

Capstone Project Calculations

This document provides formulas and instructions for determining various costs associated with the community health program you are developing as your Capstone Project. Refer to the information provided here to ensure proper completion of your project.

Example Scenario

In this example, financial information is calculated based on establishing a clinic to perform wellness checks in Phoenix, Arizona.

1. Calculating Staff Salaries

Calculation	Formula
Total Physician Salaries	Number of physicians × Average specialty salary
Total Nurse Salaries	Number of nurses × Average nurse salary
Total Support Staff Salaries	Number of support staff × Average salary of hospital staff
Total Salaries	Total salaries for physicians + nurses + support staff

Example

Staff	Quantity	Average Salary	Cost
Primary Care Physician	1	\$175,000	\$175,000
Nurses	2	\$80,000	\$160,000
Support staff	2	\$50,000	\$100,000
Total Salaries			\$435,000

2. Fringe Benefit Expense

Fringe benefits include employee benefits such as health and life insurance, retirement plans, and others. For the purposes of the Capstone Project, fringe benefits are set by hospital system at 25% of total salaries.

$$\text{Total salaries} + (0.25 \times \text{total salaries}) = \text{Total salary expense}$$

Example

Total Salaries	Fringe Benefits Expense (<i>salary × 25%</i>)	Cost (<i>Total salary + Fringe expense</i>)
\$435,000	\$108,750	\$543,750

3. Overhead (Indirect) Costs

Overhead (indirect) costs and fixed practice costs include, but are not limited to, general support staff and related costs, electronic medical records, insurance, taxes, floor space, facility, and administration. For the Capstone Project, the hospital system has set these expenses at 40% of total salary expense. Overhead and fixed costs are calculated as:

$$\text{Total Salaries Expense} + (0.40 \times \text{Total Salaries Expense}) = \text{Overhead Costs}$$

$$\text{Total Salaries Expense} + \text{Overhead Costs} = \text{Total Clinic Costs for Salaries and Overhead}$$

Example

Total Salaries Expense	Overhead Costs (<i>Total salary expense × 40%</i>)	Total Clinic Costs (<i>Total salary expense + Overhead costs</i>)
\$543,750	\$217,500	\$761,250

4. RVU Reimbursement

Physicians are paid by **relative value units (RVU)** assigned by the Centers for Medicare & Medicaid Services (CMS) and adjusted by a geographical cost index (GCI) also assigned by CMS. RVUs are assigned for work (treating the patient), practice (the clinic where the patient is treated), and malpractice (funds to help provide malpractice protection). The GCI is the same for the geography for all treatments in that area. The total RVUs are multiplied by a standard conversion (dollar amount set by CMS which is adjusted each year) that is currently \$34.89.

Note: See the section, **Physician Fee Lookup Procedure**.

Calculation	Formula
Adjusted Work RVUs	<i>Work RVUs × Work GCI</i>
Adjusted Practice RVUs	<i>Practice RVUs × Practice GCI</i>
Adjusted Malpractice RVUs	<i>Malpractice RVUs × Malpractice RVU</i>
Total RVUs	<i>Adjusted Work RVUs + Adjusted Practice RVUs + Adjusted Malpractice RVUs</i>
Reimbursement per visit	<i>Total RVUs × \$34.89</i>

Example

RVU Code (5 digits) = G0438

Conversion Rate (Constant set by CMS) = \$34.89 (2021)

Geographical Cost Index = Arizona

Calculation	Result
Work RVU (2.605) × Work GCI (1.00)	2.600
Practice RVU (2.100) × Practice GCI (0.951)	1.9971
Malpractice RVU (0.150) × Malpractice GCI (0.857)	0.12855
Total RVU	4.72565
Total RVU (4.72565) × \$34.89	Per visit = \$164.88

5. Adjustment for Variable Costs of Treating Each Patient

Variable costs are the costs incurred for treating each patient. Normally it consists of supplies such as gloves, needles, syringes, gowns, or other items used in the practice. Different methods exist to assign variable costs. For the Capstone Project, the hospital system will cover variable costs by assigning (or taking) 10% of total reimbursement of each patient visit.

$$\text{Reimbursement per visit} - (0.10 \times \text{Reimbursement per patient}) = \text{Net reimbursement per visit}$$

Example

Net reimbursement per visit	-10% Adjustment	Per Visit
\$164.88	- (0.10 × \$164.88)	\$148.39

6. Breakeven Analysis

The breakeven analysis determines the number of patient visits needed, given the net reimbursement per patient, to cover all clinic costs.

$$\text{Number of patient visits needed to break even} = \text{Total costs} \div \text{Net reimbursement per patient}$$

Example

Total Costs	Net Reimbursement Per Patient	Patient Visits Per Year
\$771,250	\$148.39	5,198

Annual Number of Visits	Number of Days / Year	Patient Visits Per Day
5,198	250	20.79

Physician Fee Lookup Procedure

Use these instructions to guide you through the Week 3 Collaborative Assignment and your Capstone Project.

