Methodology Documentation for MMCO CY 2012 National Profile Workbook

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1 INTRODUCTION

This document describes the data and methods used to produce the Medicare and Medicaid Summary Tables for Calendar Year (CY) 2012. Acumen performed this work for the Medicare-Medicaid Coordination Office (MMCO) at the Centers for Medicare and Medicaid Services (CMS) with guidance provided by Karyn Anderson. The tables summarize Medicare and Medicaid enrollment, spending, and utilization based on various demographic and other descriptive characteristics.

Section 2 describes the CMS databases used in this analysis. Section 3 details the methodology used to define the beneficiary universe analyzed in the Dual-Eligible Summary Tables. Section 4 describes the methodology used to produce the CY 2012 National Profile Workbook. In Section 4, subsections contain population definitions, row descriptions, column descriptions, and examples of the code used to categorize beneficiaries and their claims.

2 DESCRIPTION OF DATASETS

This section provides a description of the CMS databases used for this analysis, centered on CY 2012. For Medicare, claims data current as of June 2013 are pulled from the Common Working File (CWF), the Common Medicare Environment (CME), the Enrollment DataBase (EDB), the Medicare Advantage and Prescription Drug Plans (MARx) system, the Minimum Data Set (MDS), the Medicare Current Beneficiary Survey (MCBS), and the Outcome and Assessment Information Set (OASIS). For Medicaid, we use the Medicaid Statistical Information System (MSIS), which contains individual-level demographic, enrollment, and service utilization data from quarterly MSIS files submitted by states. We use the MSIS eligibility file and all four claim file types (including IP, LT, OT, and RX files) in this analysis. The download date of these data was December 2015.

3 POPULATION RESTRICTIONS AND DEFINITIONS

This section details the methodology we use to define the beneficiary universe analyzed in the Dual-Eligible Summary Tables. A beneficiary is included only if he or she is enrolled (by our definition below) in Medicare and/or Medicaid for at least one month in 2012. Beneficiaries are classified as dual-eligible, Medicare-Only, and/or Medicaid-Only. The universe is also divided into various subpopulations, described below.

3.1 Enrollment Definitions

The following section describes our enrollment definitions for Medicare, Medicaid and dual enrollment. For all beneficiaries, age is calculated as of December 31, 2012, or on the date of death if the beneficiary died during the year. In addition, we look for certain indicators to determine whether the beneficiary is enrolled in ESRD (MDCR_ESRD_IND=Y) or disabled (Maintenance Assistance Status/Basis of Eligibility value 12, 22, 32, 42, 52, and 3a) in a particular month.

FFS Enrollment

Unless otherwise specified, FFS enrollees are composed of the population of beneficiaries whose Medicare and Medicaid months are FFS only (no managed care).Dual Enrollment

Duals are only included in the analysis if they have at least one month of "valid" dual enrollment in addition to at least one month of "valid" Medicare/Medicaid enrollment as defined below (i.e., this does not include those who are not enrolled in Medicaid, including those who are linked to an MSIS ID but had no Medicaid enrollment in 2012). Dual enrollment is defined using the CME sourced from the MMA file, where the following statuses are considered dual enrollment: 01, 02, 03, 04, 05, 06, and 08 (for the purposes of this analysis, 09 has been excluded). We further classify dual months as full (02, 04, and 08), partial (03, 05, and 06), or QMB-only (01). In some tables, such as 1A and 1B, QMB is included with Partial.

Medicare Enrollment

For Medicare enrollment, we look for months with Part A or B enrollment (MDCR_PART_AB_ ENR in (1 2 3 4)) or Part D enrollment (MDCR_PART_D_ENR not in ("" "0")). We also only count enrolled months when the beneficiary is alive during the month. In other words, we look at the date of death (according to the CME) and if the date of death occurs before the month in question, we do not count that as an enrolled month. If an enrollee happens to have enrollment only on months after their date of death, the enrollee is excluded from the analysis. Enrollees ever enrolled outside of the 50 states and the District of Columbia (DC) (i.e., SSA codes 40, 48, 54, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 97, and 98; SSA code 99 and MDCR_COUNTY 000 for American Samoa) are also excluded from the analysis.

Code Samples:
The code below counts total Medicare enrolled months, enrolled months with both Part A and Part B enrollment, and enrolled months with Part C. It also sets other indicators.

```
#loop over each month;
if missing(mdcr_dod) or mdcr_dod>=mdy(month,1,2012) then do;
    if mdcr_part_ab_enr in ("1" "2" "3" "4") or mdcr_part_d_enr not in ("" "0") then do;
        mdcr_enr_months=mdcr_enr_months+1;
        if mdcr_part_ab_enr in ("1") then mdcr_bothab_months=mdcr_bothab_months+1;
        else if mdcr_part_ab_enr in ("4") then mdcr_mc_months=mdcr_mc_months+1;
        else if mdcr_part_ab_enr in ("2") then mdcr_ever_aonly="1";
        else if mdcr_part_ab_enr in ("3") then mdcr_ever_bonly="1";
        if mdcr_part_ab_enr not in ("1" "2" "3" "4") then mdcr_ever_pdonly="1";
    end;
end;
```

Medicaid Enrollment

For Medicaid enrollment, we look for months where the Basis of Eligibility (MDCD_BOE) is not 0 or 9 and only count enrolled months when the enrollee is alive during the month. For enrollees who are duals in 2012, we use the CME date of death. For other enrollees, we use the EL date of death.

Code Samples:

The code below counts Medicaid enrolled months.

```
#loop over each month;
if (dual_2012=1 and (missing(mdcr_dod) or mdcr_dod>=mdy(month,1,2012)))
      or (dual_2012=0 and (missing(mdcd_dod) or mdcd_dod>=mdy(month,1,2012)));
   if not(mdcd_boe in ("0" "9")) then do;
      mdcd_enr_months=mdcd_enr_months+1;
   end;
end;
```

LTSS Beneficiaries

For beneficiaries enrolled in Medicaid, we classify LTSS (Long-Term Services and Supports) status using a hierarchy. "LTSS Institutional" includes beneficiaries who had spending in institutional LTSS. "LTSS HCBS Waiver" includes beneficiaries who had spending in LTSS HCBS waiver, but not in institutional LTSS. "LTSS State Plan Only" includes beneficiaries who had spending in an LTSS state plan, but not in institutional LTSS or LTSS HCBS waiver. "Any LTSS" includes beneficiaries who had spending in any LTSS category. The LTSS breakouts are mutually exclusive and the sum of "Any LTSS" and "No LTSS Use" for a subpopulation equals the total of the entire subpopulation. LTSS Institutional is defined as having utilization in MSIS Type of Service 2 (Mental Hospital Services for the Aged), 4 (Inpatient Psychiatric Facility Services for Individuals Age 21 Years and Under), 5 (ICF Services for the Mentally Retarded), or 7 (NF's – All Other). LTSS HCBS is defined as having MSIS utilization with Program Type code 6 (ICF Services for the Mentally Retarded) or 7 (Home and Community Based Care Waiver Services). LTSS state plan utilization is defined as having MSIS utilization with Type of Service 13 (Home Health) or 30 (Personal Care Services). Although generally the hierarchy is used, we also display LTSS information without the hierarchy in select tables. Those cases are noted in the tables.

Code Samples:
The code below classifies each beneficiary's LTSS status using a hierarchy. It also shows the calculation for institutional LTSS spending.

```
mdcd_ltss_inst=sum(mdcd_nf_amt-mdcd_nf_amt_hcbs, mdcd_icf_amt-
mdcd_icf_amt_hcbs, mdcd_mhs_amt-mdcd_mhs_amt_hcbs, mdcd_ipf_amt-
mdcd_ipf_amt_hcbs);
if mdcd_ltss_inst^=0 then mdcd_ltss_ind="1";
else if mdcd_ltss_hcbs_wv^=0 then mdcd_ltss_ind="2";
else if mdcd_ltss_hcbs_st^=0 then mdcd_ltss_ind="3";
else mdcd_ltss_ind="0";
```

4 TABLE DEFINITIONS

4.1 Table 1 Series

Tables 1A and 1B in the *MMCO National Profiles* workbook provide a high-level overview of Medicare and Medicaid enrollment and spending. Populations are subdivided based

on their enrollment in Medicare and Medicaid. For each subpopulation, beneficiary counts and annual spending are reported. All groups are categorized on an annual basis.

4.1.1 Table 1A

Population

Table 1A uses the full set of beneficiaries as defined in Section 3.1.

Row Definitions

The first seven subpopulations (with "Overall" in the row headings) include total dually eligible beneficiaries, full/partial dual beneficiaries, Medicare/Medicaid-only beneficiaries, and total Medicare/Medicaid beneficiaries. The Total Medicaid only and Total Medicaid counts are broken out by under age 65 disabled, under age 65 non-disabled, age 65+, and Missing Date of Birth. The other subpopulations are broken out by non-ESRD/ESRD, as well as under age 65/age 65+.

The subpopulations under the "Duals" heading are grouped by dual status code from their most recent month of enrollment. These "Duals" subpopulations are mutually exclusive, meaning that a beneficiary is not categorized in more than one dual type. Each of these subpopulations is broken out by non-ESRD/ESRD, as well as under age 65/age 65+.

Column Definitions

The "Number of Beneficiaries" column in Table 1 describes the number of beneficiaries in the row subpopulation. If a beneficiary is ever dual enrolled in 2012, we select the most recent month of dual enrollment. The beneficiary totals in this column will match the overall number of beneficiaries in other tables (e.g., Table 4).

The "Aggregate Spending Medicare/Medicaid/Combined Medicare and Medicaid" columns include aggregate spending for months of the subpopulation identified in each row. . Note that the Medicare spending for the Medicaid population and the Medicaid spending for the Medicare population come from duals. The "Total Enrolled Months Medicare/Medicaid/Combined Medicare and Medicaid" columns represent total enrolled months counted in the row subpopulation. The "Per Member per Month Spending Medicare/Medicaid/Combined Medicare and Medicaid" columns represent average monthly spending for months that beneficiaries are in the row subpopulation.

Code Samples:

The code below obtains the most recent month for the "Number of Beneficiaries" column. We apply different code to each set of beneficiaries: dual, Medicare-Only, and Medicaid-Only.

```
if (substr(mdcr_dual_enr,&month.,1) in ("A", "B", "C", "D", "E", "F", "G")) then
_mrecent_m_enr=&month; #code for duals
if substr(mdcr_enrolled,&month.,1)="1" then _mrecent_m_enr=&month; #code for
Medicare-Only
if substr(mdcd_enrolled,&month.,1)="1" then _mrecent_m_enr=&month; #code for
Medicare-Only
```

4.1.2 Table 1B

Population

Table 1A uses the full set of beneficiaries as defined in Section 3.1 except months are categorized independently. That is, when a beneficiary has dual and Medicare months, each month will be separately categorized as a dual or Medicare month, as appropriate.

