Glossary for 2015 Medicare Fee-For-Service (FFS) Excel Workbook

The monthly county fee-for-service per capita cost calculation is a component used in determining the Medicare Advantage benchmarks. This glossary defines variable names and formulas used by Medicare actuaries in determining the county fee-for-service per capita costs. All calculations are performed at the county-level unless otherwise noted.

Fee-for-service: The original system of obtaining care under Medicare wherein beneficiaries can choose to obtain health care services from any Medicare-approved doctor or hospital, or other health care supplier that accepts Medicare reimbursement.

There are five worksheets in the Excel workbook:

(1) County Overview: Displays FFS per capita cost for a selected county based on the re-priced claims data, and provides intermediate step-by-step formulation of the FFS cost.

(2) ffs2015_worksheet: Contains county level re-priced claims and other relevant data used to calculate the FFS costs.

(3) absplits: Part A and Part B USPCC percentages used to calculate a county's composite enrollment (CTYNUMYR) formula #13 below.

(4) payment_data: The calendar year 2008-2012 original claims, claims adjustments by type of services, and the resultant re-priced claims.

(5) risk_scores: Weighted calendar year 2008-2012 risk scores using 2/3 of the 2013 CMS-HCC model and 1/3 of the 2014 CMS-HCC model. Used to standardize the FFS per capita cost.

The workbook contains Macros and/or ActiveX content which must be **enabled** to work properly. By default, Excel protects the user from running macros. When this workbook is opened, Excel may display a prompt asking if you want to enable macros – respond positively. If not prompted, you may have to manually change the protective security settings in your version of Excel. If for some reason you obtain unexpected results, completely exit from all open Excel applications and restart the workbook.

The workbook provides two ways to initiate the calculation and display of a specific county's FFS cost. On the County Overview sheet, simply directly enter a valid county code into the cell G5. The available valid county codes can be looked up in column B of the ffs2015_worksheet sheet, where the data is sorted by county codes within state. Alternatively you may use the State and County drop down lists in the 5th row of the County Overview worksheet to initiate the calculation. The valid county code will then automatically be entered into cell G5 and the FFS cost calculations will display.

To preserve its integrity, the workbook is locked and password protected for most editing functions. Questions and comments can be e-mailed to Clifton.Maze@cms.hhs.gov .

Formulas and explanation of terms used in the Excel Workbook

1. **FFS6_IME = FFS5_CRED_BN − PHINDOLR**
   The final projected calendar year 2015 monthly county FFS per capita cost less the Indirect Medical Education (IME) deduction.

2. **PHINDOLR = PHINPCT × AVGIME × FFS5_CRED_BN**
   The indirect medical education (IME) deduction expressed as a dollar amount. Section 161 of the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) required CMS to phase out indirect medical education (IME) amounts from MA capitation rates.

   a. PHINPCT: The maximum allowed percentage of the AVGIME that can be deducted in the contract year from the FFS rate.

   b. AVGIME: The per capita costs for IME payments as a percentage of FFS costs. (5 year average)

   c. FFS5 _CRED_BN = FFS4_CRED × BN_FAC_C: The blended credibility FFS per capita cost adjusted for budget neutrality.

3. **BN_FAC_C:** A budget neutrality factor applied to the blended credibility FFS per capita cost (FFS4_CRED). This factor ensures that combined projected FFS payments in counties where the credibility approach is used will be equal to the combined payments that would have been paid without the credibility approach. It is calculated based only on counties within the state where the credibility factor has a value less than 1.0 (average enrollment less than 1000).

$$BN\_FAC\_C = \frac{a}{b} \, ,$$

$$where\ a = \sum_{cred<1}^{all\ ctys} \left(FFS2\_DoD \times \sum_{YR=2008}^{2012} \frac{ADNUMYRB}{5} \right)$$

$$and\ b = \sum_{cred<1}^{all\ ctys} \left(FFS4\_CRED \times \sum_{YR=2008}^{2012} \frac{ADNUMYRB}{5} \right)$$

4. FFS4_CRED =
 (FFS2_DoD) × (CRED_FAC) + (FFS3_CBSA) × (1 − CRED_FAC)
The blended credibility FFS per capita cost calculation for counties where the enrollment is less than 1000.

$$\text{a. } \mathrm{CRED\_FAC} = \sqrt[2]{\frac{\sum_{YR=2008}^{2012} \frac{ADNUMYRB}{5}}{1000}}$$

