# HEALTHCARE FINANCE: AN INTRODUCTION TO ACCOUNTING AND FINANCIAL MANAGEMENT

## Online Appendix B

## Operating Indicator Ratios

### INTRODUCTION

In Chapter 17, we indicated that ratio analysis is a technique commonly used to help assess a business's financial condition. Although we discussed 15 financial ratios and 6 operating indicator ratios in the chapter, because of space limitations we were unable to include a more complete list. The purpose of the online appendixes is to provide students with a listing of most of the commonly used financial and operating indicator ratios.

Of course, it would be impossible to list every ratio that one might ever encounter in healthcare finance. Furthermore, some ratios have variants or multiple definitions, so there is no guarantee that the definitions provided here are an exact match to the ones used elsewhere. Still, this appendix provides a single source that will meet many ratio analysis needs. At a minimum, it provides a starting point for further analysis. Note, however, that this list stems primarily from analyses performed on hospitals, so there are ratios that are unique to other types of providers that may not appear in this appendix.

Note that the ratios used in financial condition analyses and their definitions are driven primarily by the availability of comparative data, including both at the industry and specific competitor levels. Thus, the comparative data set establishes the ratios and definitions used in any analysis. Perhaps the most complete set of comparative data for hospitals is the "Almanac of Hospital Financial and Operating Indicators," published annually by *Ingenix*.

This appendix (Online Appendix B) contains operating indicator ratios, while Online Appendix A contains financial ratios. Operating indicator ratios are created using data drawn primarily from the managerial accounting system, as opposed to data contained in the business's financial statements (income statement and balance sheet). The primary purpose of operating indicator analysis is to help explain the financial condition of the business as assessed in a financial ratio analysis. In addition, operating indicator analysis provides managers with the insights needed to take corrective action when the financial ratio analysis indicates deficiencies. To help in interpretation, operating indicators are placed into eight categories that focus on specific aspects of an organization's operations: profitability, price, volume, length of stay, intensity of service, efficiency, input cost, and other.

To make this appendix easier to use, all operating indicators are presented in the same way. First, the ratio is defined verbally. Then, the formula for the ratio is presented. Finally, the interpretation and use of the ratio are briefly described.

## Profitability Indicators

Profitability indicators help explain the profitability assessment made in the financial ratio analysis.

**Profit per inpatient discharge**

Inpatient revenue (net) less inpatient operating expenses divided by total discharges.

$$\text{Profit per discharge} = \frac{\text{Inpatient revenue} - \text{Inpatient operating expenses}}{\text{Total discharges}}.$$

Measures the amount of profit (contribution to net income) earned on each inpatient discharge. Low values (including negative values) can be traced either to high inpatient costs or low inpatient reimbursement, or both. Obviously, a lack of inpatient profitability can spell financial trouble for hospitals. However, lack of inpatient profitability can be offset (in whole or partially) by outpatient care profits and/or nonpatient care revenues such as contribution and grants.

**Profit per inpatient discharge adjusted for wage rate and case mix**

Inpatient revenue (net) less inpatient operating expenses divided by total discharges multiplied by wage and case mix indexes.

$$\text{Adj. profit per discharge} = \frac{\text{Inpatient revenue} - \text{Inpatient operating expenses}}{\text{Total discharges x Wage index x Case mix index}}.$$

Measures the amount of profit (contribution to net income) earned on each discharge *after adjusting* for wage rates and case mix. This indicator is similar to profit per inpatient discharge (see above), except that it is adjusted to reflect wage rate and case mix differentials. The *wage index* (more precisely, hospital-specific wage index) measures average wages in the hospital's market relative to the national average. The *case mix index* (more precisely, hospital specific all-patient case mix index) measures the relative average costliness of the hospital's patients based on diagnosis-related group (DRG) weights. To illustrate the adjustments, assume that the average profit per discharge is $200 and the hospital has a wage index of 1.10 and a case mix index of 1.15. Thus, the hospital must pay higher-than-average wages and has a patient mix with above-average complexity. Its adjusted profit per discharge is $200 / 1.10 / 1.15 = $158. By comparing adjusted profit per discharge (as opposed to profit per discharge) the effects of dissimilar wage and diagnosis mixes are removed.

