

From CAP Press: A renewed perspective on laboratory administration

May 2019—CAP Press released this month its second edition of *Laboratory Administration for Pathologists*, first published in 2011. It covers management of personnel, laboratory space, pathology information systems, and quality in laboratory medicine and in the anatomic pathology lab. That's just to start. Among its other chapters: patient safety, the pathology position, lab laws and regulations, legal affairs, ethics, and financial management of the lab and of the pathology practice. And there is more in the 296-page book edited by Elizabeth A. Wagar, MD, Michael B. Cohen, MD, Donald S. Karcher, MD, and Gene P. Siegal, MD, PhD.

CAP TODAY recently asked Dr. Wagar about the latest edition; what she told us appears here, along with an excerpt. Dr. Wagar is professor and chair, Department of Laboratory Medicine, University of Texas MD Anderson Cancer Center.



Dr. Wagar

Did you get feedback on the first edition and, if so, can you share some of it, and did it guide you in updating the book?

Yes, we had a lot of feedback, much of it good. I know that many residency programs now use it as a text for management and leadership training. And many pathologists find the appendices helpful, with everything from formats for procedures to sample interview questions. However, as time passes, changes occur, especially in the areas of quality and safety and in regulatory affairs.

Also, I felt it was time to expand the authorship and editorship of the text. Originally, the text was created based on more than 10 years of personal experience educating residents in five different residency programs in Los Angeles. We had a good core curriculum, but it was important to invite others to contribute from different regions of the country with different perspectives and different specialty skill sets. The editors intentionally asked younger pathologists and enhanced the diversity of authors to achieve this renewed perspective of the topic.

CAP president Bruce Williams, MD, writes in the foreword that there is a “growing consensus that burnout is an urgent priority for each of us.” What effect, if any, did that attention to burnout have on your update of the book?

Over the course of my career, I have found that burnout often arises from being too tightly focused on our role and job and not being aware enough of our surroundings, especially the people we work with in health care. It can create what I call a “persecution complex,” which pathologists are particularly prone to develop. The topics in this book focus on interactions and skills we need to interact with others. Also, the text provides skills for managing ourselves within an institution. It is important to renew those skills if you are a pathologist, and certainly it is important for trainees to understand them. Use of the skills in this book will allow a broader understanding of how others in the health care profession interact within our systems and prevent an over-focused approach to our daily professional efforts.

Your own chapter on financial management contains so much essential, practical information about test cost analysis, financial performance, and budgeting. Is there anything you could not or did not include, because of its complexity or for some other reason, that is necessary to know in laboratory

administration?

Deciding the “need to know” is the secret to the success of this text. As working pathologists, the editors and authors are not simply MBAs, but have a wealth of management skills targeted to the unique aspects of pathology practice. I believe the credibility of the text is enhanced by the writers’ abilities to determine the components of administrative skills that are essential to running a safe, high-quality laboratory medicine and pathology operation.

In the chapter on patient safety and high reliability, “just culture” is defined as one in which errors are viewed as opportunities to improve the understanding of risks and all employees are held responsible for their choices during an unintentional error. Dr. Williams writes in his foreword that you inculcate this in your laboratories. Do you have any sense of how prevalent this learning culture is in laboratories? That is, do you think it’s fairly common today or still lacking?

“Just culture” is a growing knowledge base in health care across the United States but probably has not reached every institution or every health care system. It is unique in that it requires a second look at how we treat mistakes in health care. Do we immediately insert a “blame game”? Or do we instead focus on the processes that might have contributed to the slips and lapses that can occur in a highly complex organization? Using the knowledge of employees “on the ground” helps sort these questions out rather than immediately blaming one individual and extinguishing other questions related to why a mistake really occurred. It is the “why” questions that lead to more successful corrective actions. “Just culture” does not imply, however, a complete lack of personal responsibility. These will always exist at whatever professional level employees and pathologists operate.

Would you like to say anything about your three co-editors and the contributing authors?

