Relative-value-unit costing for the private medical practice

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Relative-value-unit (RVU) costing for a medical practice tracks revenues and associated costs related to the procedures performed at the practice. Cost accounting, an essential component of practice management reports, offers several methods to match expenses appropriately with the products/services they represent. Resource-based relative-value-scale (RBRVS) cost accounting is unique to the medical service industry.

The RBRVS schedule assigns values to procedures and costs on a common or relative basis in three basic components: work RVU, practice expense (PE) RVU and malpractice RVU. Different geographic areas are designated and appointed a geographic price cost index or GPCI. For example the GPCI for a large city like Dallas will have a larger GPCI than a small rural town in western Texas. This GPCI adjustment sets the scale for the different payment levels that Medicare pays for the same service. This tells the consumer that getting a gallbladder removed in Dallas pays the surgeon more than if he had it done in rural Texas. The rationale behind this is the higher cost of doing business in the respective areas. The payment formula is as follows:
There are two types of PE RVUs: facility and nonfacility. We’ll deal only with the nonfacility portion. For example, take a common established patient office visit with a current procedural terminology (CPT) code of 99213 that occurred in Des Moines, Iowa, in 2002. From the Federal Register, we know to use the following payment formula:

\[
[(0.67 \times 0.959) + (0.69 \times 0.876) + (0.03 \times 0.596)] \times 36.1992 = $45.79
\]

Thus, payment for a 99213 in 2002 in Des Moines would be $45.79.

The formula seems complicated and raises the question, why RVUs? There are several answers:

- RVUs are nationally standardized — they can be used for productivity and cost benchmarking;
- The majority of third-party payers use RVU methodology; and
- RVUs are the best statistically valid measurement available — reliable, repeated measurements that yield the same results.

Prior to RVUs’ introduction, medical groups had no quantitative means of tracking provider productivity except by counting procedures performed and patients seen. Within families of codes, such as the outpatient office visit codes for new and established patients, administrators also could compare coding patterns to other groups and physicians, but that offered little beyond simple volume measures.

Cost per RVU is the cornerstone of all RVU cost analyses. It indicates the practice’s cost control vs. volume. The formula is as follows:

\[
\text{Sum of total expenses} \div \text{sum of total RVUs} = \text{cost/RVU}
\]

The cost per RVU is also the bottom line for contract negotiations based on RVUs and conversion factors. A conversion factor is simply the dollar amount paid per RVU by third-party payers. It converts RVUs into money for reimbursement of medical procedures. Multiply total RVUs for each CPT code by the conversion factor to obtain the reimbursement for each code.
Note that if the practice accepts a conversion factor lower than its blended cost per RVU, it will lose money on every procedure billed to that insurance carrier.)

This is not to say that a practice should decline any and all contracts that offer a conversion factor below the practice’s bottom-line figure. Negotiations should consider the overall volume generated by a given contract and the proportion of total practice revenue expected from the contract. In other words, make decisions based on the big picture, not on one particular scenario.

**RVU methodology**

The methodology of RVUs is based on the professional and technical services performed by physicians and the services they order to diagnose and treat patients. These services are recognized and identified by five-digit current procedural terminology (CPT) codes developed by the American Medical Association. The Centers for Medicare & Medicaid Services (CMS) has assigned values to these service codes in three major categories:

- Practice expense RVUs — related to general overhead expenses of the practice, including indirect labor expense, direct materials and supplies;
- Work expense RVUs — related to direct expenses associated with what the physician receives for payment in salary and direct benefits; and
- Malpractice expense RVUs — related solely to the cost of malpractice insurance, both for the practice and the physician.

These three expense groups make up the total of expenses that a practice incurs in its operational activities, as shown in the table, which presents sample codes and values for the services ordered and performed by physicians when diagnosing and treating patients. Note that there are three types of services. Those beginning with the number 2 are surgical procedures. The physician performs the bulk of the service, thus the work RVU component is more heavily weighted than the practice expense or malpractice expense.

Services beginning with a 7 are radiological activities that may or may not be performed by the physician, thus the higher component is in the practice expense category.
Services beginning with a 9 (evaluation and management procedures) are mainly performed by the physician, but in an office setting (standard office visits and consultations). These services are not as highly reimbursed or valued as surgical procedures but are still more heavily weighted in the work RVU component.

Malpractice RVU is usually the lowest of the three components but fluctuates relative to the work RVU.

**Allocating expenses using RVUs**

Allocating expenses using RVUs is actually quite simple. The table displays one year of sample data from a medical practice, along with the total RVUs for each expense category, as well as the total of the expense categories. If you want to know the dollar value per work RVU, practice expense RVU and malpractice RVU expense, simply divide total expenses for each category by the total RVUs in the corresponding category:

($2,850,000 ÷ 56,099.70) = $50.80 per work RVU

($2,350,368.92 ÷ 70,834.13) = $33.18 per practice expense RVU (note that practice expenses are net of malpractice insurance expenses)

($184,628.97 ÷ 7,801.18) = $23.67 per malpractice RVU

Total dollars of expense for $107.65 per total RVU

This information is valuable in that you can use the per-unit value to allocate expenses to other areas when you’re considering taking on new procedures, getting rid of unprofitable procedures and yearly budgeting for revenue and expenses.

For example, if a physician wanted to know the cost, revenue and ultimate profit of a new procedure, he could estimate this using the per-unit values times the number of procedures of expected output. Using the same sample figures from the table, we have the following scenario using fictional data from ABC Medical Associates for 2004:
1,248 Level 99214 (office/outpatient visit, established patient, 2 key components: detailed history; detailed exam; medical decision moderate complexity) office visit codes

Work RVUs = 1.10

Practice expense RVUs = 1.05

Malpractice RVUs = 0.05

Total RVUs = 2.20

If practice expenses are $33.18 per RVU and the malpractice expenses are $23.67 per malpractice RVU, compute expenses associated with those particular office visits using this formula: ($33.18 x 1.05 x 1,248) + ($23.67 x 0.05 x 1,248) = $44,957.59 of practice expenses before physicians are paid for their services.

If the same practice was offered participation in an insurance contract guaranteeing $64.54 per level 99214 office visit resulting in projected gross income of $80,545.92 ($64.54 x 1,248 procedures), the practice would have to consider the potential profit that is to be paid to the physicians of $35,588.33 ($80,545.92 revenue - $44,957.59 projected expenses) before accepting the contract.

A simpler method would be to assume the practice expense per unit of ($33.18 x 1.05) + ($23.67 x 0.05) = ($34.84 + $1.18) = $36.02 per unit. Thus, if a practice manager wanted to make 25 percent profit on each procedure performed, the minimum that he/she would accept on this contract would be $45.03 ($36.02 x 125 percent). In this example, the agreement to assume this contract would be profitable for this procedure.

In the example above, only one procedure is considered. To use this method for a total practice assessment when weighing a contract with a new insurance carrier, you must consider other variables, as well, and all procedures performed in the practice.

Although the original concept of RVUs was to define an accurate method of paying physicians for these services, the universal application and acceptance of these values by physicians and insurance carriers alike has made them a tool for costing all services performed.
notes


2. Ibid.

3. Ibid.

4. Ibid.

5. Ibid.

6. Ibid.

7. Ibid.

8. Ibid.


10. Ibid.

11. Ibid.


13. Ibid.

14. Ibid.

15. Ibid.

16. Ibid.