	Durable Medical Equipment segment
DUA	Data Use Agreement
DUE	Dental Utilization Events segment
DVH	Dental, Vision, and Hearing Utilization Questionnaire
ENS	Enumeration Summary Questionnaire
EOBs	Explanation of Benefit Statements
EPPE	Enterprise Privacy Policy Engine
ERQ	Emergency Room Utilization Questionnaire
ERS	Economic Research Service
ESRD	End-stage renal disease
EVRWGTS	Ever enrolled population weights
EX	Expenditures Questionnaire

FACASMNT	Facility Assessments segment
FACCHAR	Facility Characteristics segment
FAE	Facility Events segment
FALLS	Falls segment
FBENCVFL	COVID-19 Facility Beneficiary-Level segment
FFACCVFL	COVID-19 Facility Facility-Level segment
FFS	Fee-for-Service
FOODINS	Food Insecurity segment
FQ	Facility Questionnaire
GAD	Generalized Anxiety Disorder screening tool (GAD-2)
GENHLTH	General Health segment
HAQ	Housing Characteristics Questionnaire
HFQ	Health Status and Functioning Questionnaire
HHC	Health and Health Care of the Medicare Population
HHCHAR	Household Characteristics segment
HHQ	Home Health Utilization Questionnaire
HHS	Home Health Summary Questionnaire
HIPAA	Health Insurance Portability and Accountability Act
HIQ	Health Insurance Questionnaire
HISUMRY	Health Insurance Summary segment
HITLINE	Health Insurance Timeline segment
HMO	Health Maintenance Organization
HS	Health Status
HUE	Hearing Utilization Events segment
IADLs	Instrumental Activities of Daily Living
IAQ	Income and Assets Questionnaire
ID	Identification
IN	Introduction Questionnaire
INCASSET	Income and Assets segment
INQ	Introduction Questionnaire
INTERV	Interview Characteristics segment
IPE	Inpatient Hospital Events segment
IPQ	Inpatient Hospital Utilization Questionnaire
IRB	Institutional Review Board
IRQ	Interviewer Remarks Questionnaire
IUE	Institutional Events segment
IUQ	Institutional Utilization Questionnaire
KNQ	Beneficiary Knowledge and Information Needs Questionnaire
LDS	Limited Data Set(s)
LEP	Limited English Proficiency
LNG2WGTS	Survey File Longitudinal weights (2-year)
LNG3WGTS	Survey File Longitudinal weights (3-year)
LNG4WGTS	Survey File Longitudinal weights (4-year)
MA	Medicare Advantage
MAPLANQX	Medicare Advantage Plan Questions segment
MBQ	Mobility of Beneficiaries Questionnaire
MBSF	Master Beneficiary Summary File
MCBS	Medicare Current Beneficiary Survey
MCREPLNQ	Medicare Plan Beneficiary Knowledge segment
MDS	Minimum Data Set
MDS3	Minimum Data Set segment

MENTHLTH	Mental Health segment
MMA	Medicare Prescription Drug, Improvement, and Modernization Act of 2003
MOBILITY	Mobility segment
MPE	Medical Provider Events segment
MPQ	Medical Provider Utilization Questionnaire
NAGIDIS	Nagi Disability segment
NHATS	National Health and Aging Trends Study
NICOALCO	Nicotine and Alcohol segment
NORC	NORC at the University of Chicago
NSQ	No Statement Charge Questionnaire
OASIS	Outcome and Assessment Information segment
OEDA	Office of Enterprise Data and Analytics
OM	Other Medical Expenses
OMB	Office of Management and Budget
OMQ	Other Medical Expenses Utilization Questionnaire
OPE	Outpatient Hospital Events segment
OPQ	Outpatient Utilization Questionnaire
PAQ	Patient Activation Questionnaire
PDP	Prescription Drug Plan
PFFS	Private Fee-for-Service
PHQ	Patient Health Questionnaire depression screening tool (PHQ-9)
PII	Personally Identifiable Information
PM	Prescription Medicine
PME	Prescribed Medicine Events segment
PMQ	Prescribed Medicine Questionnaire
PNTACT	Patient Activation segment
PPIC	Patient Perceptions of Integrated Care Questionnaire
PPO	Preferred Provider Organization
PREVCARE	Preventive Care segment
PS	Person Summary segment
PSQ	Post-Statement Charge Questionnaire
PSU	Primary Sampling Units
PUF	Public Use File
PVQ	Preventive Care Questionnaire
RESTMLN	Residence Timeline segment
RH	Residence History
RIC	Record Identification Code
RUCA	Rural-Urban Commuting Area
RXMED	RX Medications segment
RXQ	Drug Coverage Questionnaire
SAS	Statistical Analysis System
SATWCARE	Satisfaction with Care segment
SCF	Sample Control File
SCQ	Satisfaction with Care Questionnaire
SNF	Skilled Nursing Facility
SS	Service Summary segment
SSN	Social Security Number
SSU	Secondary Sampling Units
STQ	Statement Cost Series Questionnaire
US	Use of Health Services Questionnaire
USCARE	Usual Source of Care segment

USDA	U.S. Department of Agriculture
USQ	Usual Source of Care Questionnaire
USU	Ultimate Sampling Unit
VISHEAR	Vision and Hearing segment
VRDC	Virtual Research Data Center
VUE	Vision Utilization Events segment

1. INTRODUCTION

Medicare is the nation's health insurance program for persons 65 years and over and for persons younger than 65 years who have a qualifying disability. The Medicare Current Beneficiary Survey (MCBS) consists of a representative national sample of the Medicare population sponsored by the Centers for Medicare & Medicaid Services (CMS).¹ The MCBS is designed to aid CMS in administering, monitoring, and evaluating Medicare programs. A leading source of information on Medicare and its impact on beneficiaries, the MCBS provides important information on beneficiaries that is not otherwise collected through operational or administrative data on the Medicare program and plays an essential role in monitoring and evaluating beneficiary health status and health care policy.

The MCBS is a continuous, multi-purpose longitudinal survey, representing the population of beneficiaries aged 65 and over and beneficiaries aged 64 and below with certain disabling conditions, residing in the United States. Interviews are usually conducted in-person using computer-assisted personal interviewing (CAPI). However, due to the coronavirus disease 2019 (COVID-19) pandemic, data collection switched to phone-only interviews in March 2020 and throughout most of 2021 with a gradual return to some in-person interviewing beginning in November 2021. MCBS data collection will continue to include both in-person and phone interviewing in the future. The MCBS has conducted continuous data collection since 1991, completing more than 1.2 million interviews provided by thousands of respondents.

The MCBS primarily focuses on economic and beneficiary topics including health care use and health care access barriers, health care expenditures, and factors that affect health care utilization. As a part of this focus, the MCBS collects a variety of information about the beneficiary, including demographic characteristics, health status and functioning, access to care, insurance coverage and out of pocket expenses, financial resources, and potential family support. The MCBS collects this information in three data collection periods, or rounds, per year. Over the years, data from the MCBS have been used to inform many advancements to the Medicare program, including the creation of new benefits such as Medicare's Part D prescription drug benefit.

Annually, CMS releases three sets of files – a Public Use File (PUF) and two Limited Data Sets (LDS). The LDS releases are referred to as the Survey File and the Cost Supplement File. The data within the LDS releases are organized into data segments. The Survey File serves as a stand-alone research file and is generally released 18 months after the close of the calendar year for that data collection cohort. Some data for the Survey File are collected into the next calendar year to provide a complete

picture of the beneficiary for analysis. For example, income and assets data are collected through the summer into the next calendar year. The Cost Supplement File is usually released approximately three months after the Survey File, when data collection has ended and final administrative and claims data for that calendar year become available. For the 2019 and 2020 data years, a total of three special PUFs were also released that provided data related to COVID-19.

Data from the MCBS have been used to inform many advancements to the Medicare program, including the creation of new benefits such as Medicare's Part D prescription drug benefit.

The Survey File contains information on beneficiaries' demographic information, health insurance coverage, self-reported health status and conditions, and responses regarding access to care and satisfaction with care. The Cost Supplement File contains a comprehensive accounting of beneficiaries' health care use, expenditures, and sources of payment. Detailed descriptions of each file, including the contents of the files, file structure,

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.

information on new variables, key recodes, and administrative sources for select variables are included in each *Data User's Guide* (i.e., Survey File and Cost Supplement File).

Each data release (LDS and PUF) includes a *Data User's Guide* that offers a publicly available, easily searchable resource for data users. Beginning with the 2015 MCBS data release, data user's guides are updated for each new data year to ensure that users have current documentation on the survey design, methods, and estimation as well as MCBS data products. In this Guide, Section 7 ("Data Products and Documentation") provides a crosswalk from historical segments to 2020 segments. Note that for analyses on beneficiaries' health care costs and utilization, data users will need to use the Cost Supplement File in conjunction with the Survey File.

Information on content and access to the MCBS PUF, including a codebook and additional documentation, can be found at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/MCBS-Public-Use-File>.

This *Data User's Guide* uses the following definitions for beneficiary and respondent:

- Beneficiary refers to a person receiving Medicare services who may or may not be participating in the MCBS.² Beneficiary may also refer to an individual selected from the MCBS sample about whom the MCBS collects information.
- Respondent is the person who answers questions for the MCBS; this person can be the beneficiary, a proxy, or a staff member located at a facility where the beneficiary resides (i.e., the Facility respondent).

For questions or suggestions on this document or other MCBS data-related questions, please email MCBS@cms.hhs.gov.

1.1 Contents of the Data User's Guide: Survey File

The content of the Survey File is governed by its central focus of serving as a unique source of information on beneficiaries' health and well-being that cannot be obtained through CMS administrative sources alone. The Survey File includes data related to Medicare beneficiaries' access to care, health status, and other information regarding beneficiaries' knowledge, attitudes towards, and satisfaction with their health care. The data release also contains demographic data and information on all types of health insurance coverage as well as Fee-for-Service claims data, which provide information on medical services and payments made by Medicare under this plan type.

This Guide contains detailed information about the Survey File and specific background information to help data users understand and analyze the data. A companion *Data User's Guide* focuses on the Cost Supplement File LDS release.³ Data users can access this Guide along with other data documentation at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Codebooks>. Please also see Appendix A: MCBS Common Definitions for descriptions of frequently used or key terms.

Here is an overview of the contents of the Data User's Guide: Survey File:

- Section 2: General Guidelines for Data Use – This section describes the main requirements for data use.
- Section 3: What's New? – This section describes the key MCBS Questionnaire changes and other highlights and enhancements for the data year.

² <https://www.cms.gov/Medicare/Medicare-General-Information/MedicareGenInfo/index.html>

³ The Cost Supplement LDS and companion *Data User's Guide* is released three to four months after the Survey File LDS.

- Sections 4-9: Overview of the MCBS – These sections provide an overview of the MBCS, including the questionnaires and the file structure. They include a technical description of the specifications and structure of the file and a brief description of the record types in this file.
 - ▶ The 2020 Data User's Guide includes a special section describing the background, methodology, sampling, questionnaires, and data products for the new COVID-19 Winter 2021 Community Supplement and Fall 2020 Facility Supplement.
- Section 10: Data File Notes – This section provides an overview of each file included in the release, a description of derived variables, and any changes from previous releases or special highlights for data users.
- Sections 11-12: References and Appendices – This section provides references and key supporting documentation, including common definitions and sample programs for data users.

2. GENERAL GUIDELINES FOR DATA USE

The LDS files contain beneficiary-level health information, but exclude specific direct identifiers as outlined in the Health Insurance Portability and Accountability Act of 1996 (HIPAA). LDS files are considered identifiable, even without the inclusion of specific direct identifiers, due to the potential capability to link other sources of data, creating an increased risk of re-identification of individuals. Since the information provided on an LDS is considered identifiable, it also remains subject to the provisions of the Privacy Act of 1974.

2.1 Data Access

All requested LDS files require a signed LDS Data Use Agreement (DUA) between CMS and the data requestor to ensure that the data remain protected against unauthorized disclosure. LDS requestors must show that their proposed use of the data meets the disclosure provisions for research. The research purpose must relate to projects that could ultimately improve the care provided to Medicare patients and policies that govern the care. This type of research includes projects related to improving the quality of life for Medicare beneficiaries, improving the administration of the Medicare program, cost and payment related projects, and the creation of analytical reports. In addition, these research projects must contribute to generalizable knowledge.

Data users can submit an LDS request via a CMS DUA tracking system, the Enterprise Privacy Policy Engine or EPPE. EPPE can be used to initiate a new LDS DUA request or to amend/update an existing LDS DUA. Questions about LDS files or the process for requesting LDS files can be sent to dataseagreement@cms.hhs.gov. For additional information on data access and the DUA process, including instructions for accessing and using EPPE to make a request, data users can visit the CMS' LDS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/Data-Disclosures-Data-Agreements/DUA - NewLDS>.

Administrative processing fees for obtaining the LDS files are \$300 for the 2020 Survey File alone, and \$600 for the 2020 Survey File with the 2020 Cost Supplement (the Cost Supplement File cannot be acquired separately). The processing of the DUA takes approximately six to eight weeks. Upon approval and payment, CMS releases the data within ten business days, depending on the size of the data request. Data users will receive the data on DVD or via the CMS Virtual Research Data Center (VRDC) for use with SAS® or other statistical software packages; each data release contains multiple files that are linkable through a key identification variable (BASEID).

Questionnaires, codebooks, and Bibliographies for each survey year are available for download on the CMS' MCBS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS>. A link to this documentation is also visible when approved data users log in to the VRDC.

2.2 Guidelines for Citation of Data Source

This document was produced, published, and disseminated at U.S. taxpayer expense. All material appearing in this document is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

Accordingly, CMS requests that data users cite CMS and the Medicare Current Beneficiary Survey as the data source in any publications or research based upon these data. Suggested citation formats are below.

Tables and Graphs: The suggested citation to appear at the bottom of all tables and graphs should read:

SOURCE: Centers for Medicare & Medicaid Services, Medicare Current Beneficiary Survey, [Data Product], [Year].

Bibliography: The suggested citation for the *2020 MCBS Data User's Guide* should read:

SOURCE: Centers for Medicare & Medicaid Services. *2020 Medicare Current Beneficiary Survey Data User's Guide: Survey File*. Retrieved from [ADD URL], [YEAR].

Survey Data: The suggested citation for the MCBS survey data files and other documentation should read:

SOURCE: Centers for Medicare & Medicaid Services. Medicare Current Beneficiary Survey, Survey File data. Baltimore, MD: U.S. Department of Health and Human Services, 2020.

SOURCE: Centers for Medicare & Medicaid Services. Medicare Current Beneficiary Survey, Cost Supplement File data. Baltimore, MD: U.S. Department of Health and Human Services, 2020.

3. WHAT'S NEW FOR DATA YEAR 2020?

Below are the highlights and updates for the 2020 data year.

3.1 Sampling

There were no changes to sampling for the 2020 data year.

3.2 Questionnaires⁴

Questionnaire content changes: There were a number of questionnaire sections that were revised in 2020. Note that variable names referenced below are the questionnaire variable names. Data users can view the questionnaire for each data year along with the questionnaire variable names referenced below and question text on the MCBS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Questionnaires>.

3.2.1 General

Community Questionnaire

The MCBS introduced several Community Questionnaire updates in 2020 to enhance survey content and data quality, improve interviewer and respondent experience, and reduce respondent burden.

These changes included the creation of two new questionnaire sections, the Cognitive Measures Questionnaire (CMQ) and the COVID-19 Questionnaire (CVQ) as well as the implementation of new items related to: oral health, vision care insurance coverage, use of the internet for health care information, and utilization of the Medicare benefit for new enrollees and annual wellness visits.

An additional enhancement to the Community Questionnaire in 2020 included a change to the administration schedule for the Mobility of Beneficiaries Questionnaire (MBQ). In Fall 2020, the administration schedule for this section was updated such that it is administered annually in the Fall round, rather than every round.

Additional details about questionnaire content and section-specific changes made in 2020 can be found in Section 3.2.2.

Facility Instrument

Starting in Fall 2020, COVID-19 items were fielded within the MCBS Facility Instrument; these items are described in detail in the COV. COVID-19 SUPPLEMENT SECTION. Additional details about questionnaire content and section-specific changes made in 2020 can be found in Section 3.2.2.

⁴ Variable names referenced in section 3.2 are questionnaire variable names. The names and question text can be viewed on the MCBS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Questionnaires>.

3.2.2 Section-Specific Changes

Community Questionnaire

The MCBS introduced several changes to the Community Questionnaire in 2020 to enhance survey content and data quality, improve interviewer and respondent experience, and reduce respondent burden.⁵

Summary of Item- and Section-Level Questionnaire Revisions

Cognitive Measures (CMQ)

- Measuring the prevalence of functional limitations in the Medicare population is important to gauging the impact of cognitive functioning on current and future health care costs. Mild cognitive impairment is linked with increased difficulties with activities of daily living (ADLs) and Instrumental Activities of Daily Living (IADLs), but the signs of cognitive impairment may be present before the respondent self-reports any functional limitations. Therefore, in Fall 2020, a new Community Questionnaire section called Cognitive Measures (CMQ) was integrated into the Community Questionnaire. The section contains four well-established cognitive measures sourced from the Health and Retirement Study (HRS):⁶
 - ▶ Backwards Counting: Respondents are asked to count backwards starting at 20 or 86 for 10 continuous numbers.
 - ▶ Date Naming: Respondents are asked to name today's date.
 - ▶ Object Naming: Respondents are asked to answer two questions: "What do you usually use to cut paper?" and "What do you call the kind of prickly plant that grows in the desert?"
 - ▶ President/Vice President Naming: Respondents are asked to name the current President/Vice President.
- The new CMQ section is administered annually in the Fall to beneficiaries in all panels who are alive and not living in a facility.

COVID-19 (CVQ)

- In Summer 2021, a subset of items from the standalone MCBS COVID-19 Community Supplement was integrated into the main MCBS Community Questionnaire. The purpose of this integration was to ensure continuity in important COVID-19 measures throughout the course of the pandemic, while minimizing disruptions to existing content.
- A new questionnaire section, COVID-19 Questionnaire (CVQ), was created to house a subset of these migrated items. Items about COVID-19 vaccination were integrated into the Community Questionnaire via CVQ in Summer 2021. The series asks about vaccine use, including how many doses were received, the date(s) of vaccination doses received, and the vaccine name (CVDVAC, VACNUM, VACDAT1, SECDOS, VACDAT2, VACNME1, and VACNME2). Respondents who report not yet receiving a vaccine dose are then asked about the likelihood of vaccine uptake and reasons for not having yet received the vaccine to date (PRSUMVAC, NOVACRSN, and NOSECVAC).

Demographics & Income (DIQ)

- In Fall 2020, the code list at D12E-WHATLANG, which collects the language other than English the beneficiary speaks at home, was expanded to include the languages that are most frequently entered at the "other, specify" variable D12E-WHTLNGOS. Accordingly, the code list at D2E-WHATLANG was updated

⁵ Questionnaire sections CVQ, KNQ, PVQ, and USQ are administered following the year of interest. Therefore, data collected for these sections in 2021 are released in the 2020 LDS. For more information on the differences between survey administration year versus data year, please refer to Tables 5.2.3 and 5.2.8.

⁶ "Health and Retirement Study Documentation/Questionnaires," Institute for Social Research, University of Michigan, 2020, <https://hrs.isr.umich.edu/documentation/questionnaires>.

to include Italian, Tagalog, Chinese (Mandarin, Cantonese, or Other), Polish, Korean, Russian, Greek, Filipino, Arabic, Japanese, Vietnamese, and Hindi.

Health Status & Functioning (HFQ)

- One new item sourced from the National Health Interview Survey (NHIS) Sample Adult Questionnaire⁷ was added in Fall 2020 to collect if the beneficiary has lost all their upper and lower natural, permanent teeth.
- In Fall 2020, the item OCCANCER was revised to align with how NHIS and the National Health and Nutrition Examination Survey (NHANES) capture cancer diagnoses. Previously, this item directed interviewers to include non-malignant tumors or growths in affirmative, "yes" responses. In Fall 2020, this item was updated to exclude benign or non-malignant tumors, which aligns with how other federal surveys collect this information. Since the universe of responses at OCCANCER was altered, item OCCANCER was renamed EVRCANCR.
- Similarly, variable OCCCODE, which captures the part of the body where the cancer reported at OCCANCER was found, was also renamed since the responses at OCCCODE will no longer include site-specific information related to benign tumors. This item was renamed EVRCODE to account for any change in the universe of respondents.
- To enable the development and dissemination of metrics on the prevalence of kidney disease, the universe of respondents at variables DIAKIDNY and YRKIDNY was expanded from only beneficiaries with diabetes to all beneficiaries. The variables were renamed OCKIDNY and YRKID to reflect the universe change.
- The universe of respondents was modified at item HFPHQ10, which captures the impact of depression on the respondent's day-to-day living as reported at the Patient Health Questionnaire-9 (PHQ-9) items HFPHQ1 through HFPHQ8. Previously, HFPHQ10 was asked of all respondents, even if they did not report being bothered by any of the problems mentioned at items HFPHQ1 through HFPHQ8. In Fall 2020, the universe was restricted such that only respondents who report being bothered by at least one of these problems are asked HFPHQ10. The variable was renamed PHQ9QS10 to reflect the change in the universe of respondents receiving the question.
- Also in Fall 2020, the existing colorectal cancer screening questions in HFQ (HFR8-COLSCOPY and HFR8A-CCOLSCOP) were modified to align with parallel items on the NHIS. This change also provides more nuanced information about the type of colorectal cancer screening received by beneficiaries. The revised items first capture whether the beneficiary had colorectal cancer screening and then, if yes, capture whether the beneficiary had a colonoscopy, sigmoidoscopy, or both tests. Due to the longitudinal nature of the MCBS, the survey will contain two versions of the colorectal cancer screening items, which will be administered once a year. Respondents participating in their Baseline interview are asked if the beneficiary has ever had colorectal screening (COLORECT) and, if yes, which test (CORECTYP); a second similar version is administered to respondents participating in their Continuing interview, which asks if the beneficiary has had colorectal screening in the past year (CCOLOREC) and again, if yes, which test (CCORECTP).
- Item HEARSCOP asks the respondent whether, before today, they had have ever heard of a sigmoidoscopy or colonoscopy exam. In Fall 2020, the universe of respondents at this item was restricted to only be administered when the respondent does not report a sigmoidoscopy or colonoscopy exam in the current round. The variable name was changed to HEARSIG, since the universe of responses changed.

⁷ "National Health Interview Survey Data, Questionnaires, and Related Documentation," National Center for Health Statistics, Centers for Disease Control and Prevention, 2022, <https://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm>.

Health Insurance (HIQ)

- In Fall 2020, a new item, PRVOPEYE, was created in order to have a comprehensive picture of out-of-pocket vision care costs. This item was modeled after existing item MHMOEYE and asks respondents about vision care coverage offered through their private insurance plan.

Beneficiary Knowledge & Information Needs (KNQ)

- Four new items sourced from the NHIS asking about use of the Internet for accessing health care related information were added to KNQ in Winter 2021. These items ask the respondent if during the prior 12 months they have used the internet to look up health information, fill a prescription, schedule an appointment with a health care provider, and communicate with a health care provider.
- In Winter 2021, the universe of respondents at item KVSITWEB was expanded to all respondents, regardless of whether they report use of the internet. The variable was renamed KVSTSITE due to the change in the universe of respondents receiving the item.

Mobility of Beneficiaries (MBQ)

- In Fall 2020, the administration schedule for the Mobility of Beneficiaries Questionnaire (MBQ) was updated from all rounds to annually, in the Fall round. To accommodate the annual administration schedule of MBQ, the reference period at all six questions was updated from the date of the previous interview (REFERENCE DATE) to that of a year ago (TODAY'S DATE - 12 MONTHS, MONTH AND YEAR).

Preventive Care (PVQ)

- A new item, PV8A-WELLNESS, was added to PVQ in Fall 2020 to monitor use of the Medicare benefit for new enrollees and annual wellness visits.
- Two new items sourced from the NHANES Oral Health Questionnaire were added to PVQ in Fall 2020.⁸ These items ask if the beneficiary has ever received an oral cancer exam (BASKORAL and CASKORAL) and, if so, when their most recent exam occurred (OCCEXAM). Due to the longitudinal nature of the MCBS, the PVQ contains two versions of the oral cancer exam items. When administered for the first time, Baseline and Continuing respondents are asked if the beneficiary has ever had an oral cancer exam (BASKORAL). Thereafter, BASKORAL is asked of Baseline respondents and a second similar version is administered to respondents participating in their Continuing interviews, which asks if the beneficiary has had an oral cancer exam in the past year (CASKORAL).
- In Winter 2021, items FLUSITE and VACPAID were added back into the questionnaire. These items were previously removed from the instrument in Winter 2016 when the existing flu series was updated to align with a subset of items from the Centers for Disease Control and Prevention's (CDC) National Flu Survey (NFS).
- Three updates were made in Winter 2021 in the PVQ section to align with the CDC's National Immunization Survey.
 - ▶ The code list at PVF2-FLUCODE, which collects why the respondent did not get a seasonal flu vaccine, was updated.
 - ▶ Item PVF4-NOVACINE was removed from the survey. This question asked if the reason that the beneficiary did not get a seasonal flu vaccination since July 1 was because the vaccine was in short supply or unavailable.
 - ▶ Finally, the universe of respondents who receives PVF5-VACSUPPLY, which asks if the beneficiary had any trouble getting a seasonal flu shot because the vaccine was in short supply or unavailable, was

⁸ "National Health and Nutrition Examination Survey Questionnaires, Datasets, and Related Documentation," National Center for Health Statistics, Centers for Disease Control and Prevention, 2022, <https://wwwn.cdc.gov/nchs/nhanes/Default.aspx>.

updated so that it is asked of everyone, except those who report that they did not receive the vaccine because it was unavailable. The variable was renamed VACAVAIL to reflect the change in the universe of respondents.

Usual Source of Care (USQ)

- The universe of respondents at TESTRSLT, which asks how often the beneficiary's specialist knows important test results from the beneficiary's other providers, was expanded to be administered to respondents who saw a specialist. The variable name at TESTRSLT was also updated to KNOWRSLT to accommodate this new universe of respondents.
- The code lists at LANGASST and LANGHELP, which ask the respondent who helps them communicate with their provider, were expanded to accommodate respondents who do not receive nor need help communicating.

Facility Instrument

There were several changes to the Facility Instrument in 2020, including updates to streamline the instrument, revise response options, and modify programming logic.

Facility Questionnaire (FQ)

- In Fall 2020, several changes were made to the Facility Questionnaire (FQ) section to align the Baseline and Continuing pathways in the collection of the total number of long-term care beds. Previously, within the Baseline FQ pathway the total number of long-term beds in the facility was calculated using responses to multiple questions (FA12-BEDSNUM, FA24-ANYBEDUL, and FA25-ULBEDS). By contrast, within the Continuing FQ pathway, the total number of long-term care beds in the facility was collected from a single question (FB18-TOTELBED). Several changes were made to align these pathways including:
 - ▶ The addition of one item FA12A-TOTLBEDA to the Baseline FQ pathway to collect the number of long-term care beds, which mirrors the existing item FB18-TOTELBED in the Continuing FQ pathway.
 - ▶ Three questions in the Baseline FQ pathway that ask about the number and types of beds in the facility (FA12-BEDSNUM, FA24-ANYBEDUL, and FA25-ULBEDS) were removed from the questionnaire. The intent and calculations behind these variables were previously used to determine the total number of long-term care beds in the Baseline FQ pathway but will now be captured in new item FA12A-TOTLBEDA.
 - ▶ On-screen interviewer help text was added to instruct interviewers to include certified ICF/IID (Intermediate Care Facilities for Individuals with Intellectual Disabilities) beds in the total count of long-term care beds in both the Baseline and Continuing FQ pathway (FA12A-TOTLBEDA and FB18-TOTELBED).
- Routing was updated throughout the FQ section to accommodate the addition and removal of the items in the Baseline FQ pathway.

3.3 Data Collection

Mode change: Due to the COVID-19 pandemic, data collection switched to phone-only interviews in March 2020 and throughout most of 2021 with a gradual return to some in-person interviewing beginning in November 2021. MCBS data collection will continue to include both in-person and phone interviewing in the future to reduce costs and continue addressing pandemic safety protocols. The respondent burden is the same regardless of mode of interview. Mode effects are discussed in further detail in the *2020 MCBS Methodology Report*.

3.4 Documentation

This 2020 *Data User's Guide* was enhanced with the following content:

- The COVID-19 Supplements section was updated to describe the COVID-19 Winter 2021 Community Supplement and COVID-19 Fall 2020 Facility Supplement.

3.5 Data Processing

New and revised content:

For the 2020 Survey File LDS, the MCBS created the following new segments:

- COGNFUNC contains the CMQ data collected in the fall Community Questionnaire
- COVIDVAC contains COVID-19 vaccination data collected in the Community Questionnaire
- COVIDWIN contains information on beneficiaries' experiences with COVID-19 from the COVID-19 Winter 2021 Community Supplement
- FBENCVFL contains beneficiary-level information from the COVID-19 Fall 2020 Facility Supplement
- FFACCVFL contains facility-level information from the COVID-19 Fall 2020 Facility Supplement

The 2020 questionnaire changes resulted in the following variables added to the annual releases:

Exhibit 3.5.1: 2020 MCBS Content Additions

Location	Questionnaire Section	Variable	Description
CHRNCOND	HFQ	OCKIDNY	CHRONIC KIDNEY DISEASE (EVER)
COGNFUNC	CMQ	CACTUS	SP IDENTIFIES CACTUS
COGNFUNC	CMQ	CNTDWN	SP COUNT DOWN FROM 20
COGNFUNC	CMQ	CNTDWNST	SP COUNT DOWN FROM 20- SECOND TRY
COGNFUNC	CMQ	POTUS	SP IDENTIFIES PRESIDENT
COGNFUNC	CMQ	SCISSOR	SP IDENTIFIES SCISSORS
COGNFUNC	CMQ	TDYMTH	SP PROVIDES CORRECT MONTH
COGNFUNC	CMQ	TDYDAY	SP PROVIDES CORRECT DAY OF MONTH
COGNFUNC	CMQ	TDYYEAR	SP PROVIDES CORRECT YEAR
COGNFUNC	CMQ	TDYDOW	SP PROVIDES CORRECT DAY OF WEEK
COGNFUNC	CMQ	VPOTUS	SP IDENTIFIES VICE PRESIDENT
COVIDVAC	CVQ	ONEDOSE	HAS SP GOTTEN AT LEAST ONE CORONAVIRUS VACCINATION
COVIDVAC	CVQ	TWODOSE	HAS SP GOTTEN AT LEAST TWO CORONAVIRUS VACCINATION
COVIDVAC	CVQ	VACMON1	WHAT MONTH DID SP GET FIRST DOSE OF CORONAVIRUS VACCINATION

Location	Questionnaire Section	Variable	Description
COVIDVAC	CVQ	VACMON2	WHAT MONTH DID SP GET SECOND DOSE OF CORONAVIRUS VACCINATION
COVIDVAC	CVQ	DOSE1TYP	WHICH CORONAVIRUS VACCINE DID RESPONDENT GET FOR FIRST DOSE
COVIDVAC	CVQ	DOSE2TYP	WHICH CORONAVIRUS VACCINE DID RESPONDENT GET FOR SECOND DOSE
COVIDVAC	CVQ	VACYR1	WHAT YEAR DID SP GET FIRST DOSE OF CORONAVIRUS VACCINATION
COVIDVAC	CVQ	VACYR2	WHAT YEAR DID SP GET SECOND DOSE OF CORONAVIRUS VACCINATION
COVIDVAC	CVQ	NOSICK	REASON FOR NO CORONOVIRUS VACCINE: ALREADY HAD CORONAVIRUS
COVIDVAC	CVQ	NONEED	REASON FOR NO CORONOVIRUS VACCINE: NOT KNOW NEEDED
COVIDVAC	CVQ	NOCAUSE	REASON FOR NO CORONOVIRUS VACCINE: COULD CAUSE CORONAVIRUS
COVIDVAC	CVQ	NOSIDE	REASON FOR NO CORONOVIRUS VACCINE: SIDE EFFECTS
COVIDVAC	CVQ	NOPREV	REASON FOR NO CORONOVIRUS VACCINE: WOULD NOT PREVENT CORONAVIRUS
COVIDVAC	CVQ	NOSERIOUS	REASON FOR NO CORONOVIRUS VACCINE: CORONAVIRUS NOT SERIOUS
COVIDVAC	CVQ	NOREC	REASON FOR NO CORONOVIRUS VACCINE: DR DID NOT RECOMMEND
COVIDVAC	CVQ	NOGET	REASON FOR NO CORONOVIRUS VACCINE: DR RECOMMENDED AGAINST
COVIDVAC	CVQ	NOLIKE	REASON FOR NO CORONOVIRUS VACCINE: DISLIKE SHOTS/NEEDLES
COVIDVAC	CVQ	NOACCESS	REASON FOR NO CORONOVIRUS VACCINE: COULD NOT GET TO SITE
COVIDVAC	CVQ	NOFIND	REASON FOR NO CORONOVIRUS VACCINE: COULD NOT FIND SITE
COVIDVAC	CVQ	NOFORGOT	REASON FOR NO CORONOVIRUS VACCINE: FORGOT
COVIDVAC	CVQ	NOAFFORD	REASON FOR NO CORONOVIRUS VACCINE: NOT AFFORD
COVIDVAC	CVQ	NOBEFORE	REASON FOR NO CORONOVIRUS VACCINE: HAD VACCINE BEFORE
COVIDVAC	CVQ	NOAVAIL	REASON FOR NO CORONOVIRUS VACCINE: NOT AVAILABLE
COVIDVAC	CVQ	NOWORTH	REASON FOR NO CORONOVIRUS VACCINE: NOT WORTH MONEY

Location	Questionnaire Section	Variable	Description
COVIDVAC	CVQ	NOTIME	REASON FOR NO CORONAVIRUS VACCINE: DID NOT HAVE TIME
COVIDVAC	CVQ	NORISK	REASON FOR NO CORONAVIRUS VACCINE: NOT AT HIGH RISK
COVIDVAC	CVQ	NOHEALTH	REASON FOR NO CORONAVIRUS VACCINE: MEDICAL REASON/ALLERGY
COVIDVAC	CVQ	NOTRUST	REASON FOR NO CORONAVIRUS VACCINE: DO NOT TRUST GOVERNMENT
COVIDVAC	CVQ	NOAPPT	REASON FOR NO CORONAVIRUS VACCINE: APPOINTMENT SCHEDULED
COVIDVAC	CVQ	NOOTHER	REASON FOR NO CORONAVIRUS VACCINE: OTHER
COVIDVAC	CVQ		REASON FOR NO CORONAVIRUS VACCINE:
COVIDWIN	COVID-19 Supplement	CLSMENT	DR RESCHEDULED DUE TO OFFICE CLOSED- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	DIRMENT	WHOSE DECISION TO NOT GET CARE- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	HOUMENT	SP RESCHEDULED NOT LEAVE HOME- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	OMDMENT	DR RESCHEDULED DUE TO OTHER REASON- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	OYRMENT	SP RESCHEDULED DUE TO OTHER REASON- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	PRIMENT	DR RESCHEDULED DUE TO OTHER PRIORITY- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	REDMENT	DR RESCHEDULED DUE TO REDUCED APPOINTMENTS- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	RSKMMENT	SP RESCHEDULED DUE TO RISK- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	RSNMENT	REASON TO RESCHEDULE- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	TRAMENT	SP RESCHEDULED NO TRANSPORTATION- MENTAL HEALTH CARE
COVIDWIN	COVID-19 Supplement	TYPMENT	UNABLE TO GET CARE- MENTAL HEALTH
COVIDWIN	COVID-19 Supplement	VACMON1	WHAT MONTH DID SP GET FIRST DOSE OF CORONAVIRUS VACCINATION
COVIDWIN	COVID-19 Supplement	VACMON2	WHAT MONTH DID SP GET SECOND DOSE OF CORONAVIRUS VACCINATION
COVIDWIN	COVID-19 Supplement	VACNUM	HOW MANY CORONAVIRUS VACCINATIONS HAS SP HAD

Location	Questionnaire Section	Variable	Description
COVIDWIN	COVID-19 Supplement	VACYR1	WHAT YEAR DID SP GET FIRST DOSE OF CORONAVIRUS VACCINATION
COVIDWIN	COVID-19 Supplement	VACYR2	WHAT YEAR DID SP GET SECOND DOSE OF CORONAVIRUS VACCINATION
DEMO	DIQ/IAQ	IPR	INCOME POVERTY RATIO MEDICARE THRESHOLD (CONTINUOUS)
DIABETES	HFQ	DIAFTEVR	EVER HAD PROBLEMS WIITH FEET DUE TO DIABETES
FBENCVFL	CV	ANTICVD	HAS SP RECEIVED ANTIBODY TEST TO SEE IF THEY EVER HAD CORONAVIRUS
FBENCVFL	CV	ANTIRES	RESULTS OF ANTIBODY TEST TO SEE IF THEY EVER HAD CORONAVIRUS
FBENCVFL	CV	CVDTEST	HAS SP BEEN TESTED FOR CORONAVIRUS TO SEE IF INFECTED AT TIME OF TEST
FBENCVFL	CV	MEDICARE	HAS SP RECEIVED MEDICAL CARE FOR CORONAVIRUS
FBENCVFL	CV	PROVEMGN	SP RECEIVED CARE FOR CORONAVIRUS: EMERGENCY
FBENCVFL	CV	PROVNURS	SP RECEIVED CARE FOR CORONAVIRUS: NURSES
FBENCVFL	CV	PROVNUSA	SP RECEIVED CARE FOR CORONAVIRUS: NURSING ASSTS
FBENCVFL	CV	PROVPHAR	SP RECEIVED CARE FOR CORONAVIRUS: PHARMACISTS
FBENCVFL	CV	PROVPHLE	SP RECEIVED CARE FOR CORONAVIRUS: PHLEBOTOMISTS
FBENCVFL	CV	PROVPHYS	SP RECEIVED CARE FOR CORONAVIRUS: PHYSICIANS
FBENCVFL	CV	PROVTECH	SP RECEIVED CARE FOR CORONAVIRUS: TECHNICIANS
FBENCVFL	CV	PROVTHER	SP RECEIVED CARE FOR CORONAVIRUS: THERAPISTS
FBENCVFL	CV	PROVOTHR	SP RECEIVED CARE FOR CORONAVIRUS: OTHER
FBENCVFL	CV	TESTRES	RESULTS OF CORONAVIRUS TEST TO CHECK FOR INFECTION AT TIME OF TEST
FFACCVFL	FQ	ACTINFAC	FACILITY USUALLY HAS SOCIAL ACTIVITIES WITHIN FACILITY
FFACCVFL	FQ	ACTOUTFC	FACILITY USUALLY HAS SOCIAL ACTIVITIES OUTSIDE OF FACILITY
FFACCVFL	FQ	ACTSUSP	ARE SOCIAL ACTIVITIES SUSPENDED DUE TO CORONAVIRUS

Location	Questionnaire Section	Variable	Description
FFACCVFL	FQ	ACTTELE	DID SOCIAL ACTIVITIES SHIFT TO AN ONLINE PLATFORM DUE TO CORONAVIRUS
FFACCVFL	FQ	ALTPROV1	ADDITIONAL HEALTH CARE PERSONNEL RECRUITED TO WORK AT FACILITY DUE TO CORONAVIRUS
FFACCVFL	FQ	ALTEMGN	ADDITIONAL HEALTH CARE PERSONNEL- EMERGENCY SERVICES
FFACCVFL	FQ	ALTNURS	ADDITIONAL HEALTH CARE PERSONNEL- NURSES
FFACCVFL	FQ	ALTNUSA	ADDITIONAL HEALTH CARE PERSONNEL- NURSING ASSISTANTS
FFACCVFL	FQ	ALTNURP	ADDITIONAL HEALTH CARE PERSONNEL- NURSE PRACTITIONERS
FFACCVFL	FQ	ALTPHAR	ADDITIONAL HEALTH CARE PERSONNEL- PHARMACISTS
FFACCVFL	FQ	ALTPHLE	ADDITIONAL HEALTH CARE PERSONNEL- PHLEBOTOMISTS
FFACCVFL	FQ	ALTPHYS	ADDITIONAL HEALTH CARE PERSONNEL- PHYSICIANS
FFACCVFL	FQ	ALTTECH	ADDITIONAL HEALTH CARE PERSONNEL- THERAPISTS
FFACCVFL	FQ	ALTNATG	ADDITIONAL HEALTH CARE PERSONNEL- NATIONAL GUARD
FFACCVFL	FQ	ALTOTHR	ADDITIONAL HEALTH CARE PERSONNEL- OTHER
FFACCVFL	FQ	DENTSUS	IN-PERSON SERVICES SUSPENDED DUE TO CORONAVIRUS- DENTAL CARE
FFACCVFL	FQ	EDACTFAC	DOES FACILITY EDUCATE RESIDENTS ABOUT ACTIONS FACILITY TAKING TO KEEP THEM SAFE
FFACCVFL	FQ	EDACTRES	DOES FACILITY EDUCATE RESIDENTS ABOUT ACTIONS TO PROTECT THEMSELVES
FFACCVFL	FQ	EDHABSUS	IN-PERSON SERVICES SUSPENDED DUE TO CORONAVIRUS- EDUCATIONAL SERVICES
FFACCVFL	FQ	EDSYMTRM	DOES FACILITY EDUCATE RESIDENTS ABOUT COVID-19 SYMPTOMS AND TRANSMISSION
FFACCVFL	FQ	FACLABCS	AT LEAST ONE LABORATORY CONFIRMED COVID-19 CASE IN FACILITY
FFACCVFL	FQ	FACMHAT	DOES FACILITY OFFER ART THERAPY
FFACCVFL	FQ	FACMHGTS	DOES FACILITY OFFER GROUP THERAPY SESSIONS
FFACCVFL	FQ	FACMHITS	DOES FACILITY OFFER INDIVIDUAL THERAPY SESSIONS
FFACCVFL	FQ	FACMHOTH	DOES FACILITY OFFER OTHER
FFACCVFL	FQ	FACMHSG	DOES FACILITY OFFER SUPPORT GROUPS

Location	Questionnaire Section	Variable	Description
FFACCVFL	FQ	HCPCDES	DOES FACILITY MONITOR EMPLOYEE ADHERENCE TO CLEANING SURFACES
FFACCVFL	FQ	HCPCOVVC	FACILITY POLICY FOR HEALTH CARE PERSONNEL- CORONAVIRUS VACCINE
FFACCVFL	FQ	HCPFLUVC	FACILITY POLICY FOR HEALTH CARE PERSONNEL- FLU SHOT
FFACCVFL	FQ	HCPHH	DOES FACILITY MONITOR EMPLOYEE ADHERENCE TO HAND HYGIENE
FFACCVFL	FQ	HCPPPE	DOES FACILITY MONITOR EMPLOYEE ADHERENCE TO USE OF PPE
FFACCVFL	FQ	INDRSUS	IN-PERSON PRIMARY CARE VISITS INSIDE OF FACILITY SUSPENDED DUE TO CORONAVIRUS
FFACCVFL	FQ	INSDSUS	IN-PERSON SPECIALTY CARE VISITS INSIDE OF FACILITY SUSPENDED DUE TO CORONAVIRUS
FFACCVFL	FQ	MENTHSUS	IN-PERSON SERVICES SUSPENDED DUE TO CORONAVIRUS- MENTAL HEALTH
FFACCVFL	FQ	MTELESER	DID SUPPORT SERVICES SHIFT TO AN ONLINE PLATFORM DUE TO CORONAVIRUS
FFACCVFL	FQ	OTHSUS	IN-PERSON SERVICES SUSPENDED DUE TO CORONAVIRUS- OTHER
FFACCVFL	FQ	OUTDRSUS	IN-PERSON PRIMARY CARE VISITS OUTSIDE OF FACILITY SUSPENDED DUE TO CORONAVIRUS
FFACCVFL	FQ	OUTSDSUS	IN-PERSON SPECIALTY CARE VISITS OUTSIDE OF FACILITY SUSPENDED DUE TO CORONAVIRUS
FFACCVFL	FQ	PODSUS	IN-PERSON SERVICES SUSPENDED DUE TO CORONAVIRUS- PODIATRIST
FFACCVFL	FQ	PREVIS	DOES FACILITY ALLOW VISITATIONS
FFACCVFL	FQ	PREVIS2	DOES FACILITY PROVIDE ALTERNATIVE METHODS FOR IN-PERSON VISITS
FFACCVFL	FQ	RESCOVVC	FACILITY POLICY FOR RESIDENTS- CORONAVIRUS VACCINE
FFACCVFL	FQ	RESFLUVC	FACILITY POLICY FOR RESIDENTS- FLU SHOT
FFACCVFL	FQ	SUSINTRO	IN-PERSON SERVICES SUSPENDED DUE TO CORONAVIRUS
FFACCVFL	FQ	SUSPCOV	ARE SUPPORT SERVICES SUSPENDED DUE TO CORONAVIRUS
FFACCVFL	FQ	TELCOVID	ARE TELEHEALTH SERVICES NOW OFFERED BY FACILITY BECAUSE OF CORONAVIRUS
FFACCVFL	FQ	TELDENT	SERVICES OFFERED THROUGH TELEHEALTH BEFORE CORONAVIRUS- DENTAL CARE

Location	Questionnaire Section	Variable	Description
FFACCVFL	FQ	TELDENTC	SERVICES NOW OFFERED THROUGH TELEHEALTH DUE TO CORONAVIRUS- DENTAL CARE
FFACCVFL	FQ	TELEDHAB	SERVICES OFFERED THROUGH TELEHEALTH BEFORE CORONAVIRUS- EDUCATIONAL SERVICES
FFACCVFL	FQ	TELEDHBC	SERVICES NOW OFFERED THROUGH TELEHEALTH DUE TO CORONAVIRUS- EDUCATIONAL SERVICES
FFACCVFL	FQ	TELEMDS	IS FACILITY CONDUCTING ANY PART OF MDS VIA VIDEO OR VOICE CALLS
FFACCVFL	FQ	TELINDR	DID DOCTOR VISITS INSIDE FACILITY OFFER TELEHEALTH BEFORE CORONAVIRUS
FFACCVFL	FQ	TELINDRC	DO DOCTORS INSIDE FACILITY NOW OFFER TELEHEALTH DUE TO CORONAVIRUS
FFACCVFL	FQ	TELINTRO	DID FACILITY OFFER TELEHEALTH SERVICES BEFORE CORONAVIRUS
FFACCVFL	FQ	TELMH	SERVICES OFFERED THROUGH TELEHEALTH BEFORE CORONAVIRUS- MENTAL HEALTH
FFACCVFL	FQ	TELMHC	SERVICES NOW OFFERED THROUGH TELEHEALTH DUE TO CORONAVIRUS- MENTAL HEALTH
FFACCVFL	FQ	TELOTH	SERVICES OFFERED THROUGH TELEHEALTH BEFORE CORONAVIRUS- OTHER
FFACCVFL	FQ	TELOTHC	SERVICES NOW OFFERED THROUGH TELEHEALTH DUE TO CORONAVIRUS- OTHER
FFACCVFL	FQ	TELOUTDR	DID DOCTOR VISITS OUTSIDE FACILITY OFFER TELEHEALTH BEFORE CORONAVIRUS
FFACCVFL	FQ	TELPOD	SERVICES OFFERED THROUGH TELEHEALTH BEFORE CORONAVIRUS- PODIATRIST
FFACCVFL	FQ	TELPODC	SERVICES NOW OFFERED THROUGH TELEHEALTH DUE TO CORONAVIRUS- PODIATRIST
FFACCVFL	FQ	TLOUTDRC	DO DOCTORS OUTSIDE FACILITY NOW OFFER TELEHEALTH DUE TO CORONAVIRUS
FFACCVFL	FQ	VISMASK	VISITORS TO FACILITY MUST WEAR A MASK
FFACCVFL	FQ	VISRROOM	VISITORS TO FACILITY MUST ONLY VISIT RESIDENT'S ROOM
FFACCVFL	FQ	VISWSHH	VISITORS TO FACILITY MUST FREQUENTLY WASH HANDS
HITLINE	HIQ	S_VISN	SP HAVE OPTICAL COVERAGE THRU PRIVATE PLAN
MCREPLNQ	KNQ	KCOMAPPO	INTERNET USAGE- SCHEDULE DOCTOR APPOINTMENT
MCREPLNQ	KNQ	KCOMCOMM	INTERNET USAGE- COMMUNICATE WITH DOCTOR
MCREPLNQ	KNQ	KCOMINTE	INTERNET USAGE- LOOK UP HEALTH INFORMATION
MCREPLNQ	KNQ	KCOMPRES	INTERNET USAGE- FILL A PRESCRIPTION

Location	Questionnaire Section	Variable	Description
MCREPLNQ	KNQ	KVSTSITE	HAS SP VISITED WEBSITE FOR MEDICARE INFO
NAGIDIS	HFQ	DISTEETH	SP LOST ALL PERMANENT TEETH
PREVCARE	HFQ	CCOLOREC	SP HAD TESTS FOR COLON CANCER SINCE LAST FALL ROUND
PREVCARE	HFQ	CCORECTP	SP HAD COLONOSCOPY OR SIGMOIDOSCOPY SINCE LAST FALL ROUND
PREVCARE	HFQ	COLORECT	SP HAD TESTS FOR COLON CANCER EVER
PREVCARE	HFQ	CORECTYP	SP HAD COLONOSCOPY OR SIGMOIDOSCOPY EVER
PREVCARE	HFQ	HEARSIG	HEARD OF COLONOSCOPY BEFORE TODAY
PREVCARE	PVQ	CTSTHIV	BEEN TESTED FOR HIV SINCE LAST FALL ROUND
PREVCARE	PVQ	BASKORAL	HAS SP EVER HAD ORAL CANCER EXAM
PREVCARE	PVQ	OCCEXAM	WHEN WAS SP'S MOST RECENT ORAL OR MOUTH CANCER EXAM
PREVCARE	PVQ	VACAVAIL	HARD TO GET SHOT BECAUSE SHORT SUPPLY
PREVCARE	PVQ	WELLNESS	HAS SP HAD ANNUAL WELLNESS VISIT SINCE LAST FALL ROUND
USCARE	USQ	KNOWRSLT	HOW OFTEN SPECIALISTS KNOW SP TEST RESULTS
USCARE	USQ	USPRNONE	HELPS COMMUNICATE W/ USUAL PROVIDER
USCARE	USQ	MEDPVNO	HELPS COMMUNICATE WITH MEDICAL PROVIDER

Weighting:

New weights are provided with the release of the MCBS COVID-19 Winter 2021 Community Supplement segment in the 2020 Survey File LDS (COVIDWIN). Three sets of full-sample and replicate cross-sectional weights were derived from nonresponse-adjusted weights among the beneficiaries sampled for the COVID-19 Winter 2021 Community Supplement. These weights are intended for use in cross-sectional statistics. For more information, please see section COV. and Exhibit 9.4.1. New weights are also provided with the release of Summer 2021 CVQ data in the 2020 Survey File LDS (COVIDVAC). Three sets of full-sample and replicate cross-sectional weights were derived from nonresponse-adjusted weights.