**Profit per outpatient visit**

Outpatient revenue (net) less outpatient operating expenses divided by total visits.

$$\text{Profit per outpatient visit} = \frac{\text{Outpatient revenue} - \text{Outpatient operating expenses}}{\text{Total visits}}.$$

Measures the amount of profit (contribution to net income) earned on each outpatient visit. Low values (including negative values) can be traced either to high outpatient costs or low outpatient reimbursement, or both. Obviously, a lack of outpatient profitability can spell financial trouble for hospitals. However, lack of outpatient profitability can be offset (in whole or partially) by either inpatient care or nonpatient care

revenues.

# PRICE INDICATORS

Clearly, the revenue received by a provider is an important determinant of financial condition. Price indicators measure the price (reimbursement) received by an organization both in terms of unit of volume and revenue structure.

**Gross price per inpatient discharge**

Gross inpatient revenue divided by total inpatient discharges.

$$\text{Gross price per discharge} = \frac{\text{Gross inpatient revenue}}{\text{Total discharges}} \ .$$

Measures the amount of *gross* revenue per discharge. Note that gross revenue reflects chargemaster prices rather than actual reimbursement, so the gross price per discharge does not represent the amount of revenue (reimbursement) per discharge. Also, note that this ratio can be adjusted for wage and case mix differentials by multiplying the denominator by the wage and case mix indexes. (See the discussion on page B-2 related to profit per inpatient discharge adjusted for wage rate and case mix.)

**Net price per inpatient discharge**

Net inpatient revenue divided by total inpatient discharges.

$$\text{Net price per discharge} = \frac{\text{Net inpatient revenue}}{\text{Total discharges}} \ .$$

Measures the amount of *net* revenue per discharge. Because allowances have been deducted, net price per discharge measures the actual amount of revenue (reimbursement) per discharge. This indicator is a measure of the *market's* assessment of the value of the inpatient services as opposed to the *hospital's* assessment. Note that this ratio can be adjusted for wage and case mix differentials by multiplying the denominator by the wage and case mix indexes.

**Gross price per outpatient visit**

Gross outpatient revenue divided by total outpatient visits.

$$\text{Gross price per visit} = \frac{\text{Gross outpatient revenue}}{\text{Total visits}} \ .$$

Measures the amount of *gross* revenue per visit. Note that gross revenue reflects chargemaster prices rather than actual reimbursement, so the gross price per visit does not represent the amount of revenue (reimbursement) per visit. Also, note that this ratio can be adjusted for wage differentials by multiplying the denominator by the wage index.

**Net price per outpatient visit**

Net outpatient revenue divided by total outpatient visits.

$$\text{Net price per visit} = \frac{\text{Net outpatient revenue}}{\text{Total visits}} \, .$$

Measures the amount of *net* revenue per visit. Because allowances have been deducted, net price per visit measures the actual amount of revenue (reimbursement) per outpatient visit. This indicator is a measure of the market's assessment of the value of the hospital's outpatient services. Note that this ratio can be adjusted for wage differentials by multiplying the denominator by the wage index.

**Medicare percentage (Medicare payment percentage)**

Medicare inpatient discharges divided by total discharges.

$$\text{Medicare percentage} = \frac{\text{Medicare discharges}}{\text{Total discharges}} \times 100 .$$

Measures the percentage of discharges due to Medicare patients. In other words, the hospital's reliance on Medicare patients. Because government payers generally are considered to be less generous than other payers, and because Medicare patients on average have longer stays than younger patients (and hence higher costs), a high Medicare percentage is considered a negative indicator. Also, high reliance on Medicare (and other government insured) patients means that the hospital will be affected to a greater degree by political rather than economic decisions. Note that this ratio measures Medicare utilization by discharge rather than by revenues. Also, note that the ratio is multiplied by 100 to convert the decimal form to a percentage.

**Contractual allowance percentage**

Contractual allowance amount (dollars) divided by total gross patient revenues.

$$\text{Contractual allowance percentage} = \frac{\text{Contractual allowance amount}}{\text{Total gross patient revenues}} \times 100 .$$

Measures the percentage of gross patient revenue (both inpatient and outpatient) that is lost because of allowances and discounts. The greater this percentage, the greater the difficulty that the provider has in translating price (chargemaster) increases into revenues. Note that the ratio is multiplied by 100 to convert the decimal form to a percentage.

**Inpatient revenue percentage**

Net inpatient revenue divided by total (net) revenue.

$$\text{Inpatient revenue percentage} = \frac{\text{Net inpatient revenue}}{\text{Total revenue}} \times 100.$$

Measures the percentage of total (net) revenue due to inpatient services. A high or low value is not necessarily bad—it just measures the reliance on inpatients (as opposed to outpatients and other patient sources) as a source of revenue. Of course, if inpatient services are more profitable than outpatient services, then a higher value would mean greater overall profitability. Note that the ratio is multiplied by 100 to convert the decimal form to a percentage.

