Use proficiency testing in the lab as an investigative tool

By Daniel C. Edson and Robin E. Stombler

Proficiency testing (PT) is an important tool in assessing laboratory performance and identifying problem areas that otherwise may go undetected. While good laboratory practices require a number of quality measures, proficiency testing evaluates a laboratory's accuracy and objectively helps laboratories ferret out reasons for unsatisfactory results.

Lab detective

While nearly all laboratories belonging to a major group of clinics in the Midwest consistently reported negative Group A strep tests, it took failed proficiency testing results to realize there was a problem. A follow-up investigation by these labs revealed that newly installed thermometers were not set correctly. With the wrong temperature, Group A strep cultures could not grow. The thermometers were swapped out, and the laboratories began reporting accurate Streptococcus results.

Proficiency testing is helpful in determining when one peer group veers from normal test results. After performing proficiency testing for prothrombin time, for example, a peer group of users of one particular test device reported results greater than the instrument's linearity. The product manufacturer was asked to test the coagulation samples to determine how the instrument reported results. The manufacturer explained situations that might occur should the instrument report a result of >50.0 seconds, and advised that such a patient result indicates that the prothrombin time is prolonged and may be invalid due to a testing problem. Even though the majority of users reported the >50.0 seconds result for a low fibrinogen level sample, it was not an acceptable result. Proficiency testing, in this instance, allowed the manufacturer to reiterate its operation procedures and better educate the laboratory on when a testing problem may occur.

Locating suspects

Individually targeted education and training needs are another benefit that proficiency testing offers. Take the case of an office lab that performs urine susceptibility testing. The individual trained to read the disc zone size misunderstood that each antibiotic has its own ranges for sensitivity or resistance. In this instance, the individual used one general template to read all antibiotic zone sizes. Some antibiotic sensitivities for each test event would fail proficiency testing, but it was difficult to target the reason for this failure. After a lengthy discussion with the proficiency testing provider, the laboratory was able to pinpoint the cause of the errors and retrain the individual before more patient susceptibility reports were affected.

Proficiency testing may also assist a laboratory in determining the cleanliness of its instruments. When there was no indication of problems emerging from hematology laboratories — yet, monocyte proficiency failure was consistently triggered in a handful of them — proficiency testing became the detective. Samples, in this instance, appeared perfect for standard deviation, expiration dates, and participant consensus — yet, the monocytes were still a problem. It was determined that, because the targets were so low, any signal generated by a dirty flow cell, dirty optical, or dirty counting chamber would appear in the monocyte count and weigh in on the results, thus producing a proficiency failure. In this instance, approximately 6% of the labs in this peer group benefitted from this knowledge.

Adhering to good laboratory practices may improve a lab's performance, but it does not guarantee a satisfactory proficiency testing outcome. Proficiency testing is available to help detect and correct problems that may affect patient testing. Examining proficiency testing results closely to determine the cause of a failure is important.

Solving the case

If the laboratory receives an unsatisfactory proficiency testing result, steps can be taken to determine the cause of the problem. First, make certain that there are no clerical discrepancies between the results you submitted and the evaluation you received. Was the result based on the proper instrument, reagent or kit? Typographical or clerical errors may be the easiest to spot.

Next, specimen-handling problems should be examined. Determine if specimens arrived in proper condition, were tested on time, and were stored correctly. If a specimen-handling problem is suspected during testing, a laboratory should notify its proficiency testing provider.

A more in-depth investigation into failed proficiency testing results requires a look at possible operator error, a review of reagent logs, quality control and calibration records, and an examination of instrument maintenance records. Proficiency testing providers and device manufacturers should be ready to help answer questions and suggest possible solutions. □

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Answering your questions

Leading a multigenerational staff

Q Traditionalists, Baby Boomers, Gen Xers, and Millennials, oh my! Our lab now has staff members from 25 years old to 75 years old. What should we keep in mind in order to successfully manage a multigenerational staff?

