WEB FEATURE

Michael C. Smith

EARLY EDITION February 2016

hfm

healthcare financial management association hfma.org

lean budgeting

to boldly go where no budget has gone before

The conventional budget model is precise, detailed, and time-tested. The problem is, it's no longer working.

AT A GLANCE

A lean budgeting process results in three robust deliverables.

- A ratio-based model
- An easy-to-interpret graphical representation
- A condensed document that allows for frequent updates

Healthcare finance leaders are accustomed to working with a traditional budgeting model that is familiar to anyone with an accounting background: It produces a budget consisting of pages of numbers and variances, with a few points of data regarding volume to help put it all into context. The problem with this model is that most of the people within a healthcare organization who must work with the budget lack any background in accounting. Their skill set tends to be focused more on qualitative measures, and they are much better able to interpret irregular vital signs, a flushed skin tone, or a raspy breath than to interpret an income statement. So no matter how hard a healthcare organization's budget team might work to develop a traditional budget, and no matter how pleased the team might be with the result, that satisfaction is all too likely to turn to frustration when immediately after the budget is published it becomes outdated and subject to misinterpretation.

Moreover, conventional budget processes often are dysfunctional in several respects. Forecasted volumes can mask operational inefficiencies and become a tempting avenue for pushing the budget toward unrealistic organizational goals.

Lean principles, originally developed as a way to make manufacturing more efficient, offer an alternative budgeting process that encourages realistic

goals and deliverables that can be easily interpreted.[a] Although much of the work performed in preparing the budget is similar to that of the conventional budget, the end product is much more user-friendly to department managers, who make up the target audience. Also, it should be noted that the conventional budget isn't eliminated with this process but is stowed in the background for its traditional uses.

Five Lean Principles for Budgeting Success

A lean-based budgeting process is founded on five basic guiding principles:

> Identify your customer, and define value from their perspective.
> Map the process, and scrutinize for value.
> Optimize the process, designing for efficiency.
> Let customer needs pull the process.
> Keep iterating, improve incrementally.

Identify your "customer," and define value from their perspective. The accounting mindset is grounded in detail, but it's the front-line departmental managers who hold the most immediate influence over performance factors. A few percentage points of labor cost efficiency from operational managers can double the organization's margin, but spreadsheet interpretation is an acquired skill and not intuitive for managers with clinical backgrounds; thus, information provided in a conventional budget format tends to be of little value to them.

A conventional budget would show only discrete financial amounts: actual dollars versus budgeted dollars, each based on completely different volume contexts. Any comparison, absent normalization for volume, is invariably misleading.

For example, if a department's labor expense were to come in under budget by almost 12 percent, as shown in the exhibit below, the department would be unlikely to look further. In this case, however, the department would fail to notice that the reason for the reduced labor expense was that its volume (patient days, surgery minutes, procedures, etc.) had fallen short of budget by almost 18 percent.

Similarly, with other areas of the budget, department managers all too easily can use a single-line interpretation of the general ledger to justify spending on specific items, failing to notice that they are over budget on the broader category. They will feel entitled to spend budgeted funds when under target within "supplies, office," selectively overlooking that they've overspent on "supplies, general." To sharpen manager focus,

a. "Principles of Lean," Lean Enterprise Institute.

BUDGET COMPARISON OF LABOR EXPENSE WITH VOLUME

Budget Comparison of Labor Expense with Volume

Description	May-15	Jun-15	Jul-15	Aug-15	Sep-15	September 2015 Budget	September 2015 Variance	
LABOR EXPENSE	112,549	116,075	119,926	105,153	99,836	113,111	13,274	11.7%

Volume Statistics Compared with Budget

Description	May-15	Jun-15	Jul-15	Aug-15	Sep-15	September 2015 Budget	September 2015 Variance	
PROCEDURES	319	329	261	309	269	327	(58)	-17.8%

Published in *hfm* Early Edition, February 2016 (hfma.org/hfm).

Budget Process Flow, Analytical Measures

The old goal of creating a budgeted income statement superseded the development of meaningful operational metrics. Effective operational analysis required conversion of both budgeted and actual financials to volume-normalized ratios.

