



National
Family Planning
& Reproductive Health Association

Cost Analysis Data Entry
Workbook Guide
January 2016

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I. Introduction to Cost Analysis

A cost analysis allocates program costs using the relative values for each type of service provided by the program, as defined by CPT codes. A relative value is a numerical representation of the amount of time, material, and level of skill required to provide a particular service in relation to all other medical services. Total program costs are distributed across services based on required resources. This allows providers to identify a true cost for providing a service that takes into consideration more than just face value. The costs for purchased services such as contraceptives, labs, and other medications are also utilized to complete the cost analysis.

A cost analysis has many uses beyond the development of an agency's fee schedule. Cost analysis data can be used to:

- compare the cost-to-payer reimbursement to assess where a program is making or losing money,
- provide insight when re-negotiating reimbursement rates with health insurance plans, and
- identify opportunities to reduce costs when they are found to exceed reimbursement rates.

This cost analysis uses the Resource Based Relative Value Scale (RBRVS) that was established for use with the Medicare program. RBRVS provides a single set of relative values by which all services are scaled. Relative Value Units (RVUs) are established for each clinic procedure. The RBRVS consists of three elements:

- physician (clinician) work;
- practices (overhead) expenses (net of malpractice expenses); and
- cost of malpractice insurance.

This guide is intended for use with Cost Analysis Data Entry Workbook (January 2016).

II. Overview of Workbook

The cost analysis data entry workbook consists of 11 worksheets designed to collect the data needed for a cost analysis. There are three types of worksheets: data entry, data analysis, and reference data.

Six worksheets require data entry:

- Overview of Cost Analysis Workbook
- Table 1: Visit Utilization by CPT Code, Including Charges
- Table 2: Annual Program Expenses
- Table 3: Unit Costs of Purchased Contraceptives, Laboratory Services, and Other Dispensed Medications
- Table 4: Unit Cost and Utilization of Oral Contraceptives
- Table 5: RVU Calculation

Three worksheets provide computation used in the analysis of data:

- Table 6: Cost Analysis Essential Indicators
- Table 7: Service Cost Summary
- Table 8: Purchased Contraceptives, Laboratory Services, and Other Dispensed Medications Cost Summary

Two worksheets contain reference data used in data computation:

- Table 9: 2015 RVUs
- Table 10: 2015 Geographic Practice Cost Index (GPCI)

Color-coding throughout the workbook denotes the following:

- blues cells require data entry and
- beige cells correspond to data that has been calculated from data elements in the table or from other worksheets.

III. Worksheet Guidance

Overview of the Cost Analysis Workbook

Purpose

This worksheet provides an overview of the entire workbook.

Data Required

- Study Year for Cost Analysis (cell D2)
- Name of Agency (cell D3)

Tips for Completion

- ✓ Data are typically collected for a one-year period. If data by CPT code or site program costs are not available for a year, a sample set may be utilized. A minimum of three months of data is recommended.

Table 1: Visit Utilization by CPT Code, Including Charges

Purpose

To collect the service utilization for the program year by CPT code and the full-fee charge associated with each service.

Data Required

Data entry for CPT codes is divided into four sections:

- Most Frequently Used – most visits in family planning programs fall within the Evaluation and Management (E/M) services guidelines. These guidelines distinguish visits by new and established patients. In general, E/M codes used by family planning providers for these services will include CPT 99201 – 99205 for new patients and CPT 99211 – 99215 for established patients. In addition, family planning programs often use the preventive medicine codes for new patient (CPT 99384 – 99386) and established patient (CPT 99394 – 99396) routine visits.

Examples of other CPT codes in the worksheet include IUD insertion or removal (CPT 58300, 58301), diaphragm or cervical cap fitting (CPT 57170), contraceptive implant insertion or removal (CPT 11981, 11982, 11983), DMPA injections (CPT 96372), and colposcopy (CPT 57452).

- Additional Services – this section allows for the entry of additional services covered by the family planning program that are not included in the first section of the table. This may include state-specific codes. Enter any state specific-codes in the first rows of this section.

- In-House Labs – this section is intended for use by agencies that perform the listed tests on-site. Service utilization should not be included for tests sent out to reference labs.
- Education and Counseling – preventive counseling codes (CPT 99401 – 99404) are provided for use by programs that bill using these codes.

For each section of CPT codes, the following data should be entered into the worksheet:

- Service utilization by CPT code (column C)
- Full-fee charge (column D) – for each CPT code, the full fee on the fee schedule.
- Medicaid (column E) – the Medicaid reimbursement payment for CPT code.
- Other insurance (column F) – reimbursement payment for a selected health insurance plan (other than Medicaid) for each CPT code.
- User notes (column G) – notes about the specific CPT code that provide more detail related to the analysis.