Row Definitions

Tables 1A and 1B use the same row categories, as detailed in the documentation for Table 1A, above. The rows are aggregated at the monthly level, so dual enrollment is separately classified by month, and not by the beneficiaries' last month of enrollment.

Column Definitions

Tables 1A and 1B use the same column definitions, as detailed in the documentation for Table 1A, above, except that 1B aggregates at the monthly level instead of the beneficiary level.

4.2 Table 2

Table 2 reports enrollment numbers for beneficiaries based on various demographic groups including age, sex, race/ethnicity, reported health status, limitations in ADLs, residence, living arrangement, education, income status, and supplemental insurance status. It merges the Medicare Beneficiary Survey (MCBS) with the other databases used to create the National Profile Workbook. As a rule, Table 2 uses the Medicare or Medicaid information instead of the MCBS whenever possible. For example, because the race of the beneficiary can be found using both the MCBS and Medicare/Medicaid sources, we use the Medicare/Medicaid sources to define race in this table. Note that in cases where we use the MCBS, the total population is calculated using survey weights and differs from the total population determined elsewhere; this means that for all MCBS based rows, population totals are the sum of the row breakouts, not the overall number of beneficiaries. All beneficiaries who cannot be linked to supplemental databases are excluded in these cases.

Row Definitions

Age, sex, race/ethnicity, original reason for entitlement to Medicare, and residence are determined using Medicare/Medicaid sources and mappings for these variables can be found in the appendix of the Medicare Medicaid MSF Data Dictionary. The following rows are constructed using the MCBS:

- Reported Health Status: This is created using the GENHELTH variable. When the GENHELTH variable is missing, the SPHEALTH variable is used instead.

- Limitations in ADLs: The ADLs considered are: trouble using the phone, trouble shopping, trouble managing money, trouble bathing, trouble dressing, and trouble using the toilet. ADLs are taken from both the facility and community interviews. The presence of an ADL limitation is shown with responses of "Yes" and "Doesn't Do." For respondents completing the facility interview, the beneficiary is considered to have the ADL limitation if he is unable to perform the activity independently (e.g., if

PFBATHNG>1). If the presence of an ADL is not shown, it is assumed that the beneficiary does not have the ADL restriction.

- Living Arrangement: If the beneficiary has any facility or SNF days (F_DAYS or S_DAYS), the beneficiary is classified as living in an institution. Otherwise, if the beneficiary has a household composition (D_HHCOMP) indicating that he/she lives alone or if the total number of people in the household (D_HHTOT) is 1, the beneficiary is classified as living alone. If the beneficiary has a household composition indicating that she lives with a spouse, the beneficiary is classified as living with a spouse. Otherwise, the beneficiary is classified as living with children, nonrelatives, or others.

- Education: This is based on the highest grade that the beneficiary completed (SPDEGRCV).

- Income Status: This is the actual income of the beneficiary (INCOME_C) and spouse. If the beneficiary does not live alone (D_HHTOT > 1) and is married (SPMARSTA = 1), $13,892[1] is used as the cutoff for the federal poverty level. Otherwise, $11,011is used.

- Supplemental Insurance Status: If the beneficiary is ever enrolled in Medicare managed care (D_MA = 1,2,3), the beneficiary is classified as enrolled in Medicare managed care. If annual private health insurance coverage indicates that the beneficiary has no supplemental insurance (D_PHI = 0), the beneficiary is classified as enrolled in Medicare/Medicare-Only. Otherwise, if the beneficiary is enrolled in employer sponsored insurance (D_PHI = 1, 3, 5, 7), the beneficiary is classified as enrolled in employer-sponsored insurance. Otherwise, the beneficiary is classified as enrolled in other private insurance. Medigap enrollment is not recorded in the 2012 MCBS.

Sample weights associated with each beneficiary (CS1YRWGT) are summed to find total beneficiary counts for variables taken from the MCBS. Note that MCBS population totals will not sum to population totals that use the supplemental databases.

Column Definitions

The first half of the columns (Columns B through I) contain beneficiary counts, while the second half (Columns J through Q) provide percentages of the population (i.e., all beneficiaries with any Medicare or Medicaid enrollment in CY 2012) within eligibility status. Columns C-E and K-M (Full/Partial/QMB Only Duals) include beneficiaries who are ever dual enrolled in 2012. Columns F and N (Medicare Only Beneficiaries) include Medicare information for beneficiaries who are never dual enrolled and have Medicare enrollment. Columns G-I and O-Q (Total/Disabled/Not Disabled Medicaid Only Beneficiaries) include Medicaid information for beneficiaries who are never dual enrolled and have Medicaid enrollment

We identify Medicaid-Only disabled beneficiaries as ever having Maintenance Assistance Status/Basis of Eligibility value 12, 22, 32, 42, 52, and 3a. The age calculation is described in Section 3.1. Tables 3, 4A, 4D, 4G, 4J, 5A, 5D, 5G, 5J, 6A, 7A, 7B, and 7Cuse the

[1] Taken from https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html

same column definitions described here. The Tables 4, 5, and 6 Series do not include Percent of Beneficiaries columns. Table 14 uses similar column definitions as Table 2, but its Medicaid Only columns are presented as totals and are not broken out by disabled/not disabled.

4.3 Table 3

Table 3 reports enrollment counts for beneficiaries enrolled in Fee-for-Service (FFS) versus managed care plan types. Enrollment for each managed care plan type in Medicare and Medicaid is reported.

Row Definitions

Table 3 provides Medicare statistics (under the "Medicare managed care participation" heading) and Medicaid statistics (under the "Medicaid managed care participation" heading). Medicare-Only beneficiaries can only have Medicare statistics, and Medicaid-Only beneficiaries can only have Medicaid statistics. Dual beneficiaries can have both Medicare and Medicaid statistics.

The rows under the "Medicare managed care participation" heading describe the Medicare managed care participation during the year for beneficiaries with at least one month of Medicare enrollment.

If the number of Part C months is 0 and the number of Part D-only months is 0, then Medicare months are all FFS. If the number of Part C months equals the number of Medicare enrolled months, then Medicare months are all MA. If Medicare months are not all FFS or all MA, and there are nonzero Parts A and B months, Part A-only months, Part B-only months, or Part C months, then Medicare months are a mix of FFS and MA. Otherwise, Medicare months are all Part D-only.

For the Medicare FFS months, if there are Part A-only months or Part B-only months, then FFS months are ever A only or B only. If all FFS months have Parts A and B, then FFS months are always A and B. If there are Part D-only months, then the beneficiary is ever Part D-only.

For Part C months, we identify beneficiaries that ever had various Part C contract types (MDCR_PART_C_CON_TYPE) during the year. If the value is ever "09", then the beneficiary is in a PACE plan. If the value is ever "04" or "10", then the beneficiary is in Private Fee-for-Service (PFFS). If the value is ever "05", then the beneficiary is in an HMO. If the value is ever "06", then the beneficiary is in a local PPO. If the value is ever "11", then the beneficiary is in a regional PPO. If the value is ever "01", "02", "03", "07", or "08", then the beneficiary is in any other MA plan.

For Part C months, we also identify whether beneficiaries ever had various special needs plan types (MDCR_MA_SNP_TYPE) during the year. If the value is ever "2", then the beneficiary is in a D-SNP plan. If the value is ever "1", then the beneficiary is in a C-SNP plan. If the value is ever "3", then the beneficiary is in an I-SNP plan.

The rows under the "Medicaid managed care participation" heading describe the Medicaid managed care participation during the year for beneficiaries with at least one month of Medicaid enrollment. A month is considered Comprehensive Managed Care (CMC) if the month contains MDCD_PLAN_TYPE 1 or 6. A month is classified as Limited Benefit Managed Care (LMC) if the month contains MDCD_PLAN_TYPE 2, 3, 4, 5, or 7. MDCD_PLAN_TYPE code 8 is classified as LMC for states AL, CA, FL, and WI. If a month is not CMC or LMC, the month is classified as FFS.

If the number of FFS months equals number of Medicaid only months, then Medicaid months are all FFS only. If the number of FFS or LMC months equals the number of Medicaid enrolled months but there is LMC, then Medicaid months are a mix of FFS only and FFS with

LMC only. If the number of CMC months (MDCD_PLAN_TYPE in (1 6)) equals the number of Medicaid enrolled months, Medicaid months are all CMC with or without other plan types. If the three previous tests fail, then the Medicaid months are some other mix of FFS and managed care.

For all Medicaid categories but pure FFS, we determined whether the beneficiary is ever in PCCM (MDCD_PLAN_TYPE=7). For the last three Medicaid categories, we determined whether the beneficiary is ever in a dental plan (MDCD_PLAN_TYPE=2), ever in a behavioral plan (MDCD_PLAN_TYPE=3), ever in a long-term care plan (MDCD_PLAN_TYPE=5), or ever in another limited-benefit plan (MDCD_PLAN_TYPE in (4 8)). For the last two Medicaid categories, we determined whether the beneficiary is ever in a comprehensive plan other than PACE (MDCD_PLAN_TYPE=1) or ever in a PACE plan (MDCD_PLAN_TYPE=6).

Column Definitions

Columns here are defined the same way as those in Table 2, as described in Section 4.2.

Code Samples:

The code below classifies Medicare managed care participation according to the four main categories.

```
if mdcr_mc_months=0 and mdcr_ever_pdonly="0" then do;
    n_mdcr_ffsonly=n_mdcr_ffsonly+1;
end;
else if mdcr_enr_months=mdcr_mc_months then do;
    n_mdcr_purema=n_mdcr_purema+1;
end;
else if mdcr_bothab_months>0 or mdcr_ever_aonly="1" or mdcr_ever_bonly="1" or
mdcr_mc_months>0 then do;
    n_mdcr_ffsma=n_mdcr_ffsma+1;
end;
else n_mdcr_pdonly=n_mdcr_pdonly+1;
```

The code below loops through the four Medicaid plan type variables for each month, and iterates the number of FFS, LMC, and CMC months. Note that a hierarchy is imposed with CMC considered first, then LMC, then FFS.

```
#loop through each enrolled month;
pt_size=4;
if 0 %do a=1 %to &pt_size.; or mdcd_plan_type_&a. in ("1" "6") %end; then do;
    mdcd_mc_months=mdcd_mc_months+1;
end;
else if 0 %do a=1 %to &pt_size.; or (mdcd_plan_type_&a. in ("2" "3" "4" "5" "7") ) or
((mdcd_plan_type_&a=8) and (mdcd_state=('AL' 'CA' 'FL' 'WI')) %end; then do;
    mdcd_lmc_months=mdcd_lmc_months+1;
%end;
else if 0 %do a=1 %to &pt_size.; or mdcd_plan_type_&a. in ( "8" "88") %end; then do;
    mdcd_ffs_months=mdcd_ffs_months+1;
end;
```

4.4 Table 4 Series

4.4.1 Table 4A

Table Series 4 and 5 report the spending, enrollment, and spending per enrollee for various service types in Medicare and Medicaid, broken down by enrollee characteristics such as age, race, and coverage type. All tables have the same row definitions.