Expressed algebraically:[a]

$$\frac{(\$\$\ \text{historical})}{(\text{volume historical})} \times (\text{adjustments}) \times (\text{volume forecast}) = \$\$\ \text{budget}$$

$$\$\$\ \text{budget} \xrightarrow[(\text{performance analysis})]{} \frac{(\$\$\ \text{actual})}{(\text{volume actual})} \text{ v } \frac{(\$\$\ \text{budget})}{(\text{volume forecast})}$$

The new primary process path is simplified by relegating financial values to secondary status:

$$\frac{(\$\$\ \text{historical})}{(\text{volume historical})} \times (\text{adjustments}) = \text{budget ratio}$$

$$\text{budget ratio} \xrightarrow[(\text{performance analysis})]{} \text{actual ratio v budget ratio}$$

Shifting the primary focus away from discrete dollars facilitates a more simple evaluation of current operational ratios compared with historical ratios. Ratios have now been volume-normalized for simple comparison. For customers who still need a detailed income statement, budget ratios are applied to a very simple (conservatively flat) forecast based upon recent averages.

a. Adjustments are for factors such as inflation and labor efficiencies.

results need to be volume-normalized and presented with minimal clutter.

Map the process, and scrutinize for value. The conventional budget model is driven by historical ratios applied to forecasted volume to derive budgeted financial statements. The biggest problem arises in the introduction of the forecasted volume. The fact that volume can never be forecasted with complete accuracy is at the root of many flawed interpretations regarding departmental performance. Given a predisposition for forecasting optimism, high volume usually justifies somewhat high expense forecasts. When actual expense dollars come close to forecast it's too tempting to accept the dollar-to-dollar comparison, rather than compare the spend within the context of actual (usually lower) volume. By maintaining a focus on volume-normalized ratios (as shown in the sidebar above), a valid comparison is encouraged.

Optimize the process, designing for efficiency. Many organizations talk about rolling forecasts, flex budgets, and the importance of being nimble, but simply generating the standard model more frequently doesn't add much value. Consider the traditional approach for budgeting labor expense, for example. The conventional budget framework, with the entire chart of accounts and detailed labor projections by job code, is cumbersome to generate and difficult to interpret. Condensing salaries, benefits, and agency contracts into one aggregate labor expense shifts the focus away from quibbling over FTEs and job code-level details, and empowers managers to flex staffing where needed. For example, RNs shouldn't be answering phones simply because there was no

specific line-item budget for additional aides. An aggregated labor expense, however, gives the department manager flexibility to assign an aide to this task.

Ultimately, it's much more important that expenses be managed proportionately than managed to a discrete target, set months prior. A condensed structure encourages departmental managers to think more holistically.

Let customer needs pull the process. Outdated budgets serve no one. A condensed, streamlined model can be updated frequently to reflect a changing business environment. Departmental feedback can be incorporated more promptly, and executive expectations or guidance can be updated as needed. Locking a budget into a fiscal year timeline risks giving it negligible relevance by the end of that year.

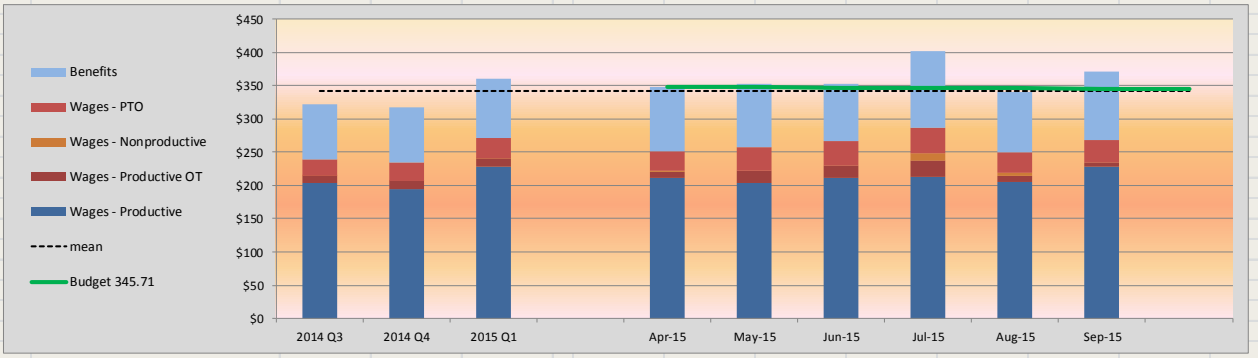
Keep iterating, improve incrementally. As previously noted, a lynchpin of lean methodology is implementing processes that cycle frequently, building on prior refinements. For example, a budget ratio, independent of volume projections, with adjustments made for inflation or performance improvements, can be carried forward into each iteration of the budget while retaining the organizational value invested in each refinement.