Data on family planning program’s total visits and unduplicated users are included in rows 62–64.

- Total unduplicated users (cell B63)
- Total visits (cell B64)

Data Element Definitions

- Total services (cell C60) – the sum of all services entered into column C.

Tips for Completion

- ✓ The “Other Insurance” column should be used for comparing a high-volume (non-Medicaid) payer’s reimbursement rates to the agency’s full-fee charges.

Table 2: Annual Program Expenses

Purpose

This spreadsheet is intended to collect all the expenses for the program related to delivery of the services defined in Table 1 for the study year. Cost for contraceptives, purchased laboratory tests, and medications are not included in this table.

Data Required

- Direct Costs – (column B) enter the dollar amount of costs for the relevant category that are related to the delivery of services defined in Table 1.
- Indirect Costs (cell B28) – Enter a total amount for overhead or indirect costs that are not directly related to the delivery of services. Indirect may include shared staff, leadership, audit, and legal.
- In-Kind Services (cell B31) – Enter the estimated value of donated goods or services.

Data Element Definitions

- Total direct (cell B25) – the spreadsheet will calculate the total direct expenses by adding all expenses into direct costs.
- Total expenses (cell B33) – the spreadsheet will calculate total expenses by adding all expenses entered into column B.

Tips for Completion

- ✓ A possible source of data for this worksheet is Title X program budget.
- ✓ As you enter the expenses in this table, assess how comfortable you are with the accuracy of the data. Do any of the numbers stand out to you?

Table 3: Unit Costs of Purchased Contraceptives, Laboratory Services, and Other Dispensed Medications

Purpose

To assess for the cost of contraceptives, purchased labs, and other medications dispensed in the family planning program. Data for full-fee charges, Medicaid, and another payer are entered for a comparison analysis.

Data Required

This worksheet is divided into three sections:

- Purchased Contraceptives Supplies
- Purchased Laboratory Tests
- Other Dispensed Medications

For each type of contraceptive, purchased laboratory, and other dispensed medication listed in column A enter the following data:

- Average unit cost (column B) – data for oral contraceptives will be automatically populated from Table 4. Enter the unit cost for the rest of items in column A.
- Full-fee charge (column D) – for each item in column A enter the full charge listed on the agency's fee schedule.
- Medicaid (column E) – the Medicaid reimbursement rate for each item in column A.
- Other insurance (column F) – the reimbursement rates for a (non-Medicaid) health insurance plan for each item in column A.
- Comment (column G) – notes about the specific CPT code that provide more detail related to the analysis.

Tips for Completion

- ✓ It is recommended to use the last cost of the year if costs for supplies changed throughout the year.

Table 4: Unit Cost and Utilization of Oral Contraceptives

Purpose

To account for the variety of oral contraceptives used, the table arrives at a weighted unit cost based on the utilization of each oral contraceptive brand. The derived weighted unit cost for oral contraceptives calculated on this table will be transferred into Table 3 (cell B9).

Data Required

For each contraceptive brand listed enter the following:

- Average unit cost for study year (column B)
- Utilization for study year (column C) – the number of packs or pills dispensed during the study year.

Data Elements Definition

The spreadsheet will calculate:

- Weight (column D) – the percentage of dispensed contraceptives for each brand as a portion of the total dispensed oral contraceptives.
- Unit cost (column E) – the weighted unit cost, as calculated by multiplying the average unit cost times weight.

Tips for Completion

- ✓ It is recommended to use the last cost of the year if costs for supplies changed throughout the year.
- ✓ The unit used to calculate the average unit cost must match the units used for utilization (column C). For example, if the cost listed is per pill then the utilization must be the total number of pills dispensed.

Table 5: RVU Calculation

Purpose

To calculate the total RVUs for the programs based on the volume of services provided in Table 1. Data for this table are automatically populated from Table 1 and Table 9 (2015 RVUs). National RVUs are adjusted based on geography through the Geographic Practice Cost Index (GPCI).

Data Required

The key data element required for this table is the GPCI for an agency's location (found in Table 10), which includes 3 key factors: work, overhead, and malpractice. To enter the GPCI into Table 5:

1. Find the agency's locality in Table 10 (column A).
2. Enter the name of the locality into Table 5 (cell G5).
3. From the corresponding locality row:

- a. Enter the Work GPCI into Table 5 (cell G65) from Table 10 (column B).
- b. Enter the Overhead GPCI into Table 5 (cell H65) from Table 10 (column C).
- c. Enter the Malpractice GPCI into Table 5 (cell I65) from Table 10 (column D).

