

Cost Analysis Helps Evaluate Contract Profitability

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A cost-accounting analysis can help group practices assess their costs of doing business and determine the profitability of managed care contracts. Group practices also can use cost accounting to develop budgets and financial benchmarks. To begin a cost analysis, group practices need to determine their revenue and cost centers. Then they can allocate their costs to each center, using an appropriate allocation basis. The next step is to calculate costs per procedure. The results can be used to evaluate operational cost efficiency as well as help negotiate managed care contracts.

Cost-accounting analysis as a management tool is a fairly new concept for group practices but one that more practice managers should consider. With accurate cost information, physicians and practice managers can assess the financial viability of their managed care arrangements as well as better manage the overall financial and business operations of the practice. By calculating a practice's per-procedure costs for each CPT code based on relative value units (RVUs), the practice can compare its actual costs with its revenue per CPT code. Also, knowing costs based on an industry standard, such as RVUs, gives group practices a benchmark by which to measure the various forms of payment. Once performed, a cost analysis can be revised to accommodate changes or used in strategic planning.

Determining Revenue and Cost Centers

The first step in a cost-accounting analysis is to establish revenue and cost centers that best reflect the group practice's operational and information needs. Revenue centers are the areas of a group practice that generate income. Cost centers are the areas of a group practice that represent overhead and administration. Cost centers do not generate income but are a viable part of a practice's business.

When establishing revenue and cost centers, considerable thought should be given to how costs will be allocated among the revenue and cost centers to obtain the most useful information for the practice. The practice could, for example, segregate its costs by clinical service categories (see Exhibit 1), location/site, physician/provider, or specialty.

A cost-benefit analysis should be applied to the cost-allocation process.

If the process requires more time and effort to collect the information than the benefit that will be gained from the results, then the information probably is not needed for decision making or control.

Allocating Costs

Once the revenue and cost centers have been determined, direct costs should be allocated to each cost and revenue center. It is important to use an allocation basis that accurately reflects the practice's resource consumption patterns. For example, it would be inappropriate to allocate the costs of medical supplies equally by specialty because the use of various medical supplies differs significantly among specialties. Likewise, billing and collection expenses per physician should not be allocated on the basis of gross charges in a multi-specialty practice in which most primary care physicians are capitated and most specialists are not.

EXHIBIT 1: EXAMPLES OF REVENUE AND COST CENTERS FOR ALLOCATION BY CLINICAL SERVICE CATEGORIES

Revenue Centers:		Cost Centers:
Office Visits	EKGs	Administration
Surgery	Sonograms	Computer Information Systems
Radiology	Mammography	Billing and Collection
Laboratory	Physical Therapy	Appointment Scheduling and Reception
Audiology	Occupational Therapy	Medical Records
Allergy	Optometry	Facility and Occupancy
Nuclear Medicine		

Note: Hospital-based group practices such as radiology and anesthesiology may have only a billing cost center or a single revenue center. Nevertheless, conducting a cost analysis can help these group practices develop a more thorough understanding of the practice's operations and the impact of clinical utilization.

Cost Analysis

Allocating costs in this manner would result in the primary care physicians being charged for expenses they did not incur.

The practice should attempt to understand how it uses its resources and whether they are used efficiently and effectively. Determining this information may require additional observation and interviewing of staff.

The cost-accounting concepts and theories presented here apply to all group practices, regardless of size or whether they are single or multi-specialty. A cost analysis, however, should take into consideration the group practice's circumstances, such as the level of physician compensation and its impact on the results of the analysis. It may be necessary to analyze costs using various levels of physician compensation, such as current level and median market level, because a physician compensation level far above fair market value will inflate the practice's actual cost of doing business. The physician compensation amount greater than market levels is additional profit and should not necessarily be used to make financial management decisions.

After direct costs have been allocated, the practice's indirect costs should be allocated to the revenue centers. This allocation essentially charges the revenue centers their fair share of the practice's support costs. Again, the basis for allocation is important. For example, it would be relevant to allocate facility and occupancy costs on the basis of square footage occupied by each revenue center rather than, say, gross charges, which may not correlate with amount or type of space occupied.