Lean Process, Robust Deliverables

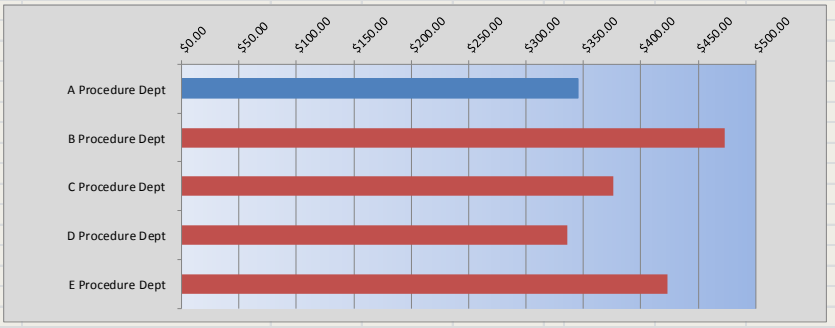
Three interlinked deliverables emerge from use of these lean principles.

TYPICAL DEPARTMENTAL LABOR RATIO PERFORMANCE REPORT, COMPARING PERFORMANCE WITH THAT OF SIMILAR DEPARTMENTS

	LABOR EXPENSE	Sept	OVER	(that's bad)	by	7.4%				
A Procedure Dept		Jul - Sept	OVER	(that's bad)	by	6.5%				



	2014 Q3	2014 Q4	2015 Q1	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Latest
SALARIES	240,740	236,901	255,850	73,375	82,350	87,756	74,722	77,272	72,042	
BENEFITS	82,089	83,968	83,756	28,046	30,199	28,319	30,204	27,882	27,794	
PROCEDURES	1,004	1,010	943	291	319	329	261	309	269	
Labor Expense / Procedure	321.54	317.69	360.13	348.53	352.82	352.81	402.01	340.30	371.14	