Row Definitions

Table 4A presents Medicare statistics (rows under the "Medicare" and "Medicare – FFS Age Breakdown" headings) as well as Medicaid statistics (rows under the "Medicaid" and "Medicaid – FFS Age Breakdown" headings). Medicare-Only beneficiaries can only have Medicare statistics, and Medicaid-Only beneficiaries can only have Medicaid statistics. Dual beneficiaries can have both Medicare and Medicaid statistics.

The definitions for the Medicare statistics are as follows (in the format Row Heading = Definition/Calculation):

- Medicare Spending = MDCR_MEDICARE_FFS_AMT + MDCR_PART_C_MDCR_PRM + MDCR_PD_LICS_CPP
- Rows under "Medicare" heading
    - Medicare Fee-for-Service (FFS) A/B and Medicare Advantage Beneficiaries = Number of beneficiaries with A&B or Part C enrollment for all months
        - Medicare Fee-for-Service and Medicare Advantage payment among Fee-for-Service (FFS) A/B and Medicare Advantage Beneficiaries = MDCR_MEDICARE_FFS_AMT + MDCR_PART_C_MDCR_PRM + MDCR_PD_LICS_CPP
        - Medicare Part B Premiums payment among Fee-for-Service (FFS) A/B and Medicare Advantage Beneficiaries = MDCR_PART_B_BENE_PRM
    - Medicare FFS A/B and MA with any Part D Beneficiaries = Number of beneficiaries with A&B or Part C enrollment for all months and any Part D months
        - Medicare Fee-for-Service and Medicare Advantage payment among FFS A/B and MA with any Part D Beneficiaries = MDCR_MEDICARE_FFS_AMT + MDCR_PART_C_MDCR_PRM + MDCR_PD_LICS_CPP
        - Medicare Part D payment among FFS A/B and MA with any Part D Beneficiaries = MDCR_PD_LICS_CPP
        - Medicare Part D Beneficiary Premiums payment among FFS A/B and MA with any Part D Beneficiaries = MDCR_PART_D_BENE_PRM
    - Medicare FFS A/B and MA with no Part D Beneficiaries = Number of beneficiaries with A&B or Part C enrollment for all months and no Part D months
        - Medicare FFS and MA without Part D payment among FFS A/B and MA with no Part D Beneficiaries = MDCR_MEDICARE_FFS_AMT + MDCR_PART_C_MDCR_PRM
    - Medicare FFS A/B Beneficiaries = Number of beneficiaries with A&B enrollment
        - Medicare Fee-for-Service A/B payment among FFS A/B Beneficiaries = MDCR_MEDICARE_FFS_AMT

- Medicare ER (preceding inpatient stay) payment among FFS A/B Beneficiaries = MDCR_IP_ER_STAY_AMT
- Medicare Inpatient and psychiatric hospital payment among FFS A/B Beneficiaries = MDCR_IP_ACUTE_NON_CAH_AMT + MDCR_IP_CAH_AMT + MDCR_IP_OTHER_AMT + MDCR_IP_PSYC_AMT
- Medicare Inpatient hospital payment among FFS A/B Beneficiaries = MDCR_IP_ACUTE_NON_CAH_AMT + MDCR_IP_CAH_AMT + MDCR_IP_OTHER_AMT
- Medicare Acute payment among FFS A/B Beneficiaries = MDCR_IP_ACUTE_NON_CAH_AMT
- Medicare CAH payment among FFS A/B Beneficiaries = MDCR_IP_CAH_AMT
- Medicare Other payment among FFS A/B Beneficiaries = MDCR_IP_OTHER_AMT
- Medicare Psychiatric hospital payment among FFS A/B Beneficiaries = MDCR_IP_PSYC_AMT
- Medicare Inpatient post-acute facility payment among FFS A/B Beneficiaries = MDCR_IP_LTCH_AMT + MDCR_IP_IRF_AMT + MDCR_SN_AMT
- Medicare LTCH payment among FFS A/B Beneficiaries = MDCR_IP_LTCH_AMT
- Medicare IRF payment among FFS A/B Beneficiaries = MDCR_IP_IRF_AMT
- Medicare SNF payment among FFS A/B Beneficiaries = MDCR_SN_AMT
- Medicare Outpatient post-acute home health payment among FFS A/B Beneficiaries = MDCR_HH_AMT
- Medicare Other outpatient payment among FFS A/B Beneficiaries = (MDCR_OP_AMT + MDCR_DM_AMT + MDCR_PB_AMT + MDCR_HS_AMT)
- Medicare Hospital ER (no inpatient stay) payment among FFS A/B Beneficiaries = MDCR_OP_ER_AMT
- Medicare Hospital outpatient facility payment among FFS A/B Beneficiaries = MDCR_OP_OTHER_AMT
- Medicare FQHC payment among FFS A/B Beneficiaries = MDCR_OP_FQHC_AMT
- Medicare Other outpatient facility (e.g., ASC, RHC) payment among FFS A/B Beneficiaries = (MDCR_PB_ASC_AMT + MDCR_OP_RURAL_AMT + MDCR_OP_RENAL_AMT)
- Medicare Hospice payment among FFS A/B Beneficiaries = MDCR_HS_AMT
- Medicare DME payment among FFS A/B Beneficiaries = MDCR_DM_AMT
- Medicare Physician payment among FFS A/B Beneficiaries = (MDCR_PB_AMT – MDCR_PB_ASC_AMT)

        - Medicare Part B drugs (excludes outpatient) payment among FFS A/B Beneficiaries = MDCR_MCARE_PART_B_DRUG_AMT
    - Medicare Advantage Beneficiaries = Number of beneficiaries with Part C enrollment for all months
        - Medicare payment among Medicare Advantage Beneficiaries = MDCR_PART_C_MDCR_PRM
        - Medicare Advantage beneficiary premiums payment among Medicare Advantage Beneficiaries = MDCR_PART_C_BENE_PRM
- Rows under "Medicare – FFS Age Breakdown" heading
    - Medicare FFS Under Age 19 Beneficiaries = Number of beneficiaries under age 19
        - Medicare payment among Medicare FFS Under Age 19 Beneficiaries = MDCR_MEDICARE_FFS_AMT
    - Medicare FFS Age 19-44 Beneficiaries = Number of beneficiaries age 19-44
        - Medicare payment among Medicare FFS Age 19-44 Beneficiaries = MDCR_MEDICARE_FFS_AMT
    - Medicare FFS Age 45-64 Beneficiaries = Number of beneficiaries age 45-64
        - Medicare payment among Medicare FFS Age 45-64 Beneficiaries = MDCR_MEDICARE_FFS_AMT
    - Medicare FFS Age 65-74 Beneficiaries = Number of beneficiaries age 65-74
        - Medicare payment among Medicare FFS Age 65-74 Beneficiaries = MDCR_MEDICARE_FFS_AMT
    - Medicare FFS Age 75-84 Beneficiaries = Number of beneficiaries age 75-84
        - Medicare payment among Medicare FFS Age 75-84 Beneficiaries = MDCR_MEDICARE_FFS_AMT
    - Medicare FFS Age 85+ Beneficiaries = Number of beneficiaries age 85+
        - Medicare payment among Medicare FFS Age 85+ Beneficiaries = MDCR_MEDICARE_FFS_AMT

The definitions for the Medicaid statistics are as follows:

- Medicaid Spending = MDCD_FFS_AMT + MDCD_HMO_AMT + MDCD_PHP_AMT + MDCD_PCCM_AMT
- Rows under "Medicaid" heading
    - Medicaid Fee-for-Service and/or Managed Care Beneficiaries = Number of beneficiaries with any Medicaid enrollment
        - Medicaid Fee-for-Service and Managed Care payment among Fee-for-Service and/or Managed Care Beneficiaries = MDCD_FFS_AMT + MDCD_HMO_AMT + MDCD_PHP_AMT + MDCD_PCCM_AMT
    - Medicaid Pure Fee-for-Service Beneficiaries = Number of beneficiaries with all Medicaid months FFS
        - Medicaid Fee-for-Service payment among Pure Fee-for-Service Beneficiaries = MDCD_FFS_AMT
        - Medicaid Inpatient hospital non-LTSS payment among Pure Fee-for-Service Beneficiaries = (MDCD_IP_AMT - MDCD_IP_AMT_HCBS)
        - Medicaid Outpatient non-LTSS /2/ payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{x}_AMT - MDCD_{x}_AMT_HCBS),