Imputation:

The imputation of missing costs and payments was improved for MA beneficiaries in the 2020 LDS. Adjustments based on MA encounter data, which were first applied for 2019, now better reflect beneficiary age and general health-related differences.

In addition, imputation for medical provider events now account for the presence of telehealth visits.

3.6 COVID-19 Supplements

In response to the emergence of the novel (new) coronavirus in the United States in 2020, the MCBS fielded topic-specific supplemental rapid response surveys and released additional topic-specific LDS segments. Data from the COVID-19 Winter 2021 Community Supplement and COVID-19 Fall 2020 Facility Supplement are included in the 2020 Survey File.

A special section of the *Survey File Data User's Guide* provides detailed information on item development, questionnaires, sampling, and data products (see COV. COVID-19 SUPPLEMENT SECTION). The *2020 MCBS Methodology Report* includes additional detail related to respondent materials, data collection and training, and case management.

3.6.1 COVID-19 Community Supplement

General

The reference period throughout the survey was updated from "Since July 1, 2020..." to "Since November 1, 2020..."

Section-Specific Changes

Forgone Health Care as a Result of the Pandemic

The series on forgone care was updated to include "Mental Health Care" at NOCARTY2 as a type of care that beneficiaries may have deferred as a result of the pandemic.

COVID-19 Vaccination

Working with the CDC, questions about presumptive and actual COVID-19 vaccine uptake were planned for the MCBS COVID-19 Fall 2020 Community Supplement. However, vaccines were not available yet throughout nearly all of the Fall 2020 data collection period, so the questions about vaccine uptake were not administered. The original intent was that the items on presumptive vaccine uptake (GETVAC and NOGETVAC) would be asked in lieu of a publically available vaccine whereas the series on vaccine utilization (CVDVAC, VACNUM, VACDAT1, VACDAT2, NOVACRSN) would be asked once a vaccine was released for public use.

The U.S. Food and Drug Administration (FDA) issued an Emergency Use Authorization (EUA) for the use of a COVID-19 vaccine in December 2020.⁹ Given that the U.S. supply of COVID-19 vaccines was limited at first, the CDC recommended a phased distribution approach based on age, place of residence, employment, and risk factors.¹⁰ For this reason, the MCBS COVID-19 Winter 2021 Community Supplement asked about both vaccination utilization (CVDVAC) and presumptive vaccine uptake (PRSUMVAC).

The vaccination series underwent minor question text and help text revisions to reflect the dosage requirements available to the public. In addition, NOVCRNOS was added to the series to collect other, specify responses to NOVACRSN.

3.6.2 COVID-19 Facility Supplement

The MCBS COVID-19 Facility Supplement was administered for the first time starting in Fall 2020. The COVID-19 Fall 2020 Facility Supplement included several facility-level measures to assess key ways in which COVID-19 impacted facilities that serve Medicare beneficiaries. There were also several beneficiary-level topics, similar to the MCBS COVID-19 Community Supplement. The MCBS COVID-19 Fall 2020 Facility Supplement was administered as part of the Fall 2020 Facility Instrument. Facility data collection was conducted with facility staff knowledgeable about the facility's protocols and the beneficiary's health status.

⁹ "FDA Takes Key Action to Fight Against COVID-19 by Issuing Emergency Use Authorization for First COVID-19 Vaccine," U.S. Food and Drug Administration, December 11, 2020, <https://www.fda.gov/news-events/press-announcements/fda-takes-key-action-fight-against-covid-19-issuing-emergency-use-authorization-first-covid-19>.

¹⁰ "Vaccine Rollout Recommendations," Centers for Disease Control and Prevention, February 3, 2021, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations.html>.

4. SURVEY OVERVIEW

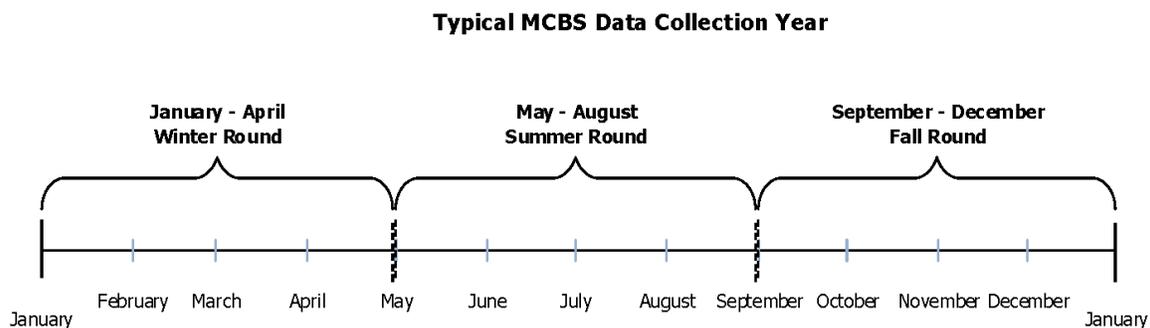
4.1 Design of MCBS

In its initial design, the MCBS was to serve as a traditional longitudinal survey of the Medicare population. There was no predetermined limit to the duration of time a beneficiary, once selected to participate, was to remain in the sample. However, this was later determined to be impractical, and beginning in 1994, participation of beneficiaries in the MCBS was limited to no more than four years.

Although limited to a four-year period, MCBS data collection is continual throughout the year with three distinct seasons (i.e., rounds) of data collection per year. In general, the three rounds are: winter (January through April); summer (May through August); and fall (September through December). The primary reason for the round by round configuration (rather than interviewing on an annual basis) is to have shorter periods of recall during the year in order to capture more complete health care costs and utilization from beneficiaries.

The 2020 MCBS data releases reflect data collected from January 2020 through December 2020, as well as data on income and assets, access to care, usual source of care, preventive care, COVID-19, beneficiary knowledge and information needs, drug coverage, and chronic pain information collected through the Winter and Summer 2021 rounds.¹¹ Exhibit 4.1.1 depicts an MCBS data collection year and the typical span of the rounds.

Exhibit 4.1.1: Typical MCBS Data Collection Year



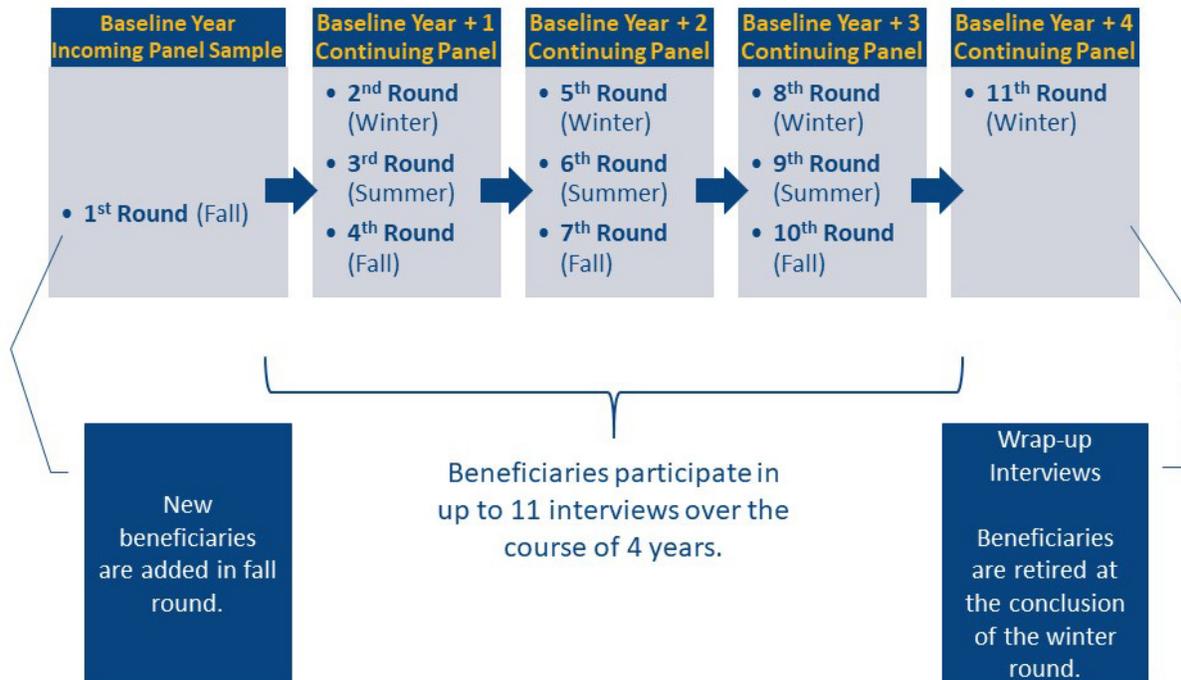
Initial interviews of newly-selected beneficiaries take place in the fall round. Since 2016, the fall round begins early in late July or early August to allow more time to conduct outreach and collect information from the new survey respondents who are selected to participate in the MCBS. That is, the early start of the fall round overlaps with the final weeks of data collection for the summer round. These small overlap periods as one round ends and another begins are acceptable design features of the survey.

Subsequent rounds, which occur every four months, involve re-interviewing of the same beneficiary (or appropriate proxy respondents or Facility staff) until they have completed four years of participation (up to 11 interviews in total). Interviews are conducted regardless of whether the beneficiary resides at home or in a long-term care facility, using a questionnaire version appropriate to the setting. Exhibit 4.1.2 depicts the timeline of participation for beneficiaries selected to be in the MCBS sample and Appendix B provides a list of all rounds by data collection year. The MCBS does not currently administer physical exams. However,

¹¹ Due to the nature of some survey items, LDS data for each data year may include data pulled forward from a prior data collection year and/or data added from a future data collection year due to the specific reference period. Please refer to Exhibits 5.2.3 and 5.2.8 for more information.

beginning in 2022, the MCBS will implement new physical measures with additions to the Survey File LDS in the future.

Exhibit 4.1.2: MCBS Beneficiary Participation Timeline



4.2 Sample Design

The MCBS uses a rotating panel sample design, covering the population of Medicare beneficiaries residing in the continental U.S. (48 states and the District of Columbia) for the survey year.¹² Each MCBS panel, an annual statistical sample of all Medicare enrollees, is interviewed up to three times a year over a four-year period, creating a continuous profile of selected beneficiaries' health care experiences.¹³ One panel is retired at the conclusion of each winter round, and a new panel is selected to replace it each fall round (see Exhibit 4.2). The size of the new panel is designed to provide a stable number of beneficiaries across all panels participating in the survey annually. Please see Section 6: Sampling for more information on the sample design selection.

¹² Alaska and Hawaii are not included among the states from which the sample is selected due to the high cost of data collection in those areas; however, they are included in control totals for weighting purposes. Beginning in 2017, sampling from Puerto Rico was discontinued. Beginning in 2018, all data collection in Puerto Rico was discontinued.

¹³ The three rounds per year are referred to seasonally. Respondents are interviewed in the winter round, the summer round, and the fall round each year.

Exhibit 4.2: 2016-2020 MCBS Rotating Panel Design

Data Collection Schedule			Panel				
Calendar Year	Season	Round#	2016	2017	2018	2019	2020
2016	Winter	74					
	Summer	75					
	Fall	76					
2017	Winter	77					
	Summer	78					
	Fall	79					
2018	Winter	80					
	Summer	81					
	Fall	82					
2019	Winter	83					
	Summer	84					
	Fall	85					
2020	Winter	86					
	Summer	87					
	Fall	88					

4.3 Case Types

MCBS respondents are classified by their phase of participation (i.e., Incoming or Continuing) and interview participation (i.e., Community or Facility), which is determined by residence status. These case types are described below.

4.3.1 Incoming and Continuing Cases

Every fall, a new panel of sampled beneficiaries is added to the total sample to replace the panel of beneficiaries completing a final interview and exiting the MCBS in the prior winter round. Newly selected beneficiaries who begin in the fall round are referred to as Incoming Panel cases. After the initial interview, they are referred to as Continuing cases.

4.3.2 Community Interviews and Facility Interviews

Approximately 90 percent of the interviews are held with beneficiaries or proxies who are living in their own residence or with family or friends. These interviews are called Community interviews; the remaining 10 percent of the interviews are for beneficiaries living in a facility. Over the course of a four-year period, it is not uncommon for beneficiaries to enter long-term care facilities (e.g., nursing homes) or to go back and forth between the community and a facility setting (these cases are called Crossovers). In order to obtain an accurate representation of the experiences of all Medicare beneficiaries, the MCBS includes beneficiaries wherever they reside, even if they reside in and/or enter a facility for the duration of their four years with the study. The MCBS does not conduct Facility interviews with the beneficiary directly; instead, specially trained Facility interviewers administer the survey to Facility administrative staff.

For more information about MCBS data collection procedures and interviewing, see the *2020 MCBS Methodology Report*.

4.4 Completed Interviews

Exhibit 4.4 lists the number of completed interviews for the Fall 2020 Continuing (2017, 2018, and 2019) and Incoming (2020) Panels by age strata. Under the rotating panel design, the beneficiaries selected in Fall 2016 exited the study at the conclusion of the Winter 2020 round.

Exhibit 4.4: 2020 MCBS Fall Round Completed Interviews: Continuing and Incoming Panels

Age Category as of 12/31/2020	2017 Panel	2018 Panel	2019 Panel	2020 Panel	Total
Under 45 years	127	222	344	421	1,114
45-64 years	162	203	318	726	1,409
65-69 years	222	373	593	1,242	2,430
70-74 years	513	499	558	936	2,506
75-79 years	399	438	543	1,012	2,392
80-84 years	398	403	571	1,042	2,414
85+ years	484	563	649	1,000	2,696
Total	2,305	2,701	3,576	6,379	14,961

SOURCE: 2020 MCBS Internal Sample Control File

5. QUESTIONNAIRES

5.1 Overview

The MCBS Questionnaire structure features two components (Community and Facility), administered based on the beneficiary's residence status. Within each component, the flow and content of the questionnaire varies by interview type and data collection season (fall, winter, or summer). There are two types of interviews (Baseline, Continuing) containing two types of questionnaire sections (Core and Topical). The beneficiary's residence status determines which questionnaire component is used and how it is administered. See Exhibit 5.1 for a depiction of the MCBS Questionnaire structure.

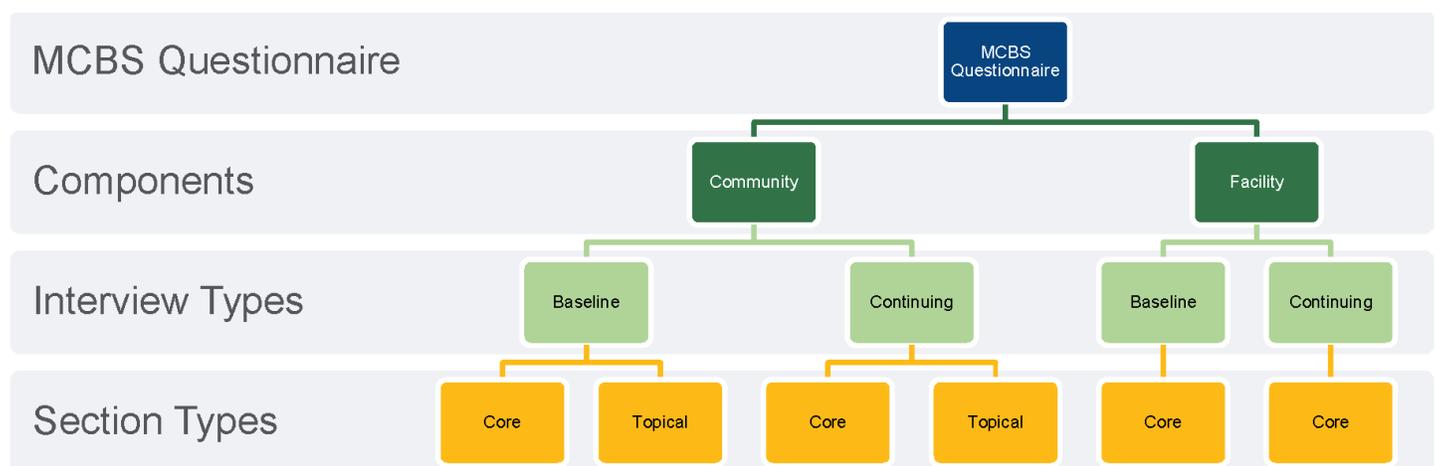
- **Community Component:** Survey administered to beneficiaries living in the community (i.e., not in a long-term care facility such as a nursing home) during the reference period covered by the MCBS interview. An interview may be conducted with the beneficiary or a proxy.
- **Facility Component:** Survey administered for beneficiaries living in facilities, such as long-term care nursing homes or other institutions, during the reference period covered by the MCBS interview. Interviewers conduct the Facility component with staff members located at the facility (i.e., Facility respondents); beneficiaries are not interviewed if they reside at a facility.

Within each component, there are two types of interviews – a Baseline interview and a Continuing interview.

- **Baseline:** The initial questionnaire administered in the fall round of the year the beneficiary is selected into the sample (interview #1).
- **Continuing:** The questionnaire administered as beneficiaries progress through the study (interviews #2-11).

Depending on the interview type and data collection season (fall, winter, or summer), the MCBS Questionnaire includes Core and Topical sections. See Sections 5.2 and 5.3 for tables of the 2020 Core and Topical sections.

Exhibit 5.1: MCBS Questionnaire Overview



5.1.1 Items from Validated Scales

The MCBS questionnaire contains content from a variety of sources that are adapted for inclusion in the MCBS. Some questionnaire items on the MCBS come from validated scales that were developed by external researchers and tested for reliability and validity. Two examples of such scales are the Generalized Anxiety

Disorder Scale (GAD-2), which is a screening tool for generalized anxiety disorder (see MCBS Community items HFGAD1 and HFGAD2) and the Patient Health Questionnaire (PHQ-9), which is a screening tool for depression (see MCBS Community items HFPHQ1 through HFPHQ8 and PHQ9QS10).

5.2 Community Questionnaire

The content of the MCBS Community Questionnaire consists of Core and Topical sections. Core survey content is grouped into questionnaire sections that collect data central to the policy goals of CMS. These sections collect information related to socio-demographics, health insurance coverage, health care utilization and costs, beneficiary health status, and experiences with care, as well as operational and procedural data. The questionnaire sections in each of these categories may be asked each round or seasonally (fall, winter, summer). Data from these questionnaire sections are found in the Survey File and Cost Supplement File data releases. In addition to the Core content, there are several Topical questionnaire sections that capture data on a variety of key topics that relate to the beneficiary's housing characteristics, health behaviors, knowledge about Medicare, and health-related decision making. All data from the Topical sections are included in the Survey File data release.

Different combinations of Core and Topical sections are used depending on a number of criteria, including interview type (Baseline vs. Continuing); the season of data collection (fall, winter, summer); whether the beneficiary is alive, deceased, or in a facility; and whether the interview is being completed with the beneficiary or a proxy.

The first Community interview conducted with Incoming Panel respondents is referred to as the Baseline interview. This interview is always conducted in the fall round and consists of a combination of Core and Topical sections. It is important to note that this first interview does not include Core sections that collect health care utilization and cost data. The respondent's 2nd through 11th interviews, also known as the Continuing interviews, consist of Core and Topical sections, including those that collect health care utilization and cost data; these interviews provide three calendar years of reported health care utilization and cost data for each beneficiary.

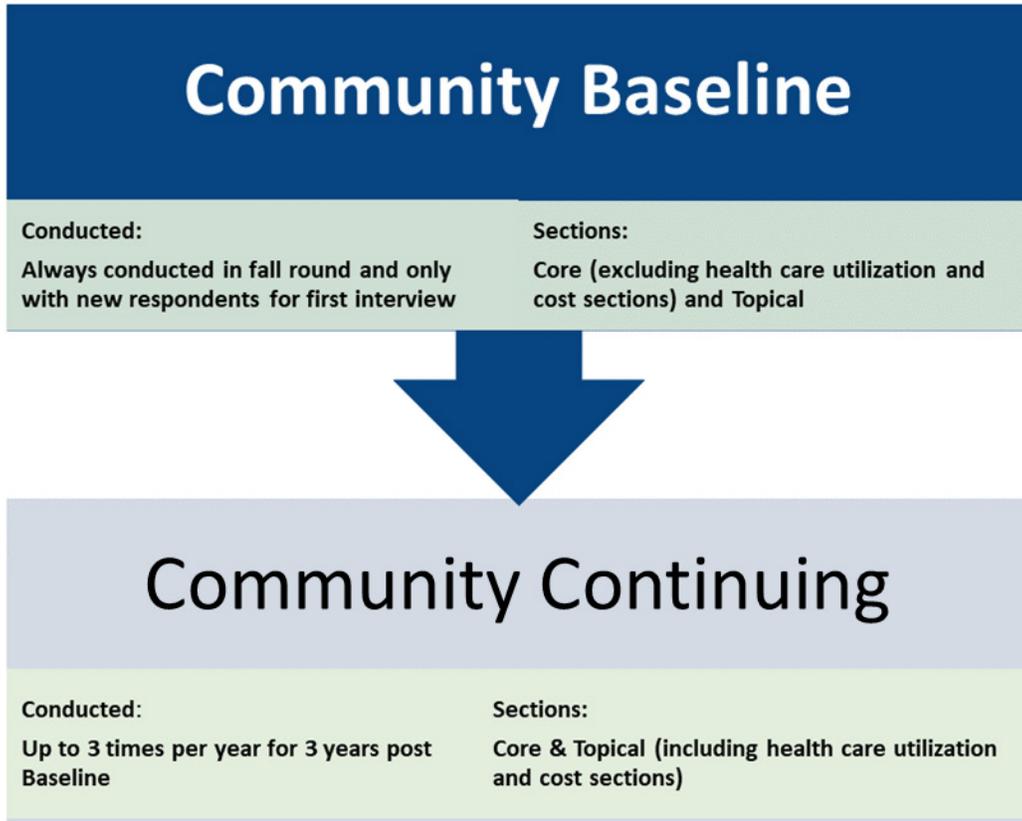
The Community questionnaire consists of the following components (see Exhibit 5.2):

- **Community Baseline questionnaire**
- **Community Continuing questionnaire**

In addition to including data collected in the three rounds (winter, summer, and fall) administered during the calendar year (i.e., January 2020 through December 2020), some data collected in the previous and following calendar years are also included in the 2020 LDS. Specifically, some data collected in 2019 are carried forward to fill in data for 2020 when questionnaire items are administered only once or when data are missing for the data year but valid values exist for the previous year. Some data are also collected in Winter and Summer 2021 and are "pulled back" for inclusion in the 2020 LDS because the section's reference period extends back to 2020; these sections are specified further below.

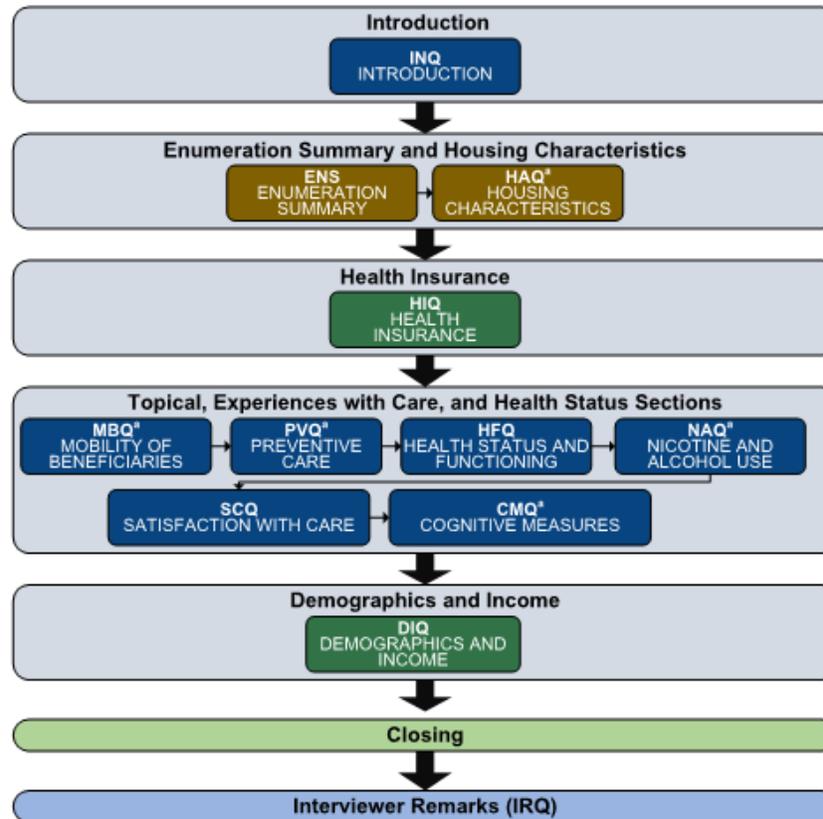
In this section, data users should note that exhibit titles will indicate either the *data collection year*, which refers to the three rounds (winter, summer, and fall) that occur within the calendar year, or the *data year*, which refers to the data collected over the three years that are included in the LDS.

Exhibit 5.2: Overview of the MCBS Community Questionnaire Components



5.2.1 Baseline Interview

As the first interview conducted, the Baseline interview provides an opportunity for the field interviewer to develop a strong rapport and connection with the respondent, acquaint the respondent with the intent of the survey, and emphasize the importance of keeping accurate records of medical care and expenses. Whenever possible, field interviewers are assigned to the same beneficiary over the course of their participation in the survey, so establishing a positive relationship is critical during the Baseline interview. Exhibit 5.2.1 depicts the sections and flow of the Community Baseline interview for the 2020 calendar year, which is synonymous with the 2020 data year for Baseline cases.

Exhibit 5.2.1: 2020 Data Collection Year MCBS Community Questionnaire Flow for Baseline Interview

a = Topical Section

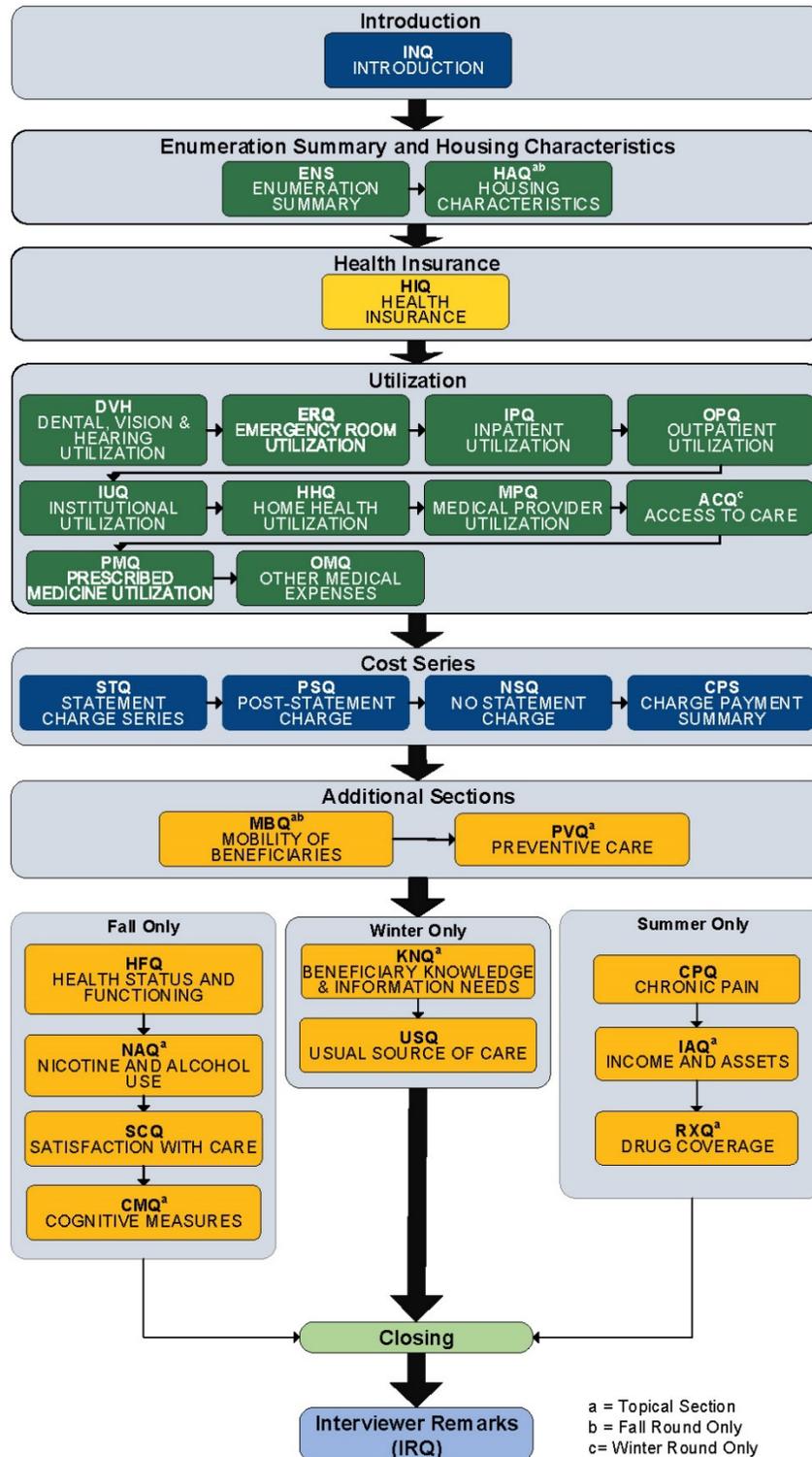
5.2.2 Continuing Interview

The Continuing interview consists of Core sections that focus on the use of medical services and the resulting costs; these sections are asked in essentially the same way each and every time they are administered. The respondent is asked about new health events and to complete any partial information that was collected in the last interview. For example, the respondent may mention a doctor visit during the health care "utilization" part of the interview. In the "cost" section, the field interviewer will ask if there are any receipts or statements from the visit. If the answer is "yes", the field interviewer will record information about the costs from those statements, but if the answer is "no," the question will be stored until the next interview. The Continuing interview also includes sections about health insurance. During each interview, the respondent is asked to verify ongoing health insurance coverage and to report any new health insurance plans.

Continuing interviews also include Topical sections which cover subjects such as mobility or drug coverage. Exhibit 5.2.2 depicts the sections and flow of the Community Continuing interview for the data collection year, rather than the data year, meaning interviews conducted in 2020 used the flow depicted. The data year includes surveys administered in other years which may have slightly different questionnaire flows but are included in the data year LDS given the reference period. Interviews administered in 2021 followed a similar flow as in 2020, with one exception. To prioritize the collection of seasonal section data and facilitate telephone data collection in response to the COVID-19 pandemic, the questionnaire order was revised in Winter, Summer, and Fall 2021 to administer the seasonal sections after Health Insurance (HIQ) and before all utilization and charge sections.

All sections are considered "Core" sections unless otherwise noted.

Exhibit 5.2.2: 2020 Data Collection Year MCBS Community Questionnaire Flow for Continuing Interview



5.2.3 Core Questionnaire Sections

Each Core section of the Community Questionnaire is described below, organized by topic of information collected. New respondents receiving the Baseline interview do not receive Core sections about health care utilization and costs; these sections are reserved for Continuing respondents. As such, in Fall 2020, only

persons in the 2017, 2018, and 2019 Panels received the Core sections about health care utilization and health care costs. All panels received the health insurance section. Exhibit 5.2.3 displays the Core Community questionnaire sections that are included in the Survey File and the Cost Supplement File.

Exhibit 5.2.3: 2020 Data Year MCBS Community Core Sections by Data File and Data Collection Schedule**

Section Group	Abbr.	Section Name	LDS [§]	Data Collection Schedule
Socio-Demographics	IAQ	Income and Assets	SF	Summer 2021**
	DIQ	Demographics/Income	SF	Fall 2020, Baseline Interview
Health Insurance	HIQ	Health Insurance	SF	All Seasons
Utilization	DVH	Dental, Vision and Hearing Care Utilization	CS	All Seasons
	ERQ	Emergency Room Utilization	CS	All Seasons
	IPQ	Inpatient Hospital Utilization	CS	All Seasons
	OPQ	Outpatient Hospital Utilization	CS	All Seasons
	IUQ	Institutional Utilization	CS	All Seasons
	HHS	Home Health Summary [‡]	CS	All Seasons
	HHQ	Home Health Utilization	CS	All Seasons
	MPQ	Medical Provider Utilization	CS	All Seasons
	OMQ	Other Medical Expenses Utilization	CS	All Seasons
	PMQ	Prescribed Medicine Utilization	CS	All Seasons
Cost	STQ	Statement Cost Series	CS	All Seasons
	PSQ	Post-Statement Charge	CS	All Seasons
	NSQ	No Statement Charge	CS	All Seasons
	CPS	Charge Payment Summary [‡]	CS	All Seasons
Experiences with Care	ACQ	Access to Care	SF	Winter 2021**
	SCQ	Satisfaction with Care	SF	Fall 2020
	USQ	Usual Source of Care	SF	Winter 2021**
	HFQ	Health Status and Functioning	SF	Fall 2020
	CMQ	Cognitive Measures	SF	Fall 2020

SOURCE: MCBS Community Questionnaire

*Certain procedural or operational management sections are collected specifically to manage the data collection process. These sections are not directly included in the LDS files (e.g., Introduction (INQ), Enumeration (ENS), and Interview Remarks (IRQ)).

**These sections are administered in the summer or winter rounds following the current data year given that the reference period is the prior year and data are included in the prior year data files.

‡Summary sections: Updates and corrections are collected through the summary sections. The respondent is asked to verify summary information gathered in previous interviews. Changes are recorded if the respondent reports information that differs from what was previously recorded.

§Limited Data Set (LDS) indicates the file where the questionnaire data appears (i.e., SF = Survey File, CS = Cost Supplement File).

¥In response to the coronavirus (COVID-19) pandemic, the mode of administration changed from in-person to phone-only in March 2020. Phone administration continued throughout most of 2021 with a gradual return to some in-person interviewing beginning in November 2021.

Socio-Demographics

Two sections in the Community Questionnaire capture key socio-demographic characteristics of the beneficiary.

The **Demographics and Income (DIQ)** section includes traditional demographic items such as Hispanic origin, race, English proficiency, education, and total household income. This section is administered during the Baseline interview.

Income and Assets (IAQ) is a summer round section that collects detailed information about income and assets of the beneficiary and spouse or partner (if applicable). IAQ covers beneficiary (and spouse/partner) income from employment, Social Security, Veteran's Administration, and pensions. The respondent is also asked to indicate the value of the beneficiary's (and spouse's/partner's) assets including retirement accounts, stocks, bonds, mutual funds, savings accounts, businesses, land or rental properties, and automobiles. Also included in this section are items about homeownership or rental status and food security. IAQ collects information about the previous calendar year; thus, income and assets information collected in Summer 2021 (for the 2020 calendar year) are included in the 2020 LDS.

Health Insurance

The Community Questionnaire captures health insurance information each round.

Health Insurance (HIQ) records all health insurance plans that the beneficiary has had since the beginning of the reference period. The survey prompts for coverage under each of the following types of plans: Medicare Advantage, Medicaid, TRICARE, non-Medicaid public plans, Medicare Prescription Drug Plans, and private (e.g., Medigap or supplemental) insurance plans. Detailed questions about coverage, costs, and payment are included for Medicare Advantage, Medicare Prescription Drug, and private insurance plans.

Utilization

The utilization sections of the questionnaire capture health care use by category. Generally, four types of health care utilization are recorded: provider service visits, home health care, other medical expenses, and prescribed medicines. Provider service visits include visits to dental, hearing, and vision care providers; emergency rooms; inpatient and outpatient hospital departments; institutional stays; and medical providers. In these sections, visits are reported as unique events by date, although in cases where there are more than five visits to a single provider during the reference period, the events are entered by month with the number of visits specified. A slightly different reporting structure is used for home health care, other medical expenses, and prescribed medicines.

All utilization sections are administered in all Community Continuing interviews; these sections are not part of the Incoming Panel's Baseline interview. Additional detail is provided on each of the four types of health care utilization collected by the Community Questionnaire below.

Provider Service Visits

The utilization sections collecting provider service dates are as follows.

Dental, Vision, and Hearing Care Utilization (DVH) collects information about dental, vision, and hearing care visits during the reference period as well as other medical expenses such purchases or repairs of glasses and hearing devices. DVH collects the name and type of dental, vision, and hearing care providers; dates of visits; services performed; medicines prescribed during the visits; and any purchases or repairs of glasses and hearing devices. This section replaced the Dental Utilization Questionnaire (DUQ) section from 2018 and earlier.

Emergency Room Utilization (ERQ) records visits to hospital emergency rooms during the reference period. ERQ collects the names of the hospitals, dates of visits, whether the visit was associated with a particular condition, and medicines prescribed during the visits. If a reported emergency department visit resulted in hospital admission, an inpatient visit event is created, with follow up questions asked in the Inpatient Utilization section.

Inpatient Utilization (IPQ) collects information about inpatient stays during the reference period. IPQ collects the names of the hospitals, beginning and end dates of the stays, whether surgery was performed, whether the visit was associated with a particular condition, and medicines prescribed to be filled upon discharge from the hospital (medicines administered during the stay are not listed separately). Inpatient stays resulting from emergency room admissions are also covered.

Outpatient Hospital Utilization (OPQ) prompts for visits that the beneficiary may have made to hospital outpatient departments or clinics during the reference period. OPQ collects the name of the outpatient facility, dates of visits, whether surgery was performed, whether the visit was associated with a particular condition, and medicines prescribed during the visits.

Institutional Utilization (IUQ) collects information about stays in nursing homes or any similar facility during the reference period. IUQ collects the name of the institution(s) and the dates the beneficiary was admitted and discharged from the institution(s).

Medical Provider Utilization (MPQ) collects information about medical provider visits during the reference period. In addition to physicians and primary care providers, this includes visits with health practitioners that are not medical doctors (acupuncturists, chiropractors, podiatrists, homeopaths, naturopaths), mental health professionals, therapists (including speech, respiratory, occupational, and physical therapists), and other medical persons (nurses, nurse practitioners, paramedics, and physician's assistants). MPQ collects names and types of providers, dates, whether the visit is associated with a particular condition, and medicines prescribed during the visit.

Home Health Care Visits

Home Health Utilization (HHQ) collects information about home health provider visits from both professional and non-professional providers, during the reference period. HHQ collects names and types of home health providers, dates of visits, and services performed during visits.

Prescribed Medicines

The **Prescribed Medicine Utilization (PMQ)** section collects details about prescribed medicines obtained during the reference period. For medicines recorded in the provider service visit sections (in the context of those visits), PMQ collects the medicine strength, form, quantity, and number of purchases. Medicines that were not previously reported during the course of the provider service visit utilization sections, including those that are refilled or called in by phone, are also collected in this section. Unlike for provider service visits, event dates are not collected for prescribed medicines. Instead, the interviewer records the number of purchases or refills. Information is not collected about non-prescription medicines and prescriptions that are not filled.

Other Medical Expenses

The Community Questionnaire also records other medical expenses. These expenses are reported using a slightly different reporting structure within the questionnaire. The reporting structure used to capture other medical expenses within the questionnaire differs slightly than that used for capturing provider services events. For example, as opposed to capturing details about a visit to a provider (e.g., provider name, date of visit, etc.), the questionnaire records the date(s) the beneficiary rented, purchased, or repaired each type of medical equipment.

Other Medical Expenses Utilization (OMQ) collects information about medical equipment and other items (excluding prescriptions) that the beneficiary purchased, rented, or repaired during the reference period. Other medical expenses includes orthopedic items (wheelchairs, canes, etc.), diabetic equipment and supplies, dialysis equipment, prosthetics, oxygen-related equipment and supplies, ambulance services, other medical equipment (beds, chairs, disposable items, etc.) and alterations to the home or car. For each item, the date(s) of rental, purchase, or repair are recorded. For disposable medical items (e.g., bandages), the number of purchases is collected, rather than a date.

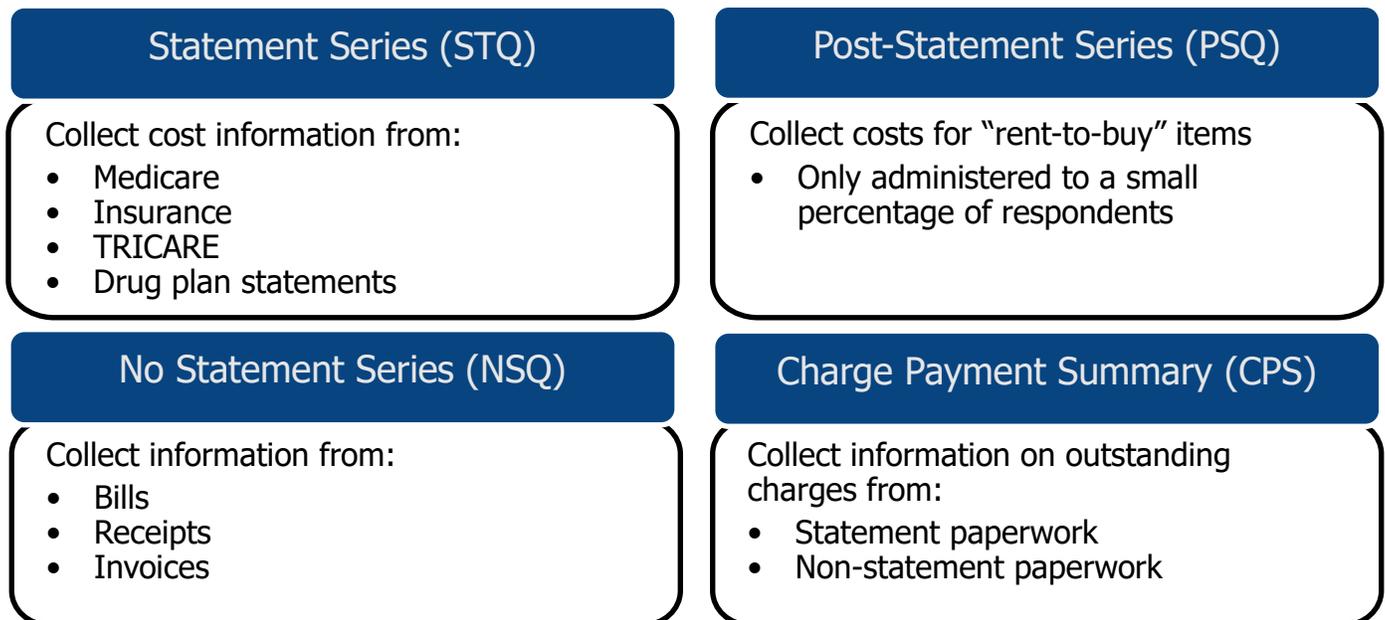
Data collected in the utilization sections are released with the Cost Supplement File LDS. See the *Cost Supplement File: Data User's Guide* for more information.

Cost Series

Once all utilization sections are completed, the questionnaire flows to the cost series, wherein the costs of all reported visits and purchases are recorded, along with the amount paid by various sources. Importantly, additional visits and purchases not reported in the utilization sections of the questionnaire could be recorded within the cost series, and all corresponding data for those events are collected within the cost series.

The cost series consists of four sections: Statement, Post-Statement, No Statement, and Charge Payment Summary. Each is summarized in Exhibit 5.2.4 and described below.

Exhibit 5.2.4: Cost Series Section Overview



The **Statement Cost Series section (STQ)** collects medical cost information directly from Medicare Summary Notices (MSNs), insurance explanations of benefits (EOB), Prescription Drug Plan statements, and TRICARE or other insurance statements. In cases where the beneficiary had more than one payer (e.g., Medicare and private insurance), interviewers organize statements into charge bundles, which are driven by the claim total on an MSN or EOB and may include one or more utilization events (visits, medicines, or purchases). Each charge bundle is entered separately, and all previously-reported events associated with the charge bundle are linked to the cost record. Payment details are entered from the statements and any remaining amount not accounted for is confirmed with the respondent. This process is repeated for all available, not previously recorded insurance statements containing events that occurred within the survey reference period (roughly the past year).

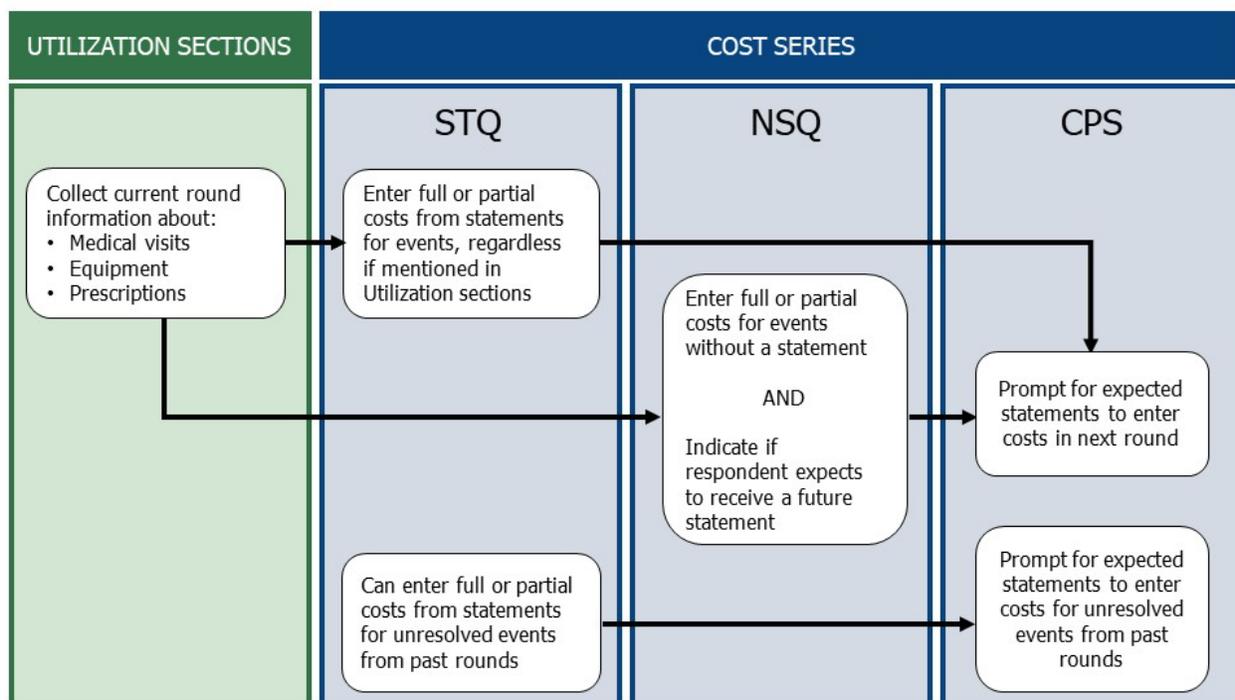
The **Post-Statement Charge section (PSQ)** facilitates cost data collection for rental items that span multiple rounds of interviews (such as a long-term wheelchair rental) and for which cost data has not yet been reported.

The **No Statement Charge section (NSQ)** prompts for cost data for all events that do not have a Medicare, insurance, or TRICARE statement reported in the current round. This section attempts to capture cost data even in absence of insurance statements. The respondent may refer to non-statement paperwork such as bills or receipts to help collect accurate cost information. NSQ loops through a series of cost verification items for each event or purchase reported during the current round utilization but not already linked to a cost record via the Statement section. If respondents indicate a statement for the event is expected, then the NSQ items are bypassed.

The final cost series section, the **Charge Payment Summary (CPS)**, reviews outstanding cost information reported within the last two rounds. For example, if the respondent reported in the previous interview that he/she expected to receive an insurance statement for a particular event, then this event is carried forward to CPS in the next round. Any charge bundle for which costs are not fully resolved is asked about in the next round's CPS section. There are a variety of reasons a cost record might qualify to be asked about in CPS (referred to as "CPS Reasons"). For example, a respondent may have been expecting to receive a statement related to the event or may have reported payments that account for only part of the total charge. The amount of information collected in CPS and the path through the section is determined by the CPS reason for the cost record. One case can have multiple cost records flagged for CPS with a variety of CPS reasons. The questionnaire loops through each eligible cost record in an attempt to collect further cost data.

The flow of sections and questions within the cost series varies depending on data collected in the current round (e.g., whether the beneficiary had a health insurance statement for a visit reported in the current round) and data collected in prior rounds (i.e., whether there was outstanding cost information reported from a prior round). Exhibit 5.2.5 illustrates how paths through these sections may vary depending on health care utilization and cost information collected in the current and previous rounds.

Exhibit 5.2.5: Utilization and Cost Section Flow



Costs are considered unresolved when full cost information is not collected due to events being reported 1) without any cost or payment information, 2) with an indication that a statement is expected, so follow-up questions about costs and payments are deferred until the next interview, or 3) with partial information about costs or payments, but there is a remaining dollar amount with pending payment information.

The current MCBS protocol allows for cost resolution attempts up to two rounds later than the events were reported. Exhibit 5.2.6 displays sample paths to resolving cost information. The first row displays a hospital event reported with costs and statement. This cost is resolved within the round. The second row displays a resolved dental event reported in the summer round with the statement provided in the fall round. The third row displays a prescription medicine event reported with a statement in the summer and resolved in the winter after the statement was provided. The final row displays an unresolved event that was reported in the summer round but did not receive cost or statement verification.