5. FFS3_CBSA
The term "core based statistical area" (CBSA) refers to a geographic region based around an urban area of at least 10,000 people. The two categories of CBSAs are metropolitan statistical area (50,000 or more people) and micropolitan statistical area (10,000 - 49,999 people).

$$\mathrm{FFS3\_CBSA} = \frac{a}{b} \, ,$$

$$where\ a = \sum_{\substack{\text{in CBSA}}}^{\text{all ctys}} (\ \mathrm{FFS2\_DoD}\ \times \sum_{YR=2008}^{2012} \frac{ADNUMYRB}{5}\ ) \qquad \mathrm{i.\,e.,ffs\ payments\ in\ CBSA}$$

$$and\ b = \sum_{\substack{\text{in CBSA}}}^{\text{all ctys}} \sum_{YR=2008}^{2012} \frac{ADNUMYRB}{5} \qquad \mathrm{i.\,e.,avg\ enrollment\ in\ CBSA}$$

6. FFS2 _DoD = FFS1_GME $\times$ DoD_FAC
FFS per capita cost with DoD adjustment, where DoD_FAC is a predetermined value that adjusts for services received by dual-eligible military retirees outside of Medicare under the Department of Defense's (DoD) TRICARE health program.

7. FFS1_GME = CTYAGA × USPCC × (1 − AVGGME)
Basic projected county per capita cost less GME adjustment.

    a. CTYAGA: The standardized average geographic adjustment.

$$CTYAGA = \frac{AGA}{NATAGA}$$

    b. USPCC: The combined Medicare Parts A and B projected national average Medicare per capita cost (USPCC) in the FFS sector in the contract year.

    c. AVGGME: Direct graduate medical education (GME) payments as a percent of total FFS claims. Based on 5 years of data. This payment adjustment was authorized by the Balanced Budget Act of 1997.

$$AVGGME = \frac{\sum_{2008}^{2012} DGME\ payments}{\sum_{2008}^{2012} Total\ Parts\ A\ \&\ B\ payments}$$

8. AGA: The average geographic adjustment is an index which measures the 5 year average historical relationship of a county's per capita Medicare expenditures to the national average per capita Medicare expenditures. Division by *AVG5SCOR* serves to remove the effects of the health status and demographics of the beneficiaries in the county – also called standardization.

$$AGA = \frac{1}{AVG5SCOR} \times \sum_{YR=2008}^{2012} \left(\frac{GEOINYR}{5}\right)$$

9. NATAGA: The national average geographic adjustment is the enrollment weighted average of all the county AGA's (uses 2012 enrollment).

$$NATAGA = \frac{\sum_{in\ U.S.}^{all\ ctys} (AGA \times CTYNUM12)}{\sum_{in\ U.S.}^{all\ ctys} CTYNUM12}$$

10. AVG5SCOR: The 5 year enrollment weighted average of all a county's fee-for-service enrollees' blended risk scores.

$$AVG5SCOR = \frac{\sum_{YR=2008}^{2012} (RISCORYR \times RISNUMYR)}{\sum_{YR=2008}^{2012} RISNUMYR}$$

11. **GEOINYR = CPCCYRAB ÷ NPCCYRAB**

    An annual index which measures the Parts A and B county per capita costs relative to the national per capita cost. For any year, this index is the ratio of all actual Medicare program per capita costs for the county, divided by the actual program per capita cost for the nation. Geographic indices are calculated for five consecutive annual periods (2008-2012), and then averaged to reduce variation. See AGA calculation.

12. **NPCCYRAB:**   National Per Capita Cost for part A and B.

    The national average per capita cost for a calendar year is the enrollment weighted average of all the county per capita costs for the year.

    $$\text{NPCCYRAB} = \sum_{\text{in U.S.}}^{\text{all ctys}} (\text{CPCCYRAB} \times \text{CTYNUMYR}) \div \sum_{\text{in US}}^{\text{all ctys}} \text{CTYNUMYR}$$

13. **CTYNUMYR = (ADNUMYRA) $\times$ (PT_A_PCT) + (ADNUMYRB) $\times$ (PT_B_PCT)**

    Composite Part A and Part B enrollment

    The county per capita cost for a calendar year is based on the actual fee-for-service payments made for all beneficiaries residing in the county. The payments made for the Aged (age 65 and over) and the Disabled (less than age 65) are grouped together. However payments for Part A (ADCOSYRA) and Part B (ADCOSYRB) are totaled separately.