where {x} = {OPH, CLIN, HS, PHYS, LX, ST, AB, NMS, NPS, OPR, SH, PDN, DN, RS, TC, TS, OS, US}

- Medicaid Outpatient hospital payment among Pure Fee-for-Service Beneficiaries = (MDCD_OPH_AMT - MDCD_OPH_AMT_HCBS)
- Medicaid Clinic payment among Pure Fee-for-Service Beneficiaries = (MDCD_CLIN_AMT - MDCD_CLIN_AMT_HCBS)
- Medicaid Hospice payment among Pure Fee-for-Service Beneficiaries = (MDCD_HS_AMT - MDCD_HS_AMT_HCBS)
- Medicaid Physician, lab and X-ray, other practitioner payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{x}_AMT - MDCD_{x}_AMT_HCBS), where {x} = {PHYS, LX, ST, AB, NMS, NPS, OPR, SH, PDN}
- Medicaid Physician payment among Pure Fee-for-Service Beneficiaries = (MDCD_PHYS_AMT - MDCD_PHYS_AMT_HCBS)
- Medicaid Lab and X-ray payment among Pure Fee-for-Service Beneficiaries = (MDCD_LX_AMT - MDCD_LX_AMT_HCBS)
- Medicaid Sterilization payment among Pure Fee-for-Service Beneficiaries = (MDCD_ST_AMT - MDCD_ST_AMT_HCBS)
- Medicaid Abortion payment among Pure Fee-for-Service Beneficiaries = (MDCD_AB_AMT - MDCD_AB_AMT_HCBS)
- Medicaid Nurse midwife payment among Pure Fee-for-Service Beneficiaries = (MDCD_NMS_AMT - MDCD_NMS_AMT_HCBS)
- Medicaid Nurse practitioner payment among Pure Fee-for-Service Beneficiaries = (MDCD_NPS_AMT - MDCD_NPS_AMT_HCBS)
- Medicaid Other practitioner payment among Pure Fee-for-Service Beneficiaries = (MDCD_OPR_AMT - MDCD_OPR_AMT_HCBS)
- Medicaid PT, OT, speech, hearing payment among Pure Fee-for-Service Beneficiaries = (MDCD_SH_AMT - MDCD_SH_AMT_HCBS)
- Medicaid Private duty nursing payment among Pure Fee-for-Service Beneficiaries = (MDCD_PDN_AMT - MDCD_PDN_AMT_HCBS)
- Medicaid Dental payment among Pure Fee-for-Service Beneficiaries = (MDCD_DN_AMT - MDCD_DN_AMT_HCBS)
- Medicaid Rehabilitation payment among Pure Fee-for-Service Beneficiaries = (MDCD_RS_AMT - MDCD_RS_AMT_HCBS)
- Medicaid Targeted case management payment among Pure Fee-for-Service Beneficiaries = (MDCD_TC_AMT - MDCD_TC_AMT_HCBS)
- Medicaid Transportation payment among Pure Fee-for-Service Beneficiaries = (MDCD_TS_AMT - MDCD_TS_AMT_HCBS)
- Medicaid Other type of service, unspecified payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{x}_AMT - MDCD_{x}_AMT_HCBS), where {x} = {OS, US}
- Medicaid Drugs (FFS) payment among Pure Fee-for-Service Beneficiaries = MDCD_RX_AMT
- Medicaid Long-term services and supports (FFS) payment among Pure Fee-for-Service Beneficiaries = Medicaid Institutional payment among

Pure Fee-for-Service Beneficiaries + Medicaid HCBS payment among Pure Fee-for-Service Beneficiaries

- Medicaid Institutional payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{x}_AMT - MDCD_{x}_AMT_HCBS), where {x} = {NF, ICF, MHS, IPF}
- Medicaid Nursing facility payment among Pure Fee-for-Service Beneficiaries = (MDCD_NF_AMT - MDCD_NF_AMT_HCBS)
- Medicaid Intermediate care facility for intellectually disabled payment among Pure Fee-for-Service Beneficiaries = (MDCD_ICF_AMT - MDCD_ICF_AMT_HCBS)
- Medicaid Mental hospital for aged payment among Pure Fee-for-Service Beneficiaries = (MDCD_MHS_AMT - MDCD_MHS_AMT_HCBS)
- Medicaid Inpatient psychiatric facility for under 21 payment among Pure Fee-for-Service Beneficiaries = (MDCD_IPF_AMT - MDCD_IPF_AMT_HCBS)
- Medicaid HCBS payment among Pure Fee-for-Service Beneficiaries = Medicaid State plan payment among Pure Fee-for-Service Beneficiaries + Medicaid HCBS waiver payment among Pure Fee-for-Service Beneficiaries
- Medicaid State plan payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{x}_AMT - MDCD_{x}_AMT_HCBS), where {x} = {HH, PCS}
- Medicaid Home health payment among Pure Fee-for-Service Beneficiaries = (MDCD_HH_AMT - MDCD_HH_AMT_HCBS)
- Medicaid Personal care payment among Pure Fee-for-Service Beneficiaries = (MDCD_PCS_AMT - MDCD_PCS_AMT_HCBS)
- Medicaid HCBS waiver payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{z}_AMT_HCBS), where {z}={HH, PCS, DN, RS, TC, TS, NF, ICF, MHS, IPF, IP, OPH, CLIN, HS, PHYS, LX, OPR, OS, US}
- Medicaid Home health payment among Pure Fee-for-Service Beneficiaries = MDCD_HH_AMT_HCBS
- Medicaid Personal care payment among Pure Fee-for-Service Beneficiaries = MDCD_PCS_AMT_HCBS
- Medicaid Dental payment among Pure Fee-for-Service Beneficiaries = MDCD_DN_AMT_HCBS
- Medicaid Rehabilitation payment among Pure Fee-for-Service Beneficiaries = MDCD_RS_AMT_HCBS
- Medicaid Targeted case management payment among Pure Fee-for-Service Beneficiaries = MDCD_TC_AMT_HCBS
- Medicaid Transportation payment among Pure Fee-for-Service Beneficiaries = MDCD_TS_AMT_HCBS
- Medicaid Other type of service, specified payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{z}_AMT_HCBS), where {z}={NF, ICF, MHS, IPF, IP, OPH, CLIN, HS, PHYS, LX, OPR}

        - Medicaid LTSS institutional payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{z}_AMT_HCBS), where {z}={NF, ICF, MHS, IPF}
        - Medicaid Inpatient hospital payment among Pure Fee-for-Service Beneficiaries = MDCD_IP_AMT_HCBS
        - Medicaid Outpatient hospital or clinic payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{z}_AMT_HCBS), where {z} = {OPH, CLIN}
        - Medicaid Hospice payment among Pure Fee-for-Service Beneficiaries = MDCD_HS_AMT_HCBS
        - Medicaid Physician, lab and X-ray, other practitioner payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{z}_AMT_HCBS), where {z} = {PHYS, LX, OPR}
        - Medicaid Other type of service, unspecified payment among Pure Fee-for-Service Beneficiaries = sum(MDCD_{z}_AMT_HCBS), where {z} = {OS, US}
        - Medicaid Uncategorized FFS payment among Pure Fee-for-Service Beneficiaries = (MDCD_FFS_AMT – (Medicaid Inpatient Hospital non-LTSS payment among Pure Fee-for-Service Beneficiaries) – (Medicaid Outpatient Hospital non-LTSS payment among Pure Fee-for-Service Beneficiaries) – MDCD_RX_AMT – (Medicaid Long-Term Services and supports (FFS) payment among Pure Fee-For-Service Beneficiaries))
        - Medicaid PCCM payment among Pure Fee-for-Service Beneficiaries = MDCD_PCCM_AMT
    - Medicaid Continuous any Managed Care Beneficiaries = Number of beneficiaries with all Medicaid months LMC or CMC
        - Medicaid Fee-for-Service and Managed Care payment among Continuous any Managed Care Beneficiaries = MDCD_FFS_AMT + MDCD_HMO_AMT + MDCD_PHP_AMT + MDCD_PCCM_AMT
        - Medicaid Managed Care payment among Continuous any Managed Care Beneficiaries = MDCD_HMO_AMT + MDCD_PHP_AMT + MDCD_PCCM_AMT
        - Medicaid Comprehensive plan payment among Continuous any Managed Care Beneficiaries = MDCD_HMO_AMT
        - Medicaid Limited-benefit plan payment among Continuous any Managed Care Beneficiaries = MDCD_PHP_AMT
        - Medicaid PCCM payment among Continuous any Managed Care Beneficiaries = MDCD_PCCM_AMT
    - Medicaid Continuous Limited Managed Care Beneficiaries = Number of beneficiaries with all Medicaid months LMC
        - Medicaid Fee-for-Service and Managed Care payment among Continuous Limited Managed Care Beneficiaries = MDCD_FFS_AMT + MDCD_HMO_AMT + MDCD_PHP_AMT + MDCD_PCCM_AMT
        - Medicaid Limited-benefit plan payment among Continuous Limited Managed Care Beneficiaries = MDCD_PHP_AMT

    - Medicaid Continuous Comprehensive Managed Care Beneficiaries = Number of beneficiaries with all Medicaid months CMC
        - Medicaid Comprehensive plan payment among Continuous Comprehensive Managed Care Beneficiaries = MDCD_HMO_AMT
        - Medicaid Limited-benefit plan payment among Continuous Comprehensive Managed Care Beneficiaries = MDCD_PHP_AMT
- Rows under "Medicaid – FFS Age Breakdown" heading
    - Medicaid FFS Under Age 19 Beneficiaries = Number of beneficiaries under age 19
        - Medicaid payment among Medicaid FFS Under Age 19 Beneficiaries = MDCD_FFS_AMT
    - Medicaid FFS Age 19-44 Beneficiaries = Number of beneficiaries age 19-44
        - Medicaid payment among Medicaid FFS Age 19-44 Beneficiaries = MDCD_FFS_AMT
    - Medicaid FFS Age 45-64 Beneficiaries = Number of beneficiaries age 45-64
        - Medicaid payment among Medicaid FFS Age 45-64 Beneficiaries = MDCD_FFS_AMT
    - Medicaid FFS Age 65-74 Beneficiaries = Number of beneficiaries age 65-74
        - Medicaid payment among Medicaid FFS Age 65-74 Beneficiaries = MDCD_FFS_AMT
    - Medicaid FFS Age 75-84 Beneficiaries = Number of beneficiaries age 75-84
        - Medicaid payment among Medicaid FFS Age 75-84 Beneficiaries = MDCD_FFS_AMT
    - Medicaid FFS Age 85+ Beneficiaries = Number of beneficiaries age 85+
        - Medicaid payment among Medicaid FFS Age 85+ Beneficiaries = MDCD_FFS_AMT

Population totals are indicated in italics, with indented rows beneath each population providing spending for that population. Italicized rows with age groups detail the population sizes, and rows with indented age groups detail spending for the population listed above the cell. Throughout the table, further indentations indicate that a sub-category of spending is a subset of a spending category listed above it.

Tables 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J use the same row definitions for the full table. Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same definitions for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

Columns here are defined the same way as those in Table 2, as described in Section 4.2.

Code Samples:

As indicated in the row definitions above, for some Medicaid types of service, we may want to subtract out the HCBS amount; for others, we may want to look at just the HCBS amount. The code below populates that.

