

The what and why of diagnostic management teams

January 2017—Michael Laposata, MD, PhD, has been speaking for years about the need for laboratory consultations and diagnostic management teams, and he will lead the first formal meeting Feb. 7-8 in Galveston, Tex., on what the teams are and how to implement them. Writer Ron Shinkman put a few questions to him about diagnostic management teams and pathology practice. Dr. Laposata is a professor in and chairman of the Department of Pathology, University of Texas Medical Branch-Galveston. Here's what he said.

Given the aging of the pathology workforce, a pending shortage, and squeezed reimbursement, how do you see smaller practices faring over the next decade or two? What kind of skills will they have to learn or deploy to succeed?



Dr. Laposata

If the expectation from users of pathology services in the years ahead goes beyond receiving an accurate diagnosis in anatomic pathology, which can be done well even in the smallest pathology practices with experienced pathologists, then it will be extremely challenging for small practices to deliver what is needed. If a breast cancer case carries with it the expectation of a pathologist's interpretation of molecular findings from five genes this month and one additional gene each month after that, a team of experts is clearly going to be required. If an interpretation of test results within any section of clinical pathology—autoimmunity, hematology, endocrinology, and more—is sought from a pathologist, there is just too much for any one person to know.

Unfortunately, in the United States, the payment incentives have not been aligned for decades to encourage pathologists to become experts outside of anatomic pathology. In addition, pathologists in the United States work within a very litigious system, and that makes stepping out of a comfort zone a dangerous endeavor.

Several things in the external environment of American medicine must be changed to promote the critical role of the pathologist as a diagnostic consultant for test selection and result interpretation. We need to be actively involved in aligning incentives correctly to significantly increase the impact of pathologists in America.

Can you explain the concept of diagnostic teams and how they work? Do they cut down on misdiagnoses, and do you have success stories?

The concept of a diagnostic management team, or DMT, is simple. It involves a group of experts who meet daily and focus on the correct selection of laboratory tests and the interpretation of complex test results in a specific clinical field. The experts are typically pathologists focusing on the diagnosis of a specific group of diseases, but doctors and laboratory experts other than pathologists can participate effectively.

The front end of the process is assistance in selecting the correct tests. This often involves the creation of expert-driven algorithms that are updated regularly to manage utilization of laboratory tests and dramatically minimize overuse and underuse. Use of such algorithms with reflex testing makes it easy for treating health care providers to order the right tests and only the right tests.

The back end of the process is the generation of the expert-driven, patient-specific interpretation of the test results in a specific clinical context. This requires the knowledge of a true expert—not someone who may have a general

idea about the meaning of a particular laboratory test result—and the participation of someone to help that expert search the medical record for relevant data to be included in the interpretation. This is usually a pathology resident or other trainee in the related field. In fact, it is the ultimate teaching tool for a trainee because he or she must provide an insightful interpretation to the team for final modification, if any, and inclusion in the medical record. Obviously, if you have a sign or symptom and need a diagnosis, you would like someone who reads the current literature and has decades of experience to direct your diagnostic studies. As I was told by the president of Massachusetts General Hospital, where I was developing a diagnostic management team in coagulation, it is obvious that misdiagnoses will be reduced when a pathologist with expert knowledge provides valuable clinical consultative information to a colleague who knows much less.

The success stories are virtually every case I have ever signed out, and that number in my field of coagulation currently exceeds 50,000. Every positive case that identified a diagnosis resulted in an earlier and more accurate diagnosis. Every case negative for coagulopathy allowed the treating health care provider to focus on a diagnosis other than one related to bleeding and thrombosis.

How can pathology practices do a better job of marketing themselves?

Pathology practices that are connected in a formal, or at the current time even in an informal, way to expert-driven diagnostic management teams would have a great marketing tool for clinical practices. I can imagine that with diagnostic management teams in all areas of medicine spread across the country, a pathology practice that has an arrangement to gain expert information within minutes or hours for virtually any complex patient from a variety of diagnostic management teams would be at a tremendous advantage.

How are most pathology practices fixed for managing and deploying patient data? What are some of the challenges for them to accomplish this?

As the National Academy of Medicine, formerly the Institute of Medicine, indicated in its report issued in September 2015 on diagnostic error, significant work needs to be completed in health information technology. One way or another, a simpler process that takes into account privacy issues and ease of use needs to be introduced so that an expert in one geographic location can help a pathologist or other health care provider in a different location in a timely and consistently effective manner. I have been able to consult with people all over the world about cases in which they need an expert opinion about something I know well, but it is rarely simple and for that reason it is less than optimal.

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