(If any state-specific codes were entered into Table 1)

State-specific codes do not have RVU assigned, thus an estimate RVU for the code must be assumed. The following is a method to determine an estimate RVU:

1. Compare the full-fee charge or the Medicaid reimbursement for the state-specific code to the other codes in the charge.
2. Identify a CPT with an equal or close-to-equal fee or reimbursement to the state code.
3. Copy and paste the RVUs for the comparable code into columns C, D, and E of the state-specific code.
4. Complete this for all state-specific codes.

Data Element Definitions

The total RVUs for each CPT code are automatically populated into column K. This value is calculated by multiplying the number of service units from Table 1 (column C) by the adjusted RVU in Table 5 (column J).

The total RVUs amount for the program is automatically populated in cell K68. It is calculated by adding all of the total RVUs for each CPT codes. Subtotal RVUs for each section of the worksheet are provided for reference in column L (cells L40, L56, and L61).

Table 6: Cost Analysis Essential Indicators

Purpose

To examine the program cost analysis using key indicators. These indicators can be compared to benchmarks (when available) as a means to assess the program costs, as well as to compare different sites within an agency.

Data Required

Data used to create this worksheet are automatically populated, therefore no data entry is required.

Data Element Definitions

- Cost per user – total expenses from Table 2 (cell B33) divided by unduplicated users from Table 1 (cell B63).
- Cost per visit – total expenses from Table 2 (cell B33) divided by total visits from Table 1 (cell B64).
- Visits per user – total visits from Table 1 (cell B64) divided by unduplicated users from Table 1 (cell B63).

- Staff cost per visit – total staff expenses from Table 2 (cells B7–B9) divided by total visits from Table 1 (cell B64).
- Total RVUs – the sum of all RVUs for the service utilization from Table 5 (cell K68).
- Average RVUs per visit – total RVUs from Table 5 (cell K68) divided by total visits from Table 1 (cell B64).
- Staff cost per RVU – total expenses from Table 2 (cell B33) divided by total RVUs from Table 5 (cell K68).
- Average cost per RVU – total expenses from Table 2 (cell B33) divided by total RVUs from Table 5 (cell K68).
- Staff cost per RVU – total staff expenses from Table 2 (cells B7, B8, and B9) divided by Total RVUs from Table 5 (cell K68).

Tips for Completion

- ✓ Use the “User Notes” field to enter questions or comments for other reviewers.

Table 7: Service Cost Summary

Purpose

To summarize the service utilization, service cost, full-fee charge amount, and reimbursement rates of payers.

Data Required

Data used to create this worksheet are automatically populated, therefore no data entry is required.

Data Element Definitions

- Service utilization (column C) – data are pulled from Table 1 (column C) for each CPT code.
- Estimated RVU cost (column D) – the cost is calculated by multiplying the average cost per RVU from Table 6 (cell B15) times the adjusted RVU for the CPT code from Table 5 (column J).
- Full-fee charge (column E) – data are pulled from Table 1 (column D) for each CPT code.
- Medicaid (column F) – data are pulled from Table 1 (column E) for each CPT code.
- Other payer (column G) – data are pulled from Table 1 (column F) for each CPT code.

Benchmarks and Analysis Guidance for Tables 6 and 7

Benchmarks

The following are key national measures to consider when analyzing the data:

- From the 2014 Family Planning Annual Report¹ (Table 13)
 - Average visits per user: **1.7** with range by region of 2.0 to 1.5.
 - Clinician productivity (average visits per clinician full-time equivalent): **1676** with a range by region of 2569 and 1021.
- Office of Family Planning Program Assessment and Rating Tool
 - Actual cost per user (in 2007): **\$229.32** with a projected target for 2013 of 301.85².
- From the 2014 HRSA Uniform Data System (UDS) for Federally Qualified Health Centers³ (Table 5 – Clinician Productivity)
 - Average annual visits per OB/GYN full-time equivalent: **2969**
 - Average visits per NP, PA, and CNM full-time equivalent: **2704**
- To determine a benchmark for average cost per visit consider using the Medicare conversion factor of \$35.83 multiplied by the agency's average RVU per visit.

Analysis Guidance for Tables 6 and 7

The following presents a suggested approach for examining the results of the cost analysis using the Tables 6 and 7.