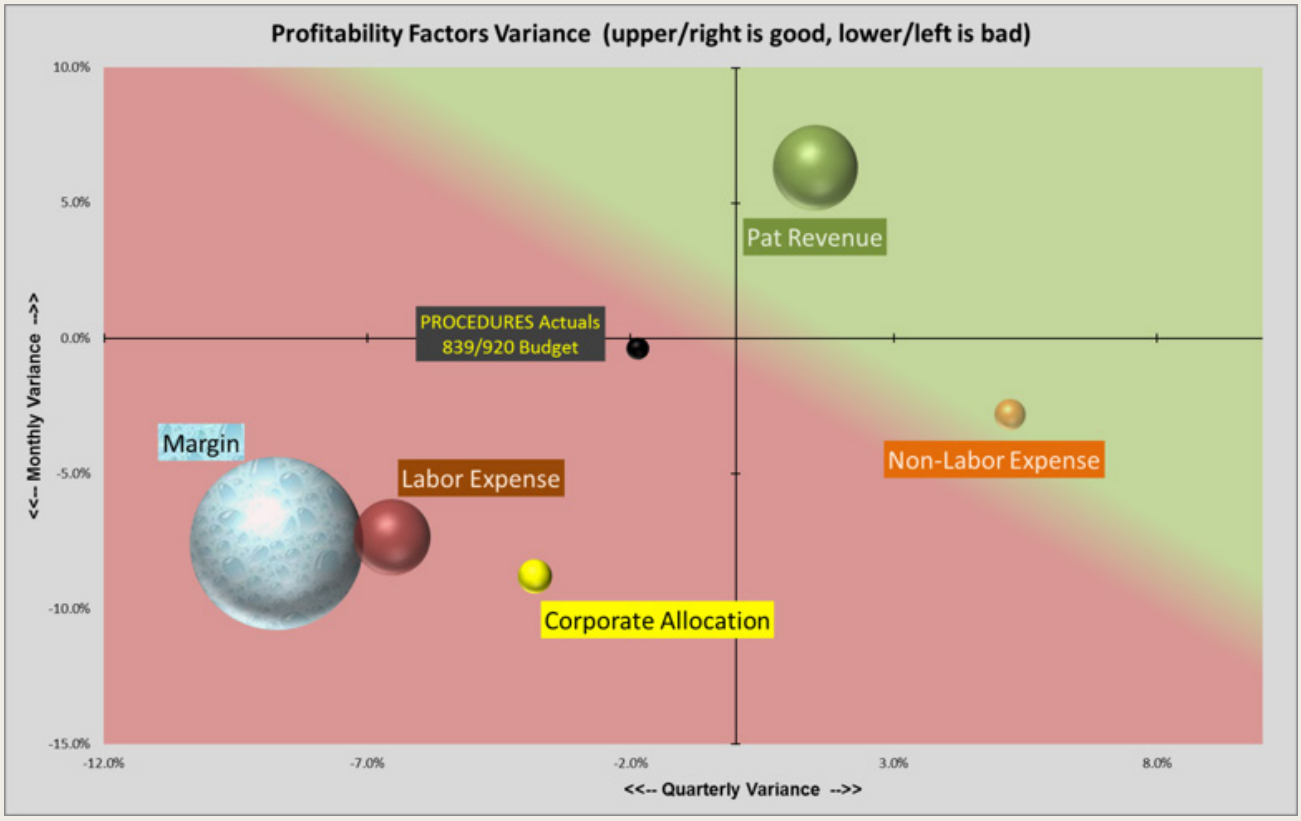


Budgeted Ratios for Latest Iteration Q3	
A Procedure Dept	345.71
B Procedure Dept	472.90
C Procedure Dept	375.79
D Procedure Dept	335.80
E Procedure Dept	423.60

Published in *hfm* Early Edition, February 2016 (hfma.org/hfm).

A ratio-based budget model and performance tracking. The lean process allows for development of three aggregate operational ratios: a revenue ratio, a labor expense ratio, and a non-labor expense ratio. A benefit of ratio-centric departmental reports is the ability to evaluate any particular department's ratio trend, and its budgeted ratio as compared with the ratios of its peers, as shown in the exhibit on page 4. As department managers examine the trends of their ratios, they also can compare their ratios with those of similar departments across the network. For a system with multiple hospitals having dramatically different character, it's impossible to make meaningful comparisons of revenue or expenses without normalizing to the ratio per

TYPICAL DEPARTMENTAL PERFORMANCE GRAPH



	Ratio Values				Dollar Values				
	Patient Revenue Ratio	Labor Ratio	Corporate Allocation Ratio	Non-Labor Ratio	Patient Revenue	Labor	Corporate Allocation	Non-Labor	Margin
July Actuals	1,829.89	402.01	0.064	65.69	$477,602	$104,926	$30,552	$17,144	$324,980
August Actuals	1,848.07	340.3	0.061	62.03	$571,053	$105,153	$35,084	$19,166	$411,650
September Actuals	1,970.96	371.14	0.067	71.97	$530,187	$99,836	$35,637	$19,360	$375,354
Rolling Quarter	1,881.81	369.39	0.064	66.35	$1,578,842	$309,915	$101,273	$55,670	$1,111,983
Q3 Budget	1,854.00	345.71	0.062	69.64	$1,706,422	$318,190	$105,424	$64,422	$1,218,386

Corporate allocation's ratio uses patient revenue as its denominator.

Published in *hfm* Early Edition, February 2016 (hfma.org/hfm).

driver unit (e.g., labor cost per procedure volume).

An intuitive graphical representation of performance. Although an accountant might subscribe to the adage "numbers don't lie," lean budgeting calls for adoption of another: "a picture is worth a thousand words." A graphical output where size draws the eye to the most relevant factor, and where location denotes whether performance is on target or drifting wide of the mark, as shown in the exhibit on page 5, can make the information clear to all. Monthly variance percentage—in this instance, for September—is tracked on the y-axis, and a rolling quarterly variance percentage is tracked on the x-axis. Size is derived not simply from the raw variance but from the ratio variance applied to the budgeted dollars. Financial values and volume context are united in a simple graphic representation with the target on the center crosshairs.

The conventional approach (emphasizing dollar values shown at right in the exhibit) for September would leave a first impression that $99,836 labor expense of the month and a Q3 labor expense of $309,915 both fall well under the Q3 budget of $318,190. The ratio-based impression is more relativistic; the labor ratio—taking into account procedure volume—is worse than budget (to the left) on the quarterly axis, and worse than budget (down) on the monthly axis.