Determining Costs per Procedure

To determine costs per procedure,

the total costs in each revenue center (direct costs plus the allocated indirect costs) should be divided by the total RVUs produced by each revenue center to determine the cost per RVU. The cost per RVU then is used to determine the cost per CPT code (procedure). Exhibit 2 illustrates how to calculate the cost of radiology services. This calculation is performed for each revenue center in the analysis (eg, office visits, surgery, physician, or specialty).

It is important to note that costs per RVU are based on specific productivity levels and physicians' compensation. Because productivity is just as important as cost-allocation methods, accurate coding is vital for meaningful results. From a cost-accounting standpoint, the RVU system assumes that a certain level of time and practice resources needs to be expended to provide certain services. Therefore, it is important to use the appropriate CPT codes to properly reflect the practice's expenses associated with each code.

Evaluating Contracts

Once the practice's costs per procedure have been determined, the practice can use the results to evaluate and negotiate managed care contracts.

For purposes of discounted fee-for-service, costs per CPT code can be compared directly with fee schedules to assess profitability. In particular, group practices should compare current costs with current payment structures for their most frequently used CPT codes. Also, group practices should evaluate their costs for procedures that are technically advanced and/or time-consuming to ensure that appropriate fees are negotiated.

Comparisons can be made for individual CPT codes or for a set of CPT codes associated with a specific case scenario. It is recommended that case-scenario comparisons be made for cases for which payment is based on a global rate, such as a normal obstetric delivery. Exhibit 3 illustrates how a hypothetical group practice would calculate and evaluate costs for a specific case scenario.

When evaluating managed care contracts, a group practice can use the cost-analysis results to estimate the practice's costs of servicing a particular managed care plan. A group practice also can use these results to estimate its per-member-per-month (PMPM) cost for servicing a capitation contract. The practice should obtain as much information as possible from the managed care organization regarding assumptions made in

EXHIBIT 2: CALCULATING THE COST OF RADIOLOGY SERVICES PER CPT CODE

Radiology Revenue Center

Calculating Cost per RVU:

Total costs	\$225,000
Total RVUs worked	6,500
Cost per RVU ($\$225,000 \div 6,500$)	<u>\$34.62</u>

Calculating Cost per CPT Code:

Example: radiology CPT code: 71020	
RVU for 71020 = 0.94	
Radiology cost per RVU (from above calculation)	\$34.62
Multiplied by RVU	0.94
Cost per CPT procedure	<u>\$32.54</u>

Cost Analysis

EXHIBIT 3: CALCULATING CASE SCENARIO COSTS

CPT Code	Cost per RVU	Relative Value Unit	Cost per Procedure	Typical Frequency	Total Cost of Case
99204	\$32.50	\$3.74	\$121.55	1	\$121.55
99212	\$32.50	\$1.00	\$32.50	1	\$32.50
99213	\$32.50	\$1.32	\$42.90	5	\$214.50
93000	\$32.50	\$0.72	\$23.40	2	\$46.80
71020	\$34.62	\$0.94	\$32.54	2	\$65.08
Total cost					<u>\$480.43</u>
Compare total case cost with current top payer payments.					
Payer 1					\$490.00
Payer 2					\$350.00
Payer 3					\$520.00
Payer 4					\$425.00

calculating its offered rates.

Exhibit 4 illustrates two examples of how a hypothetical group practice would use cost data to evaluate managed care contracts. Example 1 shows a calculation for evaluating the cost of servicing a specific health plan using expected utilization for one procedure. The group practice should evaluate the costs of all the major CPT codes it expects to use in servicing the plan's population to obtain realistic cost data for evaluating the contract. Example 2 illustrates a calculation for estimating the practice's PMPM cost for a specific plan. In both examples, the group practice should use data from both the managed care organization and the practice to analyze costs.

