As we continue the series on education and training in pathology and laboratory medicine, a few common themes are beginning to emerge from this group of articles. First, interest in education and training is growing. Next, there is emerging evidence for the use of new approaches to education and training, several of which we have highlighted in this series. Last, but certainly not least, there is emphasis on the quantitative aspects of education and training: metrics to assess outcomes and effectiveness, new ways of tracking performance, and the use of data to guide programmatic development in education and training.

Educating students and training residents in any discipline have the common goal of turning these individuals into fully qualified graduates who understand what they are supposed to do, how to do it, and how to do so in a responsible and ethical manner. With some exceptions, this goal is more easily defined for residents than it is for students, because residents generally are preparing for well-defined clinical or diagnostic roles in patient care. In the recent past, the Accreditation Council for Graduate Medical Education (ACGME) added a layer of training called the six Core Competencies, a set of requirements designed to help ensure that residents better understand their roles in health care systems and interdisciplinary care. Further changes are underway by the ACGME to guide training programs in setting-specific milestones—“specific points in development” that are part of “competency-based outcomes”—designed to help programs and trainees better monitor progress during training. All of these changes are for the better, because education and training increasingly are moving into an era characterized by a need for measurable outcomes. Put another way, evidence-based education and training are needed just as much as evidence-based patient care. We need to know what works, what doesn’t work, and of alternative approaches that are the most effective. We need data.

But we need data for many things that up to now have been lacking. If one goal is to prepare residents and postdoctoral fellows for their careers, we need much better data about what they actually do during those careers. In the article by Branda and colleagues in this issue of the Journal, a group of academic clinical pathologists have undertaken the task of defining, in a quantifiable way, the activities of laboratory directors in one academic medical center. Some earlier studies have described what laboratory directors do but without as much of a quantitative analysis. The results of the study by Branda and colleagues show that about one-half of a laboratory director’s time is spent on administrative activities, about one-third on clinical activities, and the remainder (in this setting) on the academic activities of teaching and research. Training of residents in clinical pathology or doctoral level scientists in fellowship training should therefore spend a substantial amount of time on learning about their administrative roles and perhaps less on the clinical and diagnostic aspects of their discipline. Defining the optimal balance of time allotted to different parts of training requires further study.

There were other important lessons to be learned from this study. A great deal of a laboratory director’s time is spent on activities that at this time do not receive reimbursement, and as a result in most systems they do not count as productive time. Understanding this in detail is important to set productivity benchmarks, determine staffing levels, and guide budgets. It is also important for trainees to understand the nuances of the US reimbursement system as it relates to pathology and laboratory medicine, because whether it is fully rational
or not, reimbursement does affect allocation of resources, staffing, and, ultimately, career choices. Another lesson to be learned is that pathology and laboratory medicine, because of the impact of test results on patient care, is increasingly interdisciplinary; residencies and postdoctoral fellowships should emphasize this. In particular, training programs must become better at showing trainees how to work on committees, interact with clinicians in many different specialties, and engage in a broader role within health care. Trainees need to learn how to work effectively outside the laboratory.

For those working in pathology and laboratory medicine, administration comes in two flavors. The first is specific to pathology and laboratory medicine, with a heavy emphasis on regulatory compliance, quality control, laboratory safety, and other functions that are unique to what we do. The second is common to all parts of health care, including general management skills, human resources, budget and finance, informatics, and all the other functions of business and administration. Trainees need exposure to all of these, but again we need better data as to what to emphasize, how much time to devote to specific topics, and how to ensure that trainees have learned what they need to know.

The article by Branda and colleagues also contains some findings that were not the purpose of the study but nonetheless are important to the profession. First, laboratory directors are busy: many things need to be done, done correctly, and done on time. Second, laboratory directors increasingly need to look outside their departments in order to provide the test results needed for patient care and to be able to integrate what they do with the health care system as a whole. Third, just as changes in molecular diagnostic techniques are blurring the lines between pathology and laboratory subspecialties, increases in the complexity and capability of informatics allow us to integrate clinical, radiographic, and laboratory findings in ways that previously were not possible. This blurs the lines between traditional roles in health care. Last, laboratory directors do many things as part of their jobs: being a laboratory director is not a simple task. When all of these factors are considered together, what emerges is the observation that being a laboratory director is a big job, and big jobs almost always are the most satisfying. We need to make certain that our training is structured in such a way that residents and postdoctoral fellows have a good chance of succeeding in those jobs.

References