

Quality Qorner

Technology Will Solve Our Problems. . . Not!

DOI: 10.1309/LMRRVOTVTISAG50Q

Many people believe that technology has enhanced our daily lives. After all, microwave ovens ensure that we can have warmed-through, highly processed, non-nutritious fast food at any time of the day or night. Internet access allows us to sit for hours skimming the latest celebrity shenanigans while providing exercise for our index fingers. And cellular telephones ensure that we remain electronically connected to telemarketers when we're in airport bathrooms. Yup! Technology sure has added a lot to our lives.

Technology has also enhanced our lives in the laboratory—however, for the better for the most part. Automated testing has increased throughput and accuracy while also reducing required sample volumes. Computerized information systems provide better data and information correlation for clinical decision makers. On-screen graphics simplify instrument set-up, troubleshooting, and training. And audioconferencing systems allow laboratory staff to actively participate in ongoing continuing education from their respective workplaces.

Faster, better, and cheaper technology in the laboratory, however, does not necessarily translate to faster, better, and cheaper laboratory services. Despite more reliable instruments and computer systems, emergency departments and intensive care units continue to want significant reductions in laboratory testing turnaround time. Having updated your laboratory to molecular testing methods has not reduced the number of inadequate samples received in the laboratory from non-laboratory collectors. And bar-coded patient identification does not prevent the inability to retrieve an archived sample, slide, block, or report after testing or examination.

Is there some way to improve laboratory quality without needing to use high technology? Of course! One of the easiest ways to improve laboratory quality requires the use of only a whiteboard and a marker. Add some laboratory staff, a facilitator, some hot or cold caffeine, and some munchies and you have the makings of a process-mapping session.

All laboratory work takes place as a series of interconnected processes, from the time the test or examination is ordered by a clinician to the time the result report is available for patient diagnosis or treatment. These interconnected processes are known as the laboratory's preanalytic, analytic, and post-analytic path of workflow. Every laboratory staff member and pathologist works in one or more of these processes; non-laboratory staff, such as physicians, nurses, unit clerks, and messengers, also have roles and responsibilities in some of the processes. When something goes wrong, staff is often blamed because it's believed that problems are people-related. However, data shows that most problems have their root causes in a bad or nonexistent process. So, it makes sense to identify the laboratory's processes and know the activities in each process, which job titles are involved in executing the activities, and how to perform each activity in the process.

It takes only a couple of hours for a trained facilitator to coax out of the process-mapping session participants the "who does what and when" sequence of the process flow.

What's always amazing is how a group of people, supposedly working in the same process, can have such widely diverging views on the sequence of, and responsibilities for, process activities. However, this is exactly the value of the process-mapping session—to arrive at the work group's consensus on the way the process needs to be sequenced to get to the desired end result, every time, at the least cost, in a timely manner.

I should mention that processes are immediately improved simply by conducting the process-mapping session because, as the participants discuss and document how the process is currently conducted, it's inherent in our professional nature to identify the process bottlenecks and dead ends and make on-the-spot suggestions for improvement. What's even more exciting is that participants leave the process-mapping sessions feeling good about their contributions and with a renewed sense of ownership in the process' success because they helped design it.

Wow! All that for a few cookies and some coffee! How no-tech can you get? Granted, you'll need some low-tech word processing to copy the flowchart from the whiteboard and type up the procedures into printed documents, but that costs pennies compared to a new analyzer.

Oh, by the way, one of the best processes to flowchart is the sequence of activities for setting up and running an automated analyzer. It turns out that the sequence is the same for many or most of the common analyzers in your laboratory, whatever the clinical discipline. Now, there's an improvement!

Jared Diamond, author of the popular book *Guns, Germs, and Steel*, states in his follow-up book *Collapse* that "New technologies, whether or not they succeed in solving the problems that they were designed to solve, regularly create unanticipated new problems. Technological solutions. . . are routinely far more expensive than preventive measures to avoid creating the problem in the first place." I offer that mapping existing, new, or changed laboratory processes is a valuable no-tech solution to many existing laboratory problems, whether created by technology or not.

All the available high technology could not solve a recent problem with my new cell phone number, which displayed my caller ID to call recipients as "Divorce Unlimited." Cellular service tech reps simply could not get the account name changed for this number to my account name. The high-tech solution? Get a different cell phone number!

This Month's Quality Quote:

"Quality improvement results from people improving their processes."

—Thomas Pyzdek

Lucia M. Berte is President, *Laboratories Made Better! PC*. Send your comments and questions to lberte@LaboratoriesMadeBetter.com



Lucia M. Berte
MA, MT(ASCP)SBB,DLM;
CQA(ASQ)CMQ