#loop over relevant Medicaid types of service;

```
%if &use_hcbs.=0 %then %do;
  if (mdcd_&mdcd_cat._amt-mdcd_&mdcd_cat._amt_hcbs)^=0 then do;
    use_mdcd_&mdcd_cat.=use_mdcd_&mdcd_cat.+1;
    cost_mdcd_&mdcd_cat.=cost_mdcd_&mdcd_cat.+
      (mdcd_&mdcd_cat._amt-mdcd_&mdcd_cat._amt_hcbs);
  end;
%end;
%else %do;
  if &mdcd_cat._amt_hcbs^=0 then do;
    use_mdcd_&mdcd_cat._hcbs=use_mdcd_&mdcd_cat._hcbs+1;
    cost_mdcd_&mdcd_cat._hcbs=cost_mdcd_&mdcd_cat._hcbs+
      mdcd_&mdcd_cat._amt_hcbs;
  end;
%end;
```

4.4.2 Table 4B – Age

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

Columns B-IJ include beneficiaries who are ever dual enrolled. Columns J and K display Medicare information for beneficiaries who were never dual enrolled and had Medicare enrollment. Columns L-Q display Medicaid information for beneficiaries who were never dual enrolled and had Medicaid enrollment.

We identify disabled beneficiaries as having disabled status as described in Section 3.1. The age calculation is described in Section 3.1.

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E.

4.4.3 Table 4C – Race

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

Columns B-Y include beneficiaries who are ever dual enrolled. Columns Z-AE display Medicare information for beneficiaries who were never dual enrolled and had Medicare enrollment. Columns AF-AZ display Medicaid information for beneficiaries who were never dual enrolled and had Medicaid enrollment.

We identify disabled beneficiaries as having disabled status as described in Section 3.1. The age calculation is described in Section 3.1. Race categories are the same as defined in Table 2 in Section 4.2 in the row categories. The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F.

4.4.4 Table 4D – Avg

Row Definitions

The Average (Avg) series presents annual averages. Each row either presents the population that serves as the denominator for the rows below it, or the average payment associated with the same row in Table 4A.

Column Definitions

The following tables use the same column definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J, 6A, and 6D. These definitions are described in the documentation for Table 4A.

4.4.5 Table 4E – Age Avg

Row Definitions

The Avg series presents annual averages. Each row either presents the population that serves as the denominator for the rows below it, or the average payment associated with the same row in Table 4B.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.4.6 Table 4F – Race Avg

Row Definitions

The Avg series presents annual averages. Each row either presents the population that serves as the denominator for the rows below it, or the average payment associated with the same row in Table 4C.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.4.7 Table 4G – FFS only

Population

The population is restricted to beneficiaries where all months enrolled are FFS. Duals must be FFS in both Medicare and Medicaid for all months enrolled.

Row Definitions

The following tables use the same row definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J. These definitions are described in the documentation for Table 4A.

Column Definitions

The following tables use the same column definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J, 6A, and 6D. These definitions are described in the documentation for Table 4A.

4.4.8 Table 4H – Age – FFS only

Population

The population is restricted to beneficiaries where all months enrolled are FFS. Duals must be FFS in both Medicare and Medicaid for all months enrolled.

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.4.9 Table 4I – Race – FFS only

Population

The population is restricted to beneficiaries where all months enrolled are FFS. Duals must be FFS in both Medicare and Medicaid for all months enrolled.

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.4.10 Table 4J – FFS only Avg

Population

The population is restricted to beneficiaries where all months enrolled are FFS. Duals must be FFS in both Medicare and Medicaid for all months enrolled.

Row Definitions

The Avg series presents annual averages. Each row either presents the population that serves as the denominator for the rows below it, or the average payment associated with the same row in Table 4G.

Column Definitions

The following tables use the same column definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J, 6A, and 6D. These definitions are described in the documentation for Table 4A.

4.4.11 Table 4K – Age – FFS only Avg

Population

The population is restricted to beneficiaries where all months enrolled are FFS. Duals must be FFS in both Medicare and Medicaid for all months enrolled.

Row Definitions

The Avg series presents annual averages. Each row either presents the population that serves as the denominator for the rows below it, or the average payment associated with the same row in Table 4H.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.4.12 Table 4L – Race – FFS only Avg

Population

The population is restricted to beneficiaries where all months enrolled are FFS. Duals must be FFS in both Medicare and Medicaid for all months enrolled.

Row Definitions

The Avg series presents annual averages. Each row either presents the population that serves as the denominator for the rows below it, or the average payment associated with the same row in Table 4I.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.5 Table 5 Series

The Table 5 series encompasses monthly utilization, much like Table 1B. If a beneficiary has both Medicare-Only and Dual months, utilization and enrollment will be binned

appropriately (i.e., categorized mutually exclusively into each). Similarly, if a beneficiary changes dual status over the year, those months will be binned appropriately. Utilization in months without enrollment is not considered. All population counts reflect monthly counts; otherwise, the tables follow the same structure as the Table 4 series.

4.5.1 Table 5A

Row Definitions

The following tables use the same row definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J. These definitions are described in the documentation for Table 4A. Population rows present number of months instead of beneficiaries. Each month is classified independently.

Column Definitions

Columns here are defined the same as Table 2 as described in Section 4.2.

4.5.2 Table 5B – Age

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.5.3 Table 5C – Race

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.5.4 Table 5D Avg

Row Definitions

The Avg series presents monthly averages. Each row either presents the monthly count that serves as the denominator for the rows below it, or the PMPM associated with the same row in Table 5A.

Column Definitions

The following tables use the same column definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J, 6A, and 6D. These definitions are described in the documentation for Table 4A.

4.5.5 Table 5E – Age Avg

Row Definitions

The Avg series presents monthly averages. Each row either presents the monthly count that serves as the denominator for the rows below it, or the PMPM associated with the same row in Table 5B.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.5.6 Table 5F – Race Avg

Row Definitions

The Avg series presents monthly averages. Each row either presents the monthly count that serves as the denominator for the rows below it, or the PMPM associated with the same row in Table 5C.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.5.7 Table 5G – FFS only

Population

The population is restricted to FFS months only. Duals must be FFS in Medicare and Medicaid.

Row Definitions

The following tables use the same row definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J. These definitions are described in the documentation for Table 4A.

Column Definitions

The following tables use the same column definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J. These definitions are described in the documentation for Table 4A.

4.5.8 Table 5H – Age – FFS only

Population

The population is restricted to FFS months only. Duals must be FFS in Medicare and Medicaid.

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.5.9 Table 5I – Race – FFS only

Population

The population is restricted to FFS months only. Duals must be FFS in Medicare and Medicaid.

Row Definitions

Tables 4B, 4C, 4E, 4F, 4H, 4I, 4K, 4L, 5B, 5C, 5E, 5F, 5H, 5I, 5K, and 5L use the same row definitions. This is described in the documentation for Table 4A for the rows under the "Medicare" and "Medicaid" headings.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.5.10 Table 5J – FFS only Avg

Population

The population is restricted to FFS months only. Duals must be FFS in Medicare and Medicaid.

Row Definitions

The Avg series presents monthly averages. Each row either presents the monthly count that serves as the denominator for the rows below it, or the PMPM associated with the same row in Table 5G.

Column Definitions

The following tables use the same column definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J. These definitions are described in the documentation for Table 4A.

4.5.11 Table 5K – FFS only – Age Avg

Population

The population is restricted to FFS months only. Duals must be FFS in Medicare and Medicaid.

Row Definitions

The Avg series presents monthly averages. Each row either presents the monthly count that serves as the denominator for the rows below it, or the PMPM associated with the same row in Table 5H.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.5.12 Table 5L – FFS only – Race Avg

Population

The population is restricted to FFS months only. Duals must be FFS in Medicare and Medicaid.

Row Definitions

The Avg series presents monthly averages. Each row either presents the monthly count that serves as the denominator for the rows below it, or the PMPM associated with the same row in Table 5I.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.6 Table 6 Series

4.6.1 Table 6A

Population

The population for Table 6A is restricted to beneficiaries with all months enrolled in FFS.

Column Definitions

The following tables use the same column definitions: 4A, 4D, 4G, 4J, 5A, 5D, 5G, and 5J, 6A, and 6D. These definitions are described in the documentation for Table 4A.

Row Definitions

Table 6A includes Medicare types of service (rows under the "Medicare" heading) and Medicaid types of service (rows under the "Medicaid" heading). "Medicare Only" beneficiaries can only have utilization in Medicare types of service. "Medicaid Only" beneficiaries can only have utilization in Medicaid types of service. Dual beneficiaries can have utilization in both Medicare and Medicaid types of service. There are eight rows of statistics for each type of service (e.g. Rows 8-15 are for ER admissions).

For each type of service, the first row (e.g., Medicare – Inpatient – Number of ER Admits) counts the total number of service units (admits, days, visits, events, or scripts) in the column subpopulation. The second row (e.g., Medicare – Inpatient – Number of beneficiaries with no ER Admits) counts the number of beneficiaries in the subpopulation with 0 service units. The third row (e.g., Medicare – Inpatient – Number of beneficiaries with at least 1 ER Admit) counts the number of beneficiaries in the subpopulation with at least one service unit. The second and third rows should always sum to the total number of beneficiaries in the subpopulation ("Overall – Number of beneficiaries in population" row).

The fourth and fifth rows (e.g., Medicare – Inpatient – Number of beneficiaries with 1 to 2 ER Admits/Number of beneficiaries with above 2 ER Admits) use a threshold to partition the beneficiaries with at least one service unit. The fourth row counts the number of beneficiaries in the subpopulation with number of service units between one and the threshold. The fifth row counts the number of beneficiaries in the subpopulation with number of service units greater than the threshold. The fourth and fifth rows should always sum to the third row.

To select the threshold for the fourth and fifth rows, we first find the 75th percentile utilization over all the beneficiaries in the FFS population with at least one service unit. (For Medicare types of service, we use dual and "Medicare Only" beneficiaries, and for Medicaid types of service, we use dual and "Medicaid Only" beneficiaries.) To avoid skewing the 75th percentiles towards 0, we do not consider beneficiaries in the subpopulation with 0 service units (i.e., beneficiaries counted in the second row). Then, we round the utilization to obtain the final threshold (for units<=5, do not change; for 5<units<=25, round down to nearest 5; for 25<units<=50, round down to nearest 25; for 50<units<=100, round down to nearest 50; for units>100, round down to nearest 100). The threshold for each type of service is consistent across each column subpopulation and each population.

The sixth, seventh, and eighth rows (e.g., Medicare – Inpatient – Among users, ER Admits mean/median/IQR [25th percentile, 75th percentile]) provide summary statistics (mean, median, and interquartile range) for beneficiaries in the subpopulation with at least one service unit (i.e., beneficiaries counted in the third row). To avoid skewing the summary statistics towards 0, we do not consider beneficiaries in the subpopulation with 0 service units (i.e., beneficiaries counted in the second row).

Tables 6A-6C use the same row definitions.