It is important for group practices to obtain information such as utilization and patient demographic data from managed care organizations to make the most informed decisions. Group practices also should implement processes to collect their own internal utilization and patient demographic data. The more data group practices have, the more useful and accurate the plan evaluation process can be.

Data such as expected utilization of the plan's population, together with a group practice's costs per procedure, will help the practice estimate per-patient treatment costs. If

the managed care organization's utilization data are in this calculation and differ significantly from the group practice's typical utilization patterns, however, a decision on whether to accept the managed care organization's contract will be difficult.

Both examples in Exhibit 4 assume that the costs per procedure

are based on a specified historical or current productivity level and physicians' compensation and physician productivity will remain relatively stable. During the analysis, these variables may be changed to reflect additional levels of costs and utilization. When evaluating managed care plans that will result in a significant increase

EXHIBIT 4: USING COST DATA TO EVALUATE MANAGED CARE CONTRACTS

Example 1

Estimating the total cost of service for a specific plan based on historical practice utilization or the plan's projected utilization by CPT code

Step 1: Calculate projected utilization:

Estimated annual historical utilization per 1,000 covered lives:

CPT code 99213 = 700 70%

Multiplied by:

Plan's number of covered lives 3,000

Projected utilization of plan population 2,100

Step 2: Calculated cost of projected utilization:

Multiplied by:

Cost per procedure for CPT code 99213 \$42.90

Projected cost of utilization for service of plan \$90,090

Example 2

Estimating the group practice's PMPM cost based on practice history or plan's projections for plan population

Overall practice cost per RVU \$35.00

Multiplied by:

Projected annual utilization in RVUs for plan population 3,000

Projected annual costs to service population \$105,000

Divided by:

Number of months 12

Divided by:

Number of members in plan 2,500

Estimated group practice PMPM cost \$3.50

EXHIBIT 5: CALCULATING COSTS OF ADDITIONAL UTILIZATION USING FIXED AND VARIABLE COSTS

Radiology Revenue Center			
Calculating Cost per RVU:		Fixed Cost Component	Variable Cost Component
Total costs	\$225,000	\$75,000	\$150,000
Divided by:			
Total RVUs worked	6,500	6,500	6,500
Cost per RVU	\$34.62	\$11.54	\$23.08
Calculating Costs of Additional Utilization:			
Assume additional RVUs of 1,000:			
Total fixed costs		\$75,000	
Divided by:			
Total RVUs (6,500 + 1,000)		7,500	
Fixed cost per RVU		\$10.00*	
Variable cost per RVU			\$23.08†
Revised total cost per RVU	\$33.08		
Multiply by revised total RVUs	1,000		
Total costs of additional utilization	\$33,080		
Minus fixed costs for additional utilization: (\$10.00 × 1,000 RVUs)	(\$10,000)		
Increase in total costs due to additional utilization	\$23,080		

* As the number of procedures increases, the per-procedure cost decreases because fixed costs remain constant.

† Variable costs remain constant on a per-procedure basis, but total variable costs increase as the number of procedures increase.

in patient visits and utilization, however, the cost analysis should examine separately fixed and variable costs, which are likely to increase as the practice grows. Variable costs will rise with increased utilization and patient visits.

Group practices also should understand how fee-for-service and capitation each affect the results of a cost analysis. Under fee-for-service, production determines costs. Thus, in general, the more procedures that are performed, the lower the cost is per procedure. Under capitation, the optimum scenario is for physicians to minimize the number of patients seen in the office. Therefore, fewer patient visits skew the cost per procedure.

These fee structures also affect a practice's fixed and variable costs (see Exhibit 5). As productivity increases, fixed costs decrease per

procedure but remain the same overall. The opposite is true with variable-cost behavior. With each increase in productivity, there is an incremental increase in variable costs associated with the additional production.

Conclusion

Conducting a cost analysis can help group practices understand how much it costs them to provide health-care services. With this information, practices will be in a better position to negotiate favorable managed care contract terms. The information obtained from a cost analysis also can help group practices operate more cost-effectively. ■