**Outpatient revenue percentage**

Net outpatient revenue divided by total (net) revenue.

$$\text{Outpatient revenue percentage} = \frac{\text{Net outpatient revenue}}{\text{Total revenue}} \times 100.$$

Measures the percentage of total (net) revenue due to outpatient services. A high or low value is not necessarily bad—it just measures the reliance on outpatients (as opposed to inpatients and other patient sources) as a source of revenue. Of course, if outpatient services are more profitable than inpatient services, then a higher value would mean greater overall profitability. Note that the ratio is multiplied by 100 to convert the decimal form to a percentage.

**Other operating revenue percentage**

Net noninpatient and nonoutpatient revenue divided by total (net) revenue.

$$\text{Other operating revenue percentage} = \frac{\text{Other operating revenue} + \text{Net other patient revenue}}{\text{Total revenue}} \times 100.$$

Measures the percentage of total (net) revenue from sources other than inpatient and outpatient services. Other operating revenue includes revenues from cafeteria and parking garage sales, while net other patient revenue includes revenues from patient services such as long-term care and home health. Note that the ratio is multiplied by 100 to convert the decimal form to a percentage.

## VOLUME INDICATORS

Because a large proportion of a healthcare provider's costs are fixed, volume is an important determinant of profitability. In general, the greater the volume, the greater the profitability.

**Average daily census**

Total annual patient days divided by 365.

$$\text{Average daily census} = \frac{\text{Total annual patient days}}{365}.$$

Measures inpatient volume on the basis of number of patients (occupied beds). In most situations, a higher average daily census is better because it spreads fixed costs over a greater number of patients, and hence increases profitability. Note that a valid interpretation of this measure requires comparison with the number of licensed (or staffed) beds. Also, note that this measure is sometimes just called *census*.

**Occupancy rate**

Total annual patient days divided by number of beds multiplied by 365.

$$\text{Occupancy rate} = \frac{\text{Total annual patient days}}{\text{Number of beds} \times 365} \times 100 = \frac{\text{Average daily census}}{\text{Number of beds}} \times 100.$$

Measures inpatient volume as a percentage of the number of beds. As with average daily census, the higher the occupancy rate, the better, unless it is so high that the hospital does not have the capacity to deal with emergency situations. To raise the occupancy rate, hospitals can (1) increase admissions, (2) increase length of stay (which makes no sense under many reimbursement schemes), or (3) decrease the number of beds. Note that number of beds can be measured either as *licensed* beds or *staffed* beds. Also, note that this measure is sometimes just called *occupancy*.

# LENGTH OF STAY INDICATORS

Because a large proportion of a hospital's inpatient reimbursement is per admission (per diagnosis), length of stay can have a significant impact on profitability. In general, the shorter the length of stay, the greater the profitability.

**Length of stay (LOS)**

Total annual patient days divided by total inpatient discharges.

$$\text{Length of stay} = \frac{\text{Total annual patient days}}{\text{Total discharges}}.$$

Measures the average number of days that an inpatient stays in the hospital. Because most reimbursement is independent of length of stay (LOS), the shorter the LOS, the lower the cost of treatment and hence the greater the profitability of inpatient services. Note that this measure is often called *average length of stay (ALOS)*.

**Adjusted Length of stay**

Total annual patient days divided by total inpatient discharges multiplied by the case mix index.

$$\text{Adjusted length of stay} = \frac{\text{Total annual patient days}}{\text{Total discharges x Case mix index}}.$$

Measures the average number of days that an inpatient stays in the hospital adjusted for patient mix complexity. This measure is similar to length of stay, except that it adjusts for the fact that hospitals differ in inpatient complexity of care (diagnoses). Hospitals with a higher case mix index treat more complex diagnoses and hence would be expected to have a longer LOS. This measure removes biases created by differences in case mix.

# INTENSITY OF SERVICE INDICATORS

The costs of providing services, and in many cases the associated revenues, are a function of the intensity of services provided.

**Case mix index (CMI)**

Measures the average DRG weight for the provider. The higher the CMI, the greater the complexity of inpatient services provided. Theoretically, case mix should not influence profitability, because more complex diagnoses, which are more costly to treat, should lead to higher reimbursements, and vice versa. Note that the Medicare CMI applies only to Medicare inpatients, while the all-patient CMI applies to all inpatients.