With the new budget model (at least its graphical reports), every department can view its own performance factors and their interaction. The model illustrates the various spheres that can influence profitability, positively or negatively, as they move into positive or negative territory away from the budget crosshairs. Thus, for example, if the "gravitational pull" of a positive revenue variance is balanced by the combined pulls of negative labor, corporate allocation, and non-labor expense variances, then the delicate margin orb will be held near the center of the graph. In the exhibit, corporate allocation is included as an influence on the graph—the department manager can't do much to control it, but it acts within his universe. (For our hospital system corporate costs are allocated across the system on a simple ratio based on patient revenue.)

The graphical treatment of driver volume and its variance called on some creativity to render the math in an intuitive format. In some instances, an upside volume variance can actually exert a negative financial effect, where high procedure volumes drive revenue but also drive more expenses. In the exhibit, the black ball (procedure volume) is shown as having a quarterly variance of –2 percent, rather than the –9 percent one might first expect. Here's why: Lower volume represented lost revenue compounded with a higher revenue/procedure rate (bad volume variance, large impact). Lower volume (to the extent we can assume it would drive labor) represented a gift given the higher quarterly labor ratio (good volume variance, medium impact). And lower-than-budgeted non-labor expense ratios helped the bottom line when paired with soft volume (good volume variance, small impact). Thus, a weighted average of these influences places the volume variance at –2 percent for the quarter.

Condensed format for frequent updates. Lean principles lead to condensed formats and streamlined processes, focused on the primary user: the departmental manager. Another shift is the elimination of the budget season, replaced with an ongoing budget process. The condensed format is easier to refresh, and is rebuilt every quarter.

It's time to retire the annual review of every FTE, job code by job code. That level of detail creates an illusion of accuracy and adds little value. The focus now should be on aggregate labor costs, regardless of considerations such as job code mix, and details such as nonproductive education overtime or jury duty time. Those details are invariably wrong once they are locked into an annual budget; thus, documenting to that level of detail adds no value. Rather, the emphasis should be on a historical and cross-system labor expense ratio, leaving the details of how to execute lower

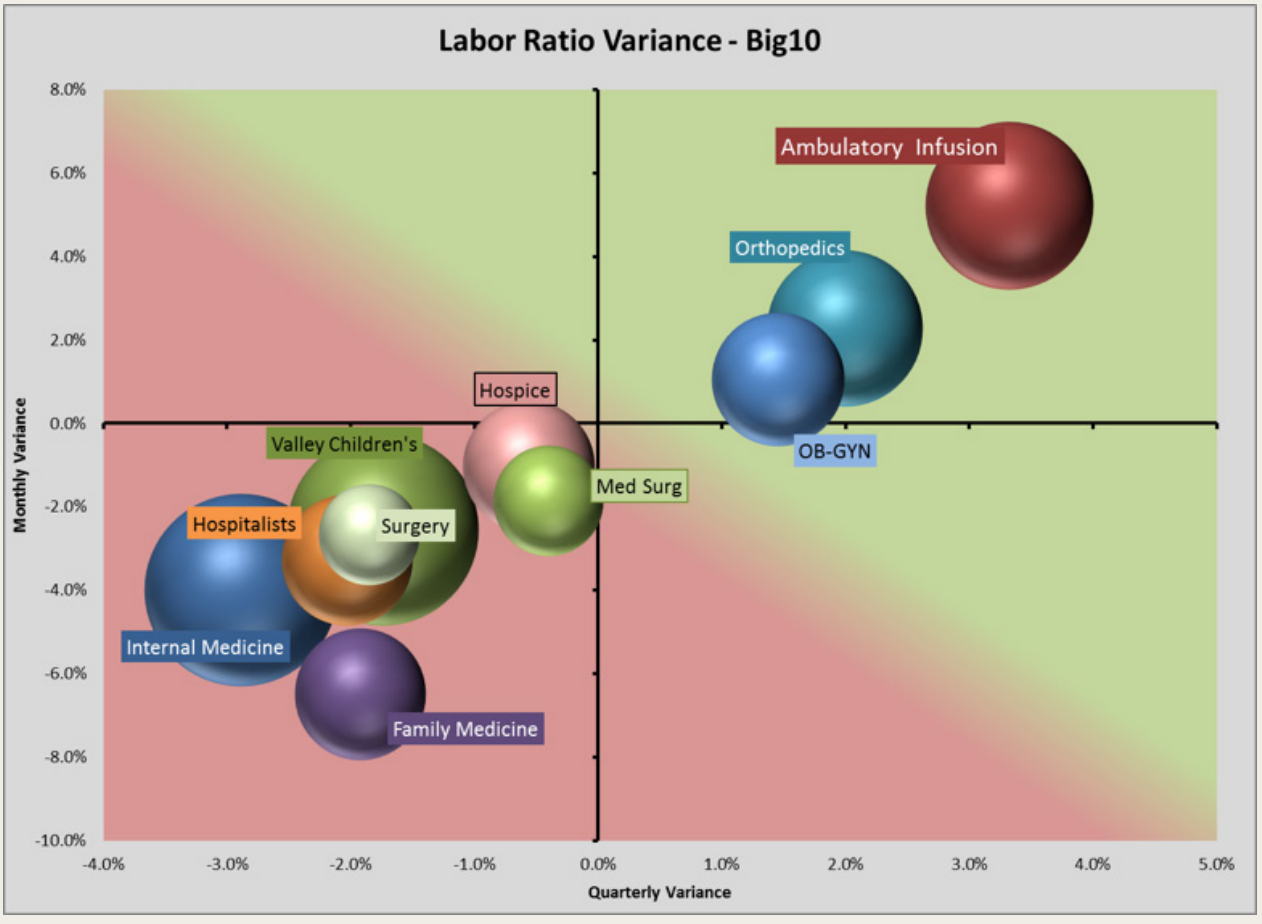
expenses to the department managers, who are most capable of influencing positive changes. Again, another lean corollary comes into play—push operational decisions to the lowest organizational level at which they can be effectively influenced.