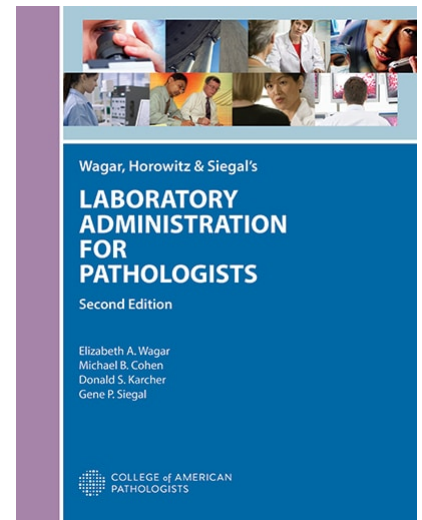
Dr. Cohen, Dr. Karcher, and Dr. Siegal were a fabulous team. We gathered many useful updates, identified new topics, and created a well-rounded second edition. All three have unique expertise. Dr. Cohen provided strengths related to administration from a multi-institutional perspective. Dr. Karcher provided new specific expertise in pathology practice and government affairs. And Dr. Siegal, a co-editor of the first edition, provided the continuity to see the continued value of the curriculum approach. We all miss Dr. [Richard] Horowitz [1931–2017], who was the driving force for the creation of this text, but we became a great team as the writing progressed.

To order (\$80 for members, \$100 for others), call the CAP at 800-323-4040 option 1 (PUB312). (The ebook, at ebooks.cap.org, is \$75.) If you are interested in writing a book for publication by CAP Press, contact Caryn Tursky at ctursky@cap.org.

*Here is an excerpt from the second edition of *Laboratory Administration for Pathologists*. It is half of the “Budgeting Process” section in an updated chapter titled “Financial Management of the Laboratory,” written by Dr. Elizabeth Wagar.*

Budgeting Process

The next step in the financial management of a laboratory is the budgeting process. Budgets are managerial financial tools that allow organizations to chart their commitments, plans, projects, and all of their costs in one comprehensive document; it is the financial map of future activities. Most organizations have a *capital budget* for major equipment or expenditures that are expected to extend over more than 1 year; a *personnel budget*, which details the personnel requirements of the entity; an *operating, or expense, budget*, which details the income and expenses of the organization; and an *allocation budget*, which details those items that are nominally called indirect expenses or overhead.



Some institutions segment budgets for different purposes. For example, an *operating budget*, which deals with activities already being performed, may be separated from an *opportunities budget*, which is devoted to innovation and new activities. Complex operations may have a *critical factors budget*, which identifies every product or service and the few major items that account for 75% to 80% of the total budget, and a *milestone budget*, which controls expenditures for a predefined result or a new product.

The methodology used to formulate the projection for a new budget varies with the institution. The simplest but least accurate method is to assess the previous year's expenditures and simply add a percentage that seems "about right" across the board for the upcoming fiscal year. A more accurate method, the *standard budget*, is based on the previous year's expenditures and realistically evaluates each line item for anticipated increases and decreases based on activities planned for the upcoming year. A favored methodology in government is the *zero-based budget*. Rather than starting with the previous year's expenditures, the manager starts fresh by identifying the results desired in a given area and asking what is needed to obtain those results. Zero-based budgeting requires significant planning; instead of incorporating this method in all areas of an institution, zero-based budgeting may be incorporated into specific sectors in which such planning may be of value. Sometimes zero-based budgeting rotates every 3 years through an institution to allow different departments to plan for obsolescence and/or changes in technology. Another budget methodology is the *flexible budget*, which may vary over the course of the fiscal year to adjust for changes in activity. Thus, with variations in utilization, adjustments can be made over the course of the year in the projections. The flexible budget basically separates fixed from variable costs and develops budget projections for various levels of activity. Finally, the *case-mix budget* accounts for different types of contracts that apply to the institution (eg, contracts with HMOs, PPOs, Medicare/Medicaid, and/or indemnity insurance providers).

Budget periods vary depending on the organization. For example, a calendar year with a January 1 start date may be typical for many businesses. Academic centers tend to follow the academic year, which begins on July 1. The federal government, on the other hand, begins its fiscal year on October 1.

The budgeting process is generally a 4- to 6-month-long activity and is based on a budget calendar. For a hospital laboratory operating in a fiscal year that starts on January 1, the process begins in the summer and ideally involves everyone in the laboratory, from the laboratory director and the pathologists to the technologists, phlebotomists, laboratory assistants, receptionists, and administrative assistants. The budgeting process begins with a review of the strategic plan and direction of the laboratory and a forecast for the upcoming year regarding changes in patient volumes, the patient case-mix, expected teaching activities, new procedures, obsolete activities, discontinued activities, the impact of new technology on productivity, anticipated inflation, and cost of living. The budgeting process also includes a prediction of changes in reimbursement from the government or the private sector. Everyone in the laboratory is asked for input regarding what they will need, or would like, so that they can provide better service in the coming year.

