Starting at the Beginning, Ending at the End

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Am J Clin Pathol. January 2015;143:10
DOI: 10.1309/AJCPATYTPX0MDHF0

In this issue of the Journal, we present the final article in our yearlong series on education and training in pathology and laboratory medicine. This article, by Hsieh and Nolan,1 is based on the results of a survey of pathology residents designed to assess the confidence, knowledge, and skills of residents at the beginning of residency training. Understanding where residents begin in terms of knowledge and skills is a logical and important starting point for designing curricula, adjusting the content of rotations, and for measuring resident progress. Assessing confidence—and developing ways to increase it during training—is more elusive due to the challenges of defining and measuring it, but it still is something that should be done. The question, then, is how does one assess these three different issues in a meaningful and reproducible way? Are surveys useful for this type of assessment, or do we need other approaches?

As an assessment tool, surveys have many faults. Low response rates are typical when surveys are distributed to wide groups of potential respondents, particularly when not distributed directly to respondents but rather through third parties (in this case, program directors). It is difficult to craft surveys that ask the “right” questions so that responses can be compared and meaningful statistical analyses performed. As Hsieh and Nolan point out, surveys are susceptible to recall/memory bias. It is challenging to write survey questions that are clear, concise, and require minimal interpretation by respondents. Last, surveys rely on the willingness of respondents to take the time and make the effort to respond with thoughtful, accurate answers (an issue that is not dissimilar to teaching evaluations, which after all are merely a type of survey).

On the other hand, surveys have positive attributes. They are a relatively easy way to reach many potential respondents over a wide area. Surveys lend themselves to use of electronic communication, both for distribution as well as for responses. Aside from the design and analysis phases, surveys are inexpensive. Perhaps most importantly, surveys can be repeated, modified, and updated as needed. Thus, despite their drawbacks, there are few practicable alternatives to the use of surveys as an assessment tool.

Without good alternatives, the challenge is how to make surveys as effective as possible. The most obvious point is that questions need to be carefully written, validated, and revised as needed so that intent is clear and responses can be compared. Too many surveys suffer from vague or ambiguous questions. More importantly, surveys need to ask the right questions. Surveys should be of the right length: overly long surveys decrease the probability that potential respondents will participate, whereas short surveys collect incomplete information. Surveys should be adaptable to changing conditions. All surveys, but especially those that require voluntary participation, must be sufficiently interesting so as to maximize response rates.

Thus, the survey results reported by Hsieh and Nolan1 highlight many of these issues. Because the survey response rate depended on program directors actually distributing it to residents and for residents to respond, the response rate was low: responses were received from only 201 (8%) of 2,327 pathology residents and only 22 training programs in the United States. As the authors point out, the survey was unable to quantify the number of specimens directly handled or autopsies performed. The authors note the subjective nature of assessing confidence by use of a survey. That said, the results suggest that we need to find ways to increase response rates so we can refine and improve the survey tool.

In closing, the most important lessons learned from this series of articles are that (1) many individuals are now formally involved in assessing, revising, and improving how we teach and train; (2) data are being collected to help evaluate new approaches and to define the most effective ways to teach and train; and (3) through time we will better understand what works, what doesn’t work, and how to make it work. The reward will be a better profession, more engaged students and residents, and the knowledge that we are moving forward in the right direction.

Reference