Code Samples:

The code below obtains the raw thresholds (before the rounding).

```
data mdcr_total; set dual_unique mdcr_unique; run;
proc means data=mdcr_total noprint;
var #Medicare types of service ;
output out=table10_p75_mdcr p75= / autoname;
run;
```

```
data mdcd_total; set dual_unique mdcd_unique; run;
proc means data=mdcd_total noprint;
var #Medicaid types of service ;
output out=table10_p75_mdcd p75= / autoname;
run;
```

The code below calculates the mean, median, 25th percentile, and 75th percentile for type of service. Here, we break out the summary statistics by table population and column subpopulation.

```
#loop over dual, Medicare only, and Medicaid only
proc means data=&grp._unique noprint;
var #types of service ;
class subpopulation/mlf preloadfmt;
class tab_pop_b tab_pop_c tab_pop_f;
format subpopulation $bpopfmt.;
output out=table10_summ_&grp. mean= median= p25= p75= / autoname;
run;
```

4.6.2 Table 6B – Age

Population

The population for Table 6B is restricted to beneficiaries with all months enrolled FFS.

Row Definitions

Tables 6A-6F use the same row definitions. These definitions are discussed in the documentation for Table 6A.

Column Definitions

The following tables use the same column definitions: 4B, 4E, 4H, 4K, 5B, 5E, 5H, 5K, 6B, 6E. These definitions are described in the documentation for Table 4B.

4.6.3 Table 6C – Race

Population

The population for Table 6C is restricted to beneficiaries with all months enrolled FFS.

Row Definitions

Tables 6A-6F use the same row definitions. These definitions are discussed in the documentation for Table 6A.

Column Definitions

The following tables use the same column definitions: 4C, 4F, 4I, 4L, 5C, 5F, 5I, 5L, 6C, and 6F. These definitions are described in the documentation for Table 4C.

4.7 Table 7 Series

Row Definitions

The Table 7 series presents counts and percentages of beneficiaries with chronic conditions. Table 4.7 shows the chronic conditions and groupings used in Rows 8-21 (Rows 8-11 show counts of beneficiaries broken out by number of chronic conditions, and Rows 12-21 show counts of beneficiaries broken out by chronic condition grouping). The "1-year lookback – Number of Beneficiaries Meeting Enrollment Criteria" rows present the population that is continuously enrolled in FFS in CY 2012 while alive. The "2-year lookback – Number of Beneficiaries Meeting Enrollment Criteria" rows present the population that is continuously enrolled in FFS in 2011 and 2012 while alive with at least one month in 2012. The "3-year lookback – Number of Beneficiaries Meeting Enrollment Criteria" row presents the population that is continuously enrolled in FFS 2010-2012 while alive with at least one month in 2012. Subsequent rows after a population definition are restricted to that population.

Table 1: Chronic Conditions Used in 2012 Analysis

Full List of Chronic Conditions	Rows 8-11 Conditions	Rows 12-21 Conditions
Alzheimer's Disease and Related Disorders or Senile Dementia	Alzheimer's & Dementia	Alzheimer's & Dementia
Chronic Kidney Disease	Chronic Kidney Disease	Diabetes, ESRD, & Other Endocrine/Renal
Diabetes	Diabetes	Diabetes, ESRD, & Other Endocrine/Renal
Anxiety Disorders	Anxiety Disorders	Mental Health
Bipolar Disorder	Bipolar Disorder	Mental Health
Depressive Disorders	Depressive Disorders	Mental Health
Personality Disorders	Personality Disorders	Mental Health
Schizophrenia	Schizophrenia	Mental Health
Osteoporosis	Osteoporosis	Arthritis, Osteoporosis and Other Joint-related
Rheumatoid Arthritis/Osteoarthritis	Rheumatoid Arthritis/Osteoarthritis	Arthritis, Osteoporosis and Other Joint-related
Chronic Obstructive Pulmonary Disease and Bronchiectasis; Asthma	Asthma & COPD	Asthma & COPD
Blindness and Visual Impairment; Glaucoma; Cataract	Visual Impairment	Hearing & Visual Impairment
Deafness and Hearing Impairment	Deafness and Hearing Impairment	Hearing & Visual Impairment
Autism Spectrum Disorders; Intellectual Disabilities and Related Conditions; Learning Disabilities; Other Developmental Delays	Intellectual/Developmental Disability	Intellectual/Developmental Disability
Cerebral Palsy	Cerebral Palsy	Health Conditions Associated with Physical Disability

Full List of Chronic Conditions	Rows 8-11 Conditions	Rows 12-21 Conditions
Cystic Fibrosis and Other Metabolic Developmental Disorders	Cystic Fibrosis and Other Metabolic Developmental Disorders	Health Conditions Associated with Physical Disability
Epilepsy	Epilepsy	Health Conditions Associated with Physical Disability
Multiple Sclerosis and Transverse Myelitis	Multiple Sclerosis and Transverse Myelitis	Health Conditions Associated with Physical Disability
Muscular Dystrophy	Muscular Dystrophy	Health Conditions Associated with Physical Disability
Mobility Impairments; Spinal Cord Injury; Traumatic Brain Injury and Nonpsychotic Mental Disorders due to Brain Damage	Mobility Impairments	Health Conditions Associated with Physical Disability
Spina Bifida and Other Congenital Anomalies of the Nervous System	Spina Bifida and Other Congenital Anomalies of the Nervous System	Health Conditions Associated with Physical Disability
Ischemic Heart Disease; Acute Myocardial Infarction; Heart Failure	Heart Disease/Failure	Heart Disease/Failure & Other Cardiovascular
Stroke/Transient Ischemic Attack	Stroke/Transient Ischemic Attack	Heart Disease/Failure & Other Cardiovascular
Lung Cancer; Breast Cancer; Colorectal Cancer; Endometrial Cancer; Prostate Cancer	Cancer (Breast, Colorectal, Endometrial, Lung, Prostate)	Cancer (Breast, Colorectal, Endometrial, Lung, Prostate)

4.7.1 Table 7A – Combined

Row Definitions

Populations require FFS enrollment in both Medicare and Medicaid. Chronic conditions can occur in either Medicare or Medicaid.

Column Definitions

The following tables use the same column definitions: 2, 3, 7A, 7B, 7C. These definitions are described in the documentation for Table 2.

4.7.2 Table 7B – Medicare

Row Definitions

Populations require FFS enrollment in Medicare. Chronic conditions reflect Medicare claims data.

Column Definitions

The following tables use the same column definitions: 2, 3, 7A, 7B, 7C. These definitions are described in the documentation for Table 2.

4.7.3 Table 7C – Medicaid

Row Definitions

Populations require FFS enrollment in Medicaid. Chronic conditions reflect Medicaid claims data.

Column Definitions

These definitions are described in the documentation for Table 2.

4.8 Table 8 Series

Tables 8A and 8B report enrollment counts and number of months enrolled for dual-eligible beneficiaries by FFS and managed care enrollment status.

4.8.1 Table 8A

Row Definitions

The first "Overall" row counts the number of beneficiaries in the population, the second lists the average age of each subpopulation, and the third counts beneficiaries who died during 2012.

The rows under the Number of Duals" heading break down the dual beneficiaries by dual status, ESRD status, and age. Dual status is based on the most recent month of dual enrollment. We identify ESRD beneficiaries as having at least one ESRD month in 2012. The age calculation is described in Section 3.1.

The rows under the "Original entitlement to Medicare" heading report the original reason for entitlement to Medicare (MDCR_ORIG_STUS _CD). The rows under the "Current entitlement to Medicare" heading report the current reason for entitlement to Medicare (MDCR_CURR_STUS _CD), which is obtained from the last month of 2012 when the beneficiary is still alive. If the value is "10", the reason for entitlement is age. If the value is "20", the reason for entitlement is disability. If the value is "11", "21", or "31", the reason for entitlement is ESRD. For any other value, the reason for entitlement is unknown.

The rows under the "Medicaid eligibility group" heading report beneficiaries' Medicaid eligibility groups (MDCD_MAS), which is obtained from the most recent month of Medicaid enrollment. If the value is "1", the eligibility group is SSI or low-income family. If the value is "3", the eligibility group is poverty-related. If the value is "2", the eligibility group is medically needy. If the value is "5", the eligibility group is Section 1115 waiver. If the value is "4", the eligibility group is other.

The rows under the "Average number of months enrolled" heading report the average number of months enrolled in 2012. These rows report the average number of months enrolled as a dual, the number of months only enrolled in Medicare, and the number of months only enrolled in Medicaid.

The rows under the "Sex" heading report the sex of the beneficiaries based on the relevant Medicare variable (MDCR_SEX). If the value is "M", the beneficiary is male; if the value is "F", the beneficiary is female; otherwise, the beneficiary's sex is unknown.

The rows under the "Race/ethnicity" heading report the race of the beneficiaries based on the relevant variable in Medicare (MDCR_RACE) or the relevant variable in Medicaid

(MDCD_RACE) if the Medicare variable is missing. For MDCR_RACE: If the value is "1" the beneficiary is non-Hispanic white; if the value is "2" the beneficiary is non-Hispanic African American; if the value is "4" the beneficiary is Asian; if the value is "5" the beneficiary is Hispanic/Latino; if the value is "6" the beneficiary is North American Native; otherwise, the beneficiary race is Other. For MDCD_RACE: if the value is "1" the beneficiary is non-Hispanic white; if the value is "2" the beneficiary is non-Hispanic African-American; if the value is "3" the beneficiary is American Indian/Alaska Native; if the value is "4" the beneficiary is Asian; if the value is "5" or "7" the beneficiary is Hispanic/Latino; if the value is "6" the beneficiary is Native Hawaiian/Pacific Islander.

The rows under the "Medicaid LTSS users" heading report LTSS enrollment in 2012, based on the definitions given in Section 3.1.

Finally, the rows under the "Residence" heading report residence type (i.e., urban, rural, or unknown).

Tables 8A, 8B, 10A, 10B, 12A, and 12B use the same row definitions.

Column Definitions

The column breakdowns are based on FFS and managed care enrollment status. If the number of Part C months is 0 and the number of Part D only months is 0, then the beneficiary is exclusively Medicare FFS. If the number of Part C months equals the number of Medicare enrolled months, then the beneficiary is exclusively MA. If the beneficiary is not exclusively FFS or exclusively MA, but has nonzero Parts A and B months, Part A only months, Part B only months, or Part C months, then the beneficiary is a mix of Medicare FFS and MA. The other beneficiaries are Part D only for all Medicare enrolled months, and are counted in the overall Total column but not in any of the breakdowns.