Exhibit 5.2.6: Example Paths Toward Cost Resolution

Scenario	Summer Round	Fall Round	Winter Round	Cost Status
Event reported with costs, statement available	 			Resolved
Event reported without costs, awaiting statement				Resolved
Event reported with receipt, awaiting statement	 			Resolved
Event reported without costs, statement not received				Unresolved

The 2020 data year includes 2020 events collected from Winter 2020 through Summer 2021 (see Exhibit 5.2.7). The unresolved costs are indicated with a red circle-backslash symbol and are unresolved given that the statement was not received. Please note, with the emergence of the COVID-19 pandemic, data collection in Winter 2020 (Round 86) shifted from in-person to telephone in March 2020. With the decision to continue data collection by phone in Summer 2020 (Round 87), CMS decided not to collect utilization or cost data in the Community Questionnaire in Summer 2020. Utilization and cost data collection resumed in Fall 2020 (Round 88) with a longer reference period to collect the information from Summer 2020.

Exhibit 5.2.7: Events Collected in the 2020 Data Year

Winter 2020 (R86)	Summer 2020 (R87)	Fall 2020 (R88) ¹	Winter 2021 (R89)	Summer 2021 (R90)
 →   				
		 →   		
			 →  	 

¹ A longer reference period was implemented in Fall 2020 (Round 88) to capture events that occurred during Summer 2020 (Round 87).

Data collected in the cost series are released with the Cost Supplement File LDS. See the *Cost Supplement File: Data User's Guide* for more information.

Experiences with Care

Three sections cover the beneficiary's experience with care in various medical settings.

Access to Care (ACQ) is administered in the winter round for Continuing respondents and focuses on the beneficiary's experience with particular types of medical encounters (hospital emergency room, hospital clinic or outpatient department, long-term care facility, or medical doctor visits) during the reference period. If the beneficiary had one or more of a particular type of medical encounter, additional items collect information about services received and waiting times associated with the most recent encounter. ACQ collects information about the previous calendar year; thus, ACQ data collected in Winter 2021 (for the 2020 calendar year) are included in the 2020 LDS.

Satisfaction with Care (SCQ) is part of the fall round interview for Incoming Panel and Continuing respondents and collects the respondent's opinions about the health care that the beneficiary had received. The questions refer to medical care received from all medical providers, including both doctors and hospitals.

The **Usual Source of Care (USQ)** section is administered in the winter round for Continuing respondents and collects specific information about the usual source of health care for the beneficiary as well as any specialists seen during the reference period. USQ collects information about the previous calendar year; thus, USQ data collected in Winter 2021 (for the 2020 calendar year) are included in the 2020 LDS.

Health Status

Health Status and Functioning (HFQ) collects information on the beneficiary's general health status and needs. This includes specific health areas such as disabilities, vision, hearing, and preventive health measures. HFQ includes measures of the beneficiary's ability to perform physical activities, moderate and vigorous exercise, health care maintenance and needs, and standard measures of Instrumental Activities of Daily Living (using the telephone, preparing meals, etc.), and Activities of Daily Living (bathing, walking, etc.). In addition,

HFQ asks about medical diagnoses for common conditions (cancer, arthritis, hypertension, etc.). Finally, the section covers mental health conditions, falls, urinary incontinence, and a more extensive series of questions for beneficiaries with high blood pressure and diabetes.

Cognitive Measures (CMQ) contains four well-established cognitive measures to assess cognitive functioning among beneficiaries, including backwards counting, date naming, object naming, and president/vice president naming.

Operational and Procedural

These sections help guide the interviewer through the interview, providing scripts for introducing and ending the interview. They also facilitate collection of information about household members to augment sample information. Data collected in these sections are not included in the Survey or Cost Supplement data files.

Introduction (INQ) introduces the survey and records whether the interview was completed by the beneficiary or a proxy. For interviews completed by a proxy, the introduction collects the proxy's name and relationship to the beneficiary and determines if the proxy is a member of the beneficiary's household. The introduction is part of every Community Questionnaire.

The **Closing (END)** section is administered to close the interview for all respondents. During the exit interview, this section contains additional scripts to thank the respondent for participation over the four years of the MCBS.

Enumeration (ENS) collects household information and a roster of persons living in the household. For each household member added to the roster, his/her relationship to the beneficiary, sex, date of birth, age, and employment status are collected. ENS is administered in all rounds except the final exit interview.

The **Interviewer Remarks Questionnaire (IRQ)** captures additional metadata about the interview, as recorded by the interviewer. This includes the length of the interview, assistance the respondent may have received, perceived reliability of the information provided during the interview, and comments the interviewer had about the interviewing situation. IRQ is administered after every interview, but it is generally completed after leaving the respondent's home, as none of the questions are directed to the respondent.

5.2.4 Topical Questionnaire Sections

Each Topical section is described below, organized by type of information collected. Exhibit 5.2.8 lists the Topical sections and data collection season. Note that information collected via Topical Questionnaire sections is included in the Survey File only and is not included in the Cost Supplement File. In addition, some Topical Questionnaire section data are collected through the summer following the current data year (i.e., IAQ, KNQ, PVQ, CPQ, CVQ, and RXQ). Annually, special non-response adjustment weights are included within the segments for use in analysis when data are not collected within the same calendar year (see Exhibit 5.2.5).

Exhibit 5.2.8: 2020 Data Year MCBS Community Topical Sections by Data File and Data Collection Schedule[¥]

Section Group	Abbr.	Section Name	LDS*	Data Collection Schedule
Housing Characteristics	HAQ	Housing Characteristics	SF	Fall 2020
Social Determinants of Health or Health Behaviors	CPQ	Chronic Pain	SF	Summer 2021
	MBQ	Mobility of Beneficiaries	SF	Fall 2020
	NAQ	Nicotine and Alcohol Use	SF	Fall 2020
	PVQ	Preventive Care	SF	Fall 2020, Winter 2021, and Summer 2021 [‡]
	IAQ	Food Insecurity items	SF	Summer 2021 ^{**}
COVID-19	CVQ	COVID-19	SF	Summer 2021
Knowledge and Decision Making	KNQ	Beneficiary Knowledge and Information Needs	SF	Winter 2021 [‡]
	RXQ	Drug Coverage	SF	Summer 2021 [‡]

SOURCE: MCBS Community Questionnaire

*LDS indicates the file where the questionnaire data appears (i.e., SF = Survey File, CS = Cost Supplement File).

**The Food Insecurity items are included within the Income and Assets Questionnaire (IAQ).

[‡]Section is administered in a round following the current data year. The reference period for this section is the prior year and data are included in the prior year data files.

[¥]In response to the coronavirus (COVID-19) pandemic, the mode of administration changed from in-person to phone-only in March 2020. Phone administration continued throughout most of 2021 with a gradual return to in-person interviewing beginning in November 2021.

Housing Characteristics

Housing Characteristics (HAQ) collects information on the beneficiary's housing situation. This includes the type of dwelling, facilities available in the household (e.g., kitchen and bathrooms), accessibility, and modifications to the home (e.g., ramps, railings, and bathroom modifications). This section also records if the beneficiary lives in an independent or assisted living community (distinct from a nursing or long-term care facility) where services like meals, transportation, and laundry may be provided. HAQ is administered in the fall for all beneficiaries in the Community component.

Social Determinants of Health or Health Behaviors

Some questionnaire sections record additional information about health behaviors, specifically mobility, preventive care, and nicotine and alcohol use.

Chronic Pain (CPQ) is a summer round section that collects information about beneficiaries' experiences with chronic pain. The CPQ begins with PAINOFTN, which asks whether or not beneficiaries experienced pain within the last three months. If so, the section asks more detailed questions about the beneficiary's experience with pain and what types of services and activities they have used to manage their pain. The CPQ section is not administered to proxy respondents. Questionnaire items were developed by the National Pain Strategy (NPS) Population Research Working Group for inclusion in federal surveys.

Mobility of Beneficiaries (MBQ) is a fall round section that determines the beneficiary's use of available transportation options, with a focus on reduced mobility and increased reliance on others for transportation.

The **Preventive Care (PVQ)** section collects information about beneficiaries' preventive health behaviors. Questions administered in this section vary by data collection season. In the winter round, the PVQ focuses on the influenza vaccine, while in the summer round, the PVQ asks about the shingles and pneumonia vaccines. In the fall round, the PVQ asks whether the beneficiary has received various types of applicable preventive screenings or tests, such as a mammogram, Pap smear, or digital rectum exam. In the summer and winter rounds, PVQ collects information about the previous calendar year; thus, PVQ data collected in Winter and Summer 2021 (for the 2020 calendar year) are included in the 2020 LDS.

Income and Assets (IAQ) is a summer round section that collects detailed information about income and assets of the beneficiary and spouse or partner (if applicable), however it also includes items about food security. IAQ collects information about the previous calendar year; thus, food insecurity data collected in Summer 2021 (for the 2020 calendar year) are included in the 2020 LDS.

Nicotine and Alcohol Use (NAQ) collects information on beneficiaries' smoking behavior, including past and current use of cigarettes, cigars, "smokeless" tobacco, and e-cigarettes. It also asks about past and current drinking behavior.

COVID-19

The **COVID-19 (CVQ)** section collects vital information on how the Medicare population is impacted by the COVID-19 pandemic. CVQ spans a number of COVID-related topics, including presumptive vaccine uptake and vaccine utilization.

Knowledge and Decision-Making

Respondent's knowledge of Medicare and health-related decision-making is captured in the following Topical sections.

The **Beneficiary Knowledge and Information Needs (KNQ)** section is administered in the winter round. These items measure the respondent's self-reported understanding of Medicare and common sources of information about health care and Medicare. KNQ collects information about the previous calendar year; thus, KNQ data collected in Winter 2021 (for the 2020 calendar year) are included in the 2020 LDS.

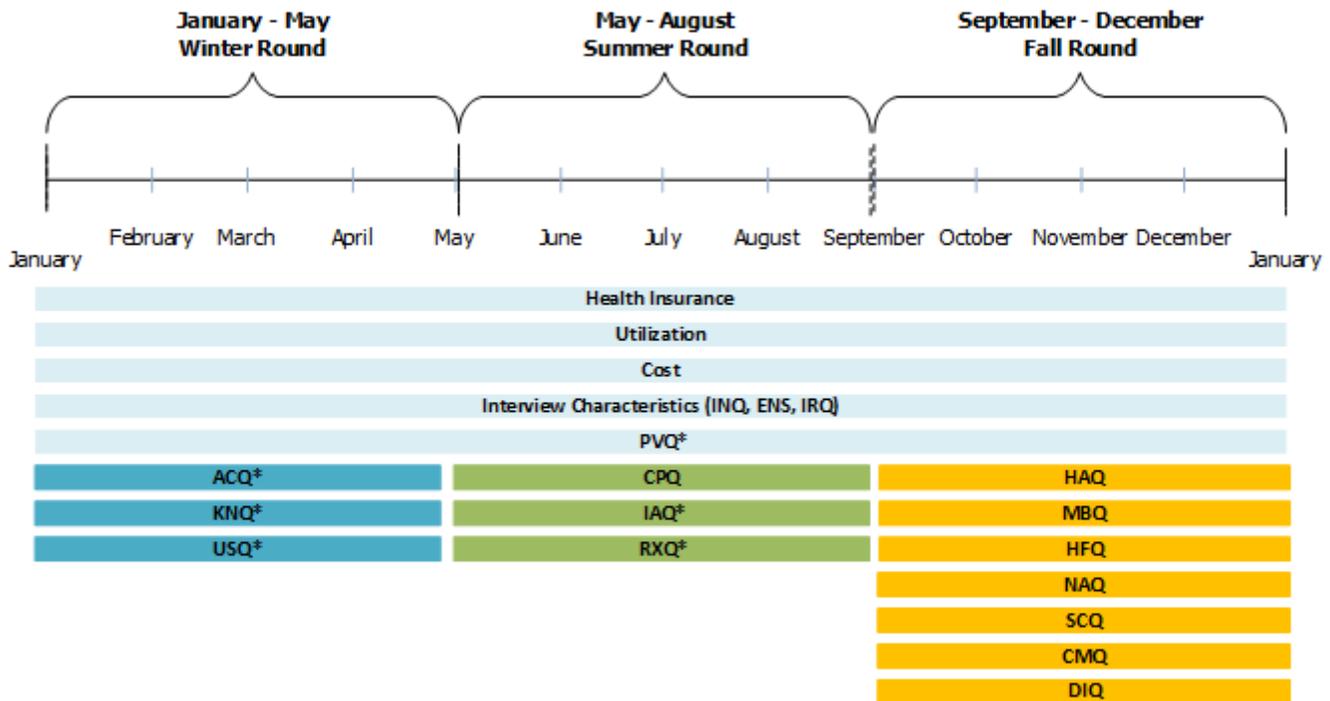
The **Drug Coverage (RXQ)** section is a summer round section that focuses on the Medicare Prescription Drug benefit, including respondent knowledge of the benefit, and opinions of the beneficiary's drug coverage, whether through a Medicare Prescription Drug Plan, a Medicare Advantage plan with prescription drug coverage, or a private insurance plan that covers prescription drugs. RXQ collects information about the previous calendar year; thus, RXQ data collected in Winter 2021 (for the 2020 calendar year) are included in the 2020 LDS.

5.2.5 Community Questionnaire Section Rotation within a Data Year

Exhibit 5.2.9 presents the MCBS Questionnaire section rotation schedule for 2020. The 2020 MCBS data releases reflect data collected from January 2020 through December 2020 and also includes data collected in Winter and Summer 2021 rounds from questionnaire sections with a 2020 reference period.

Exhibit 5.2.9: 2020 Data Collection Year MCBS Community Questionnaire Section Rotation

Typical MCBS Data Collection Year



*Fielded in 2021, but given the reference period is 2020, data are included in the 2020 LDS.

Note: In response to the coronavirus (COVID-19) pandemic, the mode of administration changed from in-person to phone-only in March 2020. Phone administration continued throughout most of 2021 with a gradual return to in-person interviewing beginning in November 2021.

5.3 Facility Instrument

In addition to collecting information from respondents living in the community, the MCBS collects information at the institutional level if the beneficiary is living in a facility at the time of the interview. Information is obtained only by interviewing Facility staff; the beneficiary is never interviewed directly.

Similar to the Community Questionnaire, if a beneficiary is living in a facility when first selected to participate in the MCBS, a Facility Baseline interview is administered. For cases in the 2nd through 11th round, a Facility Continuing interview is conducted. While administration of the Facility Instrument sections varies by season and interview type, the Facility Instrument is comprised exclusively of Core sections; each section collects information that is considered of critical importance to the MCBS.

The Facility Instrument consists of the following components (see Exhibit 5.3):

- Facility Questionnaire
- Facility Baseline interview
- Facility Continuing interview

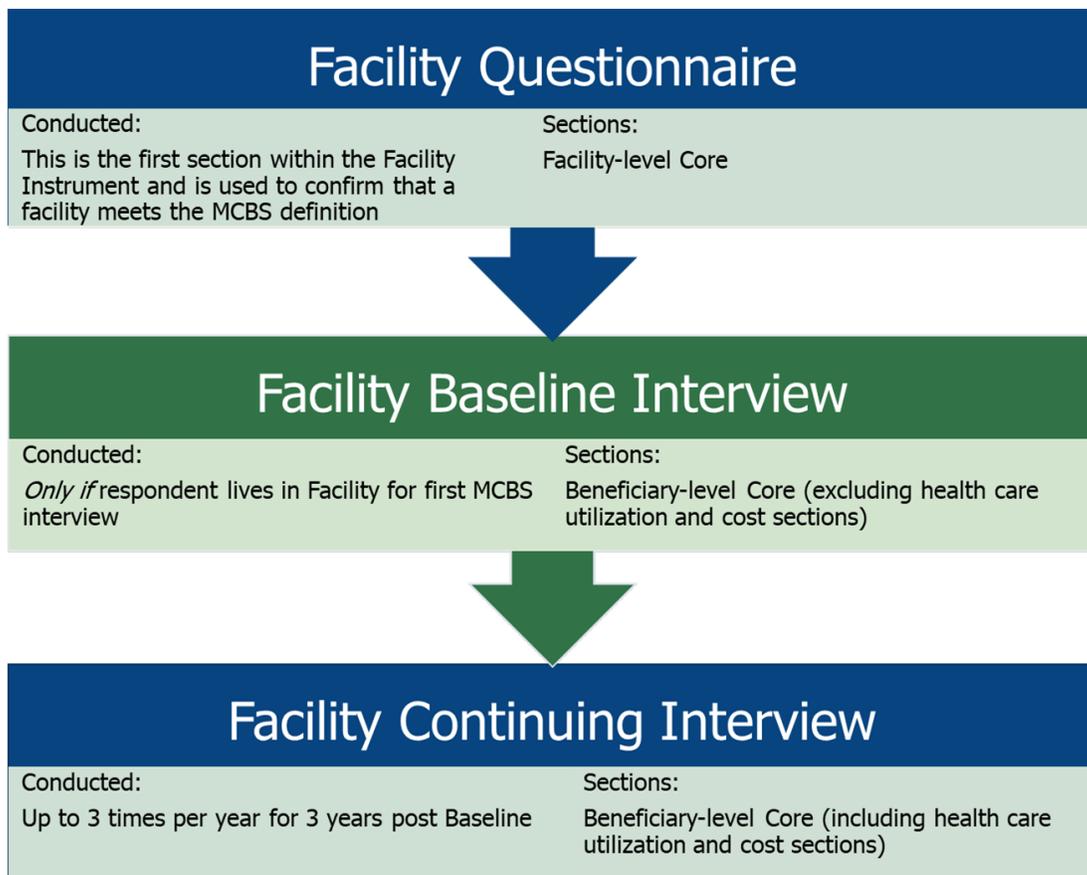
Due to the redesign of the MCBS Facility Instrument in Fall 2019, the instrument flow varies for Medicare and/or Medicaid-certified facilities and facilities not certified by Medicare and/or Medicaid. Facilities that report a CMS Certification Number (CCN) and are therefore certified by Medicare and/or Medicaid receive a shortened MCBS Facility Instrument, as the FQ and HS sections skip variables redundant with Minimum Data Set (MDS) and Certification and Survey Provider Enhanced Reports (CASPER) administrative data. Variables skipped

during interview administration are instead populated using MDS and CASPER administrative data sources during data processing. Facilities that do not report a CCN receive the full MCBS Facility Instrument.

If a person living in a facility returns to the community, that person would receive the Community Questionnaire. If the beneficiary spent part of the reference period in the community and part in a facility, then a separate interview is conducted to collect information pertaining to the beneficiary's experiences covering each distinct period of time. In this way, a beneficiary is followed in and out of facilities and a continuous record is maintained regardless of the location of the beneficiary.

Starting in Fall 2020, COVID-19 items were fielded within the Facility Instrument. The MCBS COVID-19 Fall 2020 Facility Supplement included several facility-level measures to assess key ways in which COVID-19 has impacted facilities that serve Medicare beneficiaries. There were also several beneficiary-level topics, similar to the MCBS COVID-19 Community Supplements. More information about the Facility COVID-19 items is included in the COV. COVID-19 SUPPLEMENT SECTION.

Exhibit 5.3: Overview of the MCBS Facility Instrument



5.3.1 Facility Baseline Interview

The Facility Baseline interview (see Exhibit 5.3.1) serves as a reference interview and gathers information on the facility itself as well as the health status, insurance coverage, residence history, and demographic information for the beneficiary. This flow depicts the sections and flow of the Facility Baseline interview for the 2020 calendar year, which is synonymous with the 2020 data year for Baseline cases.

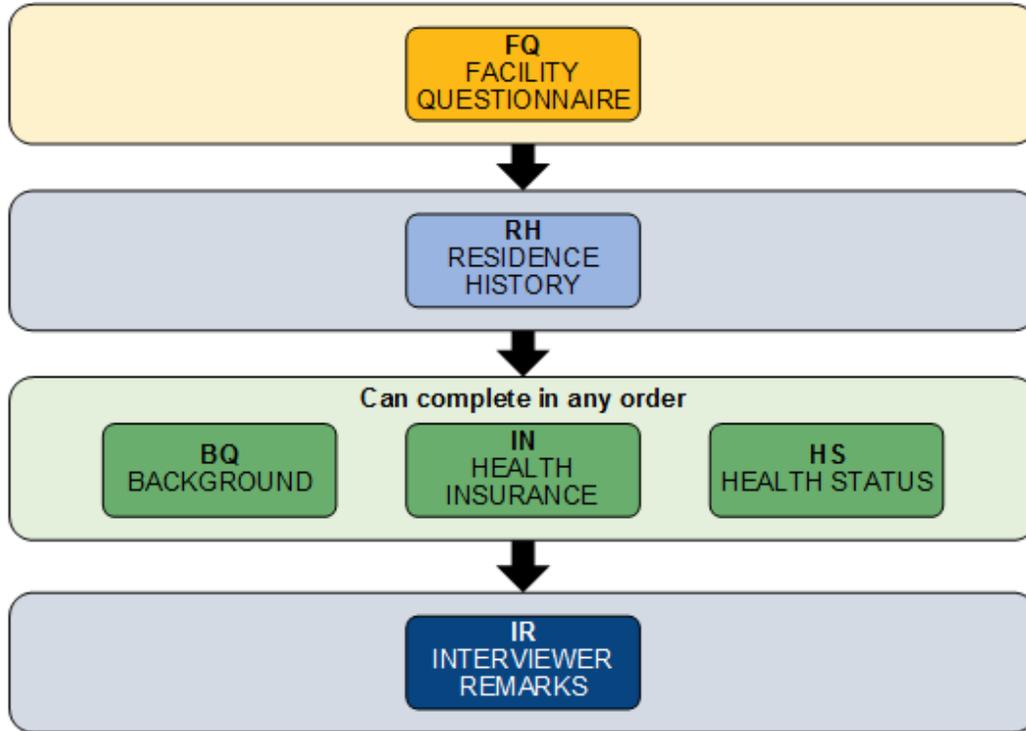
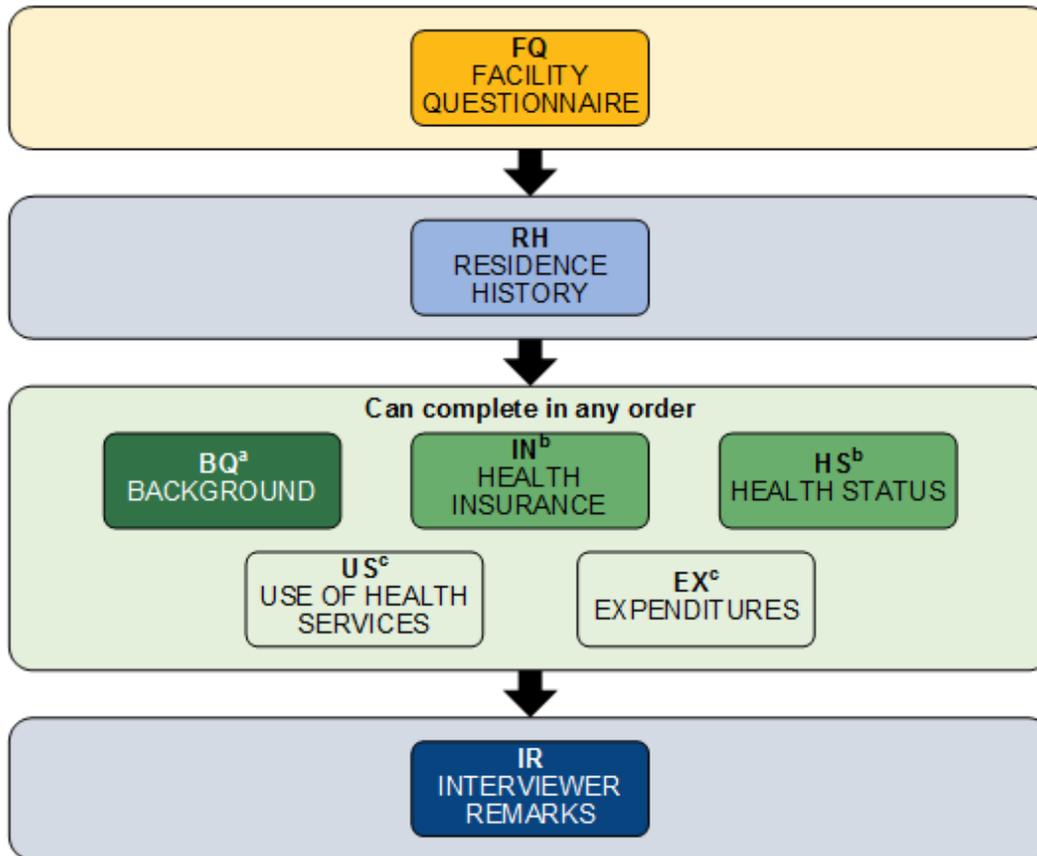
Exhibit 5.3.1: 2020 Data Collection Year MCBS Facility Instrument Flow for Baseline Interview*5.3.2 Facility Continuing Interview*

Exhibit 5.3.2 illustrates the flow of the Facility Continuing interview sections. This flow reflects the data collection year, rather than the data year, meaning the interviews conducted in the 2020 calendar year used the flows depicted. Note that beneficiaries who move to a facility from the community (Community to Facility cases), move to a new facility (Facility to Facility cases), or move to the community from the facility (Facility to Community cases) receive a different combination of Facility Continuing sections than beneficiaries who have lived continuously in the same facility.

Exhibit 5.3.2: 2020 Data Collection Year MCBS Facility Instrument Flow for Continuing Interviews

a = Administered only for Community to Facility interviews

b = Administered to all sample types in Fall round. Otherwise, administered only for Community to Facility, Facility to Facility, and for beneficiaries residing in a Facility whose last interview was a Community interview and who completed a Facility interview in a prior round.

c = Administered for all Facility interviews

5.3.3 Facility Continuing Core Sections

Each Core section of the Facility Instrument is described below, organized by topic of information collected. The sections depicted in Exhibit 5.3.3 parallel the Core sections for the Community component. These sections of the Facility Continuing interview are administered in the same rotation as the Community Continuing interview (the 2nd through the 11th rounds); however, beneficiaries new to a facility receive additional Core sections.

Similarly to the Community Questionnaire, operational management/procedural data are collected through the Interviewer Remarks (IR) section, which is completed by the interviewer and primarily used for case finalization. Exhibit 5.3.3 summarizes each component of the Facility questionnaire by data release.

Exhibit 5.3.3: 2020 Data Year MCBS Facility Core Sections by Data File and Data Collection Schedule*[‡]

Section Group	Abbrev	Section Name	LDS [§]	Data Collection Schedule
Facility Characteristics	FQ	Facility Questionnaire	SF	All seasons
Socio-Demographics	RH	Residence History	SF	All seasons
	BQ	Background	SF	Fall 2020, Baseline Interview**
Health Insurance	IN	Health Insurance	SF	Fall 2020 [‡]
Utilization	US	Use of Health Services	CS	All seasons
Cost	EX	Expenditures	CS	All seasons
Health Status	HS	Health Status	SF	Fall 2020 [‡]

SOURCE: MCBS Facility Instrument

*Certain procedural or operational management sections are collected specifically to manage the data collection process. These sections are not directly included in the LDS files (e.g., Interviewer Remarks (IR)).

**The BQ section is also administered to Community-to-Facility Crossover cases each season.

[‡]The IN and HS sections are also administered to Community-to-Facility and Facility-to-Facility cases each season.

[§]Limited Data Set (LDS) indicates the file where the questionnaire data appears (i.e., SF = Survey File, CS = Cost Supplement File).

[‡]In response to the coronavirus (COVID-19) pandemic, the mode of administration changed from in-person to phone-only in March 2020 and continued throughout 2021.

Facility Characteristics

The Facility Characteristics Core section contains the **Facility Questionnaire (FQ)** section of the Facility Instrument. The FQ section collects information on the number, classification, and certification status of beds within the facility; sources of payment for Facility residents; and Facility rates. Interviewers typically conduct the FQ with the Facility administrator. Interviewers are not allowed to abstract this section of the interview; it must be conducted with a Facility staff member.

Since the 2019 Facility Instrument redesign and the usage of administrative data for Medicare and/or Medicaid certified facilities, only facilities that do not report a CCN receive the full FQ section.

Socio-Demographics

The Socio-Demographics Core sections capture key characteristics of the interview and the beneficiary. These include residence history and demographics.

The **Residence History (RH)** section collects information about all of the places that the beneficiary stayed during the reference period. Information is collected about where the beneficiary was just before entering the

facility and where he/she went if they had been discharged. For each stay, the interviewer collects the name of the place of residence, the type of place it is, and the start and end date for the period the beneficiary was living there.

The RH section creates a timeline of the beneficiary's whereabouts from the date the beneficiary entered the facility or the date of the last interview, through the date of interview, date of discharge, or date of death. The goal is to obtain a complete picture of the beneficiary's stays during the reference period, including any stays of one night or more in hospitals, other facilities, or any other place.

The **Background Questionnaire (BQ)** collects background information about the beneficiary, such as use of long-term care before admission to the facility, level of education, race, ethnicity, service in the Armed Forces, marital status, spouse's health status, living children, and income. The BQ is completed only once for each beneficiary during their first interview in the facility.

Health Insurance

The Health Insurance Core section contains the **Health Insurance (IN)** section of the Facility Instrument. The IN section collects information about the beneficiary's type(s) of health insurance coverage. This includes questions about all types of health insurance coverage the beneficiary had in addition to Medicare: private insurance, long-term care insurance, Department of Veterans Affairs eligibility, and TRICARE or CHAMPVA.

Because of differences in interview setting, the content collected in the IN section differs from the content collected in the INQ section of the Community Questionnaire. For example, because the Facility Instrument is administered to Facility staff, as opposed to interviewing the beneficiary directly, the Facility Instrument collects the name of the insurance company for a beneficiary's private insurance plan but does not collect follow-up details about whether the plan was purchased through an employer or some other way.

Utilization

The **Use of Health Care Services (US)** section collects information on the beneficiary's use of health care services while a resident of the facility. This includes visits with a range of providers including medical doctors, dentists, and specialists; visits to the hospital emergency room; and other medical supplies, equipment, and other types of medical services provided to the beneficiary.

The best Facility respondent for this questionnaire section is usually someone directly involved with the beneficiary's care or someone who is familiar with the medical records.

Data collected in US are released with the Cost Supplement File LDS. See the *Cost Supplement File: Data User's Guide* for more information.

Cost

The Facility Cost component consists of the **Expenditures (EX)** section. The EX section collects information about bills for the beneficiary's care at a facility and payments by source for those charges. Data are only collected for the time period when the beneficiary was a resident of the facility at which the interview takes place. The EX section collects information by billing period (e.g., monthly, semi-monthly, quarterly, etc.).

Unlike the Community Questionnaire, which collects cost information for each service, the EX section collects only the fees the facility bills for the beneficiary's care. The EX section collects information on the amount billed for the beneficiary's basic care and for any health related ancillary services. Typically, the EX section is administered to Facility staff located in the billing office.

Data collected in EX are released with the Cost Supplement File LDS. See the *Cost Supplement File: Data User's Guide* for more information.

Health Status

The **Health Status (HS)** section collects information on the beneficiary's general health status, ability to perform various physical activities, general health conditions, IADLs, and ADLs.

Most of the information needed to conduct the HS section may be found in a medical chart. The Federal Government requires that all nursing facilities certified by Medicaid or Medicare conduct comprehensive and standardized assessments of each resident's health status when the resident is admitted to the nursing home and at regular intervals thereafter.¹⁴ These assessments are captured by the Long-Term Care MDS,¹⁵ which contains a set of key items measuring a resident's capacity to function independently. Nursing homes use this information to assess each resident's health status, identify problem areas and, where problems exist, formulate care plans to address them.

The HS section is designed to mirror the flow and wording of the MDS items; it contains a subset of the MDS items. In addition, the HS section contains some questions that are not found on the MDS that are administered to provide information comparable to items asked during the Community Questionnaire. Examples include items about prostate exams and mammograms, Instrumental Activities of Daily Living, vaccinations, smoking history, and general health. Interviewers ask these questions of someone knowledgeable about the beneficiary's care or find the information in the medical chart.

Since the 2019 Facility Instrument redesign and the usage of administrative data for Medicare and/or Medicaid certified facilities, only facilities that do not report a CCN receive the full HS section.

Operational and Procedural

The **Interviewer Remarks (IR)** section captures additional metadata about the interview, as recorded by the interviewer. This includes comments the interviewer may have about the interviewing situation and notes to themselves for use in gaining cooperation in the future. Data from this section are not included in the Survey File or the Cost Supplement File.

Missing Data Sections

There are three additional sections, called missing data sections, which are activated when essential survey information is coded as "don't know" or "refused" in the Facility Questionnaire (FQ), Residence History (RH), or Background (BQ) sections. The missing data sections prompt the interviewer for the specific piece of information that is missing. There are no new questions in the missing data sections, just repeats of questions initially asked in the FQ, RH, or BQ. Examples of the type of missing information that activate the missing data sections are the name of the facility or date of death.

The purpose of the missing data sections is to reduce item non-response for key variables in a modular, flexible format. If the interviewer is able to obtain the missing information from another Facility staff member or from a different medical document, then the interviewer uses the missing data section to capture a non-missing response for the key questionnaire item without modifying responses for the other already-completed

¹⁴ "Long-Term Care Facility Resident Assessment Instrument 3.0 User's Manual v.1.17.1," Centers for Medicare & Medicaid Services, October 2019.

¹⁵ <https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/Minimum-Data-Set-3-0-Public-Reports/index>

items in the FQ, RH, and BQ sections. If the interviewer is unable to obtain the missing information, either "don't know" or "refused" is entered in the missing data sections.

The missing data sections are:

Facility Questionnaire Missing Data (FQ_MD): collects data missing from the FQ section of the interview;

Residence History Questionnaire Missing Data (RH_MD): collects data missing from the RH section;

Background Questionnaire Missing Data (BQ_MD): collects data missing from the BQ section.

6. SAMPLING

6.1 Medicare Population Covered by the 2020 MCBS Data

The MCBS data releases are a reflection of enrolled Medicare beneficiaries residing in the continental United States. The sample for the MCBS is drawn from a subset of the Medicare enrollment data, which is a list of all Medicare beneficiaries. Excluded from both populations are residents of foreign countries and U.S. possessions and territories.

The beneficiaries included in the 2020 MCBS LDS releases represent a random cross-section of all beneficiaries who were ever enrolled in either Part A or Part B of the Medicare program for any portion of 2020. A subset of these beneficiaries represent a random cross-section of all beneficiaries who were continuously enrolled from January 1, 2020 up to and including interviews conducted during Fall 2020. The ever enrolled and continuously enrolled populations are described in further detail below:

- The ever enrolled population represents individuals who were enrolled in Medicare at any time during the calendar year. This population includes beneficiaries who enrolled during the calendar year 2020 as well as those who dis-enrolled or died prior to their fall interview.¹⁶ The ever enrolled population includes beneficiaries who were enrolled in Medicare for at least one day at any point during 2020.
- The continuously enrolled population represents only those individuals continuously enrolled in Medicare from January 1, 2020 up to and including their fall interview; this specifically excludes beneficiaries who enrolled during the calendar year 2020 and those who dis-enrolled or died prior to their fall interview. The concept of continuously enrolled is consistent with the concept of being exposed or "at risk" for using services up to and including their fall interview.

The Survey File and Cost Supplement File represent four separate MCBS panels identified by the year in which the panel was selected and first interviewed (i.e., for 2020 LDS files, the 2017, 2018, 2019, and 2020 Panels). Exhibit 6.1 shows the composition of each of the four panels included in the 2020 data files.

Exhibit 6.1: 2020 MCBS Composition of Panels Contributing to the LDS Data Files

Data Year (Fall)	Number of Beneficiaries Selected
2017	11,623
2018	11,523
2019	11,615
2020	15,952

¹⁶ Note that data collection for beneficiaries who enrolled during 2020 and died in 2020 after enrollment but before their fall interview was still pursued through attempts at conducting proxy interviews.

Exhibit 6.1.1 presents the aggregated estimates of the size of the two Medicare populations overall and by sex and race. Exhibits 6.1.2 and 6.1.3 present estimates of the size of the continuously enrolled and ever enrolled Medicare populations by race, and age (as of December 31, 2020) for male and female beneficiaries.

Exhibit 6.1.1: 2020 Total Estimated Number of Medicare Beneficiaries by Sex and Race*

Group	Subgroup	Continuously Enrolled	Ever Enrolled
Overall Total		58,556,640	63,997,460
Sex	Male Total	26,617,039	29,026,828
	Female Total	31,939,601	34,970,632
Race	White non-Hispanic Total	43,431,249	45,512,164
	Black non-Hispanic Total	6,303,701	6,582,743
	Hispanic Total	4,426,675	4,751,796
	Other Total [†]	4,395,015	7,150,757

SOURCE: Beneficiary race/ethnicity were sourced from administrative data in the Sample Control File and the weights were sourced from the 2020 Survey File.

* Weighted counts may not sum to the total of beneficiaries living in the community in the U.S. due to missingness.

[†]The "Other" race category includes other single races not of Hispanic origin, Two or More Races, or Unknown Races. See the Glossary (Appendix A) entry for race/ethnicity for more information.

Exhibit 6.1.2: 2020 Estimated Number of Male Medicare Beneficiaries by Race and Age*

Race	Age as of 12/31/2020	Continuously Enrolled	Ever Enrolled
White non-Hispanic	0-44	499,349	542,365
	45-64	1,951,825	1,928,647
	65-69	4,692,329	4,992,169
	70-74	5,124,539	5,291,276
	75-79	3,541,029	3,652,596
	80-84	2,138,234	2,293,813
	85+	1,939,031	2,152,423
Black non-Hispanic	0-44	169,948	174,650
	45-64	519,087	522,482
	65-69	713,996	788,617
	70-74	629,420	664,699
	75-79	276,428	287,101
	80-84	211,814	218,066
	85+	149,559	164,856
Hispanic	0-44	89,472	91,639
	45-64	322,030	321,376
	65-69	560,135	652,575
	70-74	431,615	443,466
	75-79	301,283	316,856
	80-84	168,846	170,640
	85+	146,237	170,786
Other[†]	0-44	95,421	148,186
	45-64	152,704	358,110
	65-69	770,285	1,619,186
	70-74	624,193	623,265
	75-79	214,702	212,429
	80-84	108,693	127,915
	85+	74,836	96,638

SOURCE: Beneficiary age and race/ethnicity were sourced from administrative data in the Sample Control File and the weights were sourced from the 2020 Survey File.

* Weighted counts may not sum to the total of beneficiaries living in the community in the U.S. due to missingness.

[†]The "Other" race category includes other single races not of Hispanic origin, Two or More Races, or Unknown Races. See the Glossary (Appendix A) entry for race/ethnicity for more information.

Exhibit 6.1.3: 2020 Estimated Number of Female Medicare Beneficiaries by Race and Age*

Race	Age as of 12/31/2020	Continuously Enrolled	Ever Enrolled
White non-Hispanic	0-44	407,700	447,553
	45-64	2,054,877	2,040,396
	65-69	4,946,033	5,363,081
	70-74	5,745,844	5,862,824
	75-79	4,468,238	4,504,900
	80-84	2,796,761	2,948,815
	85+	3,125,460	3,491,306
Black non-Hispanic	0-44	130,249	139,046
	45-64	714,959	710,536
	65-69	850,569	885,368
	70-74	738,243	755,234
	75-79	494,639	486,578
	80-84	307,159	340,862
	85+	397,630	444,649
Hispanic	0-44	67,854	84,565
	45-64	304,211	305,611
	65-69	593,927	691,159
	70-74	573,356	592,851
	75-79	315,631	316,560
	80-84	280,426	282,523
	85+	271,652	311,188
Other[†]	0-44	75,901	118,317
	45-64	231,409	455,562
	65-69	935,787	2,221,945
	70-74	579,389	613,444
	75-79	230,014	244,141
	80-84	148,887	150,186
	85+	152,796	161,433

SOURCE: Beneficiary age and race/ethnicity were sourced from administrative data in the Sample Control File and the weights were sourced from the 2020 Survey File.

* Weighted counts may not sum to the total of beneficiaries living in the community in the U.S. due to missingness.

[†]The "Other" race category includes other single races not of Hispanic origin, Two or More Races, or Unknown Races. See the Glossary (Appendix A) entry for race/ethnicity for more information.

6.2 Targeted Population and Sampling Strata

The targeted population for the MCBS consisted of persons enrolled in one or both parts of the Medicare program, that is, Part A or Part B, as of December 31 of the applicable sample-selection year, and whose address on the Medicare files was in one of the 48 contiguous states (excludes Alaska and Hawaii) or the District of Columbia.¹⁷ For example, for Fall Rounds 2017, 2018, 2019, and 2020 (the four rounds in which the 2017, 2018, 2019, and 2020 Panels, included in the 2020 MCBS data, were selected), the targeted population included those individuals enrolled as of December 31 of 2017, 2018, 2019, and 2020, respectively.

The universe of beneficiaries for the MCBS is divided into seven sampling strata based on age as of December 31 of the sampling year in order to include all beneficiaries enrolling during the sampling year. The age categories are: under 45, 45 to 64, 65 to 69, 70 to 74, 75 to 79, 80 to 84, and 85 or older. The strata also separate Hispanic and non-Hispanic beneficiaries by age group. The 14 strata in 2020 are depicted in Exhibit 6.2.1.¹⁸

Exhibit 6.2.1: 2020 MCBS Sampling Strata

Hispanic	Non-Hispanic
Under 45 years Hispanic	Under 45 years non-Hispanic
45 - 64 Hispanic	45 - 64 non-Hispanic
65 - 69 Hispanic	65 - 69 non-Hispanic
70 - 74 Hispanic	70 - 74 non-Hispanic
75 - 79 Hispanic	75 - 79 non-Hispanic
80 - 84 Hispanic	80 - 84 non-Hispanic
85 and over Hispanic	85 and over non-Hispanic

Additionally, in the 2017, 2018, 2019, and 2020 Panels, beneficiaries residing within the U.S. who were Hispanic (based on a Hispanic ethnicity classification code in the Medicare enrollment data; see Eicheldinger¹⁹ for more details) were oversampled to improve precision of estimates for this group.²⁰ See the *MCBS Methodology Report* for more information about this oversample. Exhibit 6.2.2 displays the beneficiaries selected as part of the 2020 Panel, by age and ethnicity.

¹⁷ Note that Puerto Rico was originally included in the MCBS sample and removed in 2017. See prior *MCBS Methodology Reports* for historical sampling information: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Codebooks>.

¹⁸ Note that the MCBS surveys beneficiaries living in community (e.g., households) and in facility (e.g., nursing home) settings; however, residence status is not known at the time of sampling and is therefore not included among the MCBS sampling strata.

¹⁹ Celia Eicheldinger and Arthur Bonito, "More Accurate Racial and Ethnic Codes for Medicare Administrative Data," *Health Care Financing Review* 29, no. 3 (2008): 27-42.

²⁰ Oversampling of Hispanic beneficiaries has been conducted throughout the MCBS and has evolved over time. See prior *MCBS Methodology Reports* for more information: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Codebooks>.

Exhibit 6.2.2: 2020 Panel of Selected Beneficiaries by Hispanic and Non-Hispanic Ethnicity Classification and Age Category*

Age Category as of 12/31/2020	TOTAL Sample Size	TOTAL Weighted	Hispanic Sample Size	Hispanic Weighted	Non-Hispanic Sample Size	Non-Hispanic Weighted
Under 45 years	1,251	1,668,975	132	189,188	1,119	1,479,787
45-64 years	1,736	6,679,803	194	608,094	1,542	6,071,709
65-69 years	3,130	16,875,016	376	1,248,389	2,754	15,626,627
70-74 years	2,297	15,045,401	265	1,150,491	2,032	13,894,910
75-79 years	2,428	10,314,190	313	701,271	2,115	9,612,918
80-84 years	2,547	6,734,542	281	511,609	2,266	6,222,932
85+ years	2,563	7,041,371	265	468,928	2,298	6,572,442
Total	15,952	64,359,297	1,826	4,877,971	14,126	59,481,326

SOURCE: Beneficiary age and race/ethnicity were sourced from administrative data in the Sample Control File and the weights were sourced from the 2020 Survey File.

6.2.1 Eligibility: Medicare Population Covered by the 2020 LDS

Beneficiaries who became eligible for Medicare Part A or B and enrolled anytime during the year were eligible to be sampled as part of the annual panel.²¹ Thus, the 2020 Cost Supplement File includes data from the 2017, 2018, 2019, and 2020 Panels and does not need to use data from the 2021 Panel in order to estimate 2020 events, cost, and utilization. This allows data to be released in a timelier manner; the Survey File LDS is released 12-15 months after the end of data collection and the Cost Supplement File LDS is released 15-18 months after the end of data collection.

6.3 Three-Stage Cluster Design

The MCBS employs a three-stage cluster sample design. Primary sampling units (PSUs) are made up of major geographic areas consisting of metropolitan areas or groups of rural counties. Secondary sampling units (SSUs) are made up of census tracts or groups of tracts within the selected PSUs. Medicare beneficiaries, the ultimate sampling units (USUs), are then selected from within the selected SSUs. The MCBS sample is annually "supplemented" during the fall round to account for attrition (deaths, dis-enrollments, refusals) and newly enrolled persons. Each annual supplement is referred to as the Incoming Panel sample. For more information about the selection of the PSUs and SSUs, see the *MCBS Methodology Report*.

6.4 Sample Selection

The MCBS sampling design provides nearly self-weighting (i.e., equal probabilities of selection) samples of beneficiaries within each of the 14 sampling strata. Within the selected PSUs and SSUs, a systematic sampling scheme with random starts is employed for selecting beneficiaries.²² For each continuing beneficiary, the survey questions corresponding to the Survey File data release are administered in the fall of the data collection year. Similarly, for beneficiaries new to the MCBS, the survey questions are administered as part of

²¹ These beneficiaries are referred to as "current-year enrollees."

²² The MCBS 2020 Panel was drawn by systematic random sampling with probability proportional to probabilities of selection with an independently selected random start within each PSU. For more information on this sampling method, please see the *MCBS Methodology Report*.

the initial fall Baseline interview. Exhibit 6.4 provides a brief summary of the number of selected beneficiaries and the inclusion criteria for the 2017 through 2020 Panels.

Exhibit 6.4: 2020 MCBS Sample Selection for the LDS Releases

Panel	# of Selected Beneficiaries	Previously Enrolled Beneficiaries Still Alive as of January 1 of Panel Year	Current-Year Enrollees
2017	11,623	Enrolled before 1/1/2017	Enrolled 1/1/2017 – 12/31/2017
2018	11,523	Enrolled before 1/1/2018	Enrolled 1/1/2018 – 12/31/2018
2019	11,615	Enrolled before 1/1/2019	Enrolled 1/1/2019 – 12/31/2019
2020	15,952	Enrolled before 1/1/2020	Enrolled 1/1/2020 – 12/31/2020

SOURCE: 2020 MCBS Internal Sample Control File

7. DATA PRODUCTS & DOCUMENTATION

7.1 Contents of Data Release

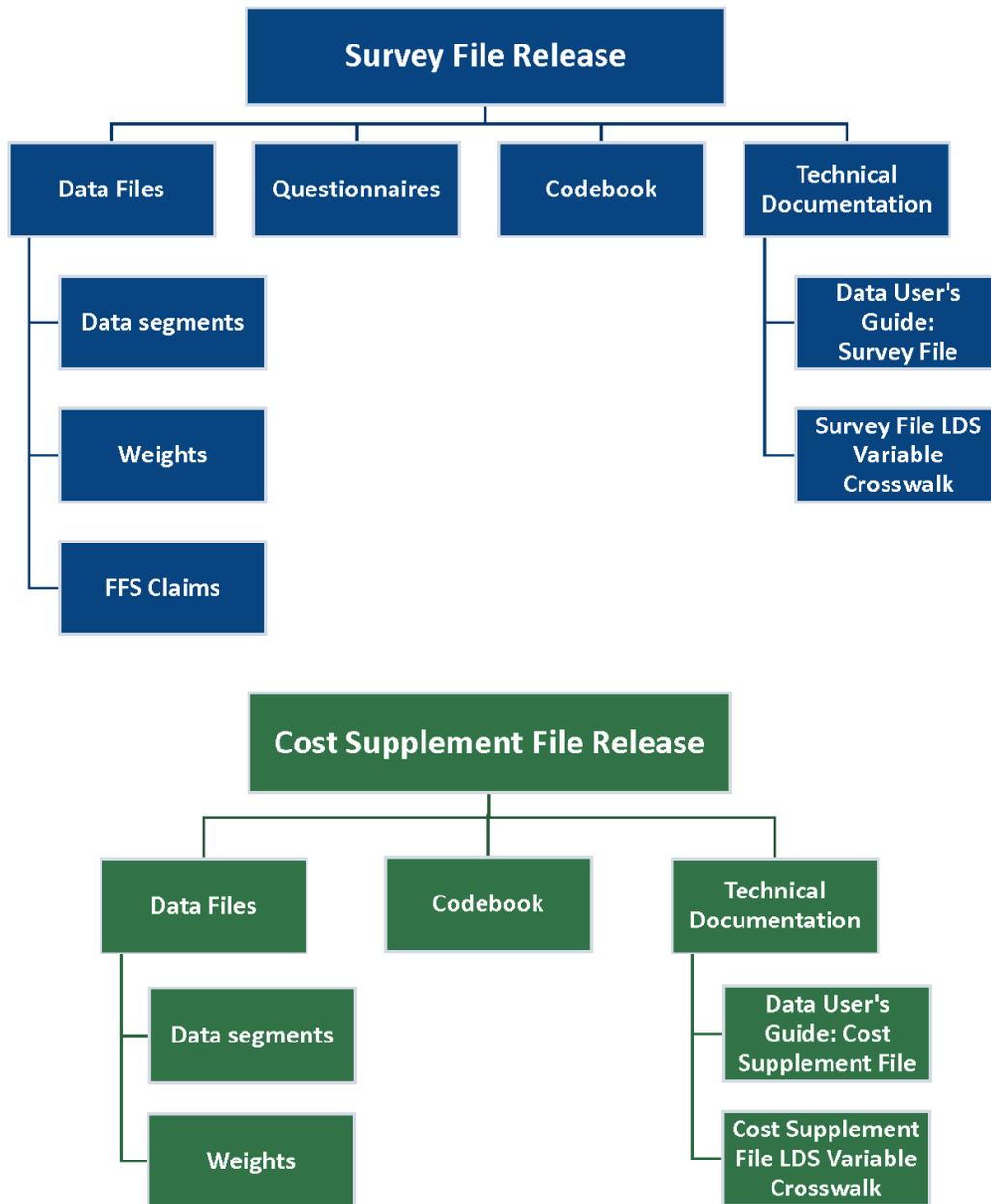
MCBS data are made available via releases of annual files. For each data year, two annual LDS releases (the Survey File and the Cost Supplement File) and one PUF (based on the Survey File data only) are planned.²³ The LDS releases contain multiple files, called segments, which are easily linkable through a common beneficiary key ID. The 2020 Survey File LDS contains over 6,000 variables across 44 segments and the 2020 Cost Supplement LDS contains over 600 variables across 14 segments.

