



Balancing Costs and Quality in Pathology: 6 Conversation Starters

HOW CAN HOSPITALS IMPROVE VALUE IN LABORATORY SERVICES? START BY ASKING THE EXPERTS: PATHOLOGISTS.

Many hospitals and health systems are putting their laboratories under the microscope to pinpoint ways to lower costs while simultaneously enhancing quality. Both external and internal pressures are driving these value-improvement efforts.



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For instance, laboratories are struggling to adjust to lower Medicare payments. In January, the Centers for Medicare and Medicaid Services (CMS) cut Medicare Part B laboratory payments by 10 percent for high-volume outpatient laboratory tests under a revamped clinical laboratory fee schedule. Similar cuts are expected in 2019 and 2020 as part of CMS’s response to the Protecting Access to Medicare Act (PAMA) of 2014.

At the same time, hospitals are adapting to developments within the pathology field, from genomic testing to artificial intelligence. While some of these advances are improving diagnostic medicine and patient care, they are also changing the job descriptions and workflows of laboratory staff, which puts additional burden on pathologists.

“There are the pressures within the institution around continuous improvement,” says Ross Reichard, M.D., FCAP, vice chair of quality and associate chair of practice, Department of Laboratory Medicine and Pathology, Mayo Clinic, Rochester, Minn. “How rapidly can we do this? What is the cost to the patient? At the same time, we have to identify capacity to innovate because through innovation, we can advance health care and create better outcomes for patients.”

A group of pathologists and hospital leaders convened in San Diego at the July AHA Leadership Summit to discuss how pathology can successfully manage these competing demands. Bob Kehoe, director, product development and strategy, American Hospital Association (AHA), moderated the discussion with representatives from the City of Hope cancer hospital and four large hospitals and health systems: CHI St. Luke’s Health, Mayo Clinic, University of California Irvine Health and UC San Diego Health. The sponsor of the event, College of American Pathologists (CAP), was represented by Stephen Myers, CEO.

A common theme was the need for hospital executives and pathology leaders to hold regular conversations about balancing costs and quality. “Have discussions at your institution to demonstrate what real value is,” Myers says. “That’s a mantra that we [CAP] preach.”



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The following six questions can help guide hospital and pathology leaders during these conversations:

1 How do pathologists contribute to the value equation?

Because they tend to spend many hours in the laboratory, the pathologists’ role in patient care tends to be less visible than other physician specialists who regularly don white coats. To initiate a