A typical budgeting process is succinctly described by an institution. In earlier months, input activities such as anticipated activity and productivity forecasts and personnel planning are performed. Also in the calendar is a capital equipment budget and an operating budget developed from these forecasts. Upper level administration will review for gaps in the proposed budget. Capital equipment requests will be allotted a given total, and finance or a capital equipment committee will review capital equipment proposals. Additional modifications may be required to adjust to late-change operating revenues and expenses. Overall, budget planning is a social process with numerous communications between physicians, especially in-hospital services, operating personnel, and health care administration.

The various needs and wants of the laboratory constitute a “wish list,” which is separated into equipment, personnel, and supplies categories. The laboratory director, along with the pathologists and the laboratory supervisors, prioritizes the requests in each category and submits these budget requests to the administration, generally in September for a calendar-year budget. A series of meetings follows wherein the laboratory director must *justify* the budget requests, often negotiate and accept trade-offs, and possibly even change some plans or projects. Laboratory directors must be able to defend all budget requests. The justifications that the administration are most likely to accept include enhancement of productivity, efficiency, and/or cost reduction; improvement in patient care and/or satisfaction; and necessity to meet safety or other governmental requirements. An important adjunct to the “needs” justification is an assessment of the clinical utility of the laboratory. It is always useful to get clinician support for the laboratory’s budget requests, preferably in writing. Another important justification is the *cost offset*, in which expenditures in the laboratory result in savings in other departments, for example, acquiring a new, faster analyzer that could decrease turnaround time and thus length of stay for an inpatient. After the administration agrees to the laboratory budget, it takes several months to finalize the budget for the entire institution by the beginning of the next fiscal year.

The *personnel budget* projection requires estimates of the workload and productivity. Unfortunately, there are no reliable, universally accepted measures of work in the clinical laboratory. Most laboratories utilize a workload recording system that is built into the laboratory information system (LIS). This working system is valuable in the budgeting process as long as annual adjustments are made for changes in technology that impact the work necessary to do the test. However, such workload analyses should not be used to make interlaboratory comparisons. The personnel budget also has no standard measure of productivity. Many laboratories measure productivity by dividing workload (billable tests per year) by total full-time equivalents (FTEs) or paid hours. For example, if a laboratory that has 50 FTEs and performs 5,000,000 billable tests per year is anticipating a 10% increase in work, the laboratory would perform 5,500,000 tests and thus require 55 FTEs. But if the laboratory also anticipates a 5% improvement in productivity, then only 52.25 FTEs would be needed, and the personnel budget would request 2.25 new FTE positions. When justifying this budget to the administration, the laboratory would cite increased workload and productivity as well as improved service, leading to decreased turnaround times and possibly decreased length of stay.

The *capital budget* request is also based on the laboratory’s “wish list” for equipment. The capital budget, since it involves current investments for which future benefits are expected, usually over a period of years, includes purchases such as buildings, equipment that will be used for at least 3 years, and expensive computer software, as well as projects that have long-term impact on the organization. Such purchases typically require a process of technology assessment that includes issuing requests for information and requests for proposals. Also, capital budgets require a more detailed justification that includes a calculation of the *return on investment (ROI)*, or the length of time necessary to recover the original cost of the investment.

The calculated ROI for a capital equipment purchase can take several forms. Most typically, it is a measure of the gain or loss generated by a capital purchase relative to the amount of the purchase. It is typically expressed as a percentage:

$$\text{ROI} = (\text{Gain from Investment} - \text{Cost of Investment}) / (\text{Cost of Investment} \times 100)$$

Another option is to account for the time required to recover the return. Thus, the ROI is often used in conjunction with the rate of return, which refers to a specified time period. The rate of return is the gain from investment over a period of time, expressed as a proportion of the original investment. The time period is typically 1 year. Thus, if you purchase an instrument for \$10,000 that performs 100,000 tests per year with a net profit of \$0.10 per test, the annual rate of return covers the instrument cost in 1 year with a profit of \$10,000. Annualization refers to the rate of return over a period of time:

$$\text{Annualization} = \text{Rate of Return} / \text{Time (typically years)}$$

In our example, if the net profit is instead \$0.05/test, the rate of return is \$5000 per year and the cost of the instrument (\$10,000) is recovered in a 2-year interval. When specifically referring to capital investment or return on invested capital (ROIC), a ratio is calculated by dividing the operating income by the invested capital:

$$\text{ROIC} = \text{Net Operating Profit} / \text{Invested Capital}$$

This calculation is for a not-for-profit institution. A for-profit institution would use the following:

$$\text{ROIC} = \frac{\text{Net Operating Profit} - \text{Adjusted Taxes}}{\text{Invested Capital}}$$