Detailed descriptions of each segment, including the core contents of each segment, key variable definitions, and special notes on new variables, recodes, and administrative sources for select variables can be found in this document (see Section 10) and corresponding information for the Cost Supplement File can be found in the *MCBS Data User's Guide: Cost Supplement File*.

Exhibit 7.1 displays the components of each LDS release. Both the Survey File and Cost Supplement File contain data segments, codebooks, questionnaires, and technical documentation. The Survey File release contains the FFS claims data, which provide CMS administrative information on medical services and payments paid by Medicare claims; PDE events for Medicare Part D are not included and claims data for Medicare Advantage beneficiaries are not available. While users can conduct analyses with the Survey File alone, users interested in the Cost Supplement File data will need both LDS files to link cost and utilization variables with demographic or health insurance coverage variables.

²³ In addition to the annual MCBS Survey File PUF, CMS has released three special topic PUFs with data from the three MCBS COVID-19 Community Supplements, which correspond to the 2019 and 2020 data years. See the COV. section below for more information.

Exhibit 7.1: 2020 Contents of Data Releases



7.1.1 2020 MCBS Survey File

The Survey File contains data collected directly from respondents and supplemented by administrative items plus the facility (non-cost) information and FFS claims. The Survey File includes multiple topic-related segments, including health status and limitations, access to care, health insurance coverage, and household characteristics. The Survey File also includes information on Facility interviews, including a residence timeline, facility characteristics, and assessment (Minimum Data Set) measures. Finally, Topical Questionnaire sections (e.g., beneficiary knowledge, drug coverage) are included with this release. To facilitate analysis, the information collected in the survey is augmented with data on the use and program cost of Medicare services from Medicare claims data and administrative data. The Survey File includes beneficiaries enrolled for at least

one day in 2020 who completed an interview in 2020 or Winter 2021, or who died during 2020. Beneficiaries who refused to complete a later interview or became nonrespondents during 2020 are excluded.

Exhibit 7.1.1 displays each segment included in the Survey File including the **segment abbreviation**, **brief description**, and **information on weights or other special notes**.

Respondent Type describes the expected setting where beneficiaries resided during the course of the calendar year (i.e., C = respondent only completed Community interviews, F = a Facility interview was conducted, or B = respondents completed at least one Community interview and for whom at least one Facility interview was conducted). In each data year, some differences by segment will exist (i.e., data may reflect a prior or future calendar year due to the specific questionnaire and reference period used to collect the information).

The **Data Source** column describes the source of the data on the segment. The four possible sources are the Community Questionnaire (CQ), Facility Instrument (FI), Administrative Records (AR), and COVID-19 Community Supplements (COVID-19). Each LDS segment can have any combination of the first three sources; the fourth source only applies to the COVIDWIN segment. Data source is different from the respondent type variable in that it reflects where the data came from, not where the beneficiary was living. For example, a beneficiary could have lived in both settings during the year and so will have a respondent type = B, but the data for that beneficiary available on the ACCESSCR segment came from their Community interview only.

The **Quex Section** column lists the specific questionnaire sources for the LDS segment. Please note that not all variables from the questionnaire are released on the segments. Some questionnaire items are combined or recoded to create the LDS variable. Data users will see these derived variables noted in the codebooks preceded with the character "D", such as D_ERVIST.

Season indicates the round (winter, summer, fall) and year when the questionnaire was administered.

Panel describes whether the questionnaire sections that provide the data for each segment are fielded for baseline respondents (base), continuing respondents (cont), or all panels (all). If the segment consists of administrative CMS data, then the cell indicates all panels are included.

Unit of Observation indicates what each row in the segment represents. For example, the ASSIST segment provides multiple rows per BASEID for each person reported as helping the beneficiary in the data year.

A list of equivalent historic segments from the 1991-2013 data release structure is provided in Appendix F.

Exhibit 7.1.1: 2020 MCBS Survey File Segments and Contents

Survey File Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source**	Quex Section	Season	Panel***	Unit of Observation
Access to Care (ACCESSCR)	Information on ability to obtain health care, delay of care related to costs, and reasons for not obtaining needed health care.		C	CQ	HFQ	Fall	All	Beneficiary
Access to Care Medical Appointments (ACCSSMED)	Information on medical and dental visit experiences and forgone medical, dental, vision, hearing, and mental health care and prescription medicines.	The data collected in Winter 2021 are released with the 2020 Survey File given that the reference period is 2020. Special non-response adjustment weights are included with this file.	C	CQ	ACQ, DVH, MPQ, PMQ	Winter (ACQ) ³ All (DVH, MPQ, PMQ)	Cont.	Beneficiary
Administrative Utilization Summary (ADMNUTLS)	Summarized administrative information on Medicare, program expenditures, and utilization.		B	AR	n/a (Admin data)	n/a	All	Beneficiary
Assistance (ASSIST)	Information on the person helping and type of assistance that the beneficiary may receive performing ADLs and IADLs.		C	CQ	ENS, HFQ	All (ENS) Fall (HFQ)	All	Helper by beneficiary
Chronic Conditions (CHRNCOND)	Information on chronic and other diagnosed medical conditions.		C	CQ	HFQ, PVQ	Fall (HFQ, PVQ) ³	All	Beneficiary
Chronic Conditions Flags (CHRNCDL)	FFS Chronic Condition Flag Records and FFS Chronic and other Disabling Flag records from administrative data sources.		B	AR	n/a (Admin data)	n/a	n/a	Beneficiary
Chronic Pain (CHRNPAIN)	Information on experiences with chronic pain and non-medication related chronic pain management techniques.	The data collected in Summer 2021 are released with the 2020 Survey File given that the reference period is 2020. Special non-response adjustment weights are included with this file.	C	CQ	CPQ	Summer	Cont.	Beneficiary

Survey File Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source**	Quex Section	Season	Panel***	Unit of Observation
Cognitive Measures (COGNFUNC)	Measures of cognitive functioning.		C	CQ	CMQ	Fall	All	Beneficiary
COVID-19 Vaccination (COVIDVAC)	Information on COVID-19 vaccination.		C	CQ	CVQ	All	All	Beneficiary
Demographics (DEMO)	Demographic information.		B	CQ, FI, AR	ENS, DIQ, INQ, BQ, RH	All (ENS, INQ, RH) Fall ¹ (DIQ, BQ)	All (ENS, INQ, BQ, RH) Base. (DIQ)	Beneficiary
Diabetes (DIABETES)	Information on diabetes management such as insulin usage.		C	CQ	HFQ	Fall	All	Beneficiary
Facility Assessments (FACASMNT)	Assessment information conducted while the beneficiary was living in a Medicare approved or non-Medicare approved facility.		F	FI, AR	HS	Fall ²	All	Beneficiary
Facility Characteristics (FACCHAR)	Primarily information from the Facility Questionnaire with Skilled Nursing Facility (SNF) stay information for beneficiaries living in the community and in facilities incorporated.		B	FI, AR	BQ, FQ, RH	Fall ¹ (BQ) All (FQ, RH)	All	Facility by beneficiary
Falls (FALLS)	Information on injuries and attitudes about falls.		C	CQ	HFQ	Fall	All	Beneficiary
Food Insecurity (FOODINS)	Information on access to sufficient food.	The data collected in Summer 2021 are released with the 2020 Survey File given that the reference period is 2020. Special non-response adjustment weights are included with this file.	C	CQ	IAQ	Summer	Cont.	Beneficiary
General Health (GENHLTH)	Information on general health status and functioning such as height and weight.		C	CQ	HFQ	Fall	All	Beneficiary

Survey File Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source **	Quex Section	Season	Panel ***	Unit of Observation
Health Insurance Summary (HISUMRY)	Administrative information on the characteristics of insurance coverage.		B	CQ, AR	HIQ	All	All	Beneficiary
Health Insurance Timeline (HITLINE)	Information on insurance plans and the coverage eligibility timeline as well as information regarding premiums and covered services.		B	CQ, FI, AR	CPS, HIQ, NSQ, STQ, IN	All (CPS, HIQ, NSQ, STQ) Fall ² (IN)	Cont. (CPS, NSQ, STQ) Both (HIQ)	Plan type by beneficiary
Household Characteristics (HHCHAR)	Information on household composition and home.		B	CQ	ENS, HAQ	All (ENS) Fall (HAQ)	All	Beneficiary
Income and Assets (INCASSET)	Information on income and assets.	The data collected in Summer 2021 are released with the 2020 Survey File given that the reference period is 2020. Special non-response adjustment weights are included with this file.	B	CQ	IAQ	Summer ³	Cont.	Beneficiary
Interview Characteristics (INTERV)	Information on interview characteristics.		B	CQ, FI	END, ENS, INQ, IRQ	All	All	Interview by beneficiary
MA Plan Questions (MAPLANQX)	Information on access to and satisfaction with care for beneficiaries enrolled in Medicare Part C.		C	CQ	HIQ	All	All	Beneficiary
Medicare Plan Beneficiary Knowledge (MCREPLNQ)	Information on experiences with the Medicare open enrollment period and knowledge about Medicare-covered expenses.	The data collected in Winter 2021 are released with the 2020 Survey File given that the reference period is 2020. Special non-response adjustment weights are included with this file.	C	CQ	KNQ	Winter ³	Cont.	Beneficiary

Survey File Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source **	Quex Section	Season	Panel ***	Unit of Observation
Minimum Data Set (MDS3)	Assessment information conducted while the beneficiary was living in an approved Medicare facility.		B	AR	n/a (Admin data)	n/a	n/a	Assessment by beneficiary
Mental Health (MENTHLTH)	Information on mental health such as feelings of anxiety or depression.		C	CQ	HFQ	Fall	All	Beneficiary
Mobility (MOBILITY)	Information on the use of available transportation options and whether health status affects their daily travel.		C	CQ	MBQ	Fall	All	Beneficiary
NAGI Disability (NAGIDIS)	Information on difficulties with performance of activities of daily living.		C	CQ	HFQ	Fall	All	Beneficiary
Nicotine and Alcohol (NICOALCO)	Information on the prevalence and frequency of alcohol and nicotine use.		C	CQ	NAQ	Fall	All	Beneficiary
Outcome and Assessment Information (OASIS)	Assessment information conducted while the beneficiary was receiving home health services.		B	AR	n/a (Admin data)	n/a	n/a	Assessment by beneficiary
Patient Activation (PNTACT)	Information on the degree to which beneficiaries actively participate in their health care and decisions concerning care.	Special non-response adjustment weights are included with this file.	C	CQ	SCQ	Fall	All	Beneficiary
Preventive Care (PREVCARE)	Information on preventive services such as vaccinations and routine screening procedures.		C	CQ	HFQ, PVQ	Fall (HFQ) All (PVQ) ³	All	Beneficiary
RX Medications (RXMED)	Information on prescription medication access and satisfaction with and knowledge about Medicare Part D.	The data collected in Summer 2021 are released with the 2020 Survey File given that the reference period is 2020. Special non-response adjustment weights are included with this file.	C	CQ	RXQ	Summer ³	Cont.	Beneficiary
Residence Timeline (RESTMLN)	Information on where the beneficiary lived over the course of the year.		B	CQ, FI	HHQ, IPQ, IUQ	All	Cont.	Beneficiary

Survey File Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source **	Quex Section	Season	Panel ***	Unit of Observation
Satisfaction with Care (SATWCARE)	Information on satisfaction with different aspects of health care.		C	CQ	SCQ	Fall	Cont. (MPQ, PMQ) Both (SCQ)	Beneficiary
Usual Source of Care (USCARE)	Information on where and how the beneficiary typically seeks medical care.	The data collected in Winter 2021 are released with the 2020 Survey File given that the reference period is 2020. Special non-response adjustment weights are included with this file.	C	CQ	USQ	Winter ³	Cont.	Beneficiary
Vision and Hearing (VISHEAR)	Information on eye health and hearing status.		C	CQ	HFQ	Fall	All	Beneficiary
Weights (CENWGTS) (EVRWGTS) (LNG2WGTS) (LNG3WGTS) (LNG4WGTS)	The weights segments include: longitudinal weights for the continuously enrolled population, general-purpose cross-sectional weights, a series of replicate weights, and weights to represent the ever enrolled population.		B	CQ, FI	n/a	n/a	All	Beneficiary
COVID-19 Winter 2021 Community Supplement (COVIDWIN)	Information on how the pandemic impacted the Medicare population during the winter of 2021.	The data collected in Winter 2021 are released with the 2020 Survey File Special non-response adjustment weights are included with this file.	C	COVID-19	n/a	Winter	All	Beneficiary
COVID-19 Facility Beneficiary-Level Supplement (FBENCVFL)	Information on COVID-19 diagnosis, testing, and care received by beneficiaries living in a facility during the fall of 2020.		F	FI	CV	All	All	Beneficiary

Survey File Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source**	Quex Section	Season	Panel***	Unit of Observation
COVID-19 Facility Level Supplement (FFACCVFL)	Information on ways COVID-19 impacted facilities that serve Medicare beneficiaries during the fall of 2020.		F	FI	FQ	All	All	Facility by beneficiary
Fee-for-Service Claims (FFS)	Abbreviated FFS claims data. Additional claims-like data will be included as they become available in subsequent years (e.g., Encounter Data, Medicaid claims data).		B	AR	n/a	n/a	All	Beneficiary

* = Respondent type describes the expected setting where beneficiaries resided during the course of the calendar year (i.e., C = respondent only completed Community interviews, F = a Facility interview was conducted, or B = respondents completed at least one Community interview and for whom at least one Facility interview was conducted). In each data year, some differences by segment will exist (i.e., data may reflect a prior or future calendar year due to the specific questionnaire and reference period used to collect the information).

** = Data source describes the source of the data on the segment. The four possible sources are the Community Questionnaire (CQ), Facility Instrument (FI), Administrative Records (AR), and COVID-19 Community Supplements (COVID-19). Each LDS segment can have any combination of the first three sources; the fourth source only applies to the COVIDWIN segment. Data source is different from the respondent type variable in that it reflects where the data came from, not where the beneficiary was living. For example, a beneficiary could have lived in both settings during the year so have a respondent type = B but the data for that beneficiary available on the ACCESSCR segment came from their Community interview only.

*** = Panel describes whether the questionnaire sections that provide the data for each segment are fielded for baseline respondents, continuing respondents, or both.

1. The BQ section is also administered to Community-to-Facility Crossover cases each season.
2. The IN and HS sections are also administered each season to Community-to-Facility cases, Facility-to-Facility cases, and for beneficiaries living in a Facility whose last interview was a Community interview and who completed a Facility interview in a prior round cases.
3. These sections are administered in rounds following the current data year given that the reference period is the prior year and data are included in the prior year data files.

7.1.2 2020 MCBS Cost Supplement File

The Cost Supplement File contains both individual event and summary files and can be linked to the Survey File to conduct analyses on healthcare cost and utilization. The Cost Supplement File links survey-reported events to Medicare FFS claims and provides a comprehensive picture of health services received, amounts paid, and sources of payment, including those not covered by Medicare. Survey-reported data include information on the use and cost of all types of medical services, as well as information on supplementary health insurance costs. Medicare FFS claims data include administrative and billing information on the use and cost of inpatient hospitalizations, outpatient hospital care, physician services, home health care, durable medical equipment, skilled nursing home services, hospice care, and other medical services.²⁴ The Cost Supplement File can support a broader range of research and policy analyses on the Medicare population than would be possible using either survey data or administrative claims data alone.

The Cost Supplement File contains a subset of the beneficiaries included in the Survey File who have complete cost and utilization data for the year. For the 2020 MCBS data year, the Cost Supplement File includes beneficiaries sampled in the 2017 through 2019 Panels, plus members of the 2020 Panel who were enrolled in Medicare during 2020 for at least one day.

For beneficiaries enrolled in Medicare Advantage, cost and utilization information is available. As is done with services not covered by Medicare (e.g., most dental, vision, and hearing care), when a beneficiary reports health care events, the MCBS uses the explanation of benefits (EOB) form from Medicare Advantage providers to report the payments, as well as the capitation information from the administrative data for total Medicare Advantage Payments. Actual claims-based information for MA beneficiaries, referred to as encounter data, is not currently available for these individual events. The Cost Supplement File undergoes a careful reconciliation process to separately identify and flag health care services reported: 1) from the survey alone, 2) from the claims data alone, and 3) from both sources. This process results in a file with a much more complete and accurate picture of health services received, amounts paid, and sources of payment. Due to the added processing time required to reconcile survey reported events with the claims data, this file is generally released 18 months after the close of the calendar year for data collection.

Exhibit 7.1.2 displays each segment included in the Cost Supplement File along with the abbreviation, description, and the equivalent historic segment from the 1991-2013 data release structure.

²⁴ Only Medicare claims for beneficiaries enrolled in Medicare Fee-for-Service (FFS, often called "traditional" Medicare), are available for linkage; similar claims information for Medicare Advantage (MA) beneficiaries is not available. To the extent that health care use and costs may be underreported in the survey or reported differentially between FFS and MA beneficiaries, this will be reflected in the data as MA beneficiaries' information will not be supplemented by claims data.

Exhibit 7.1.2: 2020 MCBS Cost Supplement File Segments and Contents

Cost Supp. Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source **	Quex Section	Season	Panel ***	Unit of Observation
Dental Utilization Events (DUE)	Contains individual dental events reported during a Community interview or created from Medicare claims data.		B	CQ, AR	DVH, US	All	All	One record per beneficiary per event (defined as a single visit to the dentist)
Facility Events (FAE)	Contains individual facility events reported during a Facility interview.	There is one record for each stay that occurred at least partly in the data year.	F	FI, AR	RH, US, EX	All	All	One record per beneficiary per stay in a long-term care facility
Hearing Utilization Events (HUE)	Contains individual hearing care events reported during a Community interview or created from Medicare claims data.		B	CQ, AR	DVH, US	All	All	One record per beneficiary per event (defined as a single visit to a hearing care provider)
Inpatient Hospital Events (IPE)	Contains individual inpatient hospital events reported during a Community interview or created from Medicare claims data.		B	CQ, AR	IUQ, IPQ, ERQ, OPQ, US	All	All	One record per beneficiary per admission
Institutional Events (IUE)	Contains individual short-term facility (usually skilled nursing facility) stays reported during a Community interview or created from Medicare claims data.		B	CQ, AR	IUQ, IPQ, US	All	All	One record per beneficiary per admission

Cost Supp. Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source **	Quex Section	Season	Panel ***	Unit of Observation
Medical Provider Events (MPE)	Contains individual events for a variety of medical services, equipment, and supplies reported during a Community interview or created from Medicare claims data.		B	CQ, AR	ERQ, IPQ, MPQ, OMQ, OPQ, US	All	All	One record per beneficiary per event (defined as a separate visit, procedure, service, or a supplied item for a survey-reported event)
Outpatient Hospital Events (OPE)	Contains individual outpatient hospital events reported during a Community interview or created from Medicare claims data.		B	CQ, AR	OPQ	All	All	One record per beneficiary per event (defined as a single outpatient visit)
Prescribed Medicine Events (PME)	Contains individual outpatient prescribed medicine events reported during a Community interview or created from Medicare claims data.		B	CQ, AR	PMQ, DVH, ERQ, IPQ, OPQ, MPQ	All	All	One record per beneficiary per prescribed medicine (defined as a single prescribed medicine)
Vision Utilization Events (VUE)	Contains individual vision care events reported during a Community interview or created from Medicare claims data.		B	CQ, AR	DVH, US	All	All	One record per beneficiary per event (defined as a single visit to a vision care provider)
Person Summary (PS)	Summarization of utilization and expenditures by type of service and summarization of expenditures by payer, yielding one record per person.		B	CQ, FI, AR	all utilization including HHQ, US	All	All	One record per beneficiary

Cost Supp. Segment (Abbrev)	Description	Data collection and special weights notes	Respondent Type*	Data Source **	Quex Section	Season	Panel ***	Unit of Observation
Service Summary (SS)	Summarization of the seven individual event files along with home health and hospice utilization, yielding a total of nine summary records per person.		B	CQ, FI, AR	all utilization including HHQ, US	All	All	Nine records per beneficiary
CSEVWGTS	Contains cross-sectional full-sample and replicate weights representing the 2020 ever enrolled population.		B	CQ/FI	N/A	All	All	One record per beneficiary
CSL2WGTS CSL3WGTS	Contains longitudinal full-sample and replicate weights for the multi-year ever enrolled population. The CSL2WGTS file includes the two-year longitudinal weights for the population ever enrolled at any time during both 2019 and 2020. The CSL3WGTS file includes the three-year longitudinal weights for the population ever enrolled at any time during 2018, 2019, and 2020.		B	CQ/FI	N/A	All	All	One record per beneficiary

* = Respondent type describes the expected setting where beneficiaries resided during the calendar year (i.e., C = respondent only completed Community interviews, F = a Facility interview was conducted, or B = respondents completed at least one Community interview and for whom at least one Facility interview was conducted). In each data year, some differences by segment will exist (i.e., data may reflect a prior or future calendar year due to the specific questionnaire and reference period used to collect the information).

** = Data source describes the source of the data on the segment. The three possible sources are the Community Questionnaire (CQ), Facility Instrument (FI), and Administrative Records (AR). Each LDS segment can have any combination of these sources.

*** = Panel describes whether the questionnaire sections that provide the data for each segment are fielded for baseline respondents, continuing respondents, or both.

The Cost Supplement segments are assembled at three levels:

- The Event level reports all payers, costs, and utilization at the most detailed level available (one observation per event per person).
- The Service Summary level summarizes all payers, costs, and utilization for a person at the service level (one observation per service type per person).
- The Person Summary level summarizes all payers and costs across service categories and summarizes type of service amounts (one observation per person).

The tri-level structure allows researchers to fit the research problem they are addressing to the available file summary levels, and potentially avoid having to process all the detailed event records in the file when summaries may suffice. For example, an analysis of differences in total health spending per person between men and women could use the person summary level, and thereby avoid having to process the more numerous event level records. Similarly, an analysis of differences in use of Medicare hospital payments by race could use the type of service summary records. Event level records would be used for more detailed analyses, for example, average length of long-term facility stays or average reimbursements per prescription drug type. For a more complete discussion of the tri-level file structure, see the *MCBS Data User's Guide: Cost Supplement File* document.

7.1.3 Using the Data

The MCBS data releases are made available in two formats: SAS formatted files and comma delimited files for use with Stata® and R®. Directions and sample SAS code are given below to help users read the dataset into SAS (see Appendix C). Files with programming code to create formats and labels are provided for both SAS users and for use with comma delimited files.

7.1.4 Research Claims Files

The fixed-length claims (also known as the research claims) are abbreviated versions of the full claim record layout. Each claim type has a subset of variables selected for their relevancy to data analysis of that service. Additionally, institutional claim types have a corresponding revenue center file that links back to the claim-level data file through a unique claim identifier. See Section 8.3: Claims Files for more on the claims file specifications.

There is one observation per data record for all of the MCBS claims files except the Physician/Supplier Claims and Durable Medical Equipment (DME) Claims. Those claim types treat each line item as a separate observation with the claim-level detail repeating for each line item.

7.2 Which File Do I Need?

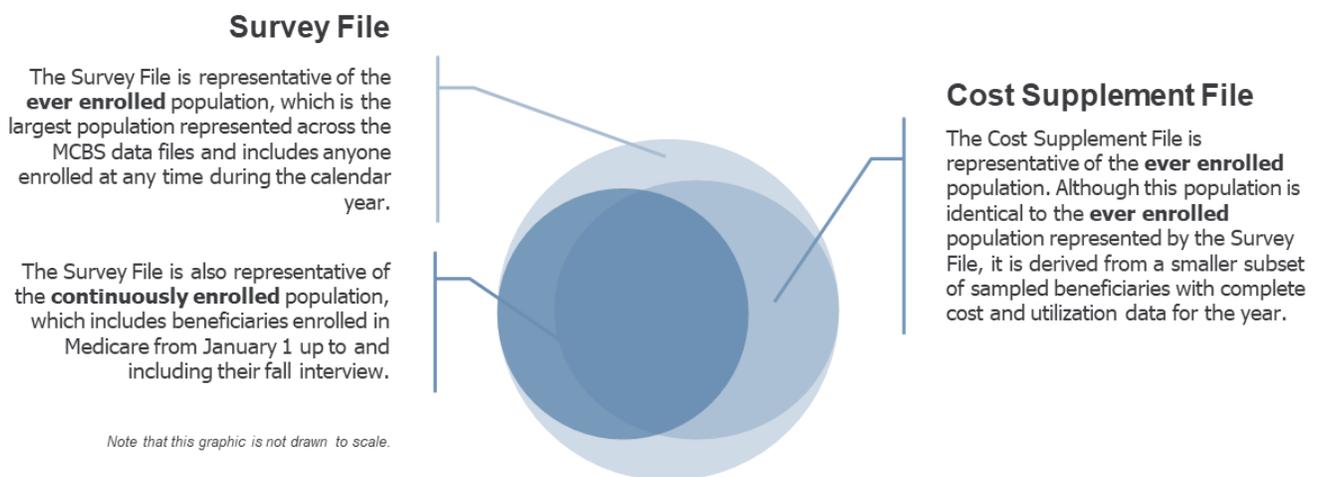
The identification of the target population for a given research question will influence both the selection of weights and the particular segments that a data user will need to conduct analyses. Exhibit 7.2 depicts the relationship between the beneficiaries included in the annual data releases.²⁵ The ever enrolled population from the Survey File is the largest, including anyone enrolled at any time during the calendar year corresponding to the LDS data year. The continuously enrolled represent the population of beneficiaries who were enrolled continuously between January 1 through the completion of their fall interview. Beneficiaries who died during the year, newly-enrolled beneficiaries who enrolled in Medicare during the year that they were sampled, and beneficiaries who have lost eligibility are not included in the continuously enrolled group. The

²⁵ Exhibit 7.2 is not drawn to scale, but provided as a visual reference for the relationship of populations between data files.

ever enrolled represent the population of beneficiaries who were ever enrolled in Medicare for at least one day at any time during the year. The ever enrolled population includes beneficiaries who died or lost entitlement prior to completing the fall interview. Beneficiaries who first became enrolled in Medicare during the year are also included. Thus, the continuously enrolled beneficiaries are a subset of the ever enrolled beneficiaries. The Survey File LDS includes weight segments that allow for subsetting the data by the ever enrolled and continuously enrolled populations.

The Cost Supplement File is representative of the ever enrolled population, but is smaller than the Survey File population because it is derived from a smaller subset of sampled beneficiaries with complete cost and utilization data for the entire year. As does the Survey File, the Cost Supplement File includes a weight segment that allows for subsetting the data by the ever enrolled population.

Exhibit 7.2: MCBS Populations in Data Products



7.2.1 Survey File Only

Users who wish to focus on research questions around health-related topics, such as health status and access to care and/or Medicare FFS utilization, only need the Survey File.

7.2.2 Using Both Survey File and Cost Supplement File

To the extent that a data user needs demographic and health insurance information to conduct research on the cost and utilization of medical services, both the Survey File and the Cost Supplement File are required. Data users must also use the ever enrolled cost weights when analyzing any cost data from the Cost Supplement File combined with survey-reported information from the Survey File. For more information on using the weights, please see 9.4 Weighting.

7.2.3 Using Both Community and Facility Data

Analytic decisions about whether to include all beneficiaries regardless of residence status or those living only in the community or only in facilities should be driven by both the research question and data limitations. However, as discussed in Sections 4 and 5, there are differences in the data collection protocols and questionnaire instruments for the MCBS Community and Facility components. Thus, caution should be observed when combining data across these populations to address questions requiring analysis of all Medicare beneficiaries.

In order to determine which population should be included in an analysis, the following steps are recommended:

1. Define the population based on the research question(s) and identify the living in community and living in facility populations. The variable INT_TYPE on the DEMO segment is the recommended variable for defining the two populations. See Section 10.3.10 for more information on INT_TYPE.
2. Identify the LDS segments and variables associated with each of the analysis' domains to determine what data are available for the Community and Facility components.
3. Assess whether the universe, level of measurement, and response categories for the variables of interest are similar for both Community and Facility components.
4. If needed, recode the LDS variables to align the coding between Community and Facility components and create analytic variables.
5. Merge the Community and Facility segments with the appropriate weights segments. Assess preliminary estimates for variation between community and facility.
6. Review MCBS documentation to determine if there are underlying differences in data collection and processing between community and facility that result in analytic limitations.
7. Conduct analysis and document any potential limitations.

For more information on using community and facility data, including a series of analytic examples with sample SAS code, see the *MCBS Advanced Tutorial on Using Community and Facility Data*. Data users can access this tutorial at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Data-Briefs>.

COV. COVID-19 SUPPLEMENT SECTION

COV.1 Introduction

In response to the emergence of the novel (new) coronavirus in the U.S. in 2020, the MCBS fielded a series of COVID-19 Community and Facility Supplements to quickly collect information on the pandemic's impacts on the Medicare population. Two COVID-19 Community Supplements were fielded in 2020, and an additional COVID-19 Community Supplement was fielded in Winter 2021. The COVID-19 Facility Supplement was administered to facility staff on behalf of beneficiaries living in a long-term care facility beginning in Fall 2020.

One topic-specific LDS segment for the COVID-19 Winter 2021 Community Supplement was released in the 2020 Survey File LDS. Additionally, COVID-19 Fall 2020 Facility Supplement data were released in the 2020 Survey File LDS along with other data collected via the main MCBS Facility Instrument.

This section contains information to help data users understand and analyze the 2020 Survey File LDS segments with items from the MCBS COVID-19 Winter 2021 Community Supplement and COVID-19 Fall 2020 Facility Supplement. For more information about the survey design and data collection methods, data users can reference the *2020 MCBS Methodology Report* at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Codebooks>.

COV.2 Background and Development

On January 31, 2020, the Secretary of the Department of Health and Human Services determined that a Public Health Emergency (PHE) existed for the United States to aid the nation's health care community in responding to the novel "severe acute respiratory syndrome coronavirus 2" (SARS-CoV-2) virus and the disease it causes, COVID-19. With the emergence of the COVID-19 pandemic in the U.S., CMS was uniquely positioned to collect timely and vital information on how the pandemic was impacting the Medicare population by utilizing the MCBS.

The first MCBS COVID-19 Community Supplement was administered in Summer 2020 (Round 87) to existing MCBS sampled beneficiaries who were continuously enrolled in Medicare from the beginning of 2020 and were alive, living in the community, and eligible for and enrolled in Medicare at the time of the interview in Summer 2020. CMS administered the COVID-19 Fall 2020 Supplement during the regular production cycle of Fall 2020 (Round 88) for existing MCBS sampled beneficiaries who were continuously enrolled in Medicare from the beginning of 2020 and were alive, eligible for, and enrolled in Medicare at the time of the Fall 2020 interview; one questionnaire was administered to beneficiaries who were living in the community and another, for the first time in Fall 2020, to facility staff (i.e., Facility respondents) about beneficiaries living in a facility. CMS administered the COVID-19 Winter 2021 Supplement during the regular production cycle of Winter 2021 (Round 89) for existing MCBS sampled beneficiaries who were enrolled in Medicare in 2020 and were alive, eligible for, and enrolled in Medicare at the time of the Winter 2021 interview; one questionnaire was administered to beneficiaries who were living in the community and another to facility staff about beneficiaries living in a facility.

Data from the COVID-19 Summer and Fall 2020 Community Supplements were first released as standalone COVID-19 PUFs. In addition to their corresponding PUFs, data collected for MCBS sampled beneficiaries living in the community using the COVID-19 Summer and Fall 2020 Community Supplements were made available as part of the 2019 Survey File LDS. These data were released with the 2019 Survey File LDS because the population administered the COVID-19 Summer and Fall 2020 Community Supplements align with the 2019 Survey File population and can be combined with other 2019 Survey File LDS segments for analysis. See the *2019 Data User's Guide: Survey File* for more information about the 2019 Survey File LDS segments.

Likewise, data collected for MCBS sampled beneficiaries living in the community using the COVID-19 Winter 2021 Community Supplement were made available as a standalone COVID-19 PUF and as part of the 2020 Survey File LDS. The COVID-19 Winter 2021 Community Supplement segment (COVIDWIN) was released with the 2020 Survey File LDS because the population administered the COVID-19 Winter 2021 Community Supplement aligns with the 2020 Survey File population and can be combined with other 2020 Survey File LDS segments for analysis.

Data collected for MCBS sampled beneficiaries living in a facility in Fall 2020 were also released as part of the 2020 Survey File LDS. The COVID-19 Fall 2020 Facility Supplement segments (FBENCVFL, FFACCVFL) were released with the 2020 Survey File LDS because the population administered the COVID-19 Fall 2020 Facility Supplement aligns with the 2020 Survey File population and can be combined with other 2020 Survey File LDS segments for analysis.

Beginning in Summer 2021, COVID-19 Community Supplement content was incorporated into the main MCBS Community Questionnaire for subsequent interviews as appropriate, including in the new CVQ. Summer 2021 CVQ data were also released as part of the 2020 Survey File LDS on the COVID-19 Vaccination segment (COVIDVAC). In Winter 2021, the COVID-19 Facility Supplement content continued to be incorporated into the main MCBS Facility Instrument for subsequent interviews.

Exhibit COV.2.1 demonstrates how the administration of the MCBS COVID-19 Community and Facility Supplements and integration of COVID-19 items into the main MCBS Community Questionnaire corresponds to each Survey File LDS data year release. Exhibit COV.2.2 shows the schedule of the MCBS COVID-19 Community and Facility Supplements and corresponding LDS and PUF data releases known to date.

Exhibit COV.2.1: COVID-19 Data Collection and Corresponding Survey File Releases

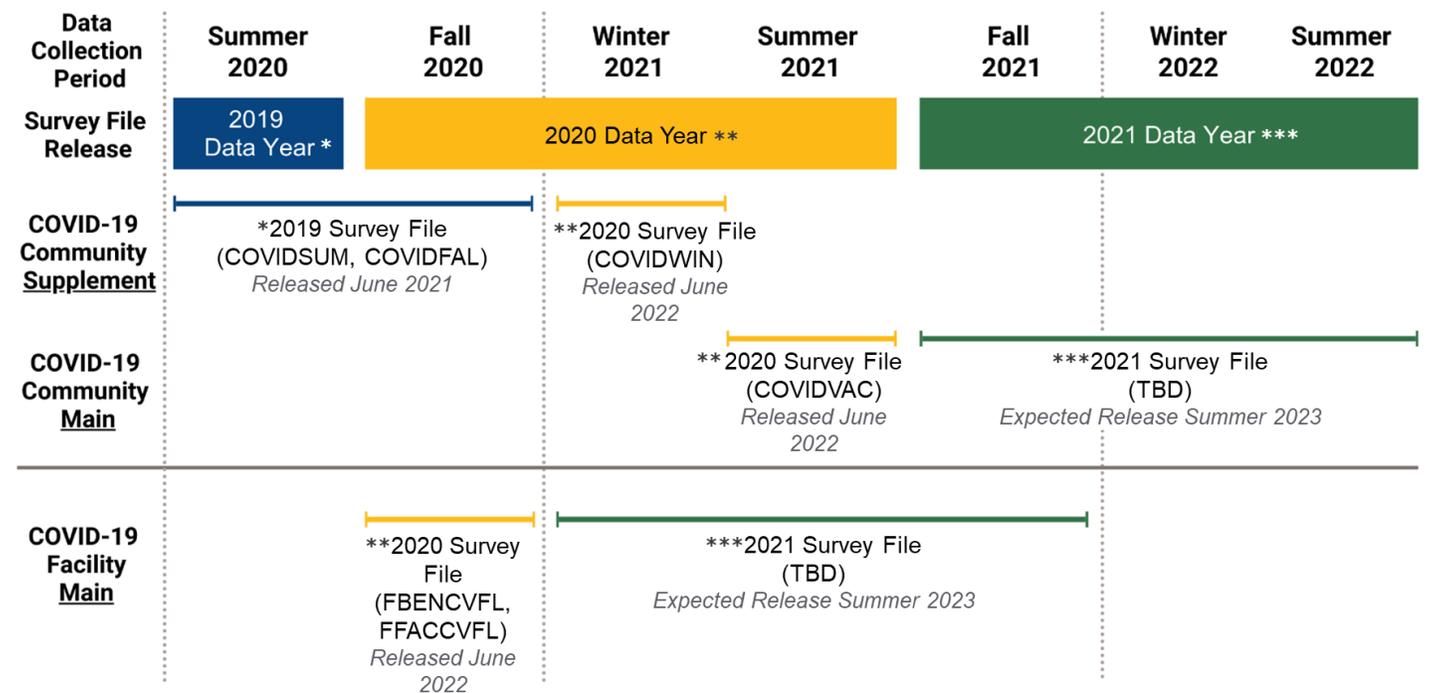


Exhibit COV.2.2: Schedule of COVID-19 Supplements

COVID-19 Supplements	Date of Survey Administration	Planned Public Use File Release	Release Date of Public Use File	Planned LDS File Release	Release Date of LDS File
COVID-19 Summer 2020 Community Supplement	June – July 2020	COVID-19 Summer 2020 PUF	October 2020	2019 Survey File COVIDSUM Segment	June 2021
COVID-19 Fall 2020 Community Supplement	October – November 2020	COVID-19 Fall 2020 PUF	January 2021	2019 Survey File COVIDFAL Segment	June 2021
COVID-19 Winter 2021 Community Supplement	March – April 2021	COVID-19 Winter 2021 PUF	July 2021	2020 Survey File COVIDWIN Segment	June 2022
COVID-19 Fall 2020 Facility Supplement	October – December 2020	n/a	n/a	2020 Survey File FBENCVFL, FFACCVFL Segments	June 2022
COVID-19 Winter 2021 Facility Supplement	January – April 2021	n/a	n/a	2021 Survey File	Summer 2023

The three COVID-19 Community Supplement PUFs are standalone and include preliminary survey weights and unique identification variables that cannot be linked to any other PUF or LDS files. The 2020 Survey File LDS segment for the COVID-19 Winter 2021 Community Supplement (COVIDWIN) contains the final weights and the BASEID identification variable, allowing these data to be linked to other LDS segments for more robust analysis. Due to disclosure concerns, COVID-19 Facility Supplement data were not released as a PUF but data from the COVID-19 Fall 2020 Facility Supplement are included in the 2020 Survey File LDS. Exhibit COV.2.3. presents some notable differences between the data available in the COVID-19 Winter 2021 Supplement PUF and the data available on the COVIDWIN segment in the 2020 Survey File LDS.

Exhibit COV.2.3: A Comparison of the COVID-19 Winter 2021 Supplement PUF and 2020 Survey File LDS COVIDWIN Segment

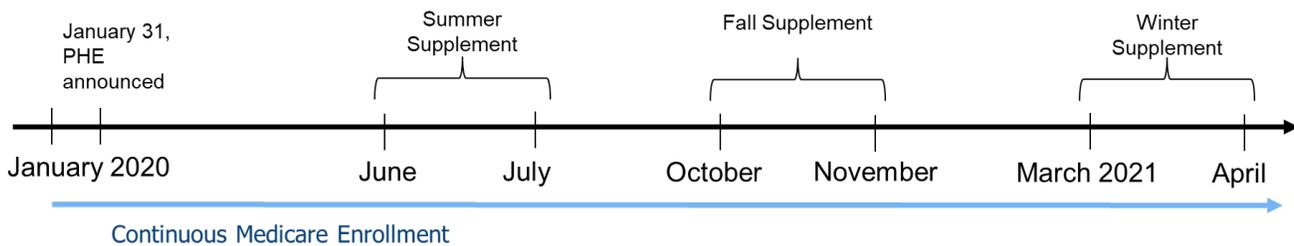
	COVID-19 Winter 2021 Supplement PUF	2020 Survey File LDS COVIDWIN Segment
Content	Includes data collected from the COVID-19 Winter 2021 Community Supplement as well as supplemental data (i.e., variables related to socio-demographics, chronic conditions, use of inhaled tobacco products, and dual eligible status) collected from MCBS respondents during prior interviews	Includes data collected from the COVID-19 Winter 2021 Community Supplement
Weights	Preliminary survey weights	Final survey weights
Data Linkage	Cannot be linked to other PUFs or LDS files	Can be merged with other MCBS LDS files using the beneficiary identifier BASEID

COV.3 COVID-19 Community Supplement Data Collection and Training

The COVID-19 Winter 2021 Community Supplement was an out-of-cycle, standalone survey administered as a supplement to the main MCBS survey design.

All respondents who were eligible to complete an MCBS interview in Winter 2021 were eligible to participate in the COVID-19 Winter 2021 Community Supplement. The COVID-19 Winter 2021 Community Supplement was conducted by telephone from March 1, 2021 to April 25, 2021. Fielding of the Winter Supplement overlapped with the MCBS Winter 2021 (Round 89) data collection, which was conducted from January through April 2021. Exhibit COV.3.1 is a visual representation of the timeline of data collection.

Exhibit COV.3.1: Timeline of COVID-19 2020 Community Supplement Data Collection



The COVID-19 Winter 2021 Community Supplement was administered for beneficiaries living in the community. If beneficiaries living in the community were unable to answer questions or required language assistance, they could enlist the help of an assistant, such as a family member, to help complete the interview; a proxy could also respond on behalf of the beneficiary if they were incapacitated or unable to complete the interview.

Interviews were conducted by trained and certified field interviewers by telephone in accordance with public health guidance during the COVID-19 pandemic.

COV.3.1 Overview of Recruitment of Beneficiaries and Scheduling Procedures

Sample members in the 2020 Panel were notified through an advance letter of the addition of the COVID-19 Winter 2021 Community Supplement. The other panels received advance letters ahead of the Summer 2020 and Fall 2020 COVID-19 Supplements so were not sent a letter before the COVID-19 Winter 2021 Supplement. Spanish versions of the COVID-19 Community Supplements were available and bilingual interviewers were available to conduct the COVID-19 Community Supplements in Spanish. The average administration time for the COVID-19 Community Supplements was 15 minutes.

COV.3.2 Telephone Data Collection

Due to the COVID-19 pandemic, the COVID-19 Community Supplement was conducted by telephone. The COVID-19 Community Supplement was programmed using Voxco, a software platform well-suited for computer assisted web interviewing (CAWI) surveys. It was administered by trained field interviewers using the same interview equipment already in their possession for use on the MCBS – laptops, tablets, and telephone. Even though it was programmed for web administration, the questions were asked by trained interviewers using the telephone. Like the MCBS CAPI instrument loaded on a laptop, the CAWI instrument automatically guided the field interviewer through questions, recoded the answers, and contained logic and skip flows that promoted the collection of timely and high-quality data.

COV.3.3 Interviewer Training

All MCBS interviewers completed remote trainings on topics specific to the COVID-19 Community Supplements prior to the start of COVID-19 Winter 2021 Community Supplement data collection.

COV.4 COVID-19 Community Supplement Questionnaires

The COVID-19 Community Supplement questionnaires consist of topics specific to the impact of the COVID-19 pandemic on Medicare beneficiaries' lives. The questions in the COVID-19 Community Supplements were adapted from a range of sources and intended to align with other federal surveys on similar topics.

The topics measured by the COVID-19 Community Supplements are:

Exhibit COV.4.1: Topics Measured by the COVID-19 Community Supplements

Content Area	COVID-19 Summer 2020 Supplement	COVID-19 Fall 2020 Supplement	COVID-19 Winter 2021 Supplement
Availability and Use of Telemedicine	X	X	X
Access to Computers and Internet	X	X	X
Forgone Health Care as a Result of the Pandemic	X	X	X
Autoimmune Disease Prevalence	X	X	X
Utilization of COVID-19 Testing	X	X	X
COVID-19 Care (including Symptoms and Suspected Diagnosis)	X	X	X
Preventive Measures	X	X	X
Sources of COVID-19 Information	X	X	X
Knowledge and Perceptions of COVID-19/Public Health Guidance	X	X	X
Ability to Access Basic Needs During the Pandemic	X	X	X
Impact to Financial and Mental Health	X	X	X
COVID-19 Vaccination (Presumptive Vaccine Uptake)		X	X
COVID-19 Vaccination (Vaccine Uptake)			X

Below are descriptions of each topic area. See the CMS website for the questionnaires and questionnaire user documentation for the COVID-19 Supplements at <https://www.cms.gov/research-statistics-data-and-systemsresearchmcsquestionnaires/2020-supplemental-covid-19-questionnaires>

COV.4.1 Availability and Use of Telemedicine

During the COVID-19 pandemic, Medicare expanded coverage of telemedicine to help beneficiaries access a wider range of services from providers without having to travel to a healthcare office.²⁶ To measure the impacts of this change in policy, the COVID-19 Winter 2021 Community Supplement included questions on availability of telemedicine services before and during the pandemic and the utilization of telemedicine services during the pandemic. These questions were adapted from items on the National Center for Health Statistics (NCHS) COVID-19 Research and Development Survey (RANDS).²⁷

COV.4.2 Access to Computers and Internet

To inform research questions pertaining to access to telemedicine services, the COVID-19 Winter 2021 Community Supplement also contained a series of items on the use of computers, smartphones, tablets, videoconferencing, and access to the internet. These items were sourced from the Census Bureau's American Community Survey (ACS)²⁸ and November 2019 Current Population Survey (CPS) Computer and Internet Use Supplement.²⁹

COV.4.3 Forgone Health Care as a Result of the Pandemic

The COVID-19 Winter 2021 Community Supplement contained a series of items about medical care that was needed for something other than COVID-19 but was not obtained because of the pandemic. The Community Supplement asked if any care was forgone, what type of care it was, and for each type of care forgone, whether it was the beneficiary or provider who made the decision to forgo care, and why the decision to forgo care was made. These items were adapted from the NCHS RANDS survey.

COV.4.4 Autoimmune Disease Prevalence

Early findings show that certain preexisting medical conditions and autoimmune diseases make a person more vulnerable to contracting COVID-19.³⁰ The main MCBS Questionnaire already collects information on prevalence of chronic conditions but does not ask about diagnosis of autoimmune diseases. Therefore, the COVID-19 Winter 2021 Community Supplement asked two questions about autoimmune diseases sourced from the NCHS RANDS survey.

COV.4.5 Utilization of COVID-19 Testing

The COVID-19 Winter 2021 Community Supplement included two sets of items pertaining to the utilization of COVID-19 testing, one on the utilization of viral testing and one on the utilization of antibody testing. For each type of test, respondents were asked about utilization of testing and, if a test was received, were asked about the result of the test, wait time for results, and portion of the cost that was paid out-of-pocket for the test.

²⁶ "Medicare & Coronavirus," U.S. Centers for Medicare & Medicaid Services, accessed August 5, 2020.

<https://www.medicare.gov/medicare-coronavirus>.

²⁷ "COVID-19 Research and Development Survey (RANDS)," National Center for Health Statistics, Centers for Disease Control and Prevention, 2020, <https://www.cdc.gov/nchs/covid19/rands.htm>.

²⁸ "2020 American Community Survey," U.S. Census Bureau, accessed May, 2020, <https://www2.census.gov/programs-surveys/acs/methodology/questionnaires/2020/quest20.pdf>.

²⁹ "November 2019 Current Population Survey Computer and Internet Use Supplement," U.S. Census Bureau, accessed May, 2020, <https://www2.census.gov/programs-surveys/cps/techdocs/cpsnov19.pdf>.

³⁰ "Certain Medical Conditions and Risk for Severe COVID-19 Illness," Centers for Disease Control and Prevention, last modified July 30, 2020, https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fneed-extra-precautions%2Fgroups-at-higher-risk.html.

These items were also included as a part of the COVID-19 Winter 2021 Facility Supplement. These items were sourced from the NCHS RANDS survey and National Health Interview Survey (NHIS).³¹

COV.4.6 COVID-19 Care

For those who had a probable or confirmed diagnosis of COVID-19, the COVID-19 Winter 2021 Community Supplement included items related to utilization of medical care and hospitalization for COVID-19, severity of coronavirus symptoms, and persistent health effects of the virus. These items were adapted from the NCHS RANDS survey.

COV.4.7 COVID-19 Vaccination

The COVID-19 Winter 2021 Community Supplement included a series on COVID-19 vaccine utilization and, for those who had not received a vaccine dose yet, presumptive vaccine uptake. The series asked if a vaccination had been received, how many doses had been received, and the month and year of the vaccination doses received. If no vaccination had been received, the respondent was asked how likely they would be to get a COVID-19 vaccination once it were available to them and the reasons why they have not received a vaccination to date. These questions used a reference period of "Since December 2020..." to align with the date the first COVID-19 vaccinations were authorized for emergency use by the U.S. Food and Drug Administration.³²

COV.4.8 Preventive Measures

The COVID-19 Winter 2021 Community Supplement included items on which preventive measures were taken to avoid exposure to the virus. The survey asked about 16 different measures that were recommended by the CDC and public health community during the pandemic, including washing hands, coughing or sneezing into a tissue, avoiding large groups of people, wearing face masks, and purchasing extra supplies such as food, cleaning supplies, and prescriptions. These items were adapted from the NCHS RANDS survey and other sources.³³

COV.4.9 Sources of COVID-19 Information

The COVID-19 Winter 2021 Community Supplement included items relating to the media or other types of sources the beneficiary relies on for information about the pandemic. These items were sourced from the March 2020 AP-NORC Center Poll.³⁴

COV.4.10 Knowledge and Perceptions of COVID-19 Public Health Guidance

The COVID-19 Winter 2021 Community Supplement included a series measuring knowledge of public health messaging about the virus. The survey asked about knowledge of guidance related to frequent hand washing, healthy people wearing face masks in public, avoiding gatherings with large numbers of people, sheltering in

³¹ "National Health Interview Survey," Centers for Disease Control and Prevention, <https://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm>.