1. Go to [CMS.gov Physician Fee Overview](#).
2. Click **Begin Search** towards the bottom of the page.
3. Review the usage license and click **Accept**.
4. On the following screen titled, **Search the Physician Fee Schedule**, click the dropdown menu under **Type of Information** and select **Relative Value Units**.

Overview | Search the Physician Fee Schedule | Documentation and Files | Physician Fee Schedule (PDF)

Search the Physician Fee Schedule

Data Updated: 07/01/2021

Use this search to view adjusted pricing amounts that reflect variations in pricing costs from area to area.

Select search parameters.

Year

2021

[See notes for selected year](#)

Type of Information

Relative Value Units

Select Healthcare Common Procedural Coding System (HCPCS) criteria.

HCPCS Criteria

Single HCPCS Code

HCPCS Code

Modifier

All Modifiers

Search fees

5. Under **HCPCS Criteria**, **Single HCPCS Code** should be selected by default. If it isn't, select it from the dropdown menu. Enter the **HCPCS Code** in the highlighted field shown below. In the **Modifiers** field, **All Modifiers** should be selected.

[Overview](#) | [Search the Physician Fee Schedule](#) | [Documentation and Files](#) | [Physician Fee Schedule \(PDF\)](#)

Search the Physician Fee Schedule

Data Updated: 07/01/2021

Use this search to view adjusted pricing amounts that reflect variations in pricing costs from area to area.

Select search parameters.

Year
2021 [See notes for selected year](#)

Type of Information
Relative Value Units

Select Healthcare Common Procedural Coding System (HCPCS) criteria.

HCPCS Criteria
Single HCPCS Code

HCPCS Code
G0438

Modifier
All Modifiers

Search fees

6. Click **Search Fees**.
7. In the **Search Results** that appear, locate the column titled **Work RVU**. In this example, this value is 2.60.

Search Results

Showing 1 - 1 of 1

HCPCS Code ▲	Modifier ▲	Short Description ▼	Proc Stat ▲	PCTC ▼	Not Used for Medicare ▼	Work RVU ▼	NA Flag for Trans Non-FAC PE RVU ▼	Transitione Non-FAC P RVU
G0438		Ppps, initial visit	A	0		2.60		2.10

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- With your mouse hovering over the search results, scroll to the right until you see the columns for **Fully Implemented Facility PE RVU** and **MP RVU**.

Search Results							
Showing 1 - 1 of 1							
NA Flag for Trans Facility PE RVU ▼	Transitioned Facility PE RVU ▼	NA Flag for Fully IMP FAC PE RVU ▼	Fully Implemented Facility PE RVU ▼	MP RVU ▼	Non-FAC PE Used for OPPS PMT AMT ▼	Facility PE Used for OPPS PMT AMT ▼	Malpractice Used for OPPS PMT AMT ▼
NA	2.10	NA	2.10	0.15	0.00	0.00	0.00

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- Return to the **Search Parameters** area above Search Results. Under **Type of Information**, select **Geographic Practice Cost Index** and, again, click **Search Fees**.

Search the Physician Fee Schedule

Data Upd

Use this search to view adjusted pricing amounts that reflect variations in pricing costs from area to area.

Select search parameters.

Year

2021

[See notes for selected year](#)

Type of Information

Geographic Practice Cost Index

Select Medicare Administrative Contractor (MAC) option.

MAC Option

All MACs

[Search fees](#)

[Reset search inputs](#)

10. Find your location. (Arizona is listed on page 4. The entire state has the same adjustment for geographic practice cost index (GPCI).)

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MAC Locality ^	MAC Description ⇅	Locality Description ⇅	GPCI Work ⇅	GPCI PE ⇅	GPCI MP ⇅
0240299	WASHINGTON	REST OF WASHINGTON	1.000	1.014	0.744
0310200	ARIZONA	ARIZONA	1.000	0.951	0.857
0320201	MONTANA	MONTANA	1.000	1.000	0.977
0330201	NORTH DAKOTA	NORTH DAKOTA	1.000	1.000	0.431
0340202	SOUTH DAKOTA	SOUTH DAKOTA	1.000	1.000	0.347
0350209	UTAH	UTAH	1.000	0.919	0.799
0360221	WYOMING	WYOMING	1.000	1.000	0.841
0411201	COLORADO	COLORADO	1.001	1.047	0.767
0421205	NEW MEXICO	NEW MEXICO	1.000	0.896	1.166
0431200	OKLAHOMA	OKLAHOMA	1.000	0.881	0.782

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11. Record the values for **GPCI Work**, **GPCI PE** (practice expense), and **GPCI MP** (malpractice).