1. Compare cost per CPT code to the full fee on the agency's fee schedule:
 - a. If the cost is lower than the full fee, are the program fees comparable to other providers in the area?
 - b. If the cost is higher than the full-fee charge, is it possible to modify the fee schedule to reflect the cost while still remaining competitive in the program area?
2. Compare cost per CPT to Medicaid reimbursement or other payer:
 - a. If the cost is higher than Medicaid reimbursement or other payer:
 - i. Why are the program costs this high?
 1. How does the cost per visit and user compare to benchmarks?
Consider the following factors:
 - a. Is clinician productivity low? How does clinician productivity compare to benchmarks?
 - b. Has service utilization volume declined without any reduction in staff or non-personnel costs?

¹ Fowler, C.I., Gable, J., Wang, J., & Lasater, B. (2015, August). Family Planning Annual Report: 2014 national summary. Research Triangle Park, NC: RTI International. Accessed: www.hhs.gov/opa/pdfs/title-x-fpar-2014-national.pdf

² Institute of Medicine (2009). A Review of the HHS Family Planning Program: Mission, Management, and Measurement of Results, pages 91–93. Washington, DC: The National Academies Press.

³ US Department of Health and Human Services, Health Resources & Services Administration. 2014 Uniform Data Set, Table 5 – Staffing and Utilization. Accessed: <http://bphc.hrsa.gov/uds/datacenter.aspx?q=t5&year=2014&state=>

- c. What costs are allocated to multiple services? How are these costs allocated? Possible costs may include:
 - i. Rent
 - ii. Program leadership
 - iii. Other overhead
 - d. How is overhead allocated?
 - ii. Are there opportunities to renegotiate contracts with health insurance plans to increase reimbursement rates? Are there particular health insurance plans reimbursing at a higher rate than others that can be leveraged in negotiations?
- 3. Additional Analysis Questions
 - a. How do visits per user compare to benchmarks? Where does the agency lie in the range?
 - i. Factors to consider:
 - 1. What is the breakdown of contraceptive coverage? For example, is there a large percentage of users on Depo-Provera that visit four times per year?
 - 2. Are there clinicians in the health center every day? If not, do patients come in to see a nurse and then have to return to the health center for a subsequent visit to see the clinician? What other policies does the health center have that require patients return for follow-up visits?
 - b. How accurate is coding for visits? Are providers coding for all services provided? What trends in distribution of CPT codes can be identified? For example, is there one E/M code that is used more frequently than the other codes?

Table 8: Purchased Contraceptives, Laboratory Services, and Other Dispensed Medications Cost Summary

Purpose

To summarize the average unit cost and full-fee charge amount of contraceptives, laboratory services, and dispensed medications, comparing the summary to reimbursement rates of payers.

Data Required

This table includes the actual cost for each contraceptive method and other pharmaceuticals dispensed by the program, as well as the average unit cost for oral contraceptives. The cost that the agency pays for purchased laboratory tests is also entered into this workbook. The cost and full-fee charges will automatically populate from data entered into Table 3 and, as such, is not directly entered into Table 8.

Tips for Completion

- ✓ The “Other” column should be used for comparing a high-volume (non-Medicaid) payer reimbursement rates to the full-fee charges. Additional columns can be added if there are multiple high-volume payers.

Analysis Guidance for Table 8

The following presents a suggested approach for examining the results of the cost analysis using the data in Table 8. Make sure to review each individual item listed in column A.

- Are *full-fee charges* enough to cover costs of contraceptives, laboratory services, and medications?
 - If not, can the agency increase the administrative fee to ensure full-fee charges are higher than cost?
- Are *payer reimbursement rates* enough to cover costs of contraceptives, laboratory services, and medications?

IV. Reference Data Guidance

There are two tables of reference data from the Medicaid Physician Fee Schedule:

- Table 9: Relative Value Units by CPT Code
- Table 10: Geographic Practice Cost Index

These tables are updated annually by The Centers for Medicare & Medicaid Services (CMS). When conducting a cost analysis, it is recommended to use these two tables for the calendar year associated with the year of the study. If the study is done for a Fiscal Year that falls within two calendar years, it is recommended to use the data for the latest year.

Table 9: 2015 Relative Value Units

Purpose

This reference table lists all of the RVUs for CPT codes as developed by CMS. Data from this table are used in Table 5 for determining the RVU for each CPT code.

Data Required

No data entry is required. The table is locked to ensure no changes are made.

Table 10: 2015 Geographic Practice Cost Index (GPCI)

Purpose

This reference table lists each GPCI factor for each locality as developed by CMS. There are three factors for each RVU element: work, overhead, and malpractice. Data from this table are entered into Table 5 Row 64, Columns G, H, and I.

Data Required

No data entry is required. The table is locked to ensure no changes are made.