Scalability

Although the lean budget is meant to influence departmental managers most, the graphical formats can also be illuminating for the executive team. A graphical representation of the top 10 departments with respect to labor variance for a non-specified month plots the variance by both monthly and quarterly percentage (again, this variance refers to budgeted ratio, not discrete dollars), but with each the sphere is sized according to its impact on health system margin, as shown in the exhibit below.

As the exhibit shows, the seven departments to the lower left exert the greatest influence in what amounts to an overall negative variance, which is only partially offset by three departments with positive variances up and to the right. The department with the most negative variance for the month, Family Medicine (lowest on the y-axis) has less of an impact than the department whose negative variance is greatest for the quarter, Internal Medicine (furthest left on the x-axis). Family Medicine and Valley Children's are similarly left of center on quarterly variance, but Valley Children's impact on the health system's margin is more than double.

ENTITY SUMMARY OF LABOR FACTORS BY DEPARTMENT



Published in *hfm* Early Edition, February 2016 (hfma.org/hfm).

Management efforts become focused toward their biggest ratio deviations, not just the most glaring variance value relative to an obsolete budget assumption.

Implementation

Samaritan Health Service, a five-hospital system in Corvallis, Ore., implemented this approach to budgeting in the fall of 2014 as budgets were developed for FY15. Reaction has been sprinkled with some resistance, but the results have been well received where the approach was most needed, particularly among operational department managers, who like the intuitive feedback.

Questions such as, "How much money do I have left in this quarter's budget for minor equipment?" are common. A flawed assumption common to detailed budgets is a notion that spending a certain amount is endorsed when the budget is published. Samaritan hopes to spur more critical analysis within an aggregate non-labor expense ratio; if volume is up and expenses proportionately restrained, then a justified purchase of minor equipment may be within budgeted ratio expectations. The budget never should be used as an incentive to spend, or as a prohibition to spend on a justifiable business need.

Continuous updates and budget refinement also have been useful. As the planning cycle for FY16 began, several cycles of cumulative ratio refinement created the baseline. As new service lines open, as physicians are hired or retire, or as healthcare reform shifts the health system's payer mix, the process allows for a more timely view. Each quarterly update rolls up the past six quarters of history as the foundation for the next six quarters' budget update.

The lean budget is the result of a new way of thinking and may have some nervously wondering "What about the detailed income statement?" or "How will our CFO distinguish 'supplies, orthopedic' from 'supplies, urological'?" But there's no need to worry. Although aggregate ratios are pulled to the forefront, there's still plenty of algebra behind the scenes for building a conventional financial statement, which will still be required for traditional accounting purposes. In sum, by sidestepping the biases of forecast optimism, a lean-based budget avoids the question "What *volume* should we hope for to meet our goals?" and asks, instead, "What *performance* do we need to reach our goals?" ■

About the author

Michael C. Smith, MBA, is manager, financial planning and analysis, Samaritan Health Service, Corvallis, Ore., and a member of HFMA's Oregon Chapter (michael@leanbudgets.org).