If all Medicaid enrolled months are FFS as defined in Section 4.4.1, the beneficiary is counted in the columns marked "Exclusively Medicaid FFS". If all Medicaid enrolled months are CMC, then the beneficiary is counted in the columns marked "Exclusively Medicaid MC". The other beneficiaries, those with LMC or a mix of FFS and CMC, are counted in the columns marked "Medicaid FFS MC Mix".

4.8.2 Table 8B

Row Definitions

Tables 8A, 8B, 10A, 10B, 12A, and 12B use the same row definitions except the B series excludes beneficiaries who died in 2012, and the subsequent row numbers are decreased by 1. These are detailed in the documentation for Table 8A.

Column Definitions

Tables 8A and 8B use the same column definitions. This is detailed in the documentation for Table 8A. Note that the "Mix of Medicare FFS and MA" columns appear in Table 8A but not in Table 8B as no month can be both FFS and MA in Medicare.

4.9 Table 9 Series

4.9.1 Table 9A

Row Definitions

Table 9A provides the average spending over all dual beneficiaries, non-ESRD full duals, non-ESRD QMB-only duals, non-ESRD partial duals, and ESRD duals. Dual status is based on the most recent month of dual enrollment, and we identify ESRD beneficiaries as having at least one ESRD month. Medicare spending has the same definition as Table 4 (MDCR_MEDICARE_FFS _AMT + MDCR_PD_LICS_CPP + MDCR_PART_C_MDCR_PRM). Medicaid spending has the same definition as Table 4 (MDCD_FFS_AMT + MDCD_HMO_AMT + MDCD_PHP_AMT + MDCD_PCCM_AMT). The additional breakdowns for duals are defined below (in the format Row Heading = Definition/Calculation):

- Annual average spending per beneficiary - Medicare - FFS A/B = MDCR_MEDICARE_FFS_AMT
- Annual average spending per beneficiary - Medicare - Part D = MDCR_PD_LICS_CPP
- Annual average spending per beneficiary - Medicare - MA = MDCR_PART_C_MDCR_PRM
- Annual average spending per beneficiary - Medicaid - FFS = MDCD_FFS_AMT
- Annual average spending per beneficiary - Medicaid - FFS - Acute = sum(MDCD_{x}_AMT - MDCD_{x}_AMT_HCBS),
  where {x} = {IP, PHYS, DN, OPR, OPH, CLIN, LX, ST, AB, TS, TC, RS, SH, HS, NMS, NPS, PDN, RNHC}
- Annual average spending per beneficiary - Medicaid - FFS - Drugs = MDCD_RX_AMT
- Annual average spending per beneficiary - Medicaid - FFS - LTSS = sum(MDCD_{y }_AMT) + sum(MDCD_{z}_AMT_HCBS),
  where {y} = {MHS, IPF, ICF, NF, HH, PCS},
  {z} = {IP, PHYS, DN, OPR, OPH, CLIN, LX, ST, AB, TS, TC, RS, SH, HS, NMS, NPS, PDN, RNHC, OS, US}
- Annual average spending per beneficiary - Medicaid - FFS - Other or unknown = sum(MDCD_{x}_AMT - MDCD_{x}_AMT_HCBS), where {x} = {OS, US}
- Annual average spending per beneficiary - Medicaid - Managed care = (MDCD_HMO_AMT + MDCD_PHP_AMT + MDCD_PCCM_AMT)
- Annual average spending per beneficiary - Medicaid - Managed care - Comprehensive plan = MDCD_HMO_AMT
- Annual average spending per beneficiary - Medicaid - Managed care - Limited-benefit plan = MDCD_PHP_AMT
- Annual average spending per beneficiary - Medicaid - Managed care - PCCM = MDCD_PCCM_AMT

These sums then repeat for non-ESRD QMB-only duals, non-ESRD partial duals, and ESRD duals. Tables 9A-9B, 11A-11B, 13A, and 13B use the same row definitions, though the B series does not contain the "Overall – Died during year" row.

Column Definitions

Table 9A uses the same column configurations as Tables 8A without percentage breakouts for beneficiaries. This is detailed in the documentation for Table 8A.

4.9.2 Table 9B By Month

Row Definitions

Table 9B uses the same row definitions as Table 9A without the Died during year row, as described above.

Column Definitions

Table 9B uses the same column configurations as Table 8B without percentage breakouts for beneficiaries. This is detailed in the documentation for Table 8B.

4.10 Table 10 Series

4.10.1 Table 10A

Row Definitions

Tables 8A, 10A, and 12A use the same row definitions. These are detailed in the documentation for Table 8A.

Column Definitions

The column breakdowns are based on the original reason for entitlement to Medicare. The age, disability, and ESRD columns have the same definitions as the rows under the "Original/Current entitlement to Medicare" headings of Table 8A, and the definitions are described in the documentation for Table 8A.

4.10.2 Table 10B By Month

Row Definitions

Tables 8B, 10B, and 12B use the same row definitions. These are detailed in the documentation for Table 8B.

Column Definitions

The column breakdowns are based on the original reason for entitlement to Medicare. The age, disability, and ESRD columns have the same definitions as the rows under the "Original/Current entitlement to Medicare" headings of Table 8B, and the definitions are described in the documentation for Table 8A.

4.11 Table 11 Series

4.11.1 Table 11A

Row Definitions

Tables 9A, 11A, and 13A use the same row definitions. These are described in the documentation for Table 9A.

Column Definitions

The column breakdowns are based on the original reason for entitlement to Medicare. The age, disability, and ESRD columns have the same definitions as the rows under the "Original/Current entitlement to Medicare" headings of Table 8A, and the definitions are described in the documentation for Table 8A.

4.11.2 Table 11B By Month

Row Definitions

Tables 9B, 11B, and 3B use the same row definitions. These are described in the documentation for Table 9B.

Column Definitions

The column breakdowns are based on the original reason for entitlement to Medicare. The age, disability, and ESRD columns have the same definitions as the rows under the "Original/Current entitlement to Medicare" headings of Table 8A, and the definitions are described in the documentation for Table 8A.

4.12 Table 12 Series

4.12.1 Table 12A

Tables 12A-12B report enrollment counts and months of enrollment for dual-eligible beneficiaries, by LTSS use.

Row Definitions

Tables 8A, 10A, and 12A use the same row definitions. These are detailed in the documentation for Table 8A.

Column Definitions

The "Any Home Health" columns capture all beneficiaries who receive an OASIS assessment during the year. The "Long Term Institutional NF User" columns capture all beneficiaries who receive an MDS quarterly assessment, which indicates long term institutional care. The "Any NF (Not LTI) NF User" columns capture beneficiaries who receive an MDS assessment but do not receive a quarterly assessment. The LTSS columns are based on the LTSS use in 2012, and the definitions are described in Section 3.1. Of the LTSS columns, the columns

marked “Exclusive” apply the LTSS hierarchy whereas the columns marked “Not Exclusive” show all beneficiaries that receive that type of LTSS services regardless of other types.

Code Samples:

Sample code documentation for the LTSS breakdowns is given in Section 3.1.

4.12.2 Table 12B By Month

Row Definitions

Tables 8B, 10B, and 12B use the same row definitions. These are detailed in the documentation for Table 8B.

Column Definitions

The column breakdowns reflect the same columns as 12A described above.

4.13 Table 13 Series

4.13.1 Table 13A

Row Definitions

Tables 9A, 11A, and 13A use the same row definitions. These are described in the documentation for Table 9A.

Column Definitions

The column breakdowns are based on the same columns as 12A.

4.13.2 Table 13B By Month

Row Definitions

Tables 9B, 11B, and 13B use the same row definitions. These are described in the documentation for Table 9B.

Column Definitions

The column breakdowns reflect the same columns as 12B described above.

4.14 Table 14

Row Definitions

The “Overall – Has MDS PPS Assessment” row indicates if a beneficiary received a MDS PPS assessment and the “Overall – Has MDS Assessment” row indicates if a beneficiary received any MDS assessment. The “Overall – Had OASIS Assessment in CY 2012” row indicates the population that received an OASIS assessment. The rows under the “FFS Population Measures” heading detail information about the Fee-for-Service population and

payment. The LTSS figures are defined as in Section 3.1. The rows under the "MDS Measures" heading are breakdowns of measures originating from the Minimum Data Set (MDS), broken down by overall BIMS score (on a scale of 0-15) and payment-related Activities of Daily Living (ADL) measures from the survey. Similarly, the rows under the "OASIS Measures" heading include information originating from OASIS.

Column Definitions

Table 14 uses similar column definitions as Table 2 as described in Section 4.2, except that the Medicaid Only columns are presented as totals and are not broken out by disabled/not disabled.

5 APPENDIX

This section defines variables used in the Code Samples provided in Sections 1-4. Table 2 contains definitions of Medicare and Medicare MSF data variables, but does not include definitions for any intermediate variables Acumen uses in SAS while developing this dataset.

Table 2: Data Dictionary for Selected Variables

Variable	Description
MDCR_MEDICARE_FFS_AMT	Total Medicare payments on all Parts A & B FFS claims
MDCD_TS_AMT_HCBS	Total Medicaid spending on all Transportation Services (MSIS TYPE-OF-SERVICE = 26) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_TS_AMT	Total Medicaid spending on all Transportation Services (MSIS TYPE-OF-SERVICE = 26) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_TC_AMT_HCBS	Total Medicaid spending on all Targeted Case Management Services (MSIS TYPE-OF-SERVICE = 31) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_TC_AMT	Total Medicaid spending on all Targeted Case Management Services (MSIS TYPE-OF-SERVICE = 31) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_ST_AMT_HCBS	Total Medicaid spending on all Sterilizations (MSIS TYPE-OF-SERVICE = 24) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_ST_AMT	Total Medicaid spending on all Sterilizations (MSIS TYPE-OF-SERVICE = 24) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_RNHC_AMT_HCBS	Total Medicaid spending on all Religious Non-Medical Health Care Institutions Services (MSIS TYPE-OF-SERVICE = 39) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_RNHC_AMT	Total Medicaid spending on all Religious Non-Medical Health Care Institutions Services (MSIS TYPE-OF-SERVICE = 39) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_RS_AMT_HCBS	Total Medicaid spending on all Rehabilitation Services (MSIS TYPE-OF-SERVICE = 33) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_RS_AMT	Total Medicaid spending on all Rehabilitation Services (MSIS TYPE-OF-SERVICE = 33) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_SH_AMT_HCBS	Total Medicaid spending on all PT, OT, Speech, Hearing Language Services (MSIS TYPE-OF-SERVICE = 34) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_SH_AMT	Total Medicaid spending on all PT, OT, Speech, Hearing Language Services (MSIS TYPE-OF-SERVICE = 34) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_PDN_AMT_HCBS	Total Medicaid spending on all Private Duty Nursing Services (MSIS TYPE-OF-SERVICE = 38) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_PDN_AMT	Total Medicaid spending on all Private Duty Nursing Services (MSIS TYPE-OF-SERVICE = 38) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_RX_AMT	Total Medicaid spending on all Prescribed Drugs (MSIS TYPE-OF-SERVICE = 16) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_PHYS_AMT_HCBS	Total Medicaid spending on all Physician Services (MSIS TYPE-OF-SERVICE = 8) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_PHYS_AMT	Total Medicaid spending on all Physician Services (MSIS TYPE-OF-SERVICE = 8) for all FFS claims (TYPE-OF-CLAIM = 1, 5).