³² "FDA Takes Key Action to Fight Against COVID-19 by Issuing Emergency Use Authorization for First COVID-19 Vaccine," U.S. Food and Drug Administration, December 11, 2020, <https://www.fda.gov/news-events/press-announcements/fda-takes-key-action-fight-against-covid-19-issuing-emergency-use-authorization-first-covid-19>.

³³ "How to Protect Yourself & Others," Centers for Disease Control and Prevention, accessed May, 2020, <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>.

³⁴ "March 2020 Poll AP-NORC Center Poll," The Associated Press-NORC Center for Public Affairs Research, accessed May, 2020. https://apnorc.org/wp-content/uploads/2020/04/march2020_topline.pdf.

place, and seeking medical attention for trouble breathing. These items were sourced from the March 2020 AP-NORC Center Poll.

The Supplement also included a series on the perceived severity of the coronavirus—both generally and as compared to the flu. These items were sourced from the University of California Irvine's COVID-19 Outbreak Study.³⁵

COV.4.11 Ability to Access Basic Needs During the Pandemic

The COVID-19 Winter 2021 Community Supplement included a series of items measuring disruption to basic needs caused by the pandemic, including ability to pay rent or mortgage and access to medication, health care, food, household supplies, and face masks. These items were adapted from the NCHS RANDS survey.

COV.4.12 Impact to Financial and Mental Health

The COVID-19 Winter 2021 Community Supplement included a series on impacts of the outbreak, including financial security, and feelings of stress or anxiety, loneliness or sadness, and social connection. These items were adapted from the NCHS RANDS survey.

COV.5 COVID-19 Community Supplement Sampling

The beneficiaries included in the MCBS Survey File LDS and COVID-19 Community Supplements represent a randomly selected cross-section of all beneficiaries who were ever enrolled in either Part A or Part B of the Medicare program for any portion of 2020.

The COVID-19 Community Supplements were cross-sectional surveys conducted with existing MCBS sample members from the 2017, 2018, 2019, and 2020 Panels. Exhibit COV.5.1 shows the distribution of each of the four panels included in the MCBS COVID-19 Winter 2021 LDS segment. Because the population for the COVID-19 Community Supplements includes existing MCBS sample members, all information in the preceding section on the MCBS sample design (i.e., Section 6 of this Guide) and source of the sample also applies to the COVID-19 Community Supplements.

Exhibit COV.5.1: MCBS Composition by Panel in the MCBS COVID-19 Winter 2021 Community Supplement

Data Year	Number of Beneficiaries Selected
2017	1,955
2018	2,182
2019	2,767
2020	4,203

SOURCE: 2020 MCBS Internal Sample Control File

To be eligible for the COVID-19 Winter 2021 Community Supplement, a beneficiary must have been enrolled in Medicare in 2020 and still be alive, living in the community, and eligible and enrolled in Medicare at the time of their COVID-19 Winter 2021 Community Supplement interview.

For aggregated estimates of the 2020 ever enrolled Medicare population still alive and enrolled and living in the community during Winter 2021, by sex and race, please see Section 6 of the *Data User's Guides: 2021*

³⁵ Roxanne Cohen Silver and Alison Holman, "COVID-19 Outbreak Study," March-April 2020, University of California Irvine.

COVID-19 Winter Supplement Public Use File available at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/MCBS-Public-Use-File>.

The target population for the COVID-19 Winter 2021 Community Supplement was the same as the main MCBS. For more information on the sampling strata, please see Section 6 of this document.

COV.6 COVID-19 Community Supplement Data Products and Documentation

MCBS COVID-19 Winter 2021 Community Supplement data are available as an individual standalone COVID-19 PUF and as part of the 2020 Survey File LDS. Additionally, CMS has released an *MCBS Advanced Tutorial on the COVID-19 Supplement Data* which provides data users with an orientation to the COVID-19 Supplements and includes guidance for accessing and analyzing the COVID-19 Supplement data.

COV.6.1 LDS

The 2020 Survey File LDS includes the data collected by the COVID-19 Community Supplement as an LDS segment, COVIDWIN. Unlike the MCBS COVID-19 Winter 2021 PUF, the COVIDWIN segment includes the beneficiary identifier, BASEID, which allows data users to link the segment to other LDS segments containing data from the 2020 data year that may be directly relevant to beneficiaries' experiences leading up to and during the pandemic (e.g., information on health insurance coverage, health status during 2020, and experiences with care).

COV.6.2 PUF

The COVID-19 PUFs are available free for download. The full PUF package available for download includes the following:

- Data File
- Codebook
- Documentation
- SAS code

COV.6.3 Other Documentation and Data Tools

- A tutorial highlighting the MCBS COVID-19 data and their use, including analytic examples: <https://www.cms.gov/research-statistics-data-and-systemsresearchmcbdata-briefs/mcbs-advanced-tutorial-covid-19-supplemental-data>
- The Medicare Current Beneficiary Survey COVID-19 Summer 2020, Fall 2020, and Winter 2021 Supplement PUFs are available with associated *Data User's Guides*: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/MCBS-Public-Use-File>
- The questionnaires and questionnaire user documentation are located at:
 - ▶ COVID-19 Summer 2020 Supplement Questionnaires: <https://www.cms.gov/research-statistics-data-and-systemsresearchmcbquestionnaires/2020-summer-supplemental-covid-19-questionnaires>
 - ▶ COVID-19 Fall 2020 Supplement Questionnaires: <https://www.cms.gov/research-statistics-data-and-systemsresearchmcbquestionnaires/2020-fall-supplemental-covid-19-questionnaires>
 - ▶ COVID-19 Winter 2021 Supplement Questionnaires: <https://www.cms.gov/research-statistics-data-and-systemsresearchmcbquestionnaires/2021-winter-supplemental-covid-19-questionnaires>
- COVID-19 Data Snapshot Infographics:

- ▶ Summer: <https://www.cms.gov/medicare-current-beneficiary-survey-summer-2020-covid-19-data-snapshot>
 - ▶ Fall: <https://www.cms.gov/research-statistics-data-systems/mcbs-public-use-file/medicare-current-beneficiary-survey-fall-2020-covid-19-data-snapshot>
 - ▶ Winter: <https://www.cms.gov/research-statistics-data-systems/mcbs-public-use-file/medicare-current-beneficiary-survey-winter-2021-covid-19-data-snapshot>
- MCBS Interactives – COVID-19 Data Tool: <https://mcbs-interactives.norc.org/>

COV.7 COVID-19 Community Supplement Weighting and Variance Estimation

The COVIDWIN segment in the 2020 Survey File contains three sets of full-sample and replicate cross-sectional weights derived from nonresponse-adjusted weights among the beneficiaries sampled for the COVID-19 Winter 2021 Community Supplement: Survey File ever enrolled (VWSEWT), Survey File continuously enrolled (VWSCWT), and Cost Supplement ever enrolled (VWCEWT). These weights are intended for use in cross-sectional statistics and can be used to conduct joint analyses of COVID-19 Supplement data, Survey File data, and Cost Supplement data. There are 100 replicate weights for each weight to support variance estimation (see Exhibit 9.4.1 for more information).

Each weight is greater than zero for all beneficiaries on the file. The two ever enrolled weights should be used to make estimates of parameters for the Medicare population who were enrolled at any point in 2020 and still alive, enrolled, and living in the community in Winter 2021. The continuously enrolled weights should be used to make estimates of parameters for the Medicare population who were enrolled from January 1, 2020 through their Fall 2020 interview and still alive, enrolled, and living in the community in Winter 2021.

For detailed analytic guidance on using the COVID-19 Community Supplement data, please see the *MCBS Advanced Tutorial on COVID-19 Supplements* at <https://www.cms.gov/research-statistics-data-and-systemsresearchmcbsdata-briefs/mcbs-advanced-tutorial-covid-19-supplemental-data>.

COV.8 COVID-19 Facility Supplement Eligibility

To be eligible for the COVID-19 Fall 2020 Facility Supplement, a beneficiary must have been eligible for the Fall 2020 Round 88 Facility interview. Facility-level measures were collected for persons alive or deceased, while beneficiary-level measures were collected only for persons who were alive at the time of interview.

For more information on the main MCBS eligibility criteria, please see section 5.3.

COV.9 COVID-19 Facility Supplement Instrument Content

The COVID-19 Fall 2020 Facility Supplement included several facility-level measures requested by CMS' Chief Medical Officer to assess key ways in which COVID-19 has impacted facilities that serve Medicare beneficiaries. There were also several beneficiary-level topics, similar to the COVID-19 Fall 2020 Community Supplement. The COVID-19 Fall 2020 Facility Supplement was administered as part of the Fall 2020 Facility Instrument. Facility data collection was conducted with facility staff knowledgeable about the facility's protocols and the beneficiary's health status.

The topics measured by the COVID-19 Fall 2020 Facility Supplement included:

- Facility-level COVID-19 topics:
 - ▶ Suspension of In-Person Health Services Inside and Outside of the Facility
 - ▶ Availability of Telemedicine Services Inside and Outside of the Facility
 - ▶ Facility Measures to Prevent and Control the Spread of COVID-19

- ▶ Facility Staffing Impact due to COVID-19
- ▶ Mental Health Services
- ▶ Social and Recreational Activities
- Beneficiary-level COVID-19 topics:
 - ▶ Utilization of COVID-19 Testing
 - ▶ COVID-19 Care
 - ▶ COVID-19 Vaccination
 - ▶ Recent Mood

COV.9.1 Suspension of In-Person Health Services Inside and Outside of the Facility

The COVID-19 Fall 2020 Facility Supplement contained a series of items about suspension of health care services, both inside and outside the facility, due to the COVID-19 pandemic. To align with services asked about in the Use of Health Services (US) section in the main MCBS Facility Instrument, the Facility Supplement asked if primary care visits, specialty care visits, dental visits, mental health visits, podiatry visits, educational or habilitational services, or any other types of visits were suspended due to the COVID-19 pandemic.

COV.9.2 Availability of Telemedicine Services Inside and Outside of the Facility

During the COVID-19 pandemic, Medicare expanded coverage of telemedicine to help beneficiaries access a wider range of services from providers without having to travel to a health care office; this expansion of coverage included beneficiaries living in any health care facility.³⁶ To measure the impacts of this change in policy, the COVID-19 Fall 2020 Facility Supplement included questions on the availability of telemedicine services offered inside and outside the facility before and during the pandemic.

COV.9.3 Facility Measures to Prevent and Control the Spread of COVID-19

The COVID-19 Fall 2020 Facility Supplement included items on prevention protocols used within the facility to prevent the spread of coronavirus. The survey asked about required prevention measures for visitors, the facility's monitoring of health care personnel adherence to prevention measures, and coronavirus prevention education to residents. These items were adapted from the CDC's Prevention and Control Assessment Tool for Nursing Homes Preparing for COVID-19.³⁷ The COVID-19 Facility Supplement also asked about the facility's current policy on the flu vaccine and their future policy for a COVID-19 vaccine, for residents and health care personnel. These items were adapted from an internet panel survey for the CDC during the 2017-18 influenza season to provide estimates of influenza vaccination among health care personnel.³⁸

COV.9.4 Facility Staffing Impact due to COVID-19

The COVID-19 Fall 2020 Facility Supplement included items on how facility staffing was impacted by the COVID-19 pandemic at the time of the interview. The survey asked about whether there was a laboratory-confirmed COVID-19 case within the facility, as well as whether additional health care personnel had been recruited in response to the pandemic.

³⁶ "Medicare & Coronavirus," Centers for Medicare & Medicaid Services, accessed August 5, 2020, <https://www.medicare.gov/medicare-coronavirus>.

³⁷ "Infection Prevention and Control Assessment Tool for Nursing Homes Preparing for COVID-19," Centers for Disease Control and Prevention, accessed June 25, 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp/assessment-tool-nursing-homes.pdf>.

³⁸ Clara L. Black et al, "Influenza Vaccination Coverage Among Health Care Personnel — United States, 2017–18 Influenza Season," *MMWR Morbidity and Mortality Weekly Report* 67 (2018): 1050-1054, <http://dx.doi.org/10.15585/mmwr.mm6738a2>.

COV.9.5 Mental Health Services

The COVID-19 Fall 2020 Facility Supplement included items asking about mental health services that are offered by the facility, whether these services were suspended due to the pandemic, and whether they had been migrated to an online platform due to the pandemic. These questions were adapted from the 2018 National Survey of Long Term Care Providers.³⁹

COV.9.6 Social and Recreational Activities

Social isolation among older adults is of heightened concern during the COVID-19 pandemic.⁴⁰ For this reason the COVID-19 Facility Supplement asked if social and recreational services were offered inside and outside the facility, if these services were suspended due to the pandemic, and whether they had been migrated to an online platform due to the pandemic. These questions were adapted from the 2010 National Survey of Residential Care Facilities Facility Questionnaire.⁴¹

COV.9.7 Utilization of COVID-19 Testing

The COVID-19 Fall 2020 Facility Supplement included items relating to utilization of COVID-19 viral and antibody testing and respective test results (if applicable). The items on utilization of a test and results of the test were sourced from the NCHS RANDS survey and NHIS. These items were also included as a part of the COVID-19 Fall 2020 Community Supplement.

COV.9.8 COVID-19 Care

The COVID-19 Fall 2020 Facility Supplement included items that asked if the beneficiary received care inside or outside of the facility for COVID-19 and, if so, the type of provider they received care from.

COV.9.9 COVID-19 Vaccination

Working with the CDC, a set of questions about COVID-19 vaccine utilization was included in the Fall 2020 Supplement specifications. Items CV5, CV5A, CV5B, and CV5C were included in the specifications in the event that a COVID-19 vaccine was made available before the survey was fielded. However, as a vaccine was not available prior to the start of fielding in early October 2020, these items were not asked in Fall 2020 and were instead administered in the MCBS COVID-19 Winter 2021 Facility Supplement once a COVID-19 vaccine was available to the public.

COV.9.10 Recent Mood

The Patient Health Questionnaire-9 (PHQ-9), also known as the Resident Mood Interview, was added to the COVID-19 Fall 2020 Facility Supplement which collects information about the beneficiary's mood over the last two weeks, such as whether they felt tired, had a poor appetite or overate, or were easily annoyed. These items were sourced from the MDS Resident Assessment and Care Screenings form.⁴² The PHQ-9 is also collected as part of HFQ in the main MCBS Community Questionnaire.

³⁹ "National Study of Long-Term Care Providers: 2018 Adult Day Services Center Provider Questionnaire," Centers for Disease Control and Prevention, <https://www.cdc.gov/nchs/data/nsltcp/2018-NSLTCP-ADSC-Questionnaire-Center.pdf>.

⁴⁰ Julianne Holt-Lunstad, "The Double Pandemic of Social Isolation and COVID-19: Cross-Sector Policy Must Address Both," Health Affairs (blog), June 22, 2020, <https://www.healthaffairs.org/doi/10.1377/hblog20200609.53823/full/>.

⁴¹ "2010 National Survey of Residential Care Facilities (NSRCF) Facility Questionnaire," Centers for Disease Control and Prevention. ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Questionnaires/nsrcf/2010/2010_NSRCF_Facility_Questionnaire.pdf.

⁴² "Minimum Data Set (MDS) 3.0 for Nursing Homes and Swing Bed Providers," Centers for Medicare & Medicaid Services, <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/NHQIMDS30>.

COV.10 COVID-19 Facility Supplement Documentation

- The questionnaires and questionnaire user documentation are located at:
 - ▶ COVID-19 Fall 2020 Supplement Questionnaires: <https://www.cms.gov/research-statistics-data-and-systemsresearchmcsquestionnaires/2020-fall-supplemental-covid-19-questionnaires>

COV.11 Future Releases

After Winter 2021, a subset of the COVID-19 Community Supplement items were integrated into the main MCBS Questionnaire and will be released with the appropriate LDS releases. Facility COVID-19 items will continue to be fielded within the Facility Instrument and released with the appropriate LDS releases.

8. FILE STRUCTURE

8.1 LDS Specifications

The MCBS Survey File contains survey-collected data augmented with administrative and claims data to allow for analysis regarding the beneficiaries' health status, access to health care, satisfaction with health care, and usual source of care. The following information is represented in the MCBS Survey File: beneficiary demographics, household characteristics, access to care, satisfaction with care, usual source of care, health insurance timeline (shows types of insurances, the coverage eligibility, and what is covered), health status and functioning, and other Topical Questionnaire sections like medical conditions and chronic pain, health behaviors, preventive services, interview characteristics, beneficiary knowledge of the Medicare program, residence timeline, facility characteristics, and income and assets.

In terms of Medicare eligibility and enrollment data, HITLINE provides monthly coverage indicators, coverage start and end dates, the type of plan, and the source of coverage information for the plan. HISUMRY also contains eligibility codes and detailed Medicare-Medicaid dual eligibility indicators.

8.2 File Structure

The Survey File segments can be divided into two subject matter groups: files containing survey data with related Medicare administrative variables and files containing Medicare FFS claims data. The claims records represent services provided during calendar year 2020 and processed by CMS. To facilitate analysis, the ADMNUTLS record contains a detailed summary of the utilization enumerated by these claims.

All MCBS segments begin with the same three variables: a unique number that identifies the person who was sampled (the BASEID), the survey reference year (in this release, a constant "2020"), and the version of release. These elements serve to identify the type of record and to provide a link to other types of records. To obtain complete survey information for an individual, a researcher must link together records for that individual from the various data files using the variable BASEID. Beneficiaries may not have a record on every data file. Exhibit 7.1.1 provides an overview of the Survey File segments and their inclusion of Community-only respondents, Facility-only respondents, or both types of respondents.

Sort Order for Merging the Survey File LDS Segments

Sort order is often important to understand when data users are merging segments within or across LDS releases. Most LDS segments are sorted by BASEID. However, some are sorted on other fields to create appropriate and unique sort keys for matching and merging the data. See Exhibit 8.2.1 below.

Exhibit 8.2.1: Sort Order by Segment in the Survey File LDS

Segment	Sorted by
ASSIST	BASEID HLPRNUM
FACCHAR	BASEID RECADMN
HITLINE	BASEID PLANTYPE PLANNUM
INTERV	BASEID SEQNUM
MDS3	BASEID TRGT_DT A2300
OASIS	BASEID M0090_AS

The MCBS Research Claims are a subset of items from the claims available on the Chronic Conditions Warehouse (CCW). All research claims are sorted by BASEID and CLAIMID. The MCBS Claims Variable Crosswalk spreadsheet crosswalks the MCBS claims item (variable) names with the CCW item (variable) names.

Item (variable) names are listed in alphabetical order. MCBS Research Claims have a unique and de-identified BASEID and CLAIMID, so that these cannot be linked back to the original claims.

The full descriptions of the items on the MCBS Research Claim can be found on the public facing CCW Claims Data Dictionary, located at: <https://www2.ccwdata.org/documents/10280/19022436/codebook-ffs-claims.pdf>

8.3 Claims Files

The fixed-length claims (also known as the research claims or FFS claims) are abbreviated versions of the full claim record layout. Each claim type has a subset of variables selected for their relevancy to data analysis of that service. Additionally, institutional claim types have a corresponding revenue center file that links back to the claim-level data file through a unique claim identifier. The Research Claims are provided as SAS files and as CSV files.

MCBS data can be linked to Medicare Part A and Part B claims data for beneficiaries who participated in the MCBS. MCBS data cannot be linked to electronic medical records, or to any other records that record lab values or physiologic data.

8.3.1 Utilization Detail Records

Core Content

The following rules were used to select claims records for the Claims files.

1. Inpatient claims were included if the discharge or "through" date fell on or after January 1, 2020 and on or before December 31, 2020.
2. Skilled nursing facility claims were included if the admission or "from" date fell on or after January 1, 2020 and on or before December 31, 2020.
3. Home health agency and outpatient facility claims were included if the "through" date fell on or after January 1, 2020 and on or before December 31, 2020.
4. Hospice claims were included if the admission or "from" date fell on or after January 1, 2020 and on or before December 31, 2020.
5. Physician or supplier claims were included if the latest "service thru" date fell on or after January 1, 2020 and on or before December 31, 2020.
6. Durable medical equipment (DME) claims were included if the latest "service thru" date fell on or after January 1, 2020 and on or before December 31, 2020.

A total of 6,034 (about 38 percent) of the 2020 survey respondents did not use Medicare reimbursed services in a FFS setting in 2020; consequently, there are no claims records for them in this file. These individuals may have used no services at all, services only in a managed care plan, or services provided by a payer other than Medicare.⁴³ For the other 9,846 individuals in the sample, the MCBS has captured claims meeting the date criteria, processed and made available by CMS through June 2021.⁴⁴ Medicare payment amounts have been reduced by the sequestration amount of two percent for all claims for service dates prior to May 1, 2020.⁴⁵

⁴³ The HITLINE segment provides data on types of insurances, the coverage eligibility timeline, and the source information for the coverage use of services (i.e., Medicare Administrative enrollment data and/or survey data). The ACCESSCR and ACCSSMED segments also provide self-reported data on access and satisfaction with visits. See the Data File Notes section of this document for more information on the contents of these segments.

⁴⁴ Note that claims "mature" through the midpoint of the following calendar year. That is, 2020 claims were pulled from CMS' administrative data after June 2021 to ensure that the 2020 claims had been finalized.

⁴⁵ The Coronavirus Aid, Relief, and Economic Security Act (CARES) Act suspended sequestration from May 1 – December 31, 2020.

9. DATA FILE DOCUMENTATION

9.1 LDS Contents

In addition to the data, CMS provides technical documentation with the following resources for data users:

- Codebooks
- Questionnaires
- Data files (SAS, CSV)
- Research claims (SAS, CSV)
- Format control files
- Sample SAS code to apply the formats and labels for those not using SAS

9.2 LDS Components

9.2.1 Codebooks

Codebooks are included with each data release and serve as the key resource for comprehensive information on all variables within a data file. The codebooks list the variables in each of the segments, the possible values, and unweighted frequencies. For variables that are associated with items in the MCBS Questionnaire, the item number and item text are provided.

The information provided within each Codebook is as follows:

Variable: The Codebook contains the variable names associated with the final version of the data files. Certain conventions apply to the variable names. All variables that are preceded by the character "D_", such as D_ERVIST, are derived variables. Variables preceded by the character "H_", such as H_DOB, come from CMS administrative source files.

Format Name: This column identifies the format name associated with the variable in the SAS dataset.

Frequency: This column shows unweighted frequency counts of values or recodes for each variable.

Question #: This column contains a reference to the questionnaire for direct variables, or to the source of derived variables. For example, the entry that accompanies the variable D_ERVIST in the Access to Care, Medical Appointments segment is "AC1." The first question in the Access to Care portion of the Community Questionnaire is the one referenced. This column will be blank for variables that do not relate to the questionnaire or to the CMS administrative source files, which are usually variables created to manage the data and the file.

Description/Label (variable label and codes): The variable label provides an explanation of the variable, which describes it more explicitly than would be possible in only eight letters. For coded variables, all of the possible values of the variable appear in lines beneath that explanation. Associated with each possible value (in the column labeled "Frequency") is a count of the number of times that the variable had that value, and, under the column labeled "Label", a short format expanding on the coded value.

BASEID: The BASEID is the unique identifier assigned to each beneficiary. This identifier can be used to link data across the survey files.

Survey Year: The Survey Year of interest is included as a variable on the file.

Version Number: Files may be re-released due to needed updates, which will be noted by the version number variable.

Note: Each variable may be followed by a statement that describes when a question was not asked, resulting in a missing variable. Questions were not asked when the response to a prior question or other information gathered earlier in the interview would make them inappropriate. For example, respondents who indicated that they never smoked (Community interview, question HFG1) would not be asked if they currently smoke (question HFG2). Notes also describe important information about the variable. For variables added to the survey recently, the first year of administration is also listed in the note.

Many questions were written to elicit simple “Yes” or “No” answers, or to limit responses to one choice from a list of categories. In other questions, the respondent was given a list of responses and instructed to select all responses that applied. In these cases when the question was a “select all that apply” item, each of the responses is coded “Indicated”/“Selected” or “Not Indicated”/“Not Selected.”

9.2.2 Questionnaires

Data users can view the Questionnaire for each data year along with the questionnaire variable names and question text on the MCBS website at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Questionnaires>.

9.2.3 Data User Resources

CMS provides technical assistance to researchers interested in using MCBS data, and provides free consultation to users interested in obtaining these data products and using these data in research. Users can email MCBS@cms.hhs.gov with questions regarding obtaining or using the data.

9.3 Data Edits and Imputation

9.3.1 Data Edits

A series of checks and edits are conducted to ensure the accuracy, completeness, and reasonableness of data within each data file. Any structural issues are addressed during either data extraction or data cleaning.

Logic checks verify that the questionnaire worked as expected, particularly with respect to questionnaire routing. Errors identified during logic checking are addressed with two categories of data edits: flagging values that were incorrectly skipped and setting incorrectly populated values to null to indicate a valid missing value.

Additional checks identify unreasonable values that are not explicitly disallowed by the questionnaire (e.g., male beneficiaries reporting female-only conditions, such as cervical cancer). After investigation, such values are then addressed with global edits. The MCBS also conducts consistency checks to identify scenarios where respondents report inconsistent information (e.g., indicating that one is Medicaid eligible due to a certain condition, but not reporting having that same condition when asked about health status). Based on a thorough data review, these types of errors are addressed with edits during data cleaning.

Certain conventions are used in coding all variables to distinguish between questions that beneficiaries would not or could not answer and questions that were not asked. These conventional codes are depicted in Exhibit 9.3.1.

Exhibit 9.3.1: Data Review and Editing Codes

Value	Format	Meaning
.	INAPPLICABLE	Valid missing, inapplicable, a valid skip, missing with no expectation that a value should be present. Missing is '.' in numeric variables and blank in character variables.
.R	REFUSED	Valid missing, refused survey response
.D	DON'T KNOW	Valid missing, don't know survey response
.N	INVALID SKIP	Invalid missing, not ascertained, an invalid skip, a response should be present but is not
.E	EDITING CODE*	Editing code, extreme value, unreasonable or out of range survey response
.S	SUPPRESSED*	Valid value suppressed due to suppression guidelines applied to Area Deprivation Index (ADI) variables

*Code not applied to data collected by the Facility instrument.

9.3.2 Imputation

In order to compile the most accurate and complete LDS, there are several types of adjustments applied to the MCBS data that compensate for missing information. Although a variety of methods are used in making the adjustments, adjustments of all types are governed by some basic principles. Information reported by the survey respondent is retained, even if it is not complete, unless strong evidence suggests that it is not accurate. When information is not reported during the interview, Medicare claims data and administrative data are the first choice as a source of supplementary, or in some cases, surrogate information.

There are several techniques for handling cases with missing data. One option is to impute the missing data. This can be done in such a way as to improve univariate tabulations, but techniques that retain correlation structure for multivariate analyses are extremely complex. For more discussion of imputation, see Kalton and Kasprzyk.⁴⁶

The MCBS imputes income when income data are missing. Using the hot deck imputation method, the MCBS first imputes whether an income source exists (such as Social Security). If the income source exists, then the amount earned was imputed. A flag was created for each imputed variable indicating whether the corresponding value was imputed.

The 2020 Income and Assets imputation used IAQ data reported in 2021, as the 2021 IAQ asks about total income in the prior year (2020). The MCBS imputed different sets of variables for respondents to the 2021 IAQ and for the 2020 ever enrolled respondents who did not complete the 2021 IAQ. For the first group, the MCBS imputed a selection of variables from the 2021 IAQ. These included probe variables, which are indicators of whether the beneficiary and/or the spouse had income or asset items, and amount variables, which give the amount of the income or asset items that the beneficiary and/or the spouse had. For the second group, which includes beneficiaries living in a facility, only the amount of total income was imputed.

The MCBS created one imputation flag for each imputed variable. For the probes, only the hot deck imputation method was used, so the imputation flags indicate whether the probe was imputed or not. For the amounts, the MCBS used a variety of imputation methods. The imputation flags indicate whether the amount was not imputed, imputed by the hot deck method, imputed by the carry forward method, or imputed by data edits.

⁴⁶ Graham Kalton and Daniel Kasprzyk, "The Treatment of Missing Survey Data," *Survey Methodology* 12, no. 1 (1986): 1-16.

The imputation used information from the Income and Assets and Facility Assessments Survey File segments and demographic information from the Beneficiary Demographics and Household Characteristics segments.

Using information from the Cost Supplement File segments and Medicare claims data, the MCBS imputed missing payer and payment information for medical events reported in 2020. For beneficiaries living in a facility, medical event data are provided only from Medicare claims data. The MCBS first imputed whether a payer, such as an insurance plan, paid for a particular event. If the payer paid, then the amount paid was imputed next. Imputation was performed using the hot deck imputation method, and a flag was created for each imputed variable indicating whether the corresponding cost value was imputed.

Beginning with 2019, the MA encounter data were utilized to improve estimation of medical events and costs for those beneficiaries enrolled in MA. For 2020, these MA encounter data adjustments were improved to better reflect age and general health-related differences.

9.4 Weighting

9.4.1 Preparing Statistics (Using the Full Sample Weights)

Two types of weights are provided, cross-sectional weights and longitudinal weights. Cross-sectional weights apply to the entire file of all those who completed an interview, either Community or Facility. Cross-sectional weights are available for the Survey File and the Cost Supplement File in each data year.

The data user may choose to conduct analyses of the Survey File data alone or use the Cost Supplement data to conduct joint analyses of both survey and cost and utilization data. Exhibit 9.4.1 provides an overview of the weights for the 2020 Survey File and Cost Supplement File. For analysis of Survey File data, there are two populations of inference that can be obtained through the use of two distinct weights. The ever enrolled Survey File weight is greater than zero for all beneficiaries in the Survey File. This weight segment is EVRWGTS, and the name of the weight is EEYRSWGT. The sum of this weight represents the population of beneficiaries who were entitled and enrolled in Medicare for at least one day at any time during the calendar year.

The continuously enrolled Survey File weight is greater than zero for the subset of beneficiaries in the Survey File who were continuously enrolled in Medicare from January 1, 2020, through completion of their fall interview. This weight segment is CENWGTS, and the weight is named CEYRSWGT. The population represented by the sum of this weight is the continuously enrolled population of Medicare beneficiaries who were enrolled from the first of the year through the Fall 2020.⁴⁷ Users should use the continuously enrolled Survey File weight (CEYRSWGT) for time series analysis of survey data across years.

Analyses of the Cost Supplement File data should be done with the Cost Supplement weight, which represents an ever enrolled population of Medicare beneficiaries enrolled in Medicare on at least one day at any time in 2020. To define the population, the MCBS creates a calendar history of a beneficiary's MCBS interviews. A number of eligibility checks are run against this calendar history to identify beneficiaries who met eligibility requirements for inclusion in the survey data for the calendar year, either because they were interviewed for a full year or interviewed until death or loss of Medicare entitlement. Beneficiaries who pass these eligibility checks become the population eligible for the Cost Supplement ever enrolled weight and the prescription medicine data files.

The Cost Supplement weights segment is named CSEVRWGT. The population represented by the sum of this weight is identical to the population represented by the sum of the ever enrolled Survey File weight, but it is

⁴⁷ This is identical to the historical Access to Care (ATC) cross-sectional weight that was available in previous years, 1991-2013.

populated for a smaller subset of respondents with complete cost and utilization data. Users wishing to conduct joint analysis of both Survey File and Cost Supplement File data should use the Cost Supplement File weights.

The weights mentioned above for the calendar year 2020 are full-sample weights. The term "full-sample" distinguishes these weights from the replicate weights used for variance estimation, as discussed in the Section 9.6: Variance Estimation. Additional information on using the weights is available in the file-specific MCBS Data User's Guide documents that accompany each data file release.

Longitudinal weights allow for the study of respondents across data years. The following longitudinal weights are provided with the 2020 Survey File and Cost Supplement LDS's.⁴⁸

Survey File Two-Year Longitudinal Weights (LNG2WGTS): Two-year longitudinal weights apply to respondents who completed fall round interviews in the current and the preceding year. This set of weights can be used to study data trends over a two-year period and are populated only for members of the 2017, 2018, and 2019 panels who had 2019 and 2020 Survey File data, and were continuously enrolled for two years. The population represented by these weights is the population of beneficiaries enrolled on or before 1/1/2019 and surviving and entitled as of completion of the Fall 2020 interview. By applying these weights to data in the current and preceding year, users will be able to estimate change among the Medicare population who were alive for the full two-year period.

Survey File Three-Year Longitudinal Weights (LNG3WGTS): Three-year longitudinal weights apply to respondents who completed fall round interviews in the current and the two preceding years. This set of weights can be used to study data trends over a three-year period and are populated only for members of the 2017 and 2018 panels who were continuously enrolled during all of the years 2018-2020 and had Survey File data in 2018 and 2020. The resulting weights represent the population of Medicare beneficiaries who enrolled on or before 1/1/2018 and were still alive and entitled as of completion of the Fall 2020 interview. By applying these weights to data in the current and the three preceding years, users will be able to estimate change among the Medicare population who were alive for the full three-year period.

Survey File Four-Year Longitudinal Weights (LNG4WGTS): Four-year longitudinal weights apply to respondents who completed fall round interviews in the current and the three preceding years. This set of weights can be used to study data trends over a four-year period and are populated only for members of the 2017 Panel who were continuously enrolled during all of the years 2017-2020. The resulting weights represent the population of Medicare beneficiaries who enrolled on or before 1/1/2017 and were still alive and entitled as of completion of the Fall 2020 interview. By applying these weights to data in the current and the three preceding years, users will be able to estimate change among the Medicare population who were alive for the full four-year period.

Cost Supplement Two-Year Longitudinal Weights (CSL2WGTS): The two-year longitudinal weights are populated for members of the 2017, 2018, and 2019 Panels who were ever enrolled in Medicare at any time during both 2019 and 2020 and provided utilization and cost data for both years.

Cost Supplement Three-Year Longitudinal Weights (CSL3WGTS): The three-year longitudinal weights are populated for members of the 2017 and 2018 Panels who were ever enrolled in Medicare at any time during 2018, 2019, and 2020, and provided utilization and cost data for all three years.

The Survey File longitudinal weights are for analysis of Survey File data. Data users cannot use the Survey File longitudinal weights with Cost Supplement data. Users who want to analyze Survey File data along with

⁴⁸ Beginning with the 2016 LDS, the Survey File longitudinal weight names reflect the number of years the beneficiary was enrolled in Medicare (i.e., LNG2WGTS weights are referred to as 'two-year' rather than 'one-year' as they represent the population continuously enrolled for two years). This change was made to align the names of the longitudinal weights in the Survey File LDS with the naming convention used for the Cost Supplement LDS.

utilization and cost data in the Cost Supplement should limit analysis to cases with a positive Cost Supplement weight.

To generate estimates using the data from one of the ten Topical Questionnaire sections (FOODINS, INCASSET, MCREPLNQ, RXMED, ACCSSMED, USCARE, PNTACT, CHRNPAIN, COVIDWIN, COVIDVAC) on their own or merged with another Survey File segment that does not contain special non-response adjustment weights, the researcher must always use the special non-response adjustment general and replicate weights included in the Topical segment INSTEAD of using the general and replicate weights that appear in the separate weight segments (CENWGTS, EVRWGTS). Topical Questionnaire sections related to the Survey File and Cost Supplement File are weighted separately as they are fielded in the winter and summer rounds following the data year, or are not administered to proxy respondents. There are three sets of full-sample and replicate weights for each module, one based on the 2020 Survey File ever enrolled population, one based on the 2020 Survey File continuously enrolled population, and one based on the 2020 Cost Supplement ever enrolled population. These weights may be used to conduct joint analyses of Topical data, Survey File data, and Cost Supplement data. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes.

There are no weights that support joint analysis between two Topical sections. Each segment with data from Topical questionnaire sections has a different set of beneficiaries included. A user could merge data from one Topical segment onto another and then use one of the Topical segment's weights as the Baseline population, but the data will not align and there will be gaps. For some combinations of the different questionnaire sections, the amount of missing data may be small enough that users could still conduct analyses.

The Topical weights that are described as "Survey File ever enrolled" weights (e.g., KNSEWT, INSEWT) correspond to the Survey File ever enrolled population and can be used to conduct analyses of the Topical data as representing the ever enrolled population and in conjunction with other Survey File data. The Topical weights that are described as "Survey File continuously enrolled" weights (e.g., KNSCWT, INSCWT) correspond to the Survey File continuously enrolled population and can be used to conduct analyses of the Topical data as representing the continuously enrolled population and in conjunction with other Survey File data. The Topical weights that are described as "Cost Supplement ever enrolled" weights (e.g., KNCEWT, INCEWT) correspond to the Cost Supplement ever enrolled population and can be used to conduct analyses of the Topical data as representing the ever enrolled population and in conjunction with Cost Supplement data. Weights corresponding to the Survey File ever enrolled population are not available for the Topical data. Because the Cost Supplement is available for a smaller subset of the Survey File population, for each Topical section the number of beneficiaries with a continuously enrolled Topical weight is larger than the number of beneficiaries with an ever enrolled Topical weight.

The Topical weights, segments, and weight names are listed in Exhibit 9.4.1. Please also see the forthcoming *2020 MCBS Methodology Report* for additional information on the composition and derivation of the Topical weights.

Prefixes for the weights changed slightly in 2018 to accommodate the additional new population and make the population clearer to the data users.

Exhibit 9.4.1: 2020 MCBS Data Files Summary of Weights

Limited Data Set	Description	Segment	Full-Sample Weight	Replicate Weights	Population
Survey File	Continuously Enrolled Cross-Sectional Weights	CENWGTS	CEYRSWGT	CEYRS001-CEYRS100	Continuously enrolled from 1/1/2020 through the fall of 2020
Survey File	Ever Enrolled Cross-Sectional Weights	EVRWGTS	EEYRSWGT	EEYRS001-EEYRS100	Ever enrolled for at least one day at any time during 2020
Survey File	Continuously Enrolled Two-Year Longitudinal Weights	LNG2WGTS	L2YRSWGT	L2YRS001-L2YRS100	Continuously enrolled from 1/1/2019 through the fall of 2020
Survey File	Continuously Enrolled Three-Year Longitudinal Weights	LNG3WGTS	L3YRSWGT	L3YRS001-L3YRS100	Continuously enrolled from 1/1/2018 through the fall of 2020
Survey File	Continuously Enrolled Four-Year Longitudinal Weights	LNG4WGTS	L4YRSWGT	L4YRS001-L4YRS100	Continuously enrolled from 1/1/2017 through the fall of 2020
Cost Supplement File	Ever Enrolled Cross-Sectional Weights	CSEVRWGT	CSEVRWGT	CSEVR001-CSEVR100	Ever enrolled for at least one day at any time during 2020
Cost Supplement File	Two-Year Longitudinal Weights	CSL2WGTS	CSL2YWGT	CSL2Y001- CSL2Y100	Enrolled at any time during both 2019 and 2020
Cost Supplement File	Three-Year Longitudinal Weights	CSL3WGTS	CSL3YWGT	CSL3Y001- CSL3Y100	Enrolled at any time during each of 2018, 2019, and 2020
Survey File Topical Section	KNQ Survey File Ever Enrolled	MCREPLNQ	KNSEWT	KNSE1-KNSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	KNQ Survey File Continuously Enrolled	MCREPLNQ	KNSCWT	KNSC1-KNSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021

Limited Data Set	Description	Segment	Full-Sample Weight	Replicate Weights	Population
Survey File Topical Section	KNQ Cost Supplement Ever Enrolled	MCREPLNQ	KNCEWT	KNCE1-KNCE100	Ever enrolled in 2010 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	ACQ Survey File Ever Enrolled	ACCSSMED	ACSEWT	ACSE1-ACSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	ACQ Survey File Continuously Enrolled	ACCSSMED	ACSCWT	ACSC1-ACSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	ACQ Cost Supplement Ever Enrolled	ACCSSMED	ACCEWT	ACSFCE1-ACSFCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	USQ Survey File Ever Enrolled	USCARE	USSEWT	USSE1-USSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	USQ Survey File Continuously Enrolled	USCARE	USSCWT	USSC1-USSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	USQ Cost Supplement Ever Enrolled	USCARE	USCEWT	USCE1-USCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	IAQ Survey File Ever Enrolled	INCASSET	INSEWT	INSE1-INSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	IAQ Survey File Continuously Enrolled	INCASSET	INSCWT	INSC1-INSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	IAQ Cost Supplement Ever Enrolled	INCASSET	INCEWT	INCE1-INCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021

Limited Data Set	Description	Segment	Full-Sample Weight	Replicate Weights	Population
Survey File Topical Section	IAQ Survey File Ever Enrolled	FOODINS	FDSEWT	FDSE1-FDSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	IAQ Survey File Continuously Enrolled	FOODINS	FDSCWT	FDSC1-FDSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	IAQ Cost Supplement Ever Enrolled	FOODINS	FDCEWT	FDCE1-FDCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	PAQ Survey File Enrolled	PNTACT	PASEWT	PASE1-PASE100	Ever enrolled for at least one day at any time during 2020
Survey File Topical Section	PAQ Survey File Continuously Enrolled	PNTACT	PASCWT	PASC1-PASC100	Continuously enrolled from 1/1/2020 through the fall of 2021
Survey File Topical Section	PAQ Cost Supplement Ever Enrolled	PNTACT	PACEWT	PACE1-PACE100	Ever enrolled for at least one day at any time during 2020
Survey File Topical Section	RXQ Survey File Ever Enrolled	RXMED	RXSEWT	RXSE1-RXSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	RXQ Survey File Continuously Enrolled	RXMED	RXSCWT	RXSC1-RXSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	RXQ Cost Supplement Ever Enrolled	RXMED	RXCEWT	RXCE1-RXCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	CPQ Survey File Ever Enrolled	CHRNPAIN	CPSEWT	CPSE1-CPSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021

Limited Data Set	Description	Segment	Full-Sample Weight	Replicate Weights	Population
Survey File Topical Section	CPQ Survey File Continuously Enrolled	CHRNPAIN	CPSCWT	CPSC1-CPSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	CPQ Cost Supplement Ever Enrolled	CHRNPAIN	CPCEWT	CPCE1-CPCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	Winter 2021 COVID Survey File Ever Enrolled	COVIDWIN	VWSEWT	VWSE1-VWSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	Winter 2021 COVID Survey File Continuously Enrolled	COVIDWIN	VWSCWT	VWSC1-VWSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	Winter 2021 COVID Cost Supplement Ever Enrolled	COVIDWIN	VWCEWT	VWCE1-VWCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Winter 2021
Survey File Topical Section	CVQ Survey File Ever Enrolled	COVIDVAC	CVSEWT	CVSE1-CVSE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	CVQ Survey File Continuously Enrolled	COVIDVAC	CVSCWT	CVSC1-CVSC100	Continuously enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021
Survey File Topical Section	CVQ Cost Supplement Ever Enrolled	COVIDVAC	CVCEWT	CVCE1-CVCE100	Ever enrolled in 2020 and still alive, entitled, and not living in a facility in Summer 2021

9.5 Using the Data

9.5.1 Merging Segments within 2020

Data users can merge segments within and/or across the Survey File and Cost Supplement File. Appendix C provides a hypothetical research question with sample SAS code for the construction of an analytic file using the 2020 Survey File LDS. For an example of how to merge data across the Survey File and Cost Supplement File LDS's, please see Appendix C.1: Using the Data of the *Data User's Guide: Cost Supplement File*. Note that although the MCBS data are nationally representative, they are not representative at the regional or state level and cannot be used to produce regional or state-level estimates. However, the data user can use the data to look for national trends across population groups.

9.6 Variance Estimation (Using the Replicate Weights)

9.6.1 Variables Available for Variance Estimation

In many statistical packages, the procedures for calculating sampling errors (e.g., variances, standard errors) assume that the data were collected in a simple random sample. Procedures of this type are not appropriate for calculating the sampling errors of statistics based upon a stratified, unequal-probability, multi-stage sample such as the MCBS. Unless the complex nature of the MCBS is taken into account, estimates of the variance of a survey statistic may be biased downward.

The MCBS includes variables to obtain weighted estimates and estimated standard errors using either the Taylor-series linearization approach or balanced repeated replication (BRR) method, also known as Fay's method. There is both serial and intra-cluster correlation in the MCBS data, including: sampling second-stage units within primary sampling units; sampling beneficiaries with second-stage units; and repeated observations of the selected beneficiary across time. Researchers should use the BRR method of variance estimation to account for various correlations. For details on the strengths and weaknesses of the two variance estimation methods, please refer to Wolter.⁴⁹

To estimate variance using the balanced repeated replication method, a series of replicate weights are included in the 2020 Survey File release. As displayed in Exhibit 9.4.1 above, there are many types of full-sample weights, including those for cross-sectional analyses, longitudinal analyses, and analyses of Topical data. Each of these full-sample weights has a corresponding set of replicate weights. The replicate weights can be used to calculate standard errors of the sample-based estimates as described below. For the Survey File, the replicate cross-sectional weights are labeled CEYRS001 through CEYRS100 corresponding to the continuously enrolled weight CEYRSWGT, and EEYRS001 through EEYRS100 corresponding to the ever enrolled weight EEYRSWGT. These weights may be found on CENWGTS and EVRWGTS respectively. The Survey File replicate longitudinal weights are found on segments LNG2WGTS, LNG3WGTS, and LNG4WGTS.

The variables SUDSTRAT (sampling strata) and SUDUNIT (primary sampling unit) are used for variance estimation using the Taylor series linearization method. For examples and guidance on using the Taylor series linearization method of variance estimation or the BRR method, please see Appendix C.

⁴⁹ Kirk Wolter, *Introduction to Variance Estimation* (Springer Science & Business Media, 2007).

9.6.2 Variance Estimation for Analyses of Single Year of MCBS

Most commercial software packages today include techniques to accommodate the complex design, either through Taylor-expansion type approaches or replicate weight approaches. Among these are R[®], STATA[®], SUDAAN[®], and the complex survey procedures in SAS.

9.6.3 Subgroup Analysis

When analyzing survey data, researchers are often interested in focusing their analyses on specific subgroups of the full population sample (e.g., Medicare beneficiaries age 65 and over, Hispanics, or females). A common pitfall when performing sub-group analysis of survey data when variance estimation methods such as Taylor-series are used is to delete or exclude observations not relevant to the subgroup of interest. Standard errors for MCBS estimates are most accurate when the analytic file includes all beneficiaries. However, when replicate weights are used for variance estimation, deleting observations not relevant to the subgroup of interest prior to analyzing the subgroup will still produce unbiased standard errors. Almost all statistical packages provide the capability to limit the analysis to a subgroup of the population.

The Taylor Series linearization method of variance estimation is not recommended for subgroup analysis with MCBS data because accidentally excluding any observation in the sample while conducting the subgroup analysis using this variance estimation method will result in biased standard error estimates. Variance estimation using the Taylor Series linearization method for subgroup analyses requires a “domain” or “subgroup” statement (available in most statistical packages) to account for estimated domain sizes (i.e., uncertainty in the denominator). The recommended method of variance estimation for subgroup analysis is the BRR method; which does not require any special subgroup considerations. The BRR method allows the researcher to subset data to a subgroup of interest and still produce unbiased standard error estimates.

9.7 Combining Multiple Years of Data

The MCBS is based on a rotating panel design, which allows for longitudinal analysis of up to four years when appropriate longitudinal weights are used. Multiple years of MCBS data can also be pooled to perform serial cross-sectional or pooled analysis. The appropriate method to combine data across years will depend on the analytic design of the study. Sample code is presented in Appendix C to demonstrate the steps involved in combining multiple years of data to perform two types of analysis: (1) Longitudinal analysis; (2) Pooled, cross-sectional analysis.

9.7.1 Longitudinal Analysis

The study objective in longitudinal analysis is to assess changes over time for each sample person. The Survey File cross-sectional and longitudinal population definitions are consistent from year to year, so the data are comparable between years. The Cost Supplement cross-sectional population definition is also consistent and comparable from year to year.⁵⁰

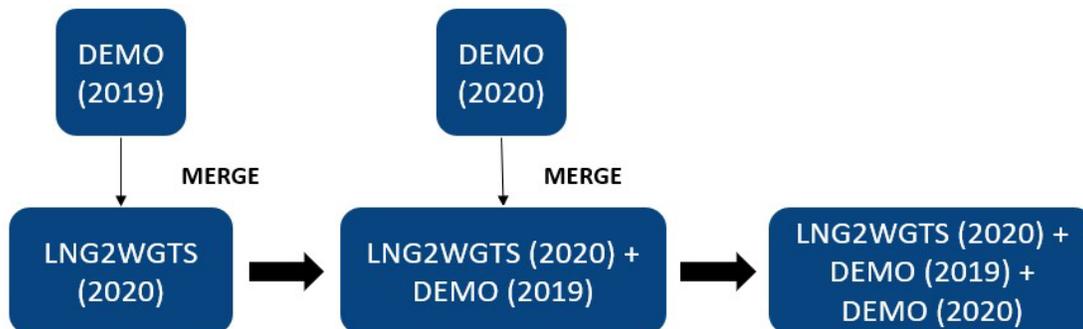
Most longitudinal analyses require the data to be in long-format (i.e., repeated observations – each representing a calendar year the sample person was surveyed – are stored in a separate row for each sample person). To construct a longitudinal analytic dataset, the first step is to use the appropriate longitudinal weights file. For example, as shown in Exhibit 9.7.1, to assess changes over time beneficiaries who have been

⁵⁰ The Cost Supplement two-year longitudinal population changed slightly in 2016 from what was defined the last time the two-year longitudinal weights were supplied (i.e., in 2013). In 2013, the two-year longitudinal (i.e., one-year backward longitudinal weight) Cost Supplement weights represented the population that enrolled on or before 1/1/2011 and were still enrolled in 2013 (i.e., enrollees after 1/1/2011 were not included). Beginning in 2016, the two-year longitudinal weights represent a true two-year ever enrolled population (i.e., the 2020 two-year longitudinal weights represent the population of beneficiaries that were ever enrolled in both 2019 and 2020).

in the sample for at least two years – from CY2019 to CY2020 – the two-year longitudinal weights (i.e., one-year “backward longitudinal weights”) (LNG2WGTS) should be used.