A Today, as many people choose to work beyond retirement age, it is not unusual to see age differences of more than 50 years between the oldest and youngest employees. When there is such a vast discrepancy in ages, there is a need to manage each group differently.

Each generation has distinct priorities, values, attitudes, behaviors, motivations, and communication styles. With workers from four generations now active in the workforce, managers need to understand generational differences to manage effectively. One-size-fits-all management does not work in today's multigenerational lab. Managers need to understand what motivates each generation in order to leverage the strengths of each employee — individually and as a team. The best way to know what employees value is to ask them, but every generation has been shaped by a unique set of experiences, so each group has different perspectives and a distinctive value in the workplace.

Traditionalists or the Silent Generation (born prior to 1945), the oldest generation in today's workforce, are a tremendous knowledge base and carry a wealth of historical information, so they are a valuable resource. This generation prefers a top-down chain of command. Do not assume that this group is clueless about technology, but its members may appreciate some technology training. Traditionalists work well in teams, like face-to-face interactions, and tend to enjoy mentoring younger staff members.

Baby Boomers (born between 1946 and 1964) are career focused and results oriented. They define themselves by their professional accomplishments, tend to be competitive, and work long hours. They believe in hierarchal structure in the workplace, so having "newbies" who have not "paid their dues" arrive on the scene expecting the benefits Boomers have worked hard for tends to ruffle Baby Boomers' feathers. This generation rarely offers spontaneous praise to others and appreciates scheduled feedback with substantial documentation.

Generation Xers (born between 1965 and 1979) are typically adaptable and work well independently. They thrive on creativity and responsibility. This generation does not like to be micromanaged and often flourishes under a hands-off management philosophy. Gen Xers are eager to learn new skills and are motivated by educational and developmental opportunities that allow them to grow their careers. Members of this generation like to receive feedback, yet often neglect to offer praise to others.

Millennials — Generation Y — (born between 1980 and 1999) have never lived without technology. They grew up "plugged-in" 24 hours a day, seven days a week, which has made them good multitaskers who are accustomed to frequent and instantaneous feedback. Millennials crave guidance, praise, coaching, and reassurance. Members of this generation do not want to wait six months or a year to be recognized in a performance review. These workers benefit greatly from mentors who can provide regular feedback and offer career guidance. Members of this generation work well in teams but prefer to communicate electronically rather than face-to-face.

Although having multiple generations can be beneficial to the lab environment, many people do not know how to work well with people of other generations. Train lab managers, supervisors, and staff to better understand the perspectives of the various generations. Understanding the motivations, values, and goals of the Traditionalists, Baby Boomers, Gen Xers, and Millenials enables more effective communication among the staff and leads to fewer misunderstandings. In order to effectively lead a workforce that spans four generations, managers should consider each group's need for different methods of communication, requirements for work-life balance, desires for career development, and effectual rewards and recognition.

Managers should also be sure to foster an environment that promotes collaboration among generations. Form teams that include members of all generations so they can learn from one another. Older workers can learn about the benefits of text messaging and Wiki collaboration, for example, while younger workers can learn about effective documentation and recordkeeping in order to meet regulations. Develop a cross-generational mentoring program. Members of any generation can mentor members of other generations. Boomers and Traditionalists have immeasureable knowledge they can pass on to younger workers and can, in turn, learn from Millennials who tend to value teamwork. Gen Xers are good at working independently, which are skills Millennials and Boomers may find beneficial.

A wide variety of seminars, webinars, motivational speakers, books, and classes are available on this topic that will help everyone involved understand, appreciate, and even benefit from the differences among the generations.

The goal is to have great employees from all generations who learn from one another and work well as a team. Take the time to learn more about the unique characteristics of each generation in order to motivate staff effectively and help keep all employees fully engaged.

Put simply: Get to know your staff. Learn what motivates each of them. Make sure that they feel appreciated. Reward them appropriately. Reap the benefits of a satisfied staff.

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