**Cost per inpatient discharge**

Total inpatient operating expense divided by total inpatient discharges.

$$\text{Cost per discharge} = \frac{\text{Total inpatient operating expense}}{\text{Total discharges}}.$$

Measures the average cost of each inpatient stay. Regardless of the reimbursement methodology, lower costs of service lead to higher profitability, all else the same. Note that this ratio can be adjusted for wage and case mix differentials by multiplying the denominator by the wage and all-patient case mix indexes.

**Cost per outpatient visit**

Total outpatient operating expense divided by total outpatient visits.

$$\text{Cost per visit} = \frac{\text{Total outpatient operating expense}}{\text{Total visits}}.$$

Measures the average cost of each outpatient visit. Regardless of the reimbursement methodology, lower costs of service lead to higher profitability, all else the same. Note that this ratio can be adjusted for wage differentials by multiplying the denominator by the wage index.

# EFFICIENCY INDICATORS

Efficiency indicators measure the amount of resources used to provide services. In economic terms, the amount of inputs needed. Because labor is a key input in the provision of healthcare services, labor is the primary focus of the efficiency indicators. In general, the more efficiently the services are being provided, the greater the profitability. Note that several of these indicators use FTEs (full-time equivalents) to measure the amount of labor used. FTEs convert part-time employees into full-time employees. For example, two half-time workers would equal one FTE.

**FTEs per occupied bed**

Inpatient FTEs divided by total annual patient days divided by 365.

$$\text{FTEs per occupied bed} = \frac{\text{Inpatient FTEs}}{\text{Total annual patient days} / 365} = \frac{\text{Inpatient FTEs}}{\text{Average daily census}} .$$

Measures the productivity of labor devoted to inpatient services as a function of the number of patients. Because the provision of inpatient services is labor intensive, labor productivity plays an important role in inpatient costs. Of course, in addition to the number of patients, the intensity of services provided also affects the requirement for labor resources. Thus, this ratio often is adjusted for case mix differentials by multiplying the denominator by the all-patient case mix index.

**Inpatient manhours per inpatient discharge**

Inpatient FTEs multiplied by 2,080 all divided by total inpatient discharges.

$$\text{Manhours per discharge} = \frac{\text{Inpatient FTEs x 2,080}}{\text{Total discharges}} .$$

As above, measures the productivity of labor devoted to inpatient services. However, this measure uses discharges as the inpatient volume measure rather than daily census and labor manhours as the input amount measure. To the extent that many payers reimburse hospitals a fixed amount per discharge, this ratio may be a better measure of labor productivity than FTEs per occupied bed. As above, this ratio is often adjusted for case mix differentials by multiplying the denominator by the case mix index. Also, note that this ratio could be modified (drop the hour multiplier) to create another ratio: FTEs per discharge.

**Outpatient manhours per outpatient visit**

Outpatient FTEs multiplied by 2,080 all divided by total outpatient visits.

$$\text{Manhours per visit} = \frac{\text{Outpatient FTEs x 2,080}}{\text{Total visits}} .$$

Measures the productivity of labor devoted to outpatient services. In general, a high value indicates excessive staffing. However, some problems can occur with comparability of this measure. For example, the clinical intensity of one patient visit can vary among providers. Also, different providers may define "one visit" differently. (Is a same-day referral for an ancillary service a second visit?) Note that another measure, FTEs per outpatient visit, can also be used to measure the productivity of labor devoted to outpatient services.

**Total revenue per FTE**

Total revenue divided by total FTEs.

$$\text{Total revenue per FTE} = \frac{\text{Total revenue}}{\text{Total FTEs}}.$$

Measures the overall productivity of labor at an organization based on its ability to *generate revenues*. This measure includes not only inpatient and outpatient service revenues, but also other patient service revenues along with revenues from nonpatient service sources such as contributions and medical office buildings. Note that providers that outsource a large amount of their labor inputs (such as housekeeping) may show a higher-than-justified total revenue per FTE because many of the FTEs needed to produce the revenues are "off the books."

# UNIT COST INDICATORS

Overall input costs are a function of both the quantity of inputs used and the cost per unit of input. For example, labor costs depend on both the number of FTEs (full-time equivalents) and the wage rates paid per FTE. Efficiency indicators (discussed in the previous section) measure the amount of resources used. The unit cost indicators presented in this section focus on the cost of those resources. In general, the lower the cost of an organization's inputs, the greater the profitability.