    Similarly, the number of beneficiaries in the county is summarized separately for Part A (ADNUMYRA) and Part B (ADNUMYRB).

    Next, the Part A (CPCCYRA) and Part B (CPCCYRB) county per capita costs can be calculated by dividing the payments by the number of beneficiaries. Finally, these two per capita costs are summed to give the overall county per capita cost (CPCCYRAB).

14. **CPCCYRAB = CPCCYRA + CBPCCYRB**

    Combined Per Capita Cost for Parts A and B, Aged and Disabled beneficiaries

15. **CPCCYRA = ADCOSYRA ÷ ADNUMYRA ÷ 12**

    Per Capita Cost for Part A Aged and Disabled beneficiaries

16. **CPCCYRB = ADCOSYRB ÷ ADNUMYRB ÷ 12**

    Per Capita Cost for Part B Aged and Disabled beneficiaries

17. **ADCOSYRA = AACOSTYR + DACOSTYR**

    Total Part A payments for Aged and Disabled beneficiaries

18. ADCOSYRB = ABCOSTYR + DBCOSTYR

Total Part B payments for Aged and Disabled beneficiaries

19. ADNUMYRA = AANUMYR + DANUMYR

Total number of Part A Aged and Disabled beneficiaries

20. ADNUMYRB = ABNUMYR + DBNUMYR

Total number of Part B Aged and Disabled beneficiaries

Sample County_Overview Sheet for Autauga County, Alabama

Medicare fee-for-service (FFS) calculations: MA ratebook CY2015

Select State and County from Drop Down menu or enter County Code Directly in Yellow Box

State		County		Enter Code
ALABAMA	▼	AUTAUGA	▼	**01000**

FFS1_GME	$716.54
RATIO	1.0000

FFS1_GME	USPCC	CTYAGA(stnd)	AGA(5yr avg)	NATAGA	AVGGME
$716.54	**768.84**	0.9345	0.9292	0.9943	0.0027

FFS2_DOD	716.54
FFS3_CBSA	712.01

Year	Geo Index	Pt A PCC	Pt B PCC	Total PCC	Nat'l PCC
2008	0.8986783	308.96	327.93	636.89	708.70
2009	0.8410286	277.73	321.44	599.17	712.43
2010	0.8018000	265.00	316.96	581.96	725.82
2011	0.8348324	268.39	349.18	617.57	739.75
2012	0.8298574	251.45	360.47	611.92	737.38

CRED_FAC	1.0000
FFS4_CRED	716.54
BN_FAC_C	1.0000
FFS5_CRED_BN	716.54
AVGIME	0.0083
PHINPCT	1.0000
PHINDOLR	5.93
FFS6_IME	710.61

PART A ENROLLEES

Year	Aged	Disabled	Total	Pt A Pct	Weighted Enrollees
2008	4,214	1,160	5,374	0.5179	5,151
2009	4,125	1,155	5,280	0.5253	5,045
2010	4,504	1,172	5,676	0.5108	5,443
2011	4,648	1,177	5,825	0.4705	5,559
2012	4,751	1,199	5,950	0.4637	5,667

PART A PAYMENTS

Year	Aged	Disabled	All
2008	16,241,782	3,682,741	19,924,523
2009	14,445,625	3,151,492	17,597,117
2010	15,033,483	3,016,086	18,049,569
2011	15,901,898	2,858,344	18,760,242
2012	15,590,133	2,363,653	17,953,786

PART B ENROLLEES

Year	Aged	Disabled	Total	Pt B Pct
2008	3,936	976	4,912	0.4821
2009	3,814	972	4,786	0.4747
2010	4,195	1,005	5,200	0.4892
2011	4,320	1,002	5,322	0.5295
2012	4,404	1,019	5,423	0.5363

PART B PAYMENTS

Year	Aged	Disabled	All
2008	15,863,118	3,466,155	19,329,273
2009	14,921,302	3,539,598	18,460,900
2010	16,479,732	3,298,673	19,778,405
2011	18,503,968	3,796,133	22,300,101
2012	19,345,315	4,112,739	23,458,054

Average Risk Score For Payment Year						
Year	2008	2009	2010	2011	2012	**AVG5SCOR**
RISNUM	4,962	4,902	5,340	5,527	5,636	
RISCOR	0.8918	0.8994	0.9165	0.9057	0.9117	0.9054