Variables from current year files representing the outcome of interest should then be merged with the current year’s longitudinal weights file. While merging, all observations in the weights file should be preserved. Next, the same variables from the prior year’s files should be merged with the current year’s longitudinal weights file.

Exhibit 9.7.1: Constructing a Longitudinal Analytic File



Variance estimation for longitudinal analysis (using replicate weights)

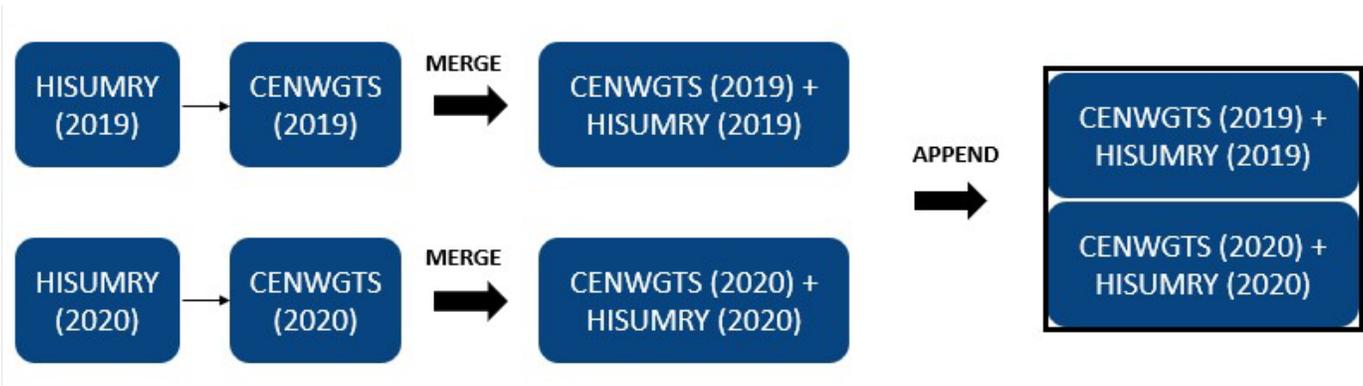
Just as there are full-sample longitudinal weights, there are corresponding sets of replicate weights. The replicate weights included in the longitudinal weights data files can be used to calculate standard errors of the sample-based estimates. The first set of replicate longitudinal weights is labeled L2YRS001 through L2YRS100 and may be found on the two-year longitudinal weights file (LNG2WGTS). The second set of replicate longitudinal weights is labeled L3YRS001 through L3YRS100 and may be found on the three-year longitudinal weights file (LNG3WGTS). The third set of replicate longitudinal weights in the Survey File LDS is labeled L4YRS001 through L4YRS100 and may be found on the four-year longitudinal weights file (LNG4WGTS).

For additional guidance, see the *MCBS Advanced Tutorial on Longitudinal Analysis*.

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Data-Briefs>.

9.7.2 Repeated Cross-Sectional or Pooled Analysis

Multiple years of MCBS data can be pooled to perform serial cross-sectional or pooled analysis. Repeated cross-sectional analysis is used for analyzing changes in the Medicare population as a whole over time. In contrast, the longitudinal analysis described earlier is used to analyze beneficiary-level changes over time. Pooled data analysis yield estimates that are in effect a moving average of nationally representative year-specific estimates. The pooled estimates can be interpreted as being representative of the midpoint of the calendar year of the pooled period. Exhibit 9.7.2 demonstrates the steps involved in constructing a repeated cross-sectional or pooled analytic dataset using CY2019 and CY2020 data. For each year in the study, variables representing the outcome of interest should then be merged with the cross-sectional weights file. While merging, all observations in the weights file should be preserved. Next, the year-specific files are appended to produce the analytic dataset.

Exhibit 9.7.2: Constructing a Repeated Cross-Section or Pooled Analytic File**Variance estimation for repeated cross-sectional or pooled analysis (using replicate weights)**

Due to the rotating-panel and multistage-sampling design of the MCBS, there is both serial and intra-cluster correlation in the data when pooling multiple years of data. When conducting a pooled analysis, using the balanced half-sample method (also known as the balanced repeated replication, or BRR, method) of variance estimation throughout appropriately accounts for the various correlations due to sampling second-stage units within primary sampling units, sampling beneficiaries within second-stage units, and repeated observations of the selected beneficiary across time. The replicate cross-sectional weights are labeled CEYRS001 through CEYRS100 and can be found in each year's cross-sectional weights file (CENWGTS).

When conducting a repeated cross-sectional analysis to compare between two years, the difference or net change in a population characteristic is often of interest. In this type of analysis, a point estimate of year-to-year difference is straightforward to calculate; simply take difference between the two individual annual cross-sectional estimates. Each cross-sectional estimate included in the comparison can be calculated using the full-sample weights included in that year's data release.

Calculating variance and standard error estimates of net change is more complicated because of correlation between the two annual data sets. Correlation is present because many beneficiaries are retained from one year to the next, and because the same set of PSUs and SSUs are used for each year. We refer to these types of correlation as serial and intra-cluster correlation, respectively.

To estimate the variance of net change estimates, the researcher may rely on a program such as SAS or calculate them directly in their own custom program using a closed formula.

SAS Method

In SAS, point estimates of year-to-year differences, in addition to corresponding estimates of standard errors, can be generated using PROC SURVEYREG. To use this method, first concatenate the two annual datasets by stacking them together vertically, each including its corresponding set of weights, and define a YEAR variable to indicate which data year each of the two files represents. From this concatenated dataset, the example SAS code below will output estimates of the difference in estimates between the two years, using Cost Supplement weights as an example. The standard errors associated with these estimates are the desired estimated standard errors of the year-to-year net change.

```

PROC SURVEYREG VARMETHOD=BRR(FAY=.30);
  CLASS YEAR;
  MODEL variable = YEAR;
  LSMEANS YEAR / DIFF;
  WEIGHT CS1YRWGT;
  REPWEIGHT CS1YR001-CS1YR00100;
RUN;

```

This process can be repeated for any combination of variable and a complementary set of cross-sectional full-sample and replicate weights (e.g., Survey File continuously enrolled, Survey File ever enrolled, Cost Supplement ever enrolled weights).

Direct Method

The variance of a difference can also be calculated directly using the formula below, which a researcher can incorporate into a custom program for producing a variety of estimates of net change. This process does not require concatenating two annual files together, although programmatically it may be useful to do so. Let X_0^t be the cross-sectional estimate of the mean of population characteristic Y from year t using the full-sample weights from that year, and let $X_1^t, X_2^t, \dots, X_{100}^t$ be cross-sectional estimates of the same population mean from year t using each of the 100 corresponding replicate weights. Similarly, let $X_0^{t-1}, X_1^{t-1}, X_2^{t-1}, \dots, X_{100}^{t-1}$ be analogous estimates of the same population characteristic Y from year t-1, using the weights from year t-1. Next, define a set of difference variables as $D_0 = X_0^t - X_0^{t-1}, D_1 = X_1^t - X_1^{t-1}$, etc.

Then,

$$Var(D_0) = \frac{2.04}{100} \sum_{i=1}^{100} (D_i - D_0)^2$$

is an estimate of the variance of the estimate of net change from year t-1 to year t. The square root of this estimate is the estimated standard error.

10. DATA FILE NOTES

This section is a collection of information about various data fields present in the Survey File segments. The MCBS does not attempt to present information on every survey data field; rather, it concentrates its efforts on data fields where additional clarity or detail may be useful. The MCBS starts with information that is applicable globally, followed by specific information on individual segments, presented in the same sequence as the segments appear in the Codebook.

10.1 Global Information

10.1.1 BASEID

The BASEID key identifies the person interviewed. It is an 8-digit element, consisting of a unique, randomly assigned 7-digit number concatenated with a single-digit check digit.

LDS segments may vary in the number of BASEIDs. This variation may occur for several reasons. First, some segments include data from Community components and others from Facility components with different numbers of beneficiaries providing responses. Second, there are also differences in the number of beneficiaries by the specific round completed. Third, the use of ever enrolled or continuously enrolled weights in constructing the segments may result in differences.

10.1.2 Missing Values

Various special values indicate the reason why some data are missing, such as .R for "refused," .D for "don't know." See Exhibit 9.3.1 above for additional values.

10.1.3 Derived and Administrative Variables

Variables that were derived or created by combining two or more survey variables are preceded with the characters "D_", such as D_ERVIST. CMS may create or modify variables in order to recode data items (e.g., to protect the confidentiality of survey responses) or to globally edit some variables. Variables preceded by the character "H_", such as H_DOB, come from CMS administrative source files.

Several segments include variables indicating the length of time the beneficiary spent doing something, such as waiting in the hospital emergency room or waiting for an appointment. In the questionnaire, the length of time is stored in a continuous variable while the corresponding unit is stored in a categorical variable (e.g., hours, minutes, or hours and minutes; days, weeks, or months). These two variables are used to derive a single variable indicating the length of time in the most appropriate unit of time. For example, on the ACCSSMED segment, D_ERTIME contains the length of time spent waiting in the hospital emergency room in minutes while D_MDAPPT contains the length of time spent waiting for a doctor's appointment in days.

10.1.4 Initial Interview Variables

Some questions are asked in only two scenarios: 1) it is the case's Baseline (initial) interview or 2) it is the first time the case has crossed to a new component (e.g., the case crosses from the Community component to the Facility component for the first time). These "initial interview variables" are not asked again during subsequent interviews because the responses are not likely to change. Such questions include "Have you ever served in the armed forces?" and "What is the highest grade of school you ever completed?" To maximize the usefulness of this release as a cross-sectional file, these data are pulled forward from the Baseline interview or

the first time the case was interviewed in a given component, as applicable. Variables that have been processed this way are listed in Appendix D.

10.1.5 Ever Variables

Many items in the MCBS ask respondents whether they have ever had certain experiences, such as ever being told they have a chronic condition, receiving a treatment, or doing a specific activity (such as ever accessing the official Medicare website). Such questions include "Have you ever been diagnosed with diabetes?" and "Have you smoked at least 100 cigarettes in your entire life?" Their responses are coded affirmatively if the respondent reports "yes" to having had that condition or experience.

These items are administered to respondents in certain scenarios. For select "ever" variables administered in the HFQ, there are different versions of each question, depending on whether a respondent is in the Incoming Panel sample or Continuing sample. These versions are combined into recoded variables to provide a complete picture of the response. All Incoming Panel sample respondents are asked if they have ever had certain conditions or experiences. Once a condition or experience is reported, the CAPI questionnaire logic retains that information for subsequent interviews. For variables that ask about conditions that cannot change after diagnosis, such as Alzheimer's, once an affirmative response is given, respondents are not asked again. However, if a negative response is given, respondents are asked annually thereafter if they had that specific condition or experience in the past year. For conditions that can change after diagnosis or can be reoccurring, such as high blood pressure, respondents are asked annually thereafter if they had that specific condition or experience in the past year. All data from a beneficiary from the current survey year and all previous years are used to determine whether the beneficiary has ever had a condition or experience.

"Ever" variables in the NAQ and KNQ are collected and processed in a similar manner to the HFQ "ever" variables, except that the NAQ and KNQ "ever" variables use only one version of each question (rather than two separate versions depending on beneficiary sample type).

For more information about "ever" variables pertaining to chronic conditions, see the data notes for the Chronic Conditions segment (CHRNCOND) in Section 10.3.5. For more information about "ever" variables pertaining to beneficiary knowledge about the Medicare open enrollment period and Medicare-covered expenses, see the data notes for the Medicare Plan Beneficiary Knowledge segment (MCREPLNQ) in Section 10.3.21. For more information about "ever" variables pertaining to beneficiary's nicotine and alcohol use, see the data notes for the Nicotine and Alcohol segment (NICOALCO) in Section 10.3.26.

10.1.6 Data Editing

Data are edited for consistency and to provide users with files that are easily used for analysis.

10.1.7 Other Specify Questions

A subset of MCBS questionnaire items include closed ended responses with "other specify" options. These options allow respondents to provide answers that are not included in the existing code frame and are useful for questions with a wide range of potential responses (e.g., types of problems experienced during attempts to obtain care). In the event that an "other specify" option is selected, interviewers record actual responses verbatim. Verbatim responses are not released.

The MCBS programmatically identifies "other specify" responses that are sufficiently similar to existing code frame options and back codes responses into existing response option categories as appropriate. Often there will be more than one answer to a single question. In these cases, responses are recoded into several variables, all of which contain categorized data. Code lists are updated when necessary to incorporate responses that are frequently provided in "other specify" response options.

10.1.8 Interview Mode Indicator

With the emergence of the COVID-19 pandemic, data collection in Winter 2020 shifted from in-person to telephone in March 2020. The Interview Characteristics (INTERV) segment includes a flag to indicate whether the fall interview was conducted in-person (INTMODE = 1) or by telephone (INTMODE = 2). Winter and Summer 2021 segments that were pulled back into 2020 segments contain the variable INTMODE for that segment. Note that all MCBS interviews conducted in Fall 2020, Winter 2021, and Summer 2021 were conducted by telephone, and as such, INTMODE is set to 2 on each applicable segment. Data users should note this when conducting analyses. Mode effects are discussed in further detail in the *2020 MCBS Methodology Report*.

10.1.9 Consistency with Medicare Program Statistics

In general, MCBS estimates may differ from Medicare program statistics using 100 percent administrative enrollment data. There are several reasons for the differences. The most important reason for the difference is that the administrative enrollment data may include people who are no longer alive. This may occur where people have entitlement, such as for Part A only, and receive no Social Security check. When field interviewers try to locate these beneficiaries for interviews, they establish the fact of these deaths. Unrecorded deaths may still be present on the Medicare Administrative enrollment data. The MCBS makes every effort to reconcile the survey information against the administrative data when possible. Other reasons, such as sampling error, may also contribute to differences between MCBS estimates and Medicare program statistics. Lastly, estimates may differ because Medicare program statistics adjust for partial enrollment. Medicare program estimates use a 'person year' calculation where partial enrollment is counted as a fraction for the year. In contrast, the MCBS gives each beneficiary the same weight regardless of full or partial enrollment during the year, thus leading to differences in estimates using Medicare published statistics and MCBS data.

10.1.10 Do Administrative Data Override Survey-Reported Data?

In linking survey-reported and administrative data, the MCBS keep records from both sources to provide more complete data. Indicators in the file will usually specify if the information is survey-reported only, administrative data only, or both. Data that are only administrative are indicated as such in the data documentation and codebook.

10.2 Survey File Segment Information

Below is the information regarding each segment within the Survey File release, presented in alphabetical order. The notes have been organized into three main categories of information.

1. Core Content – a description of the main subject of the data.
2. Variable Definitions – definitions of derived variables and/or variables that require additional explanation regarding their construction. Note: The variables listed are not a comprehensive list of all variables in each segment. The Codebook provides information on all variables in each segment.
3. Special Notes – additional background information that data users may find helpful for constructing analyses.

10.3 Survey File Segment Descriptions

10.3.1 Access to Care (ACCESSCR)

10.3.1.1 Core Content

The Access to Care segment contains information from the HFQ section in the fall round. General questions are asked about the beneficiary's ability to access medical services. This segment also contains information on medical debt and the reasons beneficiaries cannot access the care they need.

10.3.1.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.1.3 Special Notes

Respondents are asked why the beneficiary had trouble getting health care or scheduling a health care appointment in an open-ended format (e.g., "What were the reasons the doctor's office offered as an explanation for not scheduling an appointment with you?"). The respondents answer these questions in their own words, and interviewers select the response option(s) from a predefined code list that best matched the respondents' answer(s). These questions are select-all-that-apply so that respondents may provide multiple answers to each question, and each answer is stored in its own analytic variable.

If the respondent reports a reason that is not included in the predefined code list, the interviewer documents their response verbatim in an "other specify" variable that is not released. The "other specify" response is back coded as necessary into the predefined code list.

If the respondent reports that the beneficiary could not schedule an appointment because the doctor is not accepting new Medicare patients or the doctor does not accept Medicare at all, the respondent is then asked at variable OFFEXPLN whether the doctor's office explained why this is the case. If the doctor's office provided an explanation to the respondent, this explanation is recorded verbatim at OFFEXVB1 but not released.

10.3.2 Access to Care, Medical Appointments (ACCSSMED)

10.3.2.1 Core Content

The Access to Care, Medical Appointments segment contains information from the ACQ section and the emergency room, outpatient, medical provider, dental, vision, and hearing, and prescription medicine utilization sections asked in the winter round following the year of interest. General questions are asked about the beneficiary's access to all types of medical services and prescription medicines, the reasons for their visits, and the reasons for any forgone care or prescription medicines.

10.3.2.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.2.3 Special Notes

Respondents are asked why the beneficiary did or did not receive different types of medical services or prescription medicines in an open-ended format (e.g., "What was the reason you saw the doctor?"). The respondents answer these questions in their own words, and interviewers select the response option(s) from a predefined code list that best matched the respondents' answer(s). These questions are select-all-that-apply

so that respondents may provide multiple answers to each question, and each answer is stored in its own analytic variable.

If the respondent reports a reason that is not included in the predefined code list, the interviewer documents their response verbatim in an "other specify" variable that is not released. The "other specify" response is back coded as necessary into the predefined code list.

Special non-response adjustment weights are included in the file to account for survey non-response from the fall to the winter data collection period. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes. Please see the Weights section 9.4 for information on using weights with data from Topical questionnaire sections.

10.3.3 Administrative Utilization Summary (ADMNUTLS)

10.3.3.1 Core Content

The Administrative Utilization Summary segment contains information on Medicare program expenditures and utilization taken directly from the Medicare Administrative enrollment data.

10.3.3.2 Variable Definitions

Except as noted otherwise, the variables in this segment are derived from summarizing data from CMS' Medicare Administrative enrollment data and the Medicare Administrative utilization and payment records. Administrative data available as of December 31, 2020 were summarized to create these data items.

H_HHASW: One or more home health agency (HHA) visits in the calendar year is indicated by a 1. This is triggered by a value (greater than zero) found in the home health visits field (H_HHVIS). Otherwise the value for H_HHASW is 2.

H_HOSSW: One or more hospice bills in the calendar year is indicated by a 1. This is triggered by a value (greater than zero) found in the hospice Medicare payments (H_HOSPMT) field or the hospice stays (H_HOSSTY) field. Otherwise the value for H_HOSSW is 2.

H_INPSW: One or more inpatient discharges in the calendar year is indicated by a 1. This is triggered by a value (greater than zero) found in the acute inpatient stays (H_ACTSTY) field or the other inpatient stays (H_OIPSTY) field. Otherwise the value for H_INPSW is 2.

H_OUTSW: One or more outpatient visits in the calendar year is indicated by a 1. This is triggered by a value (greater than zero) found in the hospital outpatient visits (H_HOPVIS) field or hospital outpatient emergency room visits (H_HOP_ER) field. Otherwise the value for H_OUTSW is 2.

H_PBSW: One or more Part B claims in the calendar year is indicated by a 1. This is triggered by a value (greater than zero) found in any of the following fields: H_PHYPMT, H_PHYEVT, H_PB_DEV, H_PB_DRG, H_PB_OTH, H_PB_OEV, H_DMEEVT, H_DMPEPMT, H_TSTEVT, H_TSTPMT, H_ANEVT, H_ANEPMT, H_ASCEVT, H_ASCPMT, H_DIAEVT, H_DIAPMT, H_EMEVT, H_EMPMT, H_IMGEVT, H_IMGPMT, and H_PTBRMB. Otherwise the value for H_PBSW is 2.

H_SNFSW: One or more skilled nursing facility (SNF) admissions in the calendar year is indicated by a 1. This is triggered by a value (greater than zero) found in any of the following fields: H_SNFPMT, H_SNFSY, H_SNFDAY. Otherwise the value for H_SNFSW is 2.

H_PTARMB: Total Part A reimbursement in the calendar year. It is a sum of calendar year reimbursements for HHA Part A, Hospice, Inpatient, and SNF. The CLM_PMT_AMT field is selected for each claim type in preparing this calculation. The CLM_VAL_CD = "64" is used to determine HHA Part A.

H_PTBRMB: Total Part B reimbursement in the calendar year. It is a sum of calendar year reimbursements for HHA Part B, Physician, and Outpatient. The CLM_PMT_AMT field is selected for each claim type in preparing this calculation. The CLM_VAL_CD = "65" is used to determine HHA Part B. "Physician" as noted in the "sum" statement above consisted of BCARRIER_CLAIMS and DME_CLAIMS.

H_ACTPMT: Acute Inpatient Medicare Payments is the sum of the Medicare claim payment amounts (CLM_PMT_AMT from each source claim) in the acute inpatient hospital setting in the calendar year. To obtain the total acute hospital Medicare payments, take this variable and add in the annual per diem payment amount (H_ACTMPT + H_ACTPRD).

H_ACTPRD: Acute Inpatient Hospital Pass-thru Per Diem Payments is the sum of all the pass-through per diem payment amounts (CLM_PASS_THRU_PER_DIEM_AMT from each source claim) in the acute inpatient hospital setting for the calendar year. Medicare payments are designed to include certain "pass-through" expenses such as capital-related costs, direct medical education costs, kidney acquisition costs for hospitals that are renal transplant centers, and bad debts. This variable is the sum of all the daily payments for pass-through expenses. It is not included in the Medicare Payment amount (H_ACTPMT). To determine the total Medicare payments for acute hospitalizations for the beneficiary, this field must be added to the total Medicare payment amount for acute inpatient hospitalizations (H_ACTMPT + H_ACTPRD).

H_ACTSTY: Acute Inpatient Stays is the count of acute inpatient hospital stays (unique admissions, which may span more than one facility) for the calendar year. An acute inpatient stay is defined as a set of one or more consecutive acute inpatient hospital claims where the beneficiary is only discharged on the most recent claim in the set. If a beneficiary is transferred to a different provider, the acute stay is continued even if there is a discharge date on the claim from which the beneficiary was transferred.

H_ACTDAY: Acute Inpatient Medicare Covered Days is the count of Medicare covered days in the acute inpatient hospital setting for the calendar year.

H_ACTBPT: Acute Inpatient Beneficiary Payments is the sum of Medicare coinsurance and deductible payments in the acute inpatient hospital setting for the calendar year. The total acute hospitalization beneficiary payments are calculated as the sum of the beneficiary deductible amount and coinsurance amount for all acute inpatient claims where the CLM_PMT_AMT >= 0.

H_IP_ER: Inpatient Emergency Room Visits is the count of emergency department (ED) claims in the inpatient setting for the year. The revenue center codes indicating emergency room use were 0450, 0451, 0452, 0456, and 0459.

H_OIPPMT: Other Inpatient Hospital Medicare Payments is the sum of the Medicare claim payment amounts (CLM_PMT_AMT from each source claim) in the other inpatient (OIP) settings for the calendar year. To obtain the total OIP Medicare payments, take this variable and add in the annual per diem payment amount (H_OIPPMT + H_OIPPRD). These OIP claims are a subset of the IP claims consisting of data from IP settings such as long-term care hospitals, inpatient psychiatric facilities, inpatient rehabilitation facilities, and other types of IP facilities such as children's hospitals or cancer centers.

H_OIPPRD: Other Inpatient Pass-thru Per Diem Payments is the sum of all the pass-through per diem payment amounts (CLM_PASS_THRU_PER_DIEM_AMT from each source claim) in the OIP setting for the calendar year. This variable is the sum of all the daily payments for pass-through expenses. It is not included in the Medicare payment amount (H_OIPPMT). To determine the total Medicare payments for other non-acute hospitalizations

for the beneficiary, this field must be added to the total Medicare payment amount for other hospitalizations (H_OIPPMT + H_OIPPRD).

H_OIPSTY: Other Inpatient Stays is the count of hospital stays (unique admissions, which may span more than one facility) in the non-acute inpatient setting for the calendar year. A non-acute inpatient stay is defined as a set of one or more consecutive non-acute inpatient claims where the beneficiary is only discharged on the most recent claim in the set.

H_OIPDAY: Other Inpatient Hospital Covered Days is the count of covered days in the non-acute inpatient hospital setting for the calendar year. This variable equals the sum of the CLM_UTLZTN_DAY_CNT variables on the source claims.

H_OIPBPT: Other Inpatient Beneficiary Payments is the sum of Medicare coinsurance and deductible payments in the nonacute inpatient hospital setting for the year. The total OIP beneficiary payments are calculated as the sum of NCH_BENE_IP_DDCTBL_AMT and NCH_BENE_PTA_COINSRNC_LBLTY_AM for all relevant claims where the CLM_PMT_AMT ≥ 0 .

H_SNFPMT: SNF Medicare Payments is the total Medicare payments in the SNF setting for the calendar year.

H_SNFSTY: SNF Stays is the count of SNF stays (unique admissions, which may span more than one facility) for the calendar year. A SNF stay is defined as a set of one or more consecutive SNF claims where the beneficiary is only discharged on the most recent claim in the set.

H_SNFDAY: SNF Medicare Covered Days is the count of Medicare covered days in the SNF setting for the calendar year. This variable equals the sum of the CLM_UTLZTN_DAY_CNT variables on the source claims.

H_SNFBPT: Skilled Nursing Facility Beneficiary Payments is the sum of Medicare coinsurance and deductible payments in the SNF setting for the calendar year. The total beneficiary payment is calculated as the sum of the beneficiary deductible amount and coinsurance amount (variables NCH_BENE_IP_DDCTBL_AMT and NCH_BENE_PTA_COINSRNC_LBLTY_AM) for all SNF claims where the CLM_PMT_AMT ≥ 0 .

H_HOSPMT: Hospice Medicare Payments is the total Medicare payments in the hospice (HOS) setting for the calendar year.

H_HOSSTY: Hospice Stays is the count of stays (unique admissions, which may span more than one facility) in the HOS setting for the calendar year. A HOS stay is defined as a set of one or more consecutive hospice claims where the beneficiary is only discharged on the most recent claim in the set.

H_HOSDAY: Hospice Medicare Covered Days is the count of Medicare covered days in the HOS setting for the calendar year. This variable equals the sum of the CLM_UTLZTN_DAY_CNT variables on the source claims.

H_HHPMT: Home Health Medicare Payments is the total Medicare payments in the home health (HH) setting for the calendar year.

H_HHVIS: Home Health Visits is the count of HH visits for the calendar year.

H_HOPPMT: Hospital Outpatient Medicare Payments is the total Medicare payments in the hospital outpatient (HOP) setting for the calendar year.

H_HOPVIS: Hospital Outpatient Visits is the count of unique revenue center dates (as a proxy for visits) in the HOP setting for the calendar year.

H_HOP_ER: Hospital Outpatient Emergency Room Visits is the count of unique emergency department revenue center dates (as a proxy for an ED visit) in the HOP claims for the calendar year. Revenue center codes indicating emergency room use are 0450, 0451, 0452, 0456, or 0459.

H_HOPBPT: Hospital Outpatient Beneficiary Payments is the sum of Medicare coinsurance and deductible payments in the HOP setting for the calendar year. The total beneficiary payment is calculated as the sum of the beneficiary deductible amount and coinsurance amount (variables REV_CNTR_CASH_DDCTBLE_AMT and REV_CNTR_COINSRNC_WGE_ADJSTD_C) for all HOP claims where the CLM_PMT_AMT \geq 0.

H_PB_DRG: Part B Drug Medicare Payments is the total Medicare payments for Part B drugs for the calendar year. Part B drug claims are a subset of the claims in the Part B Carrier and DME claims.

H_PB_DEV: Part B Drug Events is the count of events in the Part B drug setting for the calendar year. An event is defined as each line item that contains the relevant service.

H_BPTDRG: Part B Drug Beneficiary Payments is the sum of coinsurance and deductible payments for Part B drugs for the calendar year. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT + LINE_BENE_PTBDCTBL_AMT for the relevant lines. The Part B drug claims are identified by BETOS codes (CCW variable BETOS_CD with values of "D1G", "O1D", "O1E", "O1G", "I1E", or "I1F").

H_EMPMT: Evaluation and Management Medicare Payments is the total Medicare payments for the Part B evaluation and management (E&M) services for a given year. E&M claims are a subset of the claims in the Part B Carrier and DME claims and a subset of physician claims.

H_EMEVT: E&M Events is the count of events for the Part B E&M services for the calendar year. An event is defined as each line item that contains the relevant service.

H_EMBPT: Evaluation and Management Beneficiary Payments is the sum of coinsurance and deductible payments for the Part B E&M services for the calendar year. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT and LINE_BENE_PTBDCTBL_AMT for the relevant lines. E&M claims are a subset of the claims in the Part B Carrier and DME data files and a subset of physician claims. The E&M claims are defined as those with a line BETOS code (BETOS_CD) where the first digit = "M" (but is not M1A or M1B – which are categorized as physician office care in this file – see PHYS_MDCR_PMT).

H_PHYPMPT: Part B Physician Medicare Payments is the total Medicare payments for the Part B physician office services (PHYS) for the calendar year. PHYS claims are a subset of the claims in the Part B Carrier and DME claims and a subset of physician evaluation and management claims (note that E&M are tabulated separately).

H_PHYEVT: Part B Physician Events is the count of events for Part B PHYS for the calendar year. An event is defined as each line item that contains the relevant service.

H_PHYBPT: Part B Physician Beneficiary Payments is the sum of coinsurance and deductible payments for the Part B PHYS for the calendar year. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT and LINE_BENE_PTBDCTBL_AMT for the relevant lines. The PHYS claims are defined as those with a line BETOS code (BETOS_CD) where the first three digits = M1A or M1B (the remainder of physician services which occur in different settings appear in EM_MDCR_PMT).

H_OPRPMT: Other Procedures Medicare Payments is the total Medicare payments for services considered Part B other procedures (i.e., not anesthesia or dialysis) for the calendar year. Claims for other procedures are a subset of the claims and a subset of procedures in the Part B Carrier claims.

H_OPREVT: Other Procedures Events is the count of events for Part B other procedures for the calendar year. An event is defined as each line item that contains the relevant service. Claims for other procedures are a subset of the claims in the Part B Carrier claims.

H_OPRBPT: Other Procedures Beneficiary Payments is the sum of coinsurance and deductible payments for services considered Part B other procedures for the calendar year. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT and LINE_BENE_PTB_DDCTBL_AMT for the relevant lines. Claims for other procedures are a subset of the claims in the Part B Carrier data file. These other procedure claims are defined as those with a line BETOS code (BETOS_CD) where the first 2 digits are ("P1", "P2", "P3", "P4", "P5", "P6", "P7", or "P8").

H_DMEPMT: Durable Medical Equipment Medicare Payments is the total Medicare payments for Part B durable medical equipment (DME) for the calendar year. Claims for DME are a subset of the claims in the Part B Carrier and DME claims.

H_DMEEVT: Durable Medical Equipment Events is the count of events in the Part B DME for the calendar year. An event is defined as each line item that contains the relevant service.

H_DMEBPT: Durable Medical Equipment Beneficiary Payments is the total Medicare payments for Part B DME for the calendar year.

H_PB_OTH: Other Part B Carrier Medicare Payments is the total Medicare payments from Part B Carrier and DME claims which appear in specific settings for the calendar year. Claims for other carrier/DME claims are a subset of the claims in the Part B Carrier and DME claims. Types of services which may have been summarized in this other carrier category (OTH) include ambulance, chiropractor, chemotherapy, vision, hearing and speech services, etc.

H_PB_OEV: Other Part B Carrier Events is the count of events in the Part B other setting for the calendar year, which includes Part B Carrier and DME claims which appear in specific settings for the year. An event is defined as each line item that contains the relevant service.

H_BPTOTH: Other Part B Carrier Beneficiary Payments is the sum of coinsurance and deductible payments from Part B Carrier and DME claims for the calendar year, which appear in settings other than the 10 specific categories in this segment. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT and LINE_BENE_PTB_DDCTBL_AMT for the relevant lines.

H_PTDPMT: Part D Medicare Payments is the dollar amount that the Part D plan covered for all covered drugs for the calendar year. The variable is calculated as the sum of the plan payments for covered Prescription Drug Events (PDEs) (CVRD_D_PLAN_PD_AMT) and the low-income cost sharing subsidy amount (LICS_AMT) during the year.

H_PTDEVT: Part D Events is the count of events for Part D drugs for the calendar year (i.e., a unique count of the PDE_IDs). An event is a dispensed (filled) drug prescription that appears on the source PDE claims.

H_PTDBPT: Part D Beneficiary Payments is the dollar amount that the beneficiary paid for all PDEs for the calendar year, without being reimbursed by a third party. The amount includes all copayments, coinsurance, deductible, or other patient payment amounts, and comes directly from the source PDEs.

H_PTDTOT: Part D Total Prescription Costs is the gross drug cost (TOT_RX_CST_AMT on the source claims) of all Part D drugs for the calendar year. This value includes the ingredient cost, dispensing fee, sales tax (if applicable), and vaccine administration fee.

H_ASCEVT: Ambulatory Surgery Center Events is the count of events in the Part B ambulatory surgery center (ASC) setting for the calendar year. An event is defined as each line item that contains an ambulatory surgery center service.

H_ASCBPT: Ambulatory Surgery Center Beneficiary Payments is the sum of coinsurance and deductible payments in the Part B ASC setting for the calendar year. The total beneficiary payment is calculated as the sum of the LINE_COINSRNC_AMT and LINE_BENE_PTBDCTBL_AMT for all relevant lines. ASC claims are a subset of the claims in the Part B Carrier data file. The ASC claims are identified by the claim lines where the LINE_CMS_TYPE_SRVC_CD = "F".

H_ANEPMT: Anesthesia Medicare Payments is the total Medicare payments for Part B anesthesia services (ANES) for the calendar year. Anesthesia claims are a subset of the claims and a subset of procedures in the Part B Carrier claims.

H_ANEVT: Anesthesia Events is the count of events for Part B ANES for the calendar year. An event is defined as each line item that contains the relevant service.

H_ANEBPT: Anesthesia Beneficiary Payments is the sum of coinsurance and deductible payments for Part B ANES for the calendar year. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT and LINE_BENE_PTBDCTBL_AMT for the relevant lines. ANES claims are a subset of the claims and a subset of procedures in the Part B Carrier data file. ANES claims are defined as those with a line BETOS code (BETOS_CD) where the first 2 digits = "P0" and the CARR_LINE_MTUS_CD = "2".

H_DIAPMT: Dialysis Medicare Payments is the total Medicare payments for Part B dialysis services (primarily the professional component since treatments are covered in hospital outpatient) for the calendar year. Dialysis claims are a subset of the claims and a subset of procedures in the Part B Carrier claims.

H_DIAEVT: Dialysis Events is the total Medicare payments for Part B dialysis services for the calendar year. An event is defined as each line item that contains the relevant service.

H_DIABPT: Dialysis Beneficiary Payments is the total Medicare payments for Part B dialysis services for the calendar year. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT and LINE_BENE_PTBDCTBL_AMT for the relevant lines.

H_IMGPMT: Imaging Medicare Payments is the total Medicare payments for imaging services (IMG) for the calendar year. Claims for imaging procedures are a subset of the claims and a subset of procedures in the Part B Carrier and DME claims.

H_IMGEVT: Imaging Events is the count of events for IMG for the calendar year. An event is defined as each line item that contains the relevant service.

H_IMGBPT: Imaging Beneficiary Payments is the sum of coinsurance and deductible payments for IMG for the calendar year. The total beneficiary payments are calculated as the sum of LINE_COINSRNC_AMT and LINE_BENE_PTBDCTBL_AMT for the relevant lines. These IMG claims are defined as those with a line BETOS code (BETOS_CD) where the first digit = I (except for "I1E", or "I1F" – which are considered Part B drugs).

H_TSTPMT: Tests Medicare Payments is the total Medicare payments for Part B tests for the calendar year. Claims for tests are a subset of the claims in the Part B Carrier claims.

H_TSTEVT: Tests Events is the count of events for Part B tests for the calendar year. An event is defined as each line item that contains the relevant service. Claims for tests are a subset of the claims in the Part B Carrier claims.

H_TSTBPT: Tests Beneficiary Payments is the sum of coinsurance and deductible payments for Part B tests for the calendar year.

H_PTDFIL: Part D prescribing events (PDE) consist of highly variable days' supply of the medication. This derived variable creates a standard 30 days' supply of a filled Part D prescription and counts this as a "fill." The Part D fill count does not indicate the number of different drugs the person is using, only the total months covered by a medication (e.g., if a patient is receiving a full year supply of a medication, whether this occurs in one transaction or 12 monthly transactions, the fill count = 12; if the patient is taking three such medications, the fill count = 36).

H_READMT: Acute Inpatient Hospital Readmissions is the count of hospital readmissions in the acute inpatient setting for the calendar year. The original admission must have been in the year of the data file, but it is possible for the readmission claim to have occurred in January of the following year. A beneficiary is considered to be readmitted when they have an acute inpatient stay with a discharge status that is not expired or left against medical advice within 30 days of a previous acute inpatient stay with a discharge status that is also not expired or left against medical advice.

10.3.3.3 Special Notes

For easier comparison of groups of beneficiaries by the number and cost of medical services they have received, the Administrative Utilization Summary includes a summary of all Medicare bills and claims for calendar year 2020, as received and processed by CMS through December 2021 for the 2020 benefit year.

The utilization summary represents services rendered and reimbursed under Medicare FFS in the calendar year 2020. If a beneficiary used no Medicare services at all or was a member of a coordinated or managed care plan that does not submit claims to a fiscal intermediary or carrier, all program payment summary variables will be null. If the beneficiary used no services of a particular type (e.g., inpatient hospitalization), the variables relating to those benefits will be null.

For additional information on administrative data items, please see the Master Beneficiary Summary - Cost and Use Segment Data Dictionary Codebook: <https://www.ccwdata.org/web/guest/data-dictionaries>.

10.3.4 Assistance (ASSIST)

10.3.4.1 Core Content

The Assist segment contains information on each person identified as helping the beneficiary with ADLs or IADLs, including the helper's age, relationship to the beneficiary, and the types of assistance that the beneficiary receives (e.g., assistance with dressing, shopping, eating) from each identified helper. The number of records in the Assist segment reflects the number of persons identified as having assisted the beneficiary with one or more ADL or IADLs. Therefore, it is possible to have one, several, or no helper records per beneficiary.

10.3.4.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.4.3 Special Notes

When a beneficiary has more than one helper, the variable HLPRMOST identifies which helper provides the beneficiary with the most help with daily activities. This variable contains missing values for helpers who were a beneficiary's only helper. If a beneficiary with multiple helpers has not indicated which helper provides the most help, then this variable contains missing data for each of the beneficiary's helpers.

Most ADL and IADL questions are asked in the HFQ section in the fall round. However, there is one variable, HLPRUSGO (the person who usually accompanies the beneficiary to their provider's office), that is asked in the winter round in the USQ section.

10.3.5 Chronic Conditions (CHRNCOND)

10.3.5.1 Core Content

The Chronic Conditions segment contains information on whether the beneficiary has a series of chronic and other diagnosed medical conditions such as cancer, high blood pressure, and depression. If the respondent reports that the beneficiary has the condition, a series of follow-up questions is asked.

10.3.5.2 Variable Definitions

D_OCDTYP: This variable indicates type of diabetes and is derived from OCDDTYPE and DIAPRGNT. The OCDDTYPE categories for "Pre-diabetes" and "Borderline" diabetes are combined into one category for D_OCDTYP. Female beneficiaries who answer "Yes" for DIAPRGNT, which is not released, are coded as "Gestational diabetes" for D_OCDTYP, unless they indicate for OCDDTYPE that they have Type 1 diabetes.

LOSTURIN: "More than once a week" is coded if the beneficiary cannot control urination at all. Leaking urine, especially when the person laughs, strains or coughs, does not qualify as incontinence.

10.3.5.3 Special Notes

The HFQ and PVQ sections ask respondents whether they have ever had any of a series of illnesses or conditions in the fall round. Their responses are coded affirmatively if the beneficiary had at some time been diagnosed with the condition, even if the condition had been corrected by time or treatment. The condition must be reported by the respondent as diagnosed by a physician, not by the respondent. If the respondent is not sure about the definition of a condition, the interviewer offers no advice or information, but records the respondent's answer verbatim.

There are different versions of each illness/condition question depending on whether a respondent is in the Incoming Panel sample or Continuing sample. Incoming Panel sample respondents are asked if a doctor ever told them that they had a specific condition (e.g., hypertension). If the answer is "Yes", then the Incoming Panel respondent is asked if the doctor had told them in the past year that they had the condition.

For illnesses or conditions that cannot change after diagnosis (e.g., Alzheimer's), once an affirmative response is given, respondents are not asked again. However, if a negative response is given, respondents are asked annually thereafter if they had that specific illness or condition in the past year.

For illnesses or conditions that can change after diagnosis or can be reoccurring, such as high blood pressure, respondents are asked annually thereafter if they were diagnosed with that illness or condition in the past year, irrespective of prior responses. All data for a beneficiary from the current survey year and all previous years are used to determine whether the beneficiary has ever been told by a doctor that they had a condition. The CHRNCOND segment includes variables that indicate whether a beneficiary ever had specific conditions.

The “other specify” questions EMOS and EVROS are back coded as necessary into the “reason for Medicare eligibility” and “type of cancer” response options, respectively, but the verbatim text is not released.

In 2020, the question that asked if the beneficiary has ever had cancer was revised to exclude benign or non-malignant tumors or growths.

In 2020, the HFQ was revised to add a question asking whether the beneficiary has chronic kidney disease, regardless of diabetes status. Beginning in 2020, data on chronic kidney disease are stored in the OCKIDNY variable on the Chronic Conditions segment while data on diabetes-related kidney problems continue to be stored on the Diabetes segment.

Two items about arthritis (OCOSARTH and OCARTHOT) continue to be unavailable in the 2020 Survey File but may reappear in future releases.

10.3.6 Chronic Condition Flags (CHRNCDFL)

10.3.6.1 Core Content

The Chronic Conditions Flags segment contains chronic and other disabling conditions flags from administrative FFS records from the CCW. The CCW summarizes beneficiaries' FFS claims for the calendar year and indicates whether a claim for a particular condition met criteria for inclusion. This segment also provides the first year the beneficiary met the criteria for having that chronic condition. Variables are included for those conditions related to the self-reported information included in the MCBS instrument and are not inclusive of all chronic and disabling conditions available.

10.3.6.2 Variable Definitions

The end of year indicator flags require beneficiaries to satisfy both claims criteria (a minimum number/type of claims that have the proper diagnosis codes and occurred within a specified time period) and coverage criteria (FFS Part A and Part B coverage during the entire specified time period). Each flag is also created using details about the specific condition that must be met for inclusion.

Indicators have the following values:

- 0 = Beneficiary did not meet claims criteria or have sufficient FFS coverage
- 1 = Beneficiary met claims criteria but did not have sufficient FFS coverage
- 2 = Beneficiary did not meet claims criteria but had sufficient FFS coverage
- 3 = Beneficiary met claims criteria and had sufficient FFS coverage

The ever indicator variables for the conditions show the date when the beneficiary first met the criteria for the chronic or disabling condition. The variable is missing for beneficiaries that have never had the condition. The earliest possible date for anyone is January 1, 1999. If the beneficiary became eligible for Medicare after that, the earliest possible date will be some time after their coverage start date.

10.3.6.3 Special Notes

The end of year indicator flags criteria was developed after reviewing validated algorithms from the research literature and criteria used by other federal data sources. Please visit the CCW website for more detailed information on the criteria: <https://www.cwdata.org/web/guest/condition-categories>.

10.3.7 Chronic Pain (CHRNPAIN)

10.3.7.1 Core Content

The Chronic Pain segment contains data on beneficiaries' experiences with chronic pain and chronic pain management techniques collected in the CPQ section administered the summer following the year of interest. The CPQ collects information related to frequency and severity of chronic pain, location of chronic pain (e.g., hips, knees, or feet), and use of pain management techniques (e.g., massage).

10.3.7.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.7.3 Special Notes

The CPQ uses a three-month reference period; thus, the items administered in Summer 2021 (Round 90) asked beneficiaries about pain experienced in 2021. However, because the CPQ is administered to beneficiaries who were ever enrolled in Medicare in 2020 and are still enrolled in 2021, the CPQ data are released with the 2020 Survey File.

Special non-response adjustment weights are included in the file to account for survey non-response from the fall to the summer data collection period. This includes Survey File ever enrolled and continuously enrolled weights, as well as Cost Supplement ever enrolled weights. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes. Please see the Weights section below for information on using weights with data from Topical Questionnaire sections.

10.3.8 Cognitive Measures (COGNFUNC)

10.3.8.1 Core Content

The Cognitive Measures segment contains data on the beneficiary's cognitive abilities collected in the CMQ section administered in the fall rounds. The CMQ contains four cognitive measures, including backwards counting, date naming, object naming, and president/vice president naming.

10.3.8.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.8.3 Special Notes

The CMQ was first added to the questionnaire in Fall 2020 to capture information on beneficiary's cognitive functioning.

10.3.9 COVID-19 Vaccination (COVIDVAC)

10.3.9.1 Core Content

The COVID-19 Vaccination segment contains information collected in the CVQ section the summer following the year of interest on COVID-19 vaccination, including vaccine uptake, name of vaccine received, dose dates, and number of doses. The CVQ also asks about presumptive vaccine uptake for those respondents who have not reported completing a vaccine series; these data were not released in 2020.

10.3.9.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.9.3 Special Notes

The CVQ was first added to the questionnaire in Summer 2021 to capture vaccination information.

The "other specify" questions for vaccine name (VACNM1OS and VACNM1OS) are back coded as necessary into predefined response options, but the verbatim text is not released. The "other specify" questions for reason why the beneficiary is not likely to receive a vaccine (NOVCRNOS) and reason why the beneficiary has not received the second dose of a two-dose vaccine (NOSDRNOS) are also back coded but not released.

10.3.10 Demographics (DEMO)

10.3.10.1 Core Content

The Demographics segment contains demographic information collected in the survey as well as demographic information from Medicare Administrative enrollment data and constructed items of interest.

10.3.10.2 Variable Definitions

ADI: The Area Deprivation Index (ADI) is an indicator of the socioeconomic deprivation of geographic areas and is intended for use in evaluating the relationship between socioeconomic factors and health. This index was originally developed using 17 markers of socioeconomic status from the 1990 Census data. The ADI dataset used in this data release was developed by Amy Kind, MD, PhD and her research team at the University of Wisconsin using the same indicators and 2018 Census block group-level data from the American Community Survey (ACS). This dataset contains national percentile rankings at the block group level from 1 to 100 as well as state decile rankings from 1 to 10. Raw ADI values are used to determine percentile and decile rankings. ADI values in the first percentile are the least disadvantaged, and those in the hundredth are the most disadvantaged.⁵¹

The MCBS includes two ADI values for each beneficiary, a national-level percentile (ADINATNL) and a state-level decile (ADISTATE). Both rankings are based on the Census block group for the beneficiary's primary residence address (CENSBLCK). Beneficiaries have a value for each of these variables if their Census block group is found on the ADI dataset. Excluding the exiting 2017 panel cases, there was a 95.7 percent match rate for cases matched to the ADI dataset.

H_DOB, H_DOD, H_AGE, and D_STRAT: These four variables are related to the beneficiary's age. The "legal" dates of birth and death from Medicare and the Social Security Administration records are recorded as H_DOB and H_DOD, respectively. The variable H_AGE represents the "legal" age as of December 31, 2020, adjusted for date of death, if present. The variable D_STRAT groups the beneficiaries by various age categories using H_AGE. The date of birth, as reported during the Baseline interview, is recorded in DEMO (D_DOB).

D_DOB: When the complete date of birth is entered (D_DOB) in the MCBS instrument, the CAPI questionnaire automatically calculates the person's age, which is then verified with the respondent. Despite this validation, the date of birth given by the respondent (D_DOB) does not always agree with the date of birth per CMS records (H_DOB). In these cases, the beneficiary is asked again in the next interview to provide a date of birth. Some recording errors are identified this way, but in most cases, beneficiaries provide the same date of

⁵¹ "2018 Area Deprivation Index v3.0," University of Wisconsin School of Medicine and Public Health, <https://www.neighborhoodatlas.medicine.wisc.edu/>.

birth both times they are asked. In some cases, proxies indicate that no one is exactly sure of the correct date of birth. In general, it is recommended that the variable (H_DOB) be used for analyses, since the CMS date of birth is used to select and stratify the sample.

D_DOD: Date of death provided by proxy respondents. In general, it is recommended that both the survey-reported (D_DOD) and administrative (H_DOD) variables be used for analyses.

D_RACE2: Race categories are self-reported by the respondent. Categories are not suggested by the interviewer, nor does the interviewer try to explain or define any of the groups. Ethnic groups such as Irish or Cuban are not recorded.

H_CENSUS: The Census division is performed through internal edits by matching the survey respondent's SSA State code to the appropriate Census region. The Census divisions are as follows:

- New England – Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
- Middle Atlantic – New Jersey, New York, Pennsylvania
- South Atlantic – Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
- East North Central – Illinois, Indiana, Michigan, Ohio, Wisconsin
- West North Central – Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
- East South Central – Alabama, Kentucky, Mississippi, Tennessee
- West South Central – Arkansas, Louisiana, Oklahoma, Texas
- Mountain – Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
- Pacific – Alaska, California, Hawaii, Oregon, Washington

Urban/rural status variables: H_RUCA indicates overall urban/rural status. H_RUCA1 and H_RUCA2 indicate the primary and secondary RUCA codes, respectively (see Exhibits 10.3.8.2a and 10.3.8.2b). This classification scheme provides an alternative to county-based systems for situations where more detailed geographic analysis is feasible. It identifies areas of emerging urban influence and areas where urban-rural classifications overlap, thus providing an exhaustive system of statistical areas for the country.

The ten whole numbers shown in Exhibit 10.3.19.2a below refer to the primary, or single largest, commuting share. Metropolitan cores (code 1) are defined as Census tract equivalents of urbanized areas. Micropolitan and small town cores (codes 4 and 7, respectively) are tract equivalents of urban clusters. Tracts are included in urban cores if more than 30 percent of their population is in the urbanized area or urban cluster.