**Salary per FTE**

Salary and wage expense divided by total FTEs.

$$\text{Salary per FTE} = \frac{\text{Salary and wage expense}}{\text{Total FTEs}} \ .$$

Measures the average labor cost *(not including fringe benefits)* per employee (per FTE). Because labor is the largest input in the provision of healthcare services, control over these costs is critical to profitability. Note that *wages* generally describe the pay of workers paid on the basis of time worked, such as hourly or daily or weekly, while *salaries* are the pay of higher-level employees, such as managers, who are compensated at an annual rate regardless of time worked. Note that this ratio often is adjusted for wage rate differentials by multiplying the denominator by the wage index.

**Fringe benefits percentage**

Fringe benefits expense divided by salary and wage expense.

$$\text{Fringe benefits percentage} = \frac{\text{Fringe benefits expense}}{\text{Salary and wage expense}} \times 100 \ .$$

Measures the amount paid in labor fringe benefits as a percentage of salaries and wages. Typically, fringe benefits include such items as Federal Insurance Contributions Act (FICA) taxes, which pay for social security and Medicare coverage, health insurance payments, and retirement fund payments. Note that multiplying the salary and wage expense by 1 + Fringe benefits percentage gives total labor costs (in dollars). This value, in turn, could be used to calculate total labor costs per FTE. (For a related ratio, see the next ratio: compensation costs per inpatient discharge.)

**Compensation costs per inpatient discharge**

Annual inpatient labor expenses divided by the total number of inpatient discharges.

$$\text{Compensation costs per discharge} = \frac{\text{Inpatient salaries and wages} + \text{Inpatient fringe benefits expense}}{\text{Total discharges}} \ .$$

Measures inpatient labor costs (including fringe benefits) per discharge. A high value could indicate lower labor productivity, high wages and salaries, and/or high fringe benefits. As mentioned before, because labor costs are the major costs associated with inpatient care, high values for this ratio often lead to poor financial performance. Note that this ratio is often adjusted for case mix and wage rate differences by multiplying the denominator by the all-patient case mix and wage indexes.

**Capital costs per inpatient discharge**

Annual inpatient capital expenses divided by the total number of inpatient discharges.

$$\text{Capital costs per discharge} = \frac{\text{Inpatient interest expense} + \text{Inpatient depreciation expense}}{\text{Total discharges}} \; .$$

Measures the amount of capital costs (interest and depreciation) required to support each inpatient discharge. A low value indicates low capital costs, but this may be the result of older assets (which may be bad) and associated lower debt usage. Inpatient volume also plays a role. Because capital costs are more or less fixed, an increasing volume lowers capital costs per discharge, and vice versa. Note that this ratio is often adjusted for case mix by multiplying the denominator by the all-patient case mix index. In addition, it can be further adjusted by multiplying the denominator by the wage index.

**Supply costs per inpatient discharge**

Annual inpatient supply expense divided by the total number of inpatient discharges.

$$\text{Supply costs per discharge} = \frac{\text{Inpatient supply expense}}{\text{Total discharges}} \; .$$

Measures inpatient supply costs per discharge. A low value could indicate either less supplies usage or lower purchase prices. Note that this measure often is adjusted for intensity of inpatient services by multiplying the denominator by the all-patient case mix index. Also, note that this ratio could be modified to focus on outpatient visits.

**Professional liability cost per inpatient discharge**

Annual professional liability expense divided by the total number of inpatient discharges.

$$\text{Professional liability cost per discharge} = \frac{\text{Inpatient professional liability insurance expense}}{\text{Total discharges}} \; .$$

Measures the cost of professional liability coverage on a per discharge basis. Note that the costs in the numerator should include all premiums paid to both commercial and captive (owned) insurance companies plus any payments to self-insurance trusts. Note that the values for any given hospital can vary substantially from year to year. While this cost is relatively small in comparison to labor and supply costs, its control is still important to overall profitability. Note that this ratio often is adjusted for case mix and wage rate differences by multiplying the denominator by the all-patient case mix and wage indexes.

## OTHER INDICATORS

Other indicators focus on areas outside of the seven categories previously described. Two important types of other indicators are those that focus on market share and on managed care organizations (as opposed to hospitals).

**Herfindahl index**

Sum of the squares of each provider's market share.