Variable	Description
MDCD_PCS_AMT_HCBS	Total Medicaid spending on all Personal Care Services (MSIS TYPE-OF-SERVICE = 30) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_PCS_AMT	Total Medicaid spending on all Personal Care Services (MSIS TYPE-OF-SERVICE = 30) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_OPH_AMT_HCBS	Total Medicaid spending on all Outpatient Hospital Services (MSIS TYPE-OF-SERVICE = 11) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_OPH_AMT	Total Medicaid spending on all Outpatient Hospital Services (MSIS TYPE-OF-SERVICE = 11) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_OS_AMT_HCBS	Total Medicaid spending on all Other Services (MSIS TYPE-OF-SERVICE = 19) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_OPR_AMT_HCBS	Total Medicaid spending on all Other Practitioners Services (MSIS TYPE-OF-SERVICE = 10) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_OPR_AMT	Total Medicaid spending on all Other Practitioners Services (MSIS TYPE-OF-SERVICE = 10) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_NF_AMT_HCBS	Total Medicaid spending on all Nursing Facility Services (MSIS TYPE-OF-SERVICE = 7) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_NF_AMT	Total Medicaid spending on all Nursing Facility Services (MSIS TYPE-OF-SERVICE = 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_NPS_AMT_HCBS	Total Medicaid spending on all Nurse Practitioner Services (MSIS TYPE-OF-SERVICE = 37) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_NPS_AMT	Total Medicaid spending on all Nurse Practitioner Services (MSIS TYPE-OF-SERVICE = 37) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_NMS_AMT_HCBS	Total Medicaid spending on all Nurse Midwife Services (MSIS TYPE-OF-SERVICE = 36) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_NMS_AMT	Total Medicaid spending on all Nurse Midwife Services (MSIS TYPE-OF-SERVICE = 36) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_US_AMT_HCBS	Total Medicaid spending on all missing, invalid, or unknown services (MSIS TYPE-OF-SERVICE = 99+) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_MHS_AMT_HCBS	Total Medicaid spending on all Mental Hospital Services (MSIS TYPE-OF-SERVICE = 2) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_MHS_AMT_HCBS	Total Medicaid spending on all Mental Hospital Services (MSIS TYPE-OF-SERVICE = 2) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_MHS_AMT	Total Medicaid spending on all Mental Hospital Services (MSIS TYPE-OF-SERVICE = 2) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_MHS_AMT	Total Medicaid spending on all Mental Hospital Services (MSIS TYPE-OF-SERVICE = 2) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_LX_AMT_HCBS	Total Medicaid spending on all Lab and X-Ray Services (MSIS TYPE-OF-SERVICE = 15) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_LX_AMT	Total Medicaid spending on all Lab and X-Ray Services (MSIS TYPE-OF-SERVICE = 15) for all FFS claims (TYPE-OF-CLAIM = 1, 5).

Variable	Description
MDCD_IPF_AMT_HCBS	Total Medicaid spending on all IPF Services (MSIS TYPE-OF-SERVICE = 4) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_IPF_AMT_HCBS	Total Medicaid spending on all IPF Services (MSIS TYPE-OF-SERVICE = 4) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_IPF_AMT	Total Medicaid spending on all IPF Services (MSIS TYPE-OF-SERVICE = 4) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_IPF_AMT	Total Medicaid spending on all IPF Services (MSIS TYPE-OF-SERVICE = 4) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_IP_AMT_HCBS	Total Medicaid spending on all Inpatient Services (MSIS TYPE-OF-SERVICE = 1) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_IP_AMT	Total Medicaid spending on all Inpatient Services (MSIS TYPE-OF-SERVICE = 1) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_ICF_AMT_HCBS	Total Medicaid spending on all ICF Services (MSIS TYPE-OF-SERVICE = 5) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_ICF_AMT	Total Medicaid spending on all ICF Services (MSIS TYPE-OF-SERVICE = 5) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_HS_AMT_HCBS	Total Medicaid spending on all Hospice Services (MSIS TYPE-OF-SERVICE = 35) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_HS_AMT	Total Medicaid spending on all Hospice Services (MSIS TYPE-OF-SERVICE = 35) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_HH_AMT_HCBS	Total Medicaid spending on all Home Health Services (MSIS TYPE-OF-SERVICE = 13) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_HH_AMT	Total Medicaid spending on all Home Health Services (MSIS TYPE-OF-SERVICE = 13) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_DN_AMT_HCBS	Total Medicaid spending on all Dental Services (MSIS TYPE-OF-SERVICE = 9) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_DN_AMT	Total Medicaid spending on all Dental Services (MSIS TYPE-OF-SERVICE = 9) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_CLIN_AMT_HCBS	Total Medicaid spending on all Clinic Services (MSIS TYPE-OF-SERVICE = 12) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_CLIN_AMT	Total Medicaid spending on all Clinic Services (MSIS TYPE-OF-SERVICE = 12) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_PHP_AMT	Total Medicaid spending on all Capitated Payments to PHPs (MSIS TYPE-OF-SERVICE = 21 and TYPE-OF-CLAIM = 2, 5).
MDCD_HMO_AMT	Total Medicaid spending on all Capitated Payments to HMO, HIO or Pace Plans (MSIS TYPE-OF-SERVICE = 20 and TYPE-OF-CLAIM = 2, 5).
MDCD_PCCM_AMT	Total Medicaid spending on all Capitated Payments for PCCMs (MSIS TYPE-OF-SERVICE = 22 and TYPE-OF-CLAIM = 2, 5).
MDCD_AB_AMT_HCBS	Total Medicaid spending on all Abortions (MSIS TYPE-OF-SERVICE = 25) when enrolled in an HCBS Program (MSIS PROGRAM-TYPE = 6, 7) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_AB_AMT	Total Medicaid spending on all Abortions (MSIS TYPE-OF-SERVICE = 25) for all FFS claims (TYPE-OF-CLAIM = 1, 5).
MDCD_FFS_AMT	Total Medicaid payments on all FFS Payments (MSIS TYPE-OF-SERVICE ≠ 20, 21, 22).

Variable	Description
MDCR_OBIC	The Original Beneficiary Identification Code (OBIC), which indicates whether the beneficiary was originally the primary claimant.
MDCR_SN_AMT	Sum of Medicare spending on all Skilled Nursing Facility claims.
MDCR_OP_AMT	Sum of Medicare spending on all Outpatient FFS claims
MDCR_HS_AMT	Sum of Medicare spending on all Hospice claims.
MDCR_HH_AMT	Sum of Medicare spending on all Home Health FFS claims.
MDCR_OP_ER_AMT	Sum of Medicare spending on all Emergency Room services in the Outpatient file (sum of REVPMT). Emergency Room use indicated with revenue center code of 0450, 0451, 0452, 0456, 0459, or 0981
MDCR_DM_AMT	Sum of Medicare spending on all Durable Medical Equipment FFS claims
MDCR_PB_AMT	Sum of Medicare spending on all Carrier FFS claims
MDCR_PD_LICS_CPP	Sum of low-income cost-sharing (LICS_AMT) and covered D plan paid amount (CPP_AMT)
MDCD_STATE	State of residence
MDCR_PB_ASC_AMT	Payment for Part B Carrier services where TYPSRVCB is F
MDCR_PART_D_BENE_PRM	Part D premium payments made by the beneficiary
MDCR_PART_C_BENE_PRM	Part C premium payments made by the beneficiary
MDCR_PART_C_MDCR_PRM	Part C premium payments made by Medicare
MDCR_PART_B_BENE_PRM	Part B premium payments made by the beneficiary.
MDCD_BOE	Indicator showing the basis of eligibility (BASIS-OF-ELIGIBILITY = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A)
MDCR_PART_AB_ENR	Indicator showing enrollment in: (i) FFS Parts A/B; (ii) FFS Part A only; (iii) FFS Part B only; (iv) MA
MONTH	Indicator of month
MDCR_ORIG_STUS_CD	Indicates if the beneficiary was originally enrolled as aged or disabled, with or without ESRD, based on BENE-MDCR-STUS-CD
MDCR_IP_ER_STAY_AMT	Amount paid on all inpatient claims from stays that included an Emergency Room visit. Emergency Room use indicated with revenue center code of 0450, 0451, 0452, 0456, 0459, or 0981.
MDCR_OP_RENAL_AMT	Amount paid for services performed at Renal Disease Treatment Facilities (provider: 2300-2999, 3500-3699, or 3700-3799)
MDCR_IP_PSYC_AMT	Amount paid for services performed at Psychiatric Hospitals (provider number 4000-4499 or a third character of 'S' or 'M').
MDCR_IP_OTHER_AMT	Amount paid for services performed at provider types not elsewhere classified.
MDCR_OP_OTHER_AMT	Amount paid for services performed at provider types not elsewhere classified
MDCR_IP_LTCH_AMT	Amount paid for services performed at Long Term Care Hospitals (provider number 2000-2299).
MDCR_IP_IRF_AMT	Amount paid for services performed at Inpatient Rehabilitation Facilities (provider number 3025-3099 or with a third character of 'T' or 'R').
MDCR_IP_CAH_AMT	Amount paid for services performed at Critical Access Hospitals (provider number 1300-1399).
MDCR_IP_ACUTE_NON_CAH_AMT	Amount paid for services performed at Acute Care Hospitals (provider number 0000-0999).
MDCR_OP_RURAL_AMT	Amount paid for services performed at a Rural Health Clinic (provider number 3800-3974, 3975-3999, 3400-3499, 8500-8899 or 8900-8999)
MDCR_OP_FQHC_AMT	Amount paid for services performed at a Federally Qualified Health Center (provider: 1000-1199 or 1800-1989)