High commuting (codes 2, 5, and 8) means that the largest commuting share is at least 30 percent to a metropolitan, micropolitan, or small town core. Many micropolitan and small town cores themselves (and even a few metropolitan cores) have high enough out-commuting to other cores to be coded 2, 5, or 8; typically these areas are not job centers themselves but serve as bedroom communities for a nearby larger city. Low commuting (codes 3, 6, and 9) refers to cases where the single largest flow is to a core, but is less than 30 percent. These codes identify "influence areas" of metro, micropolitan, and small town cores, respectively, and are similar in concept to the "nonmetropolitan adjacent" codes found in other Economic Research Service (ERS) classification schemes ([Rural-Urban Continuum Codes](#), [Urban Influence Codes](#)). The last of the general classification codes (10) identifies rural tracts where the primary flow is local or to another rural tract.

Exhibit 10.3.10.2a: Primary RUCA (H_RUCA1) Codes, 2010

Code	Classification description
1	Metropolitan area core: primary flow within an urbanized area (UA)
2	Metropolitan area high commuting: primary flow 30% or more to a UA
3	Metropolitan area low commuting: primary flow 10% to 30% to a UA
4	Micropolitan area core: primary flow within an urban cluster (UC) of 10,000 to 49,999 (large UC)
5	Micropolitan high commuting: primary flow 30% or more to a large UC
6	Micropolitan low commuting: primary flow 10% to 30% to a large UC
7	Small town core: primary flow within an urban cluster of 2,500 to 9,999 (small UC)
8	Small town high commuting: primary flow 30% or more to a small UC
9	Small town low commuting: primary flow 10% to 30% to a small UC
10	Rural areas: primary flow to a tract outside a UA or UC
99	Not coded: Census tract has zero population and no rural-urban identifier information

These ten codes offer a relatively straightforward and complete delineation of metropolitan and nonmetropolitan areas based on the size and direction of primary commuting flows. However, secondary flows may indicate other connections among rural and urban places. Thus, the primary RUCA codes are further subdivided to identify areas where classifications overlap, based on the size and direction of the secondary, or second largest, commuting flow (see Exhibit 10.3.10.2b). For example, 1.1 and 2.1 codes identify areas where the primary flow is within or to a metropolitan core, but another 30 percent or more commute to a larger metropolitan core. Similarly, 10.1, 10.2, and 10.3 identify rural tracts for which the primary commuting share is local, but more than 30 percent also commute to a nearby metropolitan, micropolitan, or small town core, respectively.

Exhibit 10.3.10.2b: Secondary RUCA (H_RUCA2) Codes, 2010

Code	Classification description
1 Metropolitan area core: primary flow within an urbanized area (UA)	
1.0	No additional code
1.1	Secondary flow 30% to 50% to a larger UA
2 Metropolitan area high commuting: primary flow 30% or more to a UA	
2.0	No additional code
2.1	Secondary flow 30% to 50% to a larger UA
3 Metropolitan area low commuting: primary flow 10% to 30% to a UA	
3.0	No additional code
4 Micropolitan area core: primary flow within an urban cluster (UC) of 10,000 to 49,999 (large UC)	
4.0	No additional code
4.1	Secondary flow 30% to 50% to a UA
5 Micropolitan high commuting: primary flow 30% or more to a large UC	
5.0	No additional code
5.1	Secondary flow 30% to 50% to a UA
6 Micropolitan low commuting: primary flow 10% to 30% to a large UC	
6.0	No additional code
7 Small town core: primary flow within an urban cluster of 2,500 to 9,999 (small UC)	
7.0	No additional code
7.1	Secondary flow 30% to 50% to a UA
7.2	Secondary flow 30% to 50% to a large UC
8 Small town high commuting: primary flow 30% or more to a small UC	
8.0	No additional code
8.1	Secondary flow 30% to 50% to a UA
8.2	Secondary flow 30% to 50% to a large UC
9 Small town low commuting: primary flow 10% to 30% to a small UC	
9.0	No additional code
10 Rural areas: primary flow to a tract outside a UA or UC	
10.0	No additional code
10.1	Secondary flow 30% to 50% to a UA
10.2	Secondary flow 30% to 50% to a large UC
10.3	Secondary flow 30% to 50% to a small UC
99 Not coded: Census tract has zero population and no rural-urban identifier information	

INCOME: Income represents the best source or estimate of income during the year of interest. Data gathered in fall and summer interviews represent the most detailed data and are used when available. For individuals who did not complete the fall interview (that is, Continuing Panel people unavailable for their fall interview), the most recent information available is used. It should be noted that the variable INCOME includes income from all sources, such as pension, Social Security, and retirement benefits, for the beneficiary and spouse. In some cases, the respondent will not or cannot provide specific information but did say the income is above or below \$25,000.

INT_TYPE: Provides the source for a beneficiary's residence status at the time of interview, and the types of interviews conducted with C = Community, F = Facility, and B = Both. INT_TYPE is defined as:

- C = respondent only resided in the community and only completed Community-administered survey instruments in each round
- F = respondent only resided in a facility and only completed Facility-administered survey instruments in each round
- B = respondents completed instruments in both settings across the rounds

INT_TYPE is created following the rules below:

- Beneficiaries are assigned an INT_TYPE if they completed or partially completed an interview in at least one round in 2020. INT_TYPE is also calculated for beneficiaries who completed an interview, but died or lost entitlement during the data year.
- Missing INT_TYPES - There are currently 31 beneficiaries with "complete" dispositions which cannot have their INT_TYPE/residence location calculated for them. These are individuals that appear to have died in early 2020 and did not have any completed/partially completed questionnaire data for 2020. These individuals have ever enrolled weights, but do not have completed interviews.

Note that in each data year, some differences by segment will exist (i.e., data may reflect a prior or future calendar year due to the specific questionnaire and reference period used to collect the information).

INT_TYPE is only constructed using survey-reported data for the benefit year and is not edited to account for data collected in a future or prior data year.

INT_TYPE is calculated on the benefit year, but data segments may reflect a prior or future calendar year due to the specific questionnaire and reference period used to collect the information. That is, the segment data is collected prior to or after the benefit year designation of INT_TYPE.

For example, there may be beneficiaries living in facilities (INT_TYPE = F) that appear on the 2020 segments that include 2020 non-response adjustments: ACCSSMED, CHRNPAIN, FOODINST, INCASSET, MCREPLNQ, RXMED, and USCARE. The MCBS would expect these segments to only include beneficiaries with INT_TYPE = C or B because these segments contain data from survey-reported instruments only asked of beneficiaries that reside in the community. However, because the data for these segments is collected in 2021, beneficiaries may have moved from a facility in 2020 to the community in 2021 at the time these data segments were collected.

Alternatively, data may be pulled forward from a prior data collection year. For example, a beneficiary in 2019 that answered affirmative to the question, "Have you ever had a hysterectomy?", a survey item that is asked of beneficiaries in the Community Questionnaire, will have that answer pulled forward to the 2020 data segment even if the beneficiary currently resides in a facility in 2020, and thus they would show an INT_TYPE = F. INT_TYPE is only constructed using survey-reported data for the benefit year and is not edited to account for data collected in a future or prior data year.

IPR: Indicates the income-to-poverty ratio (IPR). The Census Bureau determines who is "poor" by comparing an individual or household's income to a set of dollar-value thresholds that are intended to represent the amount of income needed to meet basic needs and are adjusted for family size and composition. A family will be designated as "poor" or "not poor" depending on whether their income is at or below or above this set threshold in a given year. In addition, the Census Bureau provides another way to describe a person's economic well-being by gauging how close to or far from the poverty threshold a family's income rests using an IPR. IPRs, income divided by the appropriate poverty threshold, are used to normalize incomes across family types and provide context for a better understanding of the depth of poverty (or lack thereof) of a family. The IPR is a useful analytic tool that can help MCBS users to easily identify the percentage of Medicare

beneficiaries living in deep poverty, below poverty, or those in "near" poverty (usually defined as less than 125 percent of the poverty level); or how health care access and use may differ across different thresholds of interest. Note that the MCBS IPR is calculated only for household sizes of one (beneficiary living alone or in a facility) 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 but can be unformatted to create other thresholds.

PANEL: Indicates the year of the beneficiary's Baseline interview.

10.3.10.3 Special Notes

The Demographics segment contains all demographic data from both the survey and from CMS administrative records.

The Department of Veterans Affairs (VA) disability rating collected at SPVARATE is a percentage and is expressed in multiples of ten; it refers to disabilities that are officially recognized by the government as service-related. If the VA finds that a Veteran has multiple disabilities, the VA uses a Combined Ratings Table to calculate a combined disability rating (see <https://www.benefits.va.gov/compensation/rates-index.asp#combined>).

The data at SURVIVE contains information about beneficiaries who were continuously enrolled in Medicare from January 1 up to and including their fall round interview. The code frame at WHATLANG, collecting data on what other languages are spoken at home, was expanded in 2020 to include the languages most frequently entered at WHTLANGOS, the "other specify" question for WHATLANG.

The "other specify" question WHTLANGOS is back coded as necessary into the "languages spoken at home" response options, but the verbatim text is not released. Similarly, the "other specify" questions HISPDTOS, RACEASOS, and RACEPIOS are also back coded as necessary into the "Other Hispanic/Latino/Spanish", "Other Asian", and "Other Pacific Islander" response options respectively, but the verbatim text is not released.

IPR replaced IPR_IND beginning in 2020. Previously a categorical variable, IPR is a formatted continuous variable, which allows researchers to unformat and create other poverty thresholds for analysis.

Starting with the 2020 Survey File, the code list for the INCOME variable was expanded to include more detailed breakdowns of incomes above \$50,000.

10.3.11 Diabetes (DIABETES)

10.3.11.1 Core Content

The Diabetes segment includes survey responses related to diabetes management. Only beneficiaries living in the community who indicated that they had ever been told they have non-gestational diabetes (variable D_OCDTYP in the Chronic Condition segment) are included in the Diabetes segment. This segment includes beneficiaries who indicated they had been diagnosed with any of these diabetic conditions: Type 1, Type 2, pre-diabetes/borderline diabetes, or other non-gestational type of diabetes.

10.3.11.2 Variable Definitions

Frequency of management variables: The Diabetes segment includes five pairs of items that describe the frequency of specific diabetes management behaviors. These behaviors are taking insulin, using an insulin pump, taking prescription or oral diabetes medications, testing blood glucose, and checking for foot sores. The

frequency of each behavior is described by a pair of variables, with one set yielding the numeric frequency (variables D_INSFREQ, D_INSPMP, D_MEDFRQ, D_TSTFRQ, and D_SORFRQ, respectively). The other set of variables captures the corresponding frequency unit, with the exception of D_INSPMP (variables INSUUNIT, MEDSUNIT, TESTUNIT, and SOREUNIT, respectively).

10.3.11.3 Special Notes

The variables included in the Diabetes segment are centered on diabetes management. It should be noted there are other diabetes-related variables on other segments. For example, the Chronic Condition segment stores variables relevant to diabetes diagnoses (e.g., OCBETES and D_OCDTYP). Variables related to diabetes risk and screening (e.g., DIAEVERT, DIARCNT, DIAAWARE, DIARISK, and DIASIGNS) appear in the PREVCARE segment. The variable pertaining to diabetic retinopathy (ERETINOP) appears in the VISHEAR segment.

10.3.12 Facility Assessments (FACASMNT)

10.3.12.1 Core Content

CMS designed the MDS instrument to collect information regarding the health status and functioning of nursing home residents. The MDS is administered to anyone residing in a certified nursing home, regardless of payer. About half of MCBS beneficiaries living in a facility at the time of their interview live in certified nursing homes. For this reason, the MCBS Facility instrument has been designed to mirror the MDS instrument.

10.3.12.2 Variable Definitions

D_HYST: Beneficiary ever had a hysterectomy. This variable is set to 1 if there was ever a "yes" response to the Facility variables EVERHYST or HYSTEREC or the Community variables PAPHYST or HYSTEREC. Otherwise, it is set to the value of most recently fielded Facility variable, EVERHYST or HYSTEREC.

D_PNEU: Beneficiary ever had a pneumonia shot. This variable is set to 1 if there was ever a "yes" response to the Facility variable PNEUSHOT or the Community variable PNEUSHOT. Otherwise, it is set to the most recent value of Facility variable PNEUSHOT.

D_SMOKE: Beneficiary ever smoked cigarettes, cigars, or a pipe. D_SMOKE places emphasis on any available community responses as self-reporting by beneficiary is most likely more reliable than a response by Facility employee regarding this topic. This variable is set to:

- 1 if there was ever a "yes" response to the community variable EVERSMOK, otherwise
- 0 if there was ever a "no" response to the community variable EVERSMOKE, otherwise
- 1 if there was ever a "yes" response to the facility variable EVRSMOKE, otherwise
- .D if there was ever a "don't know" response to the facility variable EVRSMOKE, otherwise
- The most recent value of Facility variable EVRSMOKE

10.3.12.3 Special Notes

In 2020, new items collecting the PHQ-9 mood assessment were added to the HS section of the Facility Instrument as part of the beneficiary-level COVID-19 supplement (see section COV.8), resulting in 22 new variables on the FACASMNT segment.

Special Notes Regarding the Integration of MDS Data with FACASMNT

For beneficiaries for which the facility respondent reported a CCN, more than half of the variables in FACASMNT are skipped during data collection. The survey-reported data are later merged with MDS administrative data in data processing using the BASEID and CCN. Specifically, MDS data from the Nursing

Home Comprehensive and Quarterly assessments are integrated with the FACASMNT data using the following data matching protocol:

- If there is an MDS record with an assessment date exactly matching the survey-reported assessment date, this MDS record is used.
- Otherwise, if there is an MDS assessment within 90 days of the survey-reported assessment date, the identified MDS record is used.
- If there is no survey-reported assessment date and there is an MDS assessment within 90 days of the survey reference date, this MDS record is used.
- If no MDS assessments meet these criteria, the survey record is unable to be matched to the administrative data, and the skipped variables are not populated during data processing and thus remain missing on FACASMNT.

FACASMNT data match outcomes for 2020 are detailed in Exhibit 10.3.12.3a.

Exhibit 10.3.12.3a: FACASMNT Administrative Data Match Outcomes

Match Type	Record Count
MDS record identified via an exact date match between the survey-reported assessment date and MDS assessment date	385
MDS record identified via a non-exact date match between the survey-reported assessment date and MDS assessment date	48
MDS record identified via the survey reference date	40
No match found	19

A flag variable, D_SOURCE, indicates whether the FACASMNT record has been populated for qualifying variables using the MDS.

Since the MCBS Facility instrument has been designed to mirror the MDS, the MDS data used is mostly comparable to the survey-reported data, but there are minor differences in the handling of item non-response and missing data. As the MDS data is administrative, values of .R (refuse to answer) and .D (don't know the answer) are not possible for these records. The MDS administrative data uses a dash, "-", to signify a missing value, while the survey-reported data use a period, ".". Values of "-" have been converted to "." in the FACASMNT segment to maintain the same convention as survey-reported data, but "-" values remain intact in the MDS3 segment.

The FACASMNT variables that may be populated during data processing using MDS data are indicated in the table below.

Exhibit 10.3.12.3b: FACASMNT Variables Populated with Administrative Data

Variable Names			
AFIBDYS	CSDECIS	INFHPPTS	PFTOILET
ALZHMR	CSINNH	INFMDRO	PFTRNSFR
ANEMIA	CSLOCROM	INFPNEU	PSYCOTIC
ANXIETY	CSMEMLT	INFSEPT	PTSD
APHASIA	CSMEMST	INFTBRC	PVDPAD
ARTHRIT	CSNAMFAC	INFURNRY	QUADPLEG
ASTHCOPD	CTBLADDC	INFWND	RENLESRD

BPH	CTBOWELC	MALNUTRI	RESPFAIL
BRAININJ	CVATIAST	MANICDEP	SCHIZOPH
BSAYSOT	DEHYD	MENTAUTI	SCLEROS
BSELFAC	DELUS	MENTDOWN	SEIZEPIL
BSELFACR	DEMENT	MENTEPIL	SOCAVITY
BSELFILL	DEPRESS	MENTOTHN	SOCHEW
BSNOEVAL	DIABMRN	MENTOTHO	SOCOUGH
BSNOTOT	DVTPEPTE	MENTSUM	SODENT
BSOFTWAN	GERDULC	MOLCANE	SOGUMS
BSOTHACT	HALLUC	MOLPROS	SOHOLD
BSOTHENV	HARTFAIL	MOLWCHR	SOLOSS
BSOTHILL	HCHEAID	MOLWLKR	SOPAIN
BSVERBOT	HCHECOND	NUROBLAD	SOTEETH
BSWDANGR	HCUNCOND	OBURPATH	SOTISSUE
BSWOTACT	HCUNDOTH	ORTHHYPO	THYROID
CANCER	HEIGHT	OSTEOP	TOURETTE
CATGLAUC	HEMIPLPA	OTHFRACT	VISAPPL
CERPALSY	HIPFRACT	PARAPLEG	VISION
CIRROSIS	HUNTDIS	PARKNSON	WEIGHT
COLCROHN	HYPERKAL	PFBATHNG	
COMATOSE	HYPETENS	PFDRSSNG	
CORARTDS	HYPONMIA	PFEATING	
CSCURSEA	HYPRLIPI	PFLOCOMO	

What is the difference between the MDS3 and FACASMNT segments?

FACASMNT rows populated with MDS data can be linked to the corresponding MDS3 rows using the unique key BASEID, TRGT_DT, and A2300.

See the exhibit below for key differences between the segment sources, population, reference period, and unit of observation.

Exhibit 10.3.12.3c: Differences between FACASMNT and MDS3 Data

Data Type	Facility Assessment (FACASMNT)	Minimum Data Set (MDS3)
Source	Blended administrative (MDS) and survey-reported (facility staff may pull information from electronic health records or systems to answer the survey questions)	Administrative (MDS)
Population	Represents all Facility residents, not just those in nursing homes	Represents all residents of nursing homes certified to participate in Medicare or Medicaid only
Reference period	Throughout the year	Could be multiple assessments during the year, time periods may differ based on what happened to each individual
Unit of observation	One per beneficiary	One per beneficiary per assessment

What is the difference between FACASMNT and similar Community segments?

Many of the variables on the FACASMNT segment are similar to variables available on the Survey File segments containing data from the Community interview. The exhibit below summarizes the topics that are available on FACASMNT that have similar content on a Community segment. However, in order to combine Community and Facility data together for analysis, some variables may need to be recoded to account for differences in response categories between Community and Facility variables. See Chapter 7 for more information about combining Community and Facility data.

For information on using flu shot data in analyses, please see PREVCARE.

Exhibit 10.3.12.3d: LDS Segments with Similar Topics for Community and Facility Interviews

Topic	Segments with Community Data	Segments with Facility Data	Segments with Data for All Beneficiaries
Health Status	GENHLTH FALLS CHRNCOND MENTHLTH OASIS	FACASMNT MDS3	
Preventive Care	PREVCARE	FACASMNT	
Functional Status & Assistance with Long-Term Care Needs	ASSIST NAGIDIS OASIS MOBILITY	FACASMNT MDS3	
Demographics and Socio-Economic Status	INCASSET		DEMO
Health Insurance Coverage			HISUMRY HITLINE ADMNUTLS

10.3.13 Facility Characteristics (FACCHAR)

10.3.13.1 Core Content

The Facility Characteristics segment is constructed using data from the Facility Questionnaire, which provides information about survey-collected facility stays, and the administrative Provider of Service (POS) file, which provides facility characteristics pertaining to SNF stays.

For a beneficiary in the current year's population file, any facility stay within a round from the current file year, as well as from the following winter round, provided that it has an admission date that falls within the current file year, is included in the file. The inclusion of these winter round records is meant to capture any stays which began after the conclusion of the fall round for a given file year. Selected data from the POS file is also included for any SNF stay occurring during the file year for beneficiaries on the finder file.

10.3.13.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.13.3 Special Notes

Special Notes regarding the Integration of CASPER Data with FACCHAR

For beneficiaries for which the facility respondent reported a CCN, 12 variables in FACCHAR are skipped during data collection. The survey-reported data are later merged with CASPER administrative data during data processing using the CCN. The values in the CCN questionnaire lookup tool are derived from CASPER, ensuring that matching administrative data will be available during data processing.

In 2020, 100 percent of FACCHAR records where a CCN was reported were matched to CASPER. A flag variable, D_SOURCE, indicates whether the FACCHAR record has been populated for qualifying variables using CASPER.

For some variables, data from CASPER are not directly comparable to the survey-reported items. FMRBEDS, PCHBED, and HDLICBED cannot be substituted using CASPER during data processing and thus remain missing on FACCHAR. Additionally, individual bed count variables may not sum to the total bed count, D_TOTBED.

Services provided by the facility are derived from multiple CASPER variables.

- BATHHELP: If more than one resident needs help from staff for bathing or more than one resident completely depends on staff for bathing, then the facility is classified as providing help with bathing.
- DRESHHELP: If more than one resident needs help from staff for dressing or more than one resident completely depends on staff for dressing, then the facility is classified as providing help with dressing.
- EATHHELP: If more than one resident needs help from staff for eating or more than one resident completely depends on staff for eating, then the facility is classified as providing help with eating.
- NORMCARE: The facility is classified as providing nursing or medical care if more than one resident receives any of the following types of care: a catheter, radiation therapy, chemotherapy, dialysis, intravenous therapy, respiratory treatment, tracheostomy care, ostomy care, suctioning, injections, or tube feedings.
- SUPRMEDI: The facility is classified providing supervision over medications if more than one resident receives any of the following types of medications: psychoactive, antipsychotic, antianxiety, antidepressant, hypnotic, antibiotics, or pain management.

The FACCHAR variables that may be populated during data processing using CASPER data are: BATHHELP, CAIDBEDS, CANDCBED, CAREBEDS, D_TOTBED, and DRESHHELP.

10.3.14 Falls (FALLS)

10.3.14.1 Core Content

The Falls segment contains responses related to injuries and attitudes related to falls.

10.3.14.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.14.3 Special Notes

The "other specify" question FALOTHOS is back coded as necessary into the "type of injury from fall" response options, but the verbatim text is not released.

10.3.15 Food Insecurity (FOODINS)

10.3.15.1 Core Content

The Food Insecurity segment contains information regarding the beneficiary's access to sufficient food. These questions are part of the IAQ and are based upon the USDA ERS Six-Item Short Form of the Food Security Survey Module found at <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools>.

10.3.15.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.15.3 Special Notes

This questionnaire is administered the summer following the year of interest. The food insecurity section for the reference year 2020 was asked in the summer of 2021. Special non-response adjustment weights are included in the file to account for survey non-response from the fall to the summer data collection period. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes. Please see the Weights section below for information on using weights with data from Topical questionnaire sections.

10.3.16 General Health (GENHLTH)

10.3.16.1 Core Content

The General Health segment contains data regarding a beneficiary's general health status and functioning such as height and weight.

10.3.16.2 Variable Definitions

BMI_CAT: BMI (Body Mass Index) was calculated using height and weight as-

$$(WEIGHT*703)/((HEIGHTFT*12+HEIGHTIN)*(HEIGHTFT*12+HEIGHTIN))$$

Then categorized as:

- 0 < BMI < 18.5 = 1
- 18.5 <= BMI < 25 = 2
- 25 <= BMI < 30 = 3
- 30 <= BMI < 40 = 4
- BMI >= 40 = 5

10.3.16.3 Special Notes

For height and weight information at HEIGHTFT, HEIGHTIN, and WEIGHT, the respondent is asked to recall or estimate, not to measure or weigh him or herself. In the height measurement, fractions of an inch have been rounded: those one-half inch or more were rounded up to the next whole inch, those less than one-half inch were rounded down. In the weight measurement, fractions of a pound have been rounded: those one-half pound or more were rounded up to the next whole pound, those less than one-half pound were rounded down.

10.3.17 Health Insurance Summary (HISUMRY)

10.3.17.1 Core Content

The Health Insurance Summary segment contains information on administrative plans and their characteristics. Specifically, it includes flags for monthly enrollment and dual eligibility status and information on premiums, co-pays, deductibles, and capitated payments. The file also includes EST_TPRM, which is the sum of premiums for Parts A, B, C, and D and premiums for other plans (private coverage purchased directly from an insurance company, etc.).

There are important caveats to using premium information contained in HISUMRY. For more details, see the notes below on the H_PDLS01-12: Low-Income Subsidy Indicator values.

10.3.17.2 Variable Definitions

H_DUAL01-12: The variables H_DUAL01-H_DUAL12 describe dual eligibility for each month based on state reporting requirements outlined in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA). These variables provide more detail regarding the type of Medicaid benefits the beneficiary is entitled to receive and are considered the most accurate source of information on enrollee status. Specific types of dual eligibility identified by these variables are as follows, where the applicable month is MM:

- Qualified Medicare Beneficiaries without other Medicaid (QMB-only) – These individuals are entitled to Medicare Part A, have an income of 100 percent of the Federal poverty level (FPL) or less, have resources that do not exceed twice the limit for SSI eligibility, and are not otherwise eligible for full Medicaid. Medicaid pays their Medicare Part A premiums, if any, Medicare Part B premiums, and to the extent consistent with the Medicaid State plan, Medicare deductibles, and coinsurance for Medicare services provided by Medicare providers. [Partial benefit; H_DUALMM=01]
- Qualified Medicare Beneficiaries plus full Medicaid (QMB-Plus) – These individuals are entitled to Medicare Part A, have an income of 100 percent FPL or less and resources that do not exceed twice the limit for SSI eligibility, and are eligible for full Medicaid benefits. Medicaid pays their Medicare Part A premiums, if any, Medicare Part B premiums, and, to the extent consistent with the Medicaid State plan, Medicare deductibles and coinsurance, and provides full Medicaid benefits. [Full benefit; H_DUALMM=02]
- Specified Low-Income Medicare Beneficiaries without other Medicaid (SLMB-only) – These individuals are entitled to Medicare Part A, have an income of greater than 100 percent FPL but less than 120 percent FPL, have resources that do not exceed twice the limit for SSI eligibility, and are not otherwise eligible for Medicaid. Medicaid pays their Medicare Part B premiums only. [Partial benefit; H_DUALMM=03]
- Specified Low-Income Medicare Beneficiaries plus full Medicaid (SLMB-Plus) – These individuals are entitled to Medicare Part A, have an income of greater than 100 percent FPL but less than 120 percent FPL, have resources that do not exceed twice the limit for SSI eligibility, and are eligible for full Medicaid benefits. Medicaid pays their Medicare Part B premiums and provides full Medicaid benefits. [Full benefit; H_DUALMM=04]
- Qualified Disabled and Working Individuals (QDWI) – These individuals lost their Medicare Part A benefits due to their return to work. They are eligible to purchase Medicare Part A benefits, have an income of 200 percent FPL or less, have resources that do not exceed twice the limit for SSI eligibility, and are not otherwise eligible for Medicaid. Medicaid pays the Medicare Part A premiums only. [Partial benefit; H_DUALMM=05]
- Qualifying Individuals (QI) – There is an annual cap on the amount of money available, which may limit the number of individuals in the group. These individuals are entitled to Medicare Part A, have an income of at least 120 percent FPL but less than 135 percent FPL, have resources that do not exceed twice the limit for SSI eligibility, and are not otherwise eligible for Medicaid. Medicaid pays their Medicare Part B premiums only. [Partial benefit; H_DUALMM=06]

- Other full benefit dual eligible/Medicaid Only Dual Eligibles (Non-QMB, -SLMB, -QDWI, -QI) – These individuals are entitled to Medicare Part A and/or Part B and are eligible for full Medicaid benefits. They are not eligible for Medicaid as a QMB, SLMB, QDWI, or QI. Medicaid provides full Medicaid benefits and pays for Medicaid services provided by Medicaid providers, but Medicaid will only pay for services also covered by Medicare if the Medicaid payment rate is higher than the amount paid by Medicare, and, within this limit, will only pay to the extent necessary to pay the beneficiary's Medicare cost sharing liability. Payment by Medicaid of Medicare Part B premiums is a state option. [Full benefit; H_DUALMM=08]

H_DOT: Medicare entitlement end date from the Medicare Administrative data. If the date is beyond the calendar year, it is shown as missing.

H_EGWP01-H_EGWP12: Prescription Drug Plan (PDP) Employer Group Waiver Plan (EGWP) Indicator: If the plan is an EGWP, then the value is 1, else the value is 2. An EGWP is not open to general enrollment but is offered through an employer group.

H_ESREND: Ending date of ESRD period. If the date is beyond the calendar year, then it is shown as missing.

H_GHPSW: Some MCBS beneficiaries belong to Medicare managed care plans. CMS derives variables that describe this Medicare managed care membership (H_GHPSW and H_MAFF01-MAFF12). The variable (H_GHPSW) should be used only when there is an indication that the enrollee was a member of a Medicare managed care plan at some time during 2020, and this information is needed for analysis. The monthly variables (H_MAFF01-H_MAFF12) can be used for analyzing membership at specific points in time. The variables will indicate either "FF" (Original Medicare/Fee for Service), "MA" (Medicare Advantage/Other Medicare Capitated Payment Plans), or "NO" (No Entitlement). The H_GHPSW variable is derived from the Health Maintenance Organization (HMO) Coverage Months variable in the administrative data. This variable indicates participation in a group health organization, also known as HMO, managed care participation, or Medicare Advantage/Medicare Part C.

H_MAFF01-12: The MA flag variables are the most reliable indicators for monthly MA information. This information is sourced from the CMS administrative data. The H_ENT variables were used to determine if the individual did not have Medicare entitlement. This information factored into the "No Entitlement" category in the MA flag monthly variables. The monthly entitlement variables can be found on the HITLINE segment. H_DOE and H_DOT on the HISUMRY file provide Medicare entitlement start and end dates for the beneficiary. Because the administrative source of this information has changed, H_ENT variables cannot be used to crosswalk to the MA flag variables. However, H_ENT can be used to determine Part A and Part B eligibility among FFS beneficiaries in files prior to 2015.

H_MAPMT: Total MA A/B Payment – annual amount from Medicare Advantage Prescription Drug (MARx) data.

H_MCSW: State buy-in is tracked by CMS and used as a general proxy for Medicaid participation. CMS derived H_MCSW using its administrative enrollment data.

H_OPMDCD: This variable provides a summary of annual Medicare-Medicaid dual eligibility based on the state Medicare Modernization Act (MMA) files.

Beneficiaries are assigned a dually eligible status if they are Medicaid eligible for at least one month. Specific eligibility (full, partial, or QMB) is determined by the beneficiary's status in the last month of eligibility for the year (for definitions, see option C below in Special Notes for HISUMRY for Full-benefit vs. Partial-benefit vs. QMB-only). QMB beneficiaries include Qualified Medicare Beneficiaries without other Medicaid (QMB-only). The "partial benefit" beneficiaries include: Specified Low-Income Medicare Beneficiaries without other Medicaid (SLMB-only), Qualified Disabled and Working Individuals (QDWI), and Qualifying Individuals (QI). The "full benefit" beneficiaries include: Qualified Medicare Beneficiaries plus full Medicaid (QMB-Plus), Specified Low-

Income Medicare Beneficiaries (SLMB-Plus), and all other full benefit beneficiaries (Non-QMB, -SLMB, -QWDI, -QI).

Medicaid Questions: To help the respondent answer the questions about Medicaid, the interviewers use the name of the Medicaid program in the state where the beneficiary lives. A health insurance plan is one that covers any part of hospital bills, doctor bills, or surgeon bills, but does not include any of the following:

- Public plans, including Medicare and Medicaid, mentioned elsewhere in the questionnaire.
- Disability insurance which pays only on the basis of the number of days missed from work.
- Veterans' benefits.
- "Income maintenance" insurance which pays a fixed amount of money to persons both in and out of the hospital or "Extra Cash" policies. These plans pay a specified amount of cash for each day or week that a person is hospitalized, and the cash payment is not related in any way to the person's hospital or medical bills.
- Workers' Compensation.
- Any insurance plans that are specifically for contact lenses or glasses only. Any insurance plans or maintenance plans for hearing aids only.
- Army Health Plan and plans with similar names (e.g., CHAMPUS, CHAMPVA, Air Force Health Plan).
- Dread disease plans that are limited to certain illnesses or diseases such as cancer, stroke, or heart attacks.
- Policies that cover students only during the hours they are in school, such as accident plans offered in elementary or secondary schools.
- Care received through research programs such as the National Institutes of Health.

H_PDLS01-12: Low-Income Subsidy Indicator values: When conducting data analysis with the variables H_PDLS01-12 from the 2013 and earlier files and the 2015 and later files, you will need to recode the 2015 and later data to the previous values. See the *2018 and 2019 Data User's Guides: Survey File* for recoding guidance.

H_DDED01-12: The monthly values reflect the annual Part D deductible amount charged by the plan that the beneficiary was enrolled in that month.

H_PRPY01-04: Primary Payer codes are summarized from the FFS claims. These codes indicate that some other payer besides Medicare covered at least some portion of the charges. Additional detail can be found under NCH_PRMRY_PYR_CD, <https://www2.cwdata.org/documents/10280/19022436/codebook-ffs-claims.pdf>

H_PTAPRM: Total Part A Premium paid in calendar year (CY) – This is for beneficiaries who purchased Part A by paying a monthly premium. Note that this variable will have a relatively small number of beneficiaries.

H_PTBPBM: Total Part B Premium paid in CY – This includes all Part B beneficiaries (a large number; a premium is always paid by either the beneficiary or a third party). NOTE: The MCBS shows no Part B premium paid if the beneficiary belongs to a managed care plan in which the plan pays the entirety of the premium. In this scenario, the plan paid the entirety of the beneficiary's premium, so the process shows no premium paid.

H_PTDAMT: PTD Total Payment – annual amount from the MARx data.

EST_TPRM: This variable is the sum of all premiums reported prorated by the number of months of coverage for each plan. The variable name emphasizes that the total is an estimate since complete information on the amount that a beneficiary paid may not be available for all plans. For example, for Part A, B, C, and D plans, the premium reflects the total paid, either by the beneficiary or a third party on their behalf.

Payment Model Participation Flags

There are three variables that indicate the payment model for each plan.

H_PRGID: CMS Prog ID – Payment Model

H_PRGID2: 2nd CMS Prog ID – Payment Model

H_PRGID3: 3rd CMS Prog ID – Payment Model

H_PRGID2 and H_PRGID3 are only populated if the beneficiary has multiple program IDs. Variables are designated as single, 2nd, or 3rd based on the start/end dates of the entries in the source data (earliest start date, next=2, etc.). Start dates are prior to 12/31/YR and end dates may be after 1/1/YR where "YR" = data year.

10.3.17.3 Special Notes

When describing dual enrollees, users typically define and present analyses separately for two subgroups: full-benefit and partial-benefit. However, some users may wish to pull the QMB-only beneficiaries out of the partial-benefit group to create a third classification. Therefore, the H_DUAL01-H_DUAL12 variables may be used to group Medicare-Medicaid enrollees into one, two or three categories, as follows:

A. No delineation:

All Medicare-Medicaid (dual) enrollees: H_DUAL01-H_DUAL12 in (01, 02, 03, 04, 05, 06, 08)

B. Full-benefit vs. Partial-benefit:

Partial-benefit: H_DUAL01-H_DUAL12 in (01, 03, 05, 06)

Full-benefit: H_DUAL01-H_DUAL12 in (02, 04, 08)

C. Full-benefit vs. Partial-benefit vs. QMB-only:

QMB-only: H_DUAL01-H_DUAL12 =01

Partial-benefit (non-QMB): H_DUAL01-H_DUAL12 in (03, 05, 06)

Full-benefit: H_DUAL01-H_DUAL12 in (02, 04, 08)

For detailed information on how the HITLINE and HISUMRY segments differ from the previously-released RICs (i.e., RICs 4 and A), see the *2018 and 2019 Data User's Guides: Survey File*.

10.3.18 Health Insurance Timeline (HITLINE)

10.3.18.1 Core Content

The Health Insurance Timeline segment contains one record for each plan a beneficiary has and includes information on type of insurance coverage, monthly eligibility/enrollment, coverage start and end dates, and the source information for the coverage. For all plans that a beneficiary has, both administrative and survey reported are included on the file. In addition, HITLINE contains detailed information on plans for which no administrative data are available. These plans are reported in the survey only and include different types of private plans, Tricare, coverage through the Department of Veteran's Affairs, and public plans that do not fall under either Medicare or Medicaid. For these survey-only plans, the file includes flags indicating types of services covered, and, for private plans, information on plan policyholder and premiums paid. All plans reported in a Community setting also have a unique plan identifier, PLANNUM, which can be used to link plans across multiple years.

The questionnaire does not ask whether a given plan offers 'comprehensive' coverage. Data users can construct their own definition of comprehensive coverage and consult individual coverage flags to determine if a plan meets their criteria for being a comprehensive plan.

10.3.18.2 Variable Definitions

SCRCCOV01-12: Indicates the source of coverage information for the plan for a given month in the calendar year: CMS Administrative Data, Survey Data, or Both Administrative and Survey Data.

COV01-12: Indicates if the beneficiary was covered by this plan for a given month in the calendar year.

S_DVH: Indicates whether plan covers dental, vision, or hearing services.

S_OTHPLN: Indicates whether plan is a specialty plan that only covers specific services (such as long-term care, coverage for cancer/dread disease, etc.).

S_HMOPPO: Indicates whether beneficiary's private plan is an HMO/PPO. Obtained from the HIQ variable PPRVHMO.

S_PHREL: The relationship of the policyholder to the beneficiary. Responses from the HIQ variable PERS_MIPNUM are combined with beneficiary's household roster information to determine the policyholder's relationship to the beneficiary.

S_OBTNP: Indicates how the main insured person obtained their private policy (e.g., self-purchased, current or former employer, etc.). Obtained from the HIQ variable PPRVGET.

S_COVNM: The number of people covered by each private plan. Obtained from the HIQ variable PRVNMCOV.

D_COVRX: Indicates if beneficiary's plan covers prescription drugs.

S_MSCOV: Indicates if beneficiary's plan covers visits to a doctor or other professional or lab work. Obtained from the HIQ variable PRVMSCOV.

S_IP: Indicates whether beneficiary's private plan covers inpatient stays. Obtained from the HIQ variable PRVIPCOV.

S_COVNH: Indicates whether beneficiary's private plan has long-term care coverage. Obtained from the HIQ variable PRVNHCOV.

S_DNTAL: Indicates whether beneficiary's private plan covers dental services. Obtained from the HIQ variable MHMODENT.

S_VISN: Indicates whether beneficiary's private plan covers optical or vision coverage. First added in Fall 2020 (Round 88), this information is obtained from the HIQ variable PRVOPEYE.

S_PAYSP: Indicates whether the main insured person (MIP) pays any part of the insurance premium. Obtained from the HIQ variable MIPPINS.

S_PREM: Reported cost of private health insurance plan premiums. A premium amount was recorded even if the respondent did not directly pay the premium (for example, if a son or daughter paid the premium). This variable was derived from the HIQ variable MIPPAMT. For family plans, the reported amount reflects the total premium paid for the plan.

D_ANNPRM: The annual reported cost of private health insurance plan premiums calculated for beneficiaries who answered questions associated with both S_PAYUNIT and S_PREM. Premium amounts have been prorated based on how long the beneficiary held the policy. For family plans, the annualized amount reflects the total premium paid for the plan.

S_PAYUNT: Specifies how frequently (once per year, once per month, etc.) the amount reported in S_PAYSP was paid. Obtained from the HIQ variable MIPPUNIT.

S_PAYOTH: Indicates whether anyone else, such as an employer or a union, helped to pay any portion of the premium. Obtained from the HIQ variable MHMOCOST.

S_PAYWHO: Indicates who paid a portion of the total cost of the premium. Obtained from the HIQ variable MHMOWHO.

S_TRIRX: Specifies where Tricare members obtain prescription drugs. Obtained from the HIQ variable TRIMEDS.

D_FCLTYF: Indicates whether a plan was reported in a Facility setting. Facility interviews are not conducted with the beneficiary but rather with facility staff who may have little information on coverage type and plan details. D_FCLTYF indicates which plans were reported in a Facility setting and thus have limited detailed information about them available. Beneficiaries who transition between community and facility settings may have a plan reported in each setting. However, due to the nature of the Facility interview, it is not possible to ascertain whether these would reference the same plan.

10.3.18.3 Special Notes

The HITLINE segment has one record for every plan reported for a beneficiary. Individuals covered for the entire year by a plan will have a BEGDATE of 010120XX and an ENDDATE of 123120XX to indicate a full year's coverage. BEGDATE is set for all plans using the month when a plan was first reported. For example, if someone had coverage January – March and June – November, BEGDATE will reflect that coverage started in January. Most plans have an ENDDATE as well. The only plans with missing ENDDATE are plans where coverage ended and then started again. For plans where survey and administrative data are combined, BEGDATE and ENDDATE are set using all available coverage information. Data users can reference SRCCOV01-SRCCOV12 flags to identify whether coverage information for a given month came from administrative records, a survey report, or both.

Eligibility for Tricare can be lost. Due to this fact, data users should pay attention to the appropriate coverage indicators (i.e., PLANTYPE, COV01-COV12).

10.3.19 Household Characteristics (HHCHAR)

10.3.19.1 Core Content

The Household Characteristics segment includes beneficiaries who resided in a community setting as of their last complete interview and contains information about the beneficiary's household composition and residence. For each calendar year, this segment reflects the latest available data on the size of the household and the age and relationship of household members. Information about the beneficiary's physical residence is collected at the Baseline interview and updated as necessary.

10.3.19.2 Variable Definitions

D_HHTOT: Reflects the total number of people living in the household.

D_HHREL and D_HHUNRL: Indicate the number of people in the household related to the beneficiary and unrelated to the beneficiary, respectively.

D_COMPHH: Reflects the composition of the household members.

D_SEXSPP: Indicates the gender when a spouse or partner is identified in D_COMPHH as a member of the household.

D_HHLT50 and D_HHGE50: Indicate the number of people in the household under the age of 50 and those 50 years of age or above, respectively. These numbers may include the beneficiary.

D_HHLT18: Indicates the number of people under the age of 18 who are related to the beneficiary.

10.3.19.3 Special Notes

CMS defines a household as a group of individuals, either related or not, who live together and share one kitchen. This may be one person living alone, a head of household and relatives only, or a head of household living with relatives, boarders, and any other unrelated individual living under the same roof, sharing the same kitchen.

Household membership includes all persons who currently live at the household or who normally live there but are away temporarily. For example, unmarried students away at school or family members away receiving medical care are included. Visitors in the household who will be returning to a different home at the end of the visit are not included. Generally, if there is any question about the composition of the household, the respondent's response is accepted.

Because the date of birth or exact relationship of a household member is sometimes unknown (perhaps because a proxy provided the information), the sum of the variables "number related"/"number not related" (D_HHREL/D_HHUNRL) or "number under 50"/"number 50 or older" (D_HHLT50/D_HHGE50) may not equal the total number of people in the household (D_HHTOT).

Data on certain characteristics of the residence (e.g., number of levels) is collected during the Baseline interview and carried forward unless a beneficiary moved or had a Facility stay prior to returning to the Community. Information about other characteristics of the residence (e.g., availability of personal care services) is updated annually during the fall interview.

Only beneficiaries living in the community who are responding to a Continuing interview are in universe for the question SPMOVED, "Has the SP moved since the last Fall Round data collection date?". For this reason, data users are encouraged to use longitudinal weights if they wish to utilize this variable in analysis. The reference period for this variable is going to be longer for beneficiaries whose last fall interview was in a facility and beneficiaries who missed the last fall interview.

The "other specify" questions DWELLOS and HCOMUNOS are back coded as necessary into the "description of beneficiary's housing" response options, but the verbatim text is not released.

10.3.20 Income and Assets (INCASSET)

10.3.20.1 Core Content

This segment contains data on a beneficiary's reported income and assets.

10.3.20.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.20.3 Special Notes

In the IAQ, the reference period for income is generally the previous calendar year. That is, many income questions are asked in the summer of 2021 about income earned in 2020.

Example: "Now I want to ask about your [and spouse's] total income for last year, that is, for the calendar year ending in December [CURRENT YEAR - 1], before any federal or state taxes were taken out."

Other items ask about income earned in the current calendar year.

Example: "You told me earlier that you have job-related pension plans. In all, how much was received from these pension plans in the last month, before any federal or state taxes were taken out (for the month of [CURRENT MONTH - 1])?"

For assets, there are three different timeframes referenced in the IAQ:

1. How much of an asset was received or withdrawn in the last month.
 - a. Example: "Is your mortgage paid off or are monthly mortgage payments still being made?"
2. How much is currently in certain accounts.
 - a. Example: "This next question is a bit different. You mentioned that you have retirement accounts. In total, about how much is currently in all of these retirement accounts?"
3. How much altogether was received or withdrawn in the last year.
 - a. Example: "Now thinking about all of last year, that is calendar year [CURRENT YEAR - 1], how much altogether did you receive or withdraw from all of these retirement accounts?"

The difference in reference periods between income and assets items is due to the nature of the information collected (i.e., respondent recall is facilitated when asking about a bank account balance from the last month versus four months ago), and many assets are relatively stable in value (e.g., housing).

Special non-response adjustment weights are included in the file to account for survey non-response from the fall to the summer data collection period. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes. Please see the Weights section below for information on using weights with data from Topical questionnaire sections.

The MCBS imputes income when income data are missing. Data are first imputed whether or not an income source (such as Social Security) exists. If the income source exists, then the amount earned is imputed next. Imputation is performed using the hot deck imputation method, and a flag is created for each imputed variable indicating whether or not the corresponding value is imputed.

The "other specify" questions LUMPSUMO and OPYSCHED are back coded as necessary into the "form of lump payment" and "other payment schedule" response options, respectively, but the verbatim text is not released.

10.3.21 Interview Characteristics (INTERV)

10.3.21.1 Core Content

The Interview Characteristics segment summarizes interview characteristics, such as the type of interview and whether a proxy is used.

10.3.21.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.21.3 Special Notes

Some beneficiaries have more than one interview in a round. To avoid duplication of data, the information in this file represents the last interview conducted with the respondent in each given round. INTERVU indicates which type of interview was conducted.

MINTOTAL (length of interview in minutes) excludes any time that elapses for setting up the interview.

Community interviews are sometimes interrupted to accommodate the respondent's schedule or for other reasons. Facility interviews are conducted with several instruments and often involve many respondents. TOTALINTV indicates the total number of interviews conducted with the beneficiary.

10.3.22 Medicare Advantage Plan Questions (MAPLANQX)

10.3.22.1 Core Content

The MA Plan Questions segment augments information from the ACQ and SCQ sections of the questionnaire for those beneficiaries enrolled in Medicare Part C. Beneficiaries who are enrolled in an MA plan at the time of the interview are asked general questions about their health plans, which include access to and satisfaction with medical services. This segment also contains the beneficiary's assessment of the quality of the medical care that they are receiving, types of additional coverage offered, and any beneficiary-paid premiums associated with the health plan.

10.3.22.2 Variable Definitions

D_ANHMO: The annual additional cost of MA premiums. The premiums are annualized regardless of the length of time the respondent actively held the policy. This variable is derived from the HIQ items MHMOAMT and MHMOUNIT.

D_MADV: This variable is derived from administrative data and set to 1 if the beneficiary was covered by an MA plan for at least one month out of the calendar year. All beneficiaries included in the MA Plan Questions segment have D_MADV set to 1.

MADVYRS: The number of years the beneficiary has been enrolled in MA. This variable is derived from the HIQ item HMONUMYR.

RECMADV: Indicates whether the respondent recommends the MA plan to family/friends. This variable is derived from the HIQ item RECMHMO.

MA coverage variables (MADV DENT, MADV NH, MADV EYE, and MADV RX): Indicate whether the beneficiary's MA plan covers dental care, vision care, nursing home care, and prescription medicines. These variables are derived from the HIQ items MHMODENT, MHMONH, MHMOEYE, and MHMORX.

MA payment variables (MADV PAY, MADV COST, and MADV WHO): Indicate whether there is an additional cost associated with the MA plan and if so, who covers the cost. These variables are derived from the HIQ items MHMOPAY, MHMOCOST, and MHMOWHO.

10.3.22.3 Special Notes

If the respondent reports a payer or a unit of payment that is not included in the predefined code list, the interviewer documents their response verbatim in an "other specify" variable that is not released. The "other specify" response is back coded as necessary into the predefined code list.

10.3.23 Medicare Plan Beneficiary Knowledge (MCREPLNQ)

10.3.23.1 Core Content

The Medicare Plan Beneficiary Knowledge segment contains information from the KNQ section related to the beneficiary's knowledge about the Medicare open enrollment period and Medicare-covered expenses. The KNQ is administered the winter following the year of interest.

The data collected in this segment support evaluation of the impact of existing education initiatives by CMS. The KNQ section helps refine future CMS education initiatives by asking about information that beneficiaries may need, preferred sources for this information, and beneficiaries' access to insurance information. This data also presents the knowledge beneficiaries have gained from CMS publications.

10.3.23.2 Variable Definitions

KVSTSITE: This variable collects whether the respondent has ever visited the official website for Medicare information. If the respondent has previously answered "yes" to this question, the "yes" response is pulled forward to the current data year.

KCPHINFO: This variable collects whether the respondent has ever called 1-800-MEDICARE. If the respondent has previously answered "yes" to this question, the "yes" response is pulled forward to the current data year.

10.3.23.3 Special Notes

In 2020, the variable KVSTSITE replaced KVSITWEB. KVSTSITE is asked of all respondents regardless of their responses to current use of the internet either with or without a friend. In addition, a series of questions (variables KCOMINTE, KCOMPRES, KCOMAPPO, and KCOMCOMM) that ask about the use of the Internet for accessing health care-related information was added to the KNQ section.

Special non-response adjustment weights are included in the file to account for survey non-response from the fall to the winter data collection period. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes. Please see the Weights section below for information on using weights with data from Topical questionnaire sections.

10.3.24 Mental Health (MENTHLTH)

10.3.24.1 Core Content

The Mental Health segment contains survey responses regarding the beneficiary's mental health such as feelings of anxiety or depression.

10.3.24.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.24.3 Special Notes

Generalized Anxiety Disorder scale (GAD-2): Two items labeled with "GAD" comprise the GAD-2 scale, which is a screening tool for generalized anxiety.