Herfindahl index = (Provider 1 market share)$^2$ + (Provider 2 market share)$^2$ + (Provider 3 market share)$^2$ …

Measures the degree of competition in the market area—the smaller the index, the greater the competition. To illustrate, assume a market of three hospitals. In Market A, the market shares are 40%, 30%, and 30%, while in Market B the shares are 70%, 15%, and 15%. The Herfindahl index is $0.40^2 + 0.30^2 + 0.30^2 = 0.34$ for Market A and $0.70^2 + 0.15^2 + 0.15^2 = 0.94$ for Market B. The lower value for Market A shows it is much more competitive than B. (No provider is dominant in Market A.) Note that metropolitan statistical area (MSA) often is used to define market area. Also, note that the Herfindahl index is used more by economists than by healthcare managers.

**Inpatient market share**

Annual inpatient revenue divided by total market inpatient revenues.

$$\text{Inpatient market share} = \frac{\text{Annual inpatient revenue}}{\text{Total market inpatient revenues}} \times 100.$$

Measures the market share of inpatient services. Note that the "market" is often defined as an MSA (see above). Also, note that market share can be based on inpatient discharges rather than on revenue. Finally, note that market share measures also can be developed for outpatient services and total patient services.

**HMO (managed care) penetration**

Annual HMO patient service revenue divided by total patient service revenues.

$$\text{HMO penetration} = \frac{\text{Annual managed care revenue}}{\text{Total patient services revenues}} \times 100.$$

Measures the percentage of total patient service revenues obtained from HMOs (managed care plans). Presumably, the greater this percentage, the more difficult it will be to increase prices. Note that a similar measure could be constructed with only nongovernmental payer revenue in the denominator. This would indicate the percentage of "commercial" payers that are managed care plans.

**Medical loss ratio (used by managed care organizations)**

Annual expense for medical services divided by total premium revenues.

$$\text{Medical loss ratio } = \frac{\text{Annual medical service expense}}{\text{Total premium revenues}} \times 100.$$

Measures the percentage of premium revenue devoted to medical care (inpatient, outpatient, and other services). All else the same, the greater this ratio, the lower the profitability (and hence the ability to add to reserves) of the organization. If this ratio is too large, the organization may face financial distress. On the other hand, if it is too small, the organization may not be providing all the healthcare services needed by the covered populations.

**Administrative cost ratio (used by managed care organizations)**

Annual administrative expense divided by total premium revenues.

$$\text{Administrative cost ratio } = \frac{\text{Annual administrative expenses}}{\text{Total premium revenues}} \times 100.$$

Measures the percentage of premium revenue devoted to administrative expenses. All else the same, the greater this ratio, the greater the profitability (and hence the ability to add to reserves) of the organization. If this ratio is too large, the organization may not providing sufficient medical care. On the other hand, if it is too small, the organization may not be providing sufficient administrative support to the covered populations. Note that administrative expenses usually include all nonmedical expenses, including depreciation.

**Percent administrative expense (used by managed care organizations)**

Annual administrative expense divided by total operating expenses.

$$\text{Percent administrative expense } = \frac{\text{Annual administrative expense}}{\text{Total operating expenses}} \times 100.$$

Measures the percentage of total operating expenses devoted to administration. Note that this ratio is similar to the administrative cost ratio (above), except that it focuses on expenses rather than premium revenues. Also, note that this ratio, along with the other percent expense ratios, is used to determine the proportionate cost structure of a managed care organization.

**Percent inpatient expense (used by managed care organizations)**

Annual inpatient expense divided by total operating expenses.

$$\text{Percent inpatient expense} = \frac{\text{Annual inpatient expense}}{\text{Total operating expenses}} \times 100.$$

Measures the percentage of total operating expenses paid for inpatient services. This ratio, along with the other percent expense ratios, is used to determine the proportionate cost structure of a managed care organization.

**Percent physician expense (used by managed care organizations)**

Annual physician expense divided by total operating expenses.

$$\text{Percent physician expense} = \frac{\text{Annual physician expense}}{\text{Total operating expenses}} \times 100.$$

Measures the percentage of total operating expenses paid for physician services. This ratio, along with the other percent expense ratios, is used to determine the proportionate cost structure of a managed care organization.

**Percent other medical expense (used by managed care organizations)**

Annual other medical expense divided by total operating expenses.

$$\text{Percent other medical expense} = \frac{\text{Annual other medical expenses}}{\text{Total operating expenses}} \times 100.$$

Measures the percentage of total operating expenses paid for other medical services (such as physical therapy, long-term care, and so on). This ratio, along with the other percent expense ratios, is used to determine the proportionate cost structure of a managed care organization.