Patient Health Questionnaire (PHQ-9): Items labeled with "PHQ" are taken from the PHQ-9, which is a screening tool for depression. The MCBS does not collect the ninth item on the PHQ-9, which asks about suicidal ideation, but does include the PHQ-9 follow-up question that asks about the overall difficulty caused by depression (MENTHLTH item PHQPRDIF).

10.3.25 Mobility (MOBILITY)

10.3.25.1 Core Content

The Mobility segment contains information on the beneficiary's use of available transportation options and whether the beneficiary's health affects their daily travel.

10.3.25.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.25.3 Special Notes

Starting in Fall 2020, the administration schedule of the MBQ was updated to only be fielded in fall rounds. To accommodate the change to annual administration, the reference period for MBQ items was also updated to ask about mobility in the past year; as such, the 2020 data year only includes MBQ data from Fall 2020.

10.3.26 Minimum Data Set (MDS3)

10.3.26.1 Core Content

The Minimum Data Set is health assessment information collected while the beneficiary was in an approved Medicare Facility. For more information regarding the MDS and the changes in version 3.0, please consult <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/index>.

10.3.26.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.26.3 Special Notes

MDS3 administrative data records are included for any beneficiary having such a record in the year of interest. There are beneficiaries living in the community (DEMO segment INT_TYPE = C) that appear in the MDS segment. CMS includes MDS data for all MCBS beneficiaries regardless of the INT_TYPE, which is determined by the type of survey instrument completed.

For more information on the difference between the MDS and FACASMNT data and how the two segments can be linked, please see the FACASMNT section above.

10.3.27 Nagi Disability (NAGIDIS)

10.3.27.1 Core Content

The Nagi Disability segment contains information on the beneficiary's difficulties with performing ADLs and IADLs, including which ADLs and IADLs the beneficiary has difficulty performing, how long the beneficiary has experienced these difficulties, whether the beneficiary has received any help or used supportive equipment to perform ADLs or IADLs, and the total number of persons who have helped the beneficiary, if applicable.

10.3.27.2 Variable Definitions

ADL and IADL measures: The MCBS asks respondents whether they have any difficulty performing 12 activities. Their answers about difficulty performing the IADLs (PRBTELE, PRBLHWK, PRBHWWK, PRBMEAL, PRBSHOP, and PRBBILS) and ADLs (HPPDBATH, HPPDDRES, HPPDEAT, HPPDCHAR, HPPDWALK, and HPPDTOIL) reflect whether or not the beneficiary usually has difficulty and anticipates continued trouble with these tasks, even if a short-term injury made them temporarily difficult.

"Difficulty" in these questions has a qualified meaning. Only difficulties associated with a health or physical problem are considered. If a beneficiary only performed an activity with help from another person (including just needing to have the other person present while performing the activity), then that respondent is deemed to have difficulty with the activity.

Help from another person includes a range of helping behaviors. The concept encompasses personal assistance in physically doing the activity, instruction, supervision, and "standby" help. These questions are asked in the present tense; the difficulty may have been temporary or may be chronic. Vague or ambiguous answers, such as "Sometimes I have difficulty," are coded "yes."

D_ADLHNM: D_ADLHNM stores the number of persons helping the beneficiary with ADLs and/or IADLs. D_ADLHNM is derived by counting the number of helper rows for a BASEID.

D_MODTIM: The length of time the beneficiary spent doing moderate activities (e.g., golf, gardening) is collected in number of minutes/day, hours/day, hours/week, or hours/month. The length of time is stored in a continuous variable while the corresponding unit is stored in a categorical variable. These variables are used to derive D_MODTIM, the number of hours per week the beneficiary spent doing moderate activities.

D_MUSTIM: The length of time the beneficiary spent increasing muscle strength (e.g., lifting weights, yoga) is collected in number of minutes/day, hours/day, hours/week, or hours/month. The length of time is stored in a continuous variable while the corresponding unit is stored in a categorical variable. These variables are used to derive D_MUSTIM, the number of hours per week the beneficiary spent increasing muscle strength.

D_VIGTIM: The length of time the beneficiary spent doing vigorous activities (e.g., running, aerobics) is collected in number of minutes/day, hours/day, hours/week, or hours/month. The length of time is stored in a

continuous variable while the corresponding unit is stored in a categorical variable. These variables are used to derive D_VIGTIM, the number of hours per week the beneficiary spent doing vigorous activities.

HPPDBATH: Those who have difficulty bathing or showering without help met at least one of the following criteria:

- someone else washes at least one part of the body
- someone else helps the person get in or out of the tub or shower or helps get water for a sponge bath
- someone else gives verbal instruction, supervision, or stand-by help
- the person uses special equipment such as handrails or a seat in the shower stall
- the person never bathes at all (a highly unlikely possibility)
- the person receives no help, uses no special equipment or aids, but acknowledges having difficulty

HPPDDRES: Dressing is the overall complex behavior of getting clothes from closets and drawers and then putting the clothes on. Tying shoelaces and putting on socks or hose are not considered part of dressing. Special dressing equipment includes items such as button hooks, zipper pulls, long-handled shoe horns, tools for reaching, and any clothing made especially for accommodating a person's limitations in dressing, such as Velcro fasteners or snaps.

HPPDEAT: A person eats without help if he or she can get food from the plate into the mouth. A person who does not ingest food by mouth (that is, is fed by tube or intravenously) is not considered to eat at all. Special eating equipment includes such items as a special spoon that guides food into the mouth, a forked knife, a plate guard, or a hand splint.

PRBBILS: Managing money refers to the overall complex process of paying bills, handling simple cash transactions, and generally keeping track of money coming in and money going out. It does not include managing investments, preparing tax forms, or handling other financial activities for which members of the general population often seek professional advice.

PRBLHWK and PRBHHWK: The distinction between light housework (PRBLHWK) and heavy housework (PRBHHWK) is made clear by examples. Washing dishes, straightening up and light cleaning represent light housework; scrubbing floors and washing windows represent heavy housework. The interviewer is not permitted to interpret the answer in light of the degree of cleanliness of the dwelling.

PRBMEAL: "Preparing meals" includes the overall complex behavior of cutting up, mixing, and cooking food. The amount of food prepared is not relevant, so long as it would be sufficient to sustain a person over time. Reheating food prepared by someone else does not qualify as "preparing meals."

PRBSHOP: Shopping for personal items means going to the store, selecting the items, and getting them home. Having someone accompany the beneficiary would qualify as help from another person.

PRBTELE: Using the telephone includes the overall complex behavior of obtaining a phone number, dialing the number, talking and listening, and answering the telephone.

10.3.27.3 Special Notes

Six global disability questions are released on the Nagi Disability segment to comply with HHS guidance. These variables are: DISDECSN, DISWALK, DISBATH, and DISERRND. DISHEAR and DISSEE are included on the VISHEAR segment.

A new question DISTEETH which asks if the beneficiary lost all their upper and lower natural permanent teeth was added to the HFQ section in 2020.

For beneficiaries with identified helpers, information about the persons responsible for assisting with the beneficiary's performance of ADLs and IADLs is found in the ASSIST segment.

10.3.28 Nicotine and Alcohol (NICOALCO)

10.3.28.1 Core Content

The Nicotine and Alcohol segment contains information on the prevalence and frequency of alcohol and nicotine use (including cigarettes, e-cigarettes, cigars, pipe tobacco, and smokeless tobacco).

10.3.28.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.28.3 Special Notes

Affirmative responses indicating former or current use of inhaled tobacco products (cigar, cigarette, smokeless tobacco, pipe tobacco, and e-cigarettes) are pulled forward to the current data year variables (i.e., CIGARONE, CIGAR50, CIG100, SMKLSONE, PIPEONE, and ECIGONE).

10.3.29 Outcome and Assessment Information (OASIS)

10.3.29.1 Core Content

The Outcome and Assessment Information segment contains assessment information conducted while the beneficiary was receiving home health services.

For more information regarding OASIS, please consult <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits>.

10.3.29.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.29.3 Special Notes

All home health records are included for MCBS respondents for the year of interest.

10.3.30 Patient Activation (PNTACT)

10.3.30.1 Core Content

The Patient Activation segment contains data that can be used to assess the degree to which beneficiaries actively participate in their own health care and the decisions concerning their health care, measuring if beneficiaries receive information about their health and Medicare and if they understand the information in a way that makes it useful.

10.3.30.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.30.3 Special Notes

Special non-response adjustment weights are included in the file to account for survey non-response as these items are only asked of non-proxy respondents.

10.3.31 Preventive Care (PREVCARE)

10.3.31.1 Core Content

The Preventive Care segment provides data on the beneficiary's use of preventive services, including getting a mammogram, Pap smear, prostate screening, diabetes screening, colon cancer screening, blood pressure screening, flu and pneumonia shots, shingles vaccine, and HIV testing.

10.3.31.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.31.3 Special Notes

Select items are collected only in the summer (whether the beneficiary received a pneumonia shot or the shingles vaccine) while the seasonal flu vaccine items are asked in the winter and summer rounds. Several items are collected only in the fall, including questions about getting a mammogram, Pap smear, prostate test, blood pressure screening, hysterectomy, and HIV testing.

How do I find out what proportion of Medicare beneficiaries received a flu shot in a given calendar year? Flu shot data are available for both Community and Facility components, but data collection and processing methods are different, and the variables are located on different segments in the Survey File LDS. To estimate prevalence of flu shots in a given flu season, data users need the prior data year (e.g., 2019) Survey File for beneficiaries living in the community and the current data year (e.g., 2020) Survey File for beneficiaries living in a facility. Note that the response categories of the FLUSHOT variables are similar across the two components (Yes/No), but the coding values associated with the Yes/No categories in the LDS files are different. For community, Yes = 1 and No = 2, but for facility Yes = 1 and No = 0. In addition, the reference periods differ between the Community and Facility components. Therefore, users need both the prior and current data year Survey File LDS' to estimate the flu shot prevalence for all Medicare beneficiaries for a given flu season.

Exhibit 10.3.31.1: Segment, Questionnaire, and Variable Information for Analyses of 2019-2020 Flu Shot Data

Component	Variable Location	Variable Label	Data Collection Timing
Community	FLUSHOT ON PREVCARE	FLU SHOT FOR LAST WINTER	PVQ in Winter and Summer 2020 and included in 2019 Survey File
Facility	FLUSHOT on FACASMNT	SP HAD A FLU SHOT IN THE PAST YEAR?	HS in Fall 2020 and included in 2020 Survey File

In 2020, changes were made to the existing colonoscopy questions in HFQ. Questions COLSCOPY and CCOLSCOP were deleted and replaced with COLORECT and CORECTYP to ask whether the beneficiary had ever had a colorectal cancer screening and if yes, whether the beneficiary had a colonoscopy, sigmoidoscopy, or both tests. These questions are asked of respondents at the Baseline interview. Two additional colonoscopy questions, CCOLOREC and CCORECTP, were added to ask Continuing interview respondents if they had a colorectal screening in the past year. Prior to 2020, question HEARSCOP asked if the respondent has ever heard of a sigmoidoscopy or colonoscopy exam, even if the respondent reported having one of those exams in the current round. Starting in 2020, respondents are asked this question only if they do not report a sigmoidoscopy or colonoscopy exam in the current round. The variable HEARSCOP was renamed HEARSIG due to this update.

A new series related to oral cancer was added to the PVQ in 2020. This series asks whether the beneficiary has ever received an oral cancer exam (BASKORAL) and if yes, when their most recent exam was (OCCEXAM). CASKORAL was added to ask respondents participating in their Continuing interview if they had an oral cancer exam in the past year; this variable will first be released in 2021. Additionally, a question was added to monitor utilization of the Medicare benefit for new enrollees and annual wellness visits (WELLNESS).

There were several updates to the flu vaccine series in the PVQ in 2020. Questions FLUSITE and VACPAID are now included in the Survey File again after being removed in 2017. These questions ask where the respondent went for their most recent flu shot and if they paid some or all of the cost to cover it. The code frame at FLUCODE was updated to an entirely new list to align with the CDC's immunization survey. The question NOVACINE, asking if the reason the beneficiary didn't get a seasonal flu vaccination since July 1st was because of the vaccine being in short supply or unavailable, was removed. Question VACSUPPLY, which asks if the beneficiary had any trouble getting a seasonal flu shot because the vaccine was in short supply or unavailable, was renamed to VACAVAIL because it is now asked of everyone, except those who report that they did not receive the vaccine because it was unavailable at FLUCODE.

The "other specify" questions MAMNOTHS, PAPNOTHS, PRONOTHS, FLUOTHOS, and FLUSITOS are back coded as necessary into the reason(s) for not getting a mammogram, Pap smear, prostate test, or flu shot or where they got their flu shot, respectively, but the verbatim text is not released.

10.3.32 Residence Timeline (RESTMLN)

10.3.32.1 Core Content

The Residence Timeline segment provides a timeline of each MCBS setting type in which a beneficiary resides over the portion of the year in which they are enrolled in Medicare, as well as any periods associated with FFS inpatient, SNF, or hospice events.

10.3.32.2 Variable Definitions

D_BEG1: Represents the beneficiary's first date of Medicare eligibility within the file year.

D_CODE1: Either identifies a residential setting or for a small number of cases, contains the code "N". The latter only occurs for some Facility respondents who are new to the MCBS survey but were enrolled in Medicare prior to the start of the year. The first interview that these beneficiaries receive only covers back to the date of admission into the facility in which they currently reside. If they were admitted into their current facility after the 1st of the year, it will result in the setting code on their first situation (D_CODE1) having a value of "N".

10.3.32.3 Special Notes

Residential situations are overwritten by all claim events which overlap them, with two exceptions. Hospice events do not overwrite residential situations as this type of utilization is less indicative of a change in setting as it is a change in the level of care being received. These events should instead be considered as occurring concurrently with the beneficiary's identified residential situation. Also, a beneficiary's initial residential status is not overwritten, even when overlapped completely by a claim of any type, in order to provide context as to their original living situation at the start of their timeline.

The total number of setting changes is equal to the sum of MCBS residential status changes (D_NUMRES) and the number of the events corresponding to the above mentioned claim types (D_NUMEVT). Each transition is identified with a code representing the type of setting along with begin and end dates.

The number of variables in the series D_CODEn, D_BEGn, and D_ENDn will correspond to the maximum number of settings in a given year (calculated as D_NUMSIT + D_NUMEVT). At a minimum, each beneficiary has information pertaining to their setting at the beginning of their eligibility period within the year. Residential status situations do not have end dates populated to illustrate that these extend through any claim events which follow until a change in residential status occurs.

10.3.33 RX Medications (RXMED)

10.3.33.1 Core Content

The RX Medications segment augments information from the ACQ and SCQ sections of the questionnaire with information specific to prescription drug coverage collected in the RXQ section. The RXQ covers topics related to knowledge about and experience with Medicare Part D enrollment, options considered when choosing prescription drug coverage, access to prescription drugs, and satisfaction with current prescription drug coverage.

10.3.33.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.33.3 Special Notes

This questionnaire is administered the summer following the year of interest. The RXQ questions for the reference year 2020 were asked in the summer of 2021. Special non-response adjustment weights are included in the file to account for survey non-response from the fall to the summer data collection period. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes. Please see the Weights section below for information on using weights with data from Topical questionnaire sections.

The "other specify" questions PDNOOS and PDNTOS are back coded as necessary into the reason(s) for not using the current coverage response options and the reason(s) for not being enrolled response options, respectively, but the verbatim text is not released.

10.3.34 Satisfaction with Care (SATWCARE)

10.3.34.1 Core Content

The Satisfaction with Care segment contains data from the SCQ section on satisfaction with different aspects of medical care, such as cost and the information provided by the beneficiary's medical care provider. The questions about satisfaction with care represent the respondent's general opinion of all medical care received in the year preceding the interview.

10.3.34.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.34.3 Special Notes

N/A

10.3.35 Usual Source of Care (USCARE)

10.3.35.1 Core Content

The Usual Source of Care segment contains data from the USQ on where and how the beneficiary typically seeks medical care.

10.3.35.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.35.3 Special Notes

In the Limited English Proficiency (LEP) series, a new response was added in Winter 2021 at the questionnaire variables USPRNONE (who helps the beneficiary communicate with their usual provider) and MEDPVNO (who helps the beneficiary communicate with other providers) for "no trouble communicating in English".

In Winter 2021, the universe of TESTRSLT was expanded to include all respondents who saw a specialist, regardless of whether they saw a primary care provider, and TESTRSLT was renamed as KNOWRSLT.

Several "other specify" variables are back coded as necessary into response options, but the verbatim text is not released. Back coded "other specify" variables include PVSPEC (provider specialty), LANGPREF (the language in which the beneficiary prefers to receive medical care), GETUSOS (how beneficiary normally gets to their provider), ACCOTHOS (why someone accompanies the beneficiary to their appointments), PLACEKND (the kind of place the beneficiary goes for medical care), and USWHYNAV (why the beneficiary's usual doctor is not available).

This questionnaire is administered the winter following the year of interest. Special non-response adjustment weights are included in the file to account for survey non-response from the fall to the winter data collection period. Note that counts of cases with positive Topical weights may vary within the data year and may change across years due to response rates, sample sizes, and fielding methods. The Topical weights account for these changes. Please see the Weights section below for information on using weights with data from Topical questionnaire sections.

10.3.36 Vision and Hearing (VISHEAR)

10.3.36.1 Core Content

The Vision and Hearing segment contains information on the beneficiary's eye health and hearing status.

10.3.36.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.36.3 Special Notes

The "other specify" question EDOCTYOS is back coded as necessary into a variable (EDOCTYPE) capturing the type of doctor the beneficiary saw at their last eye exam, but the verbatim text is not released.

Six global disability questions are released to comply with HHS guidance. DISHEAR and DISSEE are included on the VISHEAR segment. Variables DISDECSN, DISWALK, DISBATH, and DISERRND are included on the NAGIDIS segment.

10.3.37 COVID-19 Winter 2021 Community Supplement (COVIDWIN)

10.3.37.1 Core Content

The COVID-19 Winter 2021 Community Supplement segment contains information on Medicare beneficiaries' experiences with the COVID-19 pandemic collected in Winter 2021. This special data collection round ran from February 28 to April 25, 2021. Like Fall 2020, the COVID-19 Community Winter 2021 Supplement covered topics such as availability of telemedicine, access to computers and internet, forgone health care due to the pandemic, COVID-19 symptoms and diagnosis, access to and utilization of COVID-19 testing, COVID-19 preventive measures, sources of COVID-19 information, and impact to financial and mental health. Notably, in Winter 2021, a series of questions about COVID-19 vaccine uptake were added to the questionnaire.

10.3.37.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.37.3 Special Notes

The presumptive vaccine uptake series (11 analytic variables collecting details about likelihood of vaccine uptake) was first fielded in the COVID-19 Fall 2020 Community Supplement, before the first COVID-19 vaccine was authorized for emergency use in the U.S. The COVID-19 vaccine uptake series (four variables collecting details about actual vaccine uptake as of their Winter 2021 interview date, such as number of doses and vaccination dates) was fielded for the first time in Winter 2021. The presumptive vaccine uptake series was also fielded again in Winter 2021, with some modifications, for beneficiaries who had reported *not* receiving a vaccine as of their Winter 2021 interview. The presumptive vaccine uptake series code frame was also expanded to include several other potential reasons for not receiving a vaccine that are now applicable given a vaccine is available. All presumptive vaccine uptake analytic variables were renamed in Winter 2021 due to changes in questionnaire routing and the question universe.

If the respondent reported a reason for not getting a vaccine that is not included in the predefined code list, the interviewer documented their response verbatim in an "other specify" variable that is not released. The "other specify" response is back coded as necessary into the predefined code list. A new response option for

"Appointment scheduled" was created in data processing for responses indicating that the beneficiary had a COVID-19 vaccine appointment scheduled in the future.

In addition to the new series on vaccine uptake, the forgone health care series was expanded to include forgone mental health care, resulting in 11 new variables suffixed with "MENT" to denote mental health care.

10.3.38 COVID-19 Facility Beneficiary-Level Supplement (FBENCVFL)

10.3.38.1 Core Content

The COVID-19 Facility Beneficiary-Level Supplement segment contains information collected in the CV section in Fall 2020, including COVID-19 diagnosis, testing, and care received by different types of health care providers.

10.3.38.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.38.3 Special Notes

Many of the variables on the FBENCVFL segment are similar to variables available on the Survey File segments containing data from the COVID-19 Community Supplements. However, since the MCBS Facility interview is conducted with a Facility respondent rather than the beneficiary, questions such as presumptive vaccine uptake found on the COVID-19 Community Supplements are not included in the FBENCVFL segment.

10.3.39 COVID-19 Facility Facility-Level Supplement (FFACCVFL)

10.3.39.1 Core Content

The COVID-19 Facility Facility-Level Supplement segment contains COVID-19 related information collected in the FQ section in Fall 2020, including telehealth services provided, suspension of in-person services, prevention activities, prospective vaccination policies for staff and residents, personnel changes, mental health services provided, and social/recreational services provided.

10.3.39.2 Variable Definitions

Please see the Codebook for information regarding variables in this segment.

10.3.39.3 Special Notes

N/A

10.3.40 Weights

For information about the ever enrolled and continuously enrolled cross-sectional weights and two-year, three-year, and four-year longitudinal weights available in the Survey File LDS and obtaining weighted estimates using these files, please see section 9.4.

For discussion on how the weights files were created, please refer to the *MCBS Methodology Report*, which can be found on the CMS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Codebooks>.

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APPENDICES

12. APPENDICES

Appendix A: MCBS Common Definitions

Activities of daily living (ADLs): Activities of daily living are activities related to personal care. They include bathing or showering, dressing, getting in and out of bed or a chair, walking, using the toilet, and eating.

Baseline interview: The initial questionnaire administered in the fall round of the year the beneficiary is selected into the sample (interview #1).

Beneficiary: Beneficiary refers to a person receiving Medicare services who may or may not be participating in the MCBS.⁵² Beneficiary may also refer to an individual selected from the MCBS sample about whom the MCBS collects information.

Claim-only event: A claim-only event is a medical service or event known only through the presence of a Medicare FFS claim from administrative data. This means that the event represented in the data could not be reconciled with a corresponding survey-reported event.

Community component: 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.

Company clinic: A doctor's office or clinic, which is operated principally for the employees (and sometimes their dependents) of a particular company or business.

Continuing interview: The questionnaire administered as beneficiaries progress through the study (interviews #2-11).

Continuously enrolled (aka always enrolled): A Medicare beneficiary who was enrolled in Medicare from the first day of the calendar year until the fall interview and did not die prior to the fall round. This population excludes beneficiaries who dis-enrolled or died prior to their fall interview, residents of foreign countries, and residents of U.S. possessions and territories.

Core sections: These sections of the MCBS Questionnaire are of critical purpose and policy relevancy to the MCBS. They may be fielded every round or on a seasonal basis.

Coronavirus (COVID-19 or SARS-CoV-2): An illness caused by a new coronavirus that can spread person to person. Symptoms range from mild (or no symptoms) to severe illness.⁵³ The virus has been named "severe acute respiratory syndrome coronavirus 2" (SARS-CoV-2) and the disease it causes has been named "coronavirus disease 2019" ("COVID-19").

COVID-19 Fall 2020 Community Supplement: A nationally representative, cross-sectional telephone survey of Medicare beneficiaries living in the community on topics pertaining to the COVID-19 pandemic that was administered from October 2020 through November 2020.

⁵² <https://www.cms.gov/Medicare/Medicare-General-Information/MedicareGenInfo/index.html>

⁵³ "What you should know about COVID-19 to protect yourself and others," Centers for Disease Control and Prevention, last modified June 1, 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/2019-ncov-factsheet.pdf>.

COVID-19 Fall 2020 Facility Supplement: A nationally representative, cross-sectional telephone survey of Medicare beneficiaries living in a facility on topics pertaining to the COVID-19 pandemic that was administered from October 2020 through December 2020.

COVID-19 Summer 2020 Community Supplement: A nationally representative, cross-sectional telephone survey of Medicare beneficiaries living in the community on topics pertaining to the COVID-19 pandemic that was administered from June through July 2020.

COVID-19 Winter 2021 Community Supplement: A nationally representative, cross-sectional telephone survey of Medicare beneficiaries living in the community on topics pertaining to the COVID-19 pandemic that was administered from March to April 2021.

Crossover: A respondent who enters a long-term care facility setting (e.g., nursing homes) or who alternates between a community and a facility setting.

Current-year enrollee: Beneficiaries who were eligible and enrolled in Medicare (Parts A or B) anytime from January 1 to December 31 of the year the sample was selected.

Doctor: This includes both medical doctors (M.D.) and doctors of osteopathy (D.O.). It does not include chiropractors, nurses, technicians, optometrists, podiatrists, physician's assistants, physical therapists, psychologists, mental health counselors, or social workers. Generic specialties shown in parentheses following one of the specialties were coded as the specialty. For example, if the respondent mentioned a "heart" doctor, cardiology was coded. Generic answers not listed were not converted to specialties.

Doctor's office or group practice: This refers to an office maintained by a doctor or a group of doctors practicing together; generally the patient makes an appointment to see a particular physician.

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.

Exit interview: Conducted in the winter round, this final interview completes the respondent's participation in the MCBS (interview #11) and captures any unreported utilization and cost information from the prior year.

Facility component: Survey administered for beneficiaries living in facilities, such as long-term care nursing homes or other institutions, during the reference period covered by the MCBS interview. Interviewers conduct the Facility component with staff members located at the facility (i.e., Facility respondents); beneficiaries are not interviewed if they reside at a facility.

Fee-for-Service (FFS) payment: FFS is a method of paying for medical services in which each service delivered by a provider bears a charge. This charge is paid by the patient receiving the service or by an insurer on behalf of the patient.

Field interviewer: The principal contact for collecting and securing respondent data.

Field manager: A supervisor who motivates and manages a group of field interviewers to meet the goals of high-quality data collection on time and within budget limits.

Free-standing surgical center: A facility performing minor surgical procedures on an outpatient basis, and not physically connected to a hospital. Note that a unit performing outpatient procedures connected with a hospital (either physically or by name) is referred to as a hospital outpatient department/clinic.

Gap days: Gap days are periods during the calendar year in which a sample person was enrolled in Medicare but was not covered by a survey interview.

Home: This includes situations where the doctor comes to the beneficiary, rather than the beneficiary going to the doctor. Here, "home" refers to anywhere the beneficiary was usually staying at the time of the medical provider's visit. It may be the beneficiary's home, the home of a friend, a hotel room, etc.

Hospital emergency room: This means the emergency room of a hospital. "Urgent care" centers are not included. (NOTE: All hospital emergency room visits were included, even if the beneficiary went there for a "non-emergency" condition such as a cold, flu, or intestinal disorder.) A physician, nurse, paramedic, physician extender, or other medical provider may administer the health care.

Hospital outpatient department: A unit of a hospital, or a facility connected with a hospital, providing health and medical services, health education, health maintenance, preventive services, diagnosis, treatment, surgery, and rehabilitation to individuals who receive services from the hospital but do not require hospitalization or institutionalization. Outpatient clinics can include obesity clinics; eye, ear, nose, and throat clinics; alcohol and drug abuse clinics; physical therapy clinics; kidney dialysis clinics; and radiation therapy clinics. The outpatient department may or may not be physically attached to a hospital, but it must be associated with a hospital.

Incoming Panel sample (formerly known as Supplemental Panel): A statistically sampled group of beneficiaries that enter the MCBS in the fall of a data collection year. One panel is retired at the conclusion of each winter round, and a new panel is selected to replace it each fall round. Panels are identified by the data collection year (e.g., 2015 Panel) in which they were selected.

Instrumental activities of daily living (IADLs): Instrumental activities of daily living are activities related to independent living. They include preparing meals, managing money, shopping for groceries or personal items, performing light or heavy housework, and using a telephone. If a beneficiary had any difficulty performing an activity by himself/herself, or did not perform the activity at all, because of health problems, the person was deemed to have a limitation in that activity. The limitation may have been temporary or chronic at the time of the survey. Facility interviewers did not ask about the beneficiary's ability to prepare meals or perform light or heavy housework, since they are not applicable to the beneficiary's situation; however, interviewers did question proxies about the beneficiary's ability to manage money, shop for groceries or personal items, or use a telephone.

Internal Sample Control File: A data file that contains every beneficiary sampled back through the beginning of MCBS. The file contains sampling information, year of selection, primary sampling unit, secondary sampling unit, contact information, and other sampling demographic information as well as final disposition codes to indicate completion status per round, component fielded per round, dates of death, and lost entitlement information.

Long-term care facility: A facility that provides rehabilitative, restorative, and/or ongoing skilled nursing care to patients or residents in need of assistance with activities of daily living.

Medical clinic: This refers to any group of doctors or other health professionals who have organized their practice in a clinic setting and work cooperatively; generally, patients either come in without an appointment or make an appointment and see whatever health professional is available.

Medicare: Medicare is the federal health insurance program for people who are 65 and over, certain younger people with disabilities, and people with End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant, sometimes called ESRD). The different parts of Medicare help cover specific services:

- Hospital Insurance (Part A): covers inpatient hospital stays, care in a skilled nursing facility, hospice care, and some home health care.
- Medical Insurance (Part B): covers certain doctors' services, outpatient care, medical supplies, and preventive services.
- Medicare Advantage (Part C): an alternative to coverage under traditional Medicare (Parts A and B), a health plan option similar to a Health Maintenance Organization (HMO) or Preferred Provider Organization (PPO) administered by private companies.
- Prescription Drug Coverage (Part D): additional, optional coverage for prescription drugs administered by private companies.

For more information, please visit the Medicare.gov website at <https://www.medicare.gov/sign-up-change-plans/decide-how-to-get-medicare/whats-medicare/what-is-medicare.html>.

Medicare Advantage (MA): Medicare Advantage Plans, sometimes called "Part C" or "MA Plans," are offered by private companies approved by Medicare. An MA provides, or arranges for the provision of, a comprehensive package of health care services to enrolled persons for a fixed capitation payment. The term "Medicare Advantage" includes all types of MAs that contract with Medicare, encompassing risk MAs, cost MAs, and health care prepayment plans (HCPPs).

Medicare beneficiary: See Beneficiary.

Medicare Managed Care Organization (MCO)/Health Maintenance Organization (HMO): This is an organization that provides a full range of health care coverage in exchange for a fixed fee/co-pay. Some managed care plans require that plan members receive all medical services from one central building or location. Formerly referenced only as HMOs, these organizations are now referred to with terms such as Medicare MCOs/HMOs/MA/Part C.

Minimum Data Set (MDS): The MDS is part of the federally mandated process for clinical assessment of all residents in Medicare and Medicaid certified nursing homes. For more information, please visit <https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/Minimum-Data-Set-3-0-Public-Reports/index>.

Neighborhood/family health center: A non-hospital facility which provides diagnostic and treatment services, frequently maintained by government agencies or private organizations.

Other clinic: A non-hospital facility clinic that is not already listed in the other clinic categories. Some examples include a "free" clinic, a family planning clinic, or military base clinic.

Outcome and Assessment Information Set (OASIS): The instrument/data collection tool used by CMS to collect and report performance data by Medicare-certified home health agencies. For more information, please visit <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits>.

Panel: See Incoming Panel sample.

Personal health care expenditures: Personal health care expenditures consist of health care goods and services purchased directly by individuals. They exclude public program administration costs, the net cost of private health insurance, research by nonprofit groups and government entities, and the value of new construction put in place for hospitals and nursing homes.

Prescription drugs: The basic unit measuring use of prescription drugs is a single purchase of a single drug in a single container. Prescription drug data are included for beneficiaries living in the community and in a facility; Prescription drugs administered during an inpatient hospital stay are not included.

Primary Sampling Unit (PSU): PSU refers to sampling units that are selected in the first (primary) stage of a multi-stage sample ultimately aimed at selecting individual elements (Medicare beneficiaries in the case of MCBS). PSUs are made up of major geographic areas consisting of metropolitan areas or groups of rural counties.

Proxy: Beneficiaries who were too ill, or who could not complete the Community 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 residing in the community in the previous round had since entered into a long-term care facility. Proxy interviews are only used for the Community interview, as the Facility interview is conducted with a staff member located at the facility (see definition of "Facility component").

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 category includes other single races not of Hispanic origin (including American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander), Two or More Races, or Unknown Races.

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

Residence status: Medicare beneficiaries who only completed Community interviews during the calendar year are categorized as living only in the community. Medicare beneficiaries for whom only Facility interviews were completed during the calendar year are categorized as living only in facilities. Beneficiaries who completed at least one Community interview and for whom at least one Facility interview was conducted during the year are classified as living in both community and facility.

Respondent: Respondent refers to a person who answers questions for the MCBS; this person can be the beneficiary, a proxy, or a staff member located at a facility where the beneficiary resides (i.e., the Facility respondent).

Round: The MCBS data collection period. There are three distinct rounds each year; winter (January through April); summer (May through August); and fall (September through December).

Rural health clinic: A clinic that provides outpatient services, routine diagnostic services for individuals residing in an area that is not urbanized and is designated as a health staff shortage area or an area with a shortage of personal health services. The clinic can also provide outpatient services that include physician services, services and supplies provided under the direction and guidance of a physician by nurse practitioner, physician assistants, and treatment of emergency cases. These services are usually provided at no charge except for the amount of any deductible or coinsurance amount.

Sample person: An individual beneficiary selected from MCBS' Incoming Panel sample to participate in the MCBS survey.

Secondary Sampling Unit (SSU): SSUs are made up of census tracts or groups of tracts within the selected PSUs.

Skilled nursing facility (SNF): A facility (which meets specific regulatory certification requirements) which primarily provides inpatient skilled nursing care and related services to patients who require medical, nursing, or rehabilitative services but does not provide the level of care or treatment available in a hospital. (Source: <https://www.cms.gov/apps/glossary/default.asp?Letter=S&Language=English>)

Survey-reported event: A survey-reported event is a medical service or event reported by a respondent during an interview. The event may have been matched to a Medicare FFS claim from administrative data, or it may be a survey-only event, in which case it was not matched to a Medicare claim and is only known through the survey.

Telehealth: The use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, and public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications. Telehealth is different from telemedicine because it refers to a broader scope of remote health care services than telemedicine. While telemedicine refers specifically to remote clinical services, telehealth can refer to remote non-clinical services, such as provider training, administrative meetings, and continuing medical education, in addition to clinical services.⁵⁴

Telemedicine: The use of remote clinical services, such as videoconferencing for consultations with health professionals.⁵⁵

Topical sections: Sections of the MCBS Questionnaire that collect information on special interest topics. They may be fielded every round or on a seasonal basis. Specific topics may include housing characteristics, drug coverage, and knowledge about Medicare.

Ultimate Sampling Unit (USU): USUs are Medicare beneficiaries selected from within the selected SSUs.

Walk-in urgent center: A facility not affiliated with a nearby hospital, offering services for acute conditions (e.g., flu, virus, sprain). Typically, people are seen without appointments (i.e., walk-ins).

⁵⁴ "What is telehealth? How is telehealth different from telemedicine?" HealthIT.gov, last reviewed October 17, 2019, <https://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine>

⁵⁵ "Telehealth Interventions to Improve Chronic Disease," Centers for Disease Control and Prevention, last modified May 11, 2020, <https://www.cdc.gov/dhdsp/pubs/telehealth.htm>.

Appendix B: MCBS Rounds by Data Year and Season

Year	Winter	Summer	Fall
1991	n/a	n/a	1
1992	2	3	4
1993	5	6	7
1994	8	9	10
1995	11	12	13
1996	14	15	16
1997	17	18	19
1998	20	21	22
1999	23	24	25
2000	26	27	28
2001	29	30	31
2002	32	33	34
2003	35	36	37
2004	38	39	40
2005	41	42	43
2006	44	45	46
2007	47	48	49
2008	50	51	52
2009	53	54	55
2010	56	57	58
2011	59	60	61
2012	62	63	64
2013	65	66	67
2014	68	69	70
2015	71/72	71/72	73
2016	74	75	76
2017	77	78	79
2018	80	81	82
2019	83	84	85
2020	86	87	88
2021	89	90	91
2022	92	93	94

Appendix C: Sample Code⁵⁶

Merging Segments within the 2020 Survey File LDS

Data users can merge segments within and/or across the Survey File and Cost Supplement File. What follows below is a hypothetical research question with sample SAS code for the construction of an analytic file. In this example, the MCBS is interested in studying the self-reported general health for Medicare beneficiaries living in the community with diabetes.

First, there are two measures required to identify our study population: residence status and self-reported diabetes. Variables corresponding to these measures can be found in the following Survey File segments, respectively: Demographics (DEMO) and Chronic Conditions (CHRNCOND). General health information is found in the General Health (GENHLTH). To ensure estimates are representative of the continuously enrolled Medicare population, the MCBS will also require weights from the CENWGTS file.

Below, is an example of how multiple Survey File segments can be merged with the CENWGTS segment in SAS using BASEID as the key variable. When merging segments, all observations in the CENWGTS segment should be preserved.

```
Data merged;
  merge surveyYY.CENWGTS (in = a)
        surveyYY.DEMO (keep = BASEID H_AGE INT_TYPE)
        surveyYY.CHRNCOND (keep = BASEID D_OCDTYP)
        surveyYY.GENHLTH (keep = BASEID GENHELTH);
  by BASEID;
  if a;
run;
```

In order to segment the file to beneficiaries living in the community only, subset the file on the variable INT_TYPE.

```
Data merged_surveyfile;
  set merged;
  where INT_TYPE = 'C'; /* denotes individuals living only in the community */
run;
```

Now there is an analytic file that includes all the Survey File variables and weights required to analyze general health for Medicare beneficiaries living in the community with diabetes. Data users can export the created dataset for use with R and Stata.

Repeated Cross-Sectional or Pooled Analysis (Section 9.7.2)

Sample code

The sample code below demonstrates the steps involved in constructing a repeated cross-sectional or pooled analytic dataset and performing analysis. The example below estimates percent of Medicare beneficiaries that are dual eligible (i.e., enrolled in both Medicare and Medicaid programs) during the prior data year and the current data year.

⁵⁶ The "YY" in "costYY" and "surveyY" refers to the data year of the Cost Supplement File and Survey File, respectively. Longitudinal code is represented with the convention of Y1, Y2, etc.

Although the MCBS includes variables to obtain weighted estimates and estimated standard errors using Taylor-series linearization approach, the balanced repeated replication (BRR) method, also known as Fay's method, provides more analytic flexibility when performing analysis using pooled cross-sectional data.⁵⁷

CMS generally recommends the BRR method of variance estimation to MCBS users because it requires neither the specification of strata and cluster definitions nor the specification of domain or subgroup definitions in subpopulation analyses, which are required for Taylor-series estimation and are common inadvertent omissions. However, the Taylor series method of variance estimation is also appropriate for experienced users who prefer this method or in instances where the BRR method is not possible in the available software. For these reasons, the MCBS data files include the variables SUDSTRAT and SUDUNIT, which are needed for Taylor-series estimation. The SAS functions %surveyglm and %surveygenmod appropriately allow for strata and cluster definitions. When using these functions (and in any other instances where Taylor series estimation is used), specify SUDSTRAT as the strata definitions and SUDUNIT as the cluster definitions.

The examples presented in this section involve multiple years of MCBS data and use replicate weights – a form of the BRR technique.

Example

```
/* Merge prior data year administrative records (HISUMRY) file with cross-sectional weights (CENWGTS) file */
data mcbsY1;
merge surveyY1.CENWGTS (in = a drop = VERSION)
      surveyY1.HISUMRY (keep = BASEID H_OPMDCD);
  by BASEID;
  if a;
run;
```

```
/* Create Analytic Dataset for Repeated Cross-Sectional or Pooled Analysis */
/* Merge current data year administrative records (HISUMRY) file with cross-sectional weights (CENWGTS) file */
data mcbsY2;
  merge surveyY2.CENWGTS (in = a drop = VERSION)
        surveyY2.HISUMRY (keep = BASEID H_OPMDCD);
  by BASEID;
  if a;
run;
```

```
/* Concatenate prior and current cross-sectional files */
data mcbs_analytic_file;
  set mcbsY1 mcbsY2;
run;
```

SAS

```
* Estimate Percent of Dual Eligible Medicare Beneficiaries (Pooled estimate representing the moving average
of nationally representative year-specific estimates) using balanced repeated replication (Fay's method));
proc surveyfreq data = mcbs_analytic_file varmethod = brr (fay=.30);
  table H_OPMDCD;
  weight CEYRSWGT;
```

⁵⁷ Given the rotating panel design of the MCBS, performing pooled cross-sectional analysis using Taylor-Series Linearization method of variance estimation will require additional adjustments to account for non-independence of beneficiaries across years in a multi-year dataset.

```
repweights CEYRS001-CEYRS100;
run;
```

* Estimate Percent of Dual Eligible Medicare Beneficiaries by Year (nationally representative, year-specific estimates) using balanced repeated replication (Fay's method);

```
proc surveyfreq data = mcbs_analytic_file varmethod = brr (fay=.30);
  table SURVEYYR * H_OPMDCD / row;
  weight CEYRSWGT;
  repweights CEYRS001-CEYRS100;
run;
```

Stata

* Declare survey dataset

```
svyset _n [pweight = CEYRSWGT], brrweight(CEYRS001-CEYRS100) fay(.3) vce(brr)
```

* Estimate Percent of Dual Eligible Medicare Beneficiaries (Pooled estimate representing the

* moving average of nationally representative year-specific estimates)

```
svy brr, fay(.3): tab H_OPMDCD
```

* Estimate Percent of Dual Eligible Medicare Beneficiaries (nationally representative, year-specific estimates)

```
svy brr, fay(.3): tab H_OPMDCD SURVEYYR, column
```

R

Note: Data users will need to install the 'survey' package to use the svrepdesign function below.

Specify survey design object

```
mcbs <- svrepdesign(
  weights = ~CEYRSWGT,
  repweights = "CEYRS[001-100]+",
  type = "Fay",
  rho = 0.3,
  data = mcbs_analytic_file,
  combined.weights = TRUE
)
```

Estimate Percent of Dual Eligible Medicare Beneficiaries by Year (Pooled estimate representing the moving average of nationally representative year-specific estimates)

```
prop.table(svytable(~H_OPMDCD, design=mcbs))
```

Estimate Percent of Dual Eligible Medicare Beneficiaries by Year (nationally representative, year-specific estimates)

```
prop.table(svytable(~H_OPMDCD + SURVEYYR, design=mcbs), 2)
```

Conducting Subgroup Analyses with Appropriate Variance Estimation

Using the BRR method of variance estimation

Variance estimation can be impacted by selecting individuals prior to analysis. If the BRR variance estimation method is used, subgroup analyses can be conducted by limiting the dataset to the desired sub-sample. There are multiple ways to conduct subgroup analyses using BRR.

For indicator variables in three-way tables, you can create flags to help you identify the population of interest. For instance, if you are interested in the prevalence of diabetes in men versus women, but only in the over-65 population in Medicare Advantage, you could use the following SAS code:

```
proc surveyfreq data=mcbsdata VARMETHOD = brr (fay=.30);
  table GENDER * DIABETES * OVER65MA / col notot;
  weight CEYRSWGT;
  repweights CEYRS001-CEYRS100;
run;
```

This sample code assumes an analytic data set, including replicate weights, in which the data user has created binary analytic variables for GENDER and DIABETES, as well as a flag variable, OVER65MA, to identify the population of interest for this analysis. In this case, the flag is equal to 1 if the beneficiary is over 65 and in Medicare Advantage, and equal to 0 otherwise.

Since variance estimation using the BRR approach permits limiting the dataset to the desired sub-sample of interest, the following SAS code can also be used to achieve the same result through subgroup analysis:

```
data mcbsdata_subset;
  set mcbsdata;
  if OVER65MA = 1 then output;
run;

proc surveyfreq data=mcbsdata_subset VARMETHOD = brr (fay=.30);
  table GENDER * DIABETES / col notot;
  weight CEYRSWGT;
  repweight CEYRS001-CEYRS100;
run;
```

Using the Taylor Series linearization method of variance estimation

If other variance estimation methods, such as Taylor Series linearization are used, the correct way to analyze MCBS data is to employ domain statements (in SAS: `proc surveymeans`, `surveylogistic`, and `surveyreg`) or indicator variables in three-way tables (in SAS: `proc surveyfreq`). The Taylor Series linearization method of variance estimation is not recommended for subgroup analysis with MCBS data because accidentally excluding any observation in the sample while conducting the subgroup analysis using this variance estimation method will result in biased standard error estimates.

For indicator variables in three-way tables, data users can create flags to identify the population of interest. The variables SUDSTRAT (sampling strata) and SUDUNIT (primary sampling unit) are included for variance estimation using the Taylor Series linearization method. This method does not require replicate weights. For instance, if a data user is interested in the prevalence of diabetes in men versus women, but only in the over-65 population in Medicare Advantage, they could use the following SAS code:

```
proc surveyfreq data=mcbsdata;
  table GENDER * DIABETES * OVER65MA / col notot;
  strata SUDSTRAT;
  cluster SUDUNIT;
  weight CEYRSWGT;
run;
```

Appendix D: Initial Interview Variables

Exhibit D.1: Initial Interview Variables

Segment	Topic	LDS Variable Name
DEMO	Date of Birth	D_DOB
DEMO	Sex	ROSTSEX
DEMO	Hispanic Origin	HISPORIG HISPORMA HISPORPR HISPORCU HISPOROT
DEMO	Race	D_RACE2 RACEAA RACEAS RACENH RACEWH RACEAI
DEMO	Asian Race Subcategories	RACEASAI RACEASCH RACEASFI RACEASJA RACEASKO RACEASVI RACEASOT
DEMO	Pacific Islander Race Subcategories	RACEPIHA RACEPIGU RACEPIISA RACEPIOT
DEMO	Military Service	SPAFEVER SPAFVIET SPAFKORE SPAFWWII SPAFGULF SPAFIRAF SPAFPEAC SPNGEVER SPNGALL SPNGDSBL SPVARATE
DEMO	Number of Children	SPCHNLNM
DEMO	Limited English Proficiency	ENGWELL ENGREAD OTHLANG WHATLANG
DEMO	Education	SPDEGRCV
DEMO	Income	INCOME

CHRNCOND	Reason for Medicare Eligibility	EMHBP EMMYOCAR EMCHD EMCFAIL EMHRTCND EMSTROKE EMCSKIN EMCANCER EMARTERY EMARTHRH EMARTOST EMARTHOT EMMENTAL EMALZMER EMDEMENT EMDEPRSS EMPSYCHO EMOSTEOP EMBRKHIP EMPARKIN EMEMPHYS EMPPARAL EMAMPUTE EMDIABTS EMOTHOS
CHRNCOND	Number of Medications Taken for Blood Pressure	HYPEMANY
FACCHAR	Place of Residence before Facility Admission	BEFORADM
FACCHAR	Household Makeup before Facility Admission	D_LIVWTH

Appendix E: Table of Links to MCBS Documentation

MCBS Resources	Links
CMS MCBS website	https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS
MCBS LDS file information	https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/Data-Disclosures-Data-Agreements/DUA_-_NewLDS
MCBS PUF	https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/MCBS-Public-Use-File/index
CMS Chronic Conditions Warehouse (CCW)	https://www.ccwdata.org/web/guest/home/
Data User's Guides, Methodology Reports, Codebooks, and LDS Variable Crosswalks	https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Codebooks
Chartbook	https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Data-Tables
Early Look, Data Briefs, Infographics, and Tutorials	https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Data-Briefs
Bibliography	https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Bibliography
Questionnaires and Questionnaire User Documentation	https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Questionnaires
MCBS Interactives – COVID-19 Data Tool and Survey File PUF Data Tool ⁵⁸	https://mcb-interactives.norc.org/

⁵⁸ The MCBS Interactives consist of two data tools, the Survey File PUF Data Tool and the COVID-19 Data Tool. Each tool contains multiple interactive dashboards that allow users to sort and visualize data according to a variety of demographic and health-related factors.

Appendix F: 2020 MCBS Survey File Segments and Historic RIC Segments

Survey File Segment	Segment Abbrev	Historic RIC Segment
Access to Care	ACCESSCR	3
Access to Care, Medical Appointments	ACCSSMED	3
Administrative Utilization Summary	ADMNUTLS	A
Assistance	ASSIST	2H
Chronic Conditions	CHRNCOND	2, 2P
Chronic Conditions Flags	CHRNCDFL	N/A
Chronic Pain	CHRNPAIN	N/A
Cognitive Measures	COGNFUNC	N/A
COVID-19 Vaccination	COVIDVAC	N/A
Demographics	DEMO	1, 9, A, K
Diabetes	DIABETES	N/A
Facility Assessments	FACASMNT	2F
Facility Characteristics	FACCHAR	7, 7S
Falls	FALLS	2, 2P
Food Insecurity	FOODINS	N/A
General Health	GENHLTH	2
Health Insurance Summary	HISUMRY	4, A
Health Insurance Timeline	HITLINE	4, A
Household (HH) Characteristics	HHCHAR	5
Income and Assets	INCASSET	1, Income Asset
Interview Characteristics	INTERV	4, 8, 9, K
Medicare Advantage (MA) Plan Questions	MAPLANQX	H
Medicare Plan Beneficiary Knowledge	MCREPLNQ	KN
Minimum Data Set	MDS3	MDS, 10
Mental Health	MENTHLTH	N/A
Mobility	MOBILITY	N/A
Nagi Disability	NAGIDIS	2, 2H, 2P
Nicotine and Alcohol	NICOALCO	2, 2P
Outcome and Assessment Information	OASIS	OAS, 10
Patient Activation	PNTACT	PA
Preventive Care	PREVCARE	2, 2P
RX Medications	RXMED	RX
Residence Timeline	RESTMLN	6, 9, A, K
Satisfaction with Care	SATWCARE	3
Usual Source of Care	USCARE	2, 3
Vision and Hearing	VISHEAR	2

Survey File Segment	Segment Abbrev	Historic RIC Segment
Weights	CENWGTS EVRWGTS LNG2WGTS LNG3WGTS LNG4WGTS	X, XE, X3, X4
COVID-19 Winter 2021 Community Supplement	COVIDWIN	N/A
COVID-19 Facility Beneficiary-Level Supplement	FBENCVFL	N/A
COVID-19 Facility Facility-Level Supplement	FFACCVFL	N/A
Fee-for-Service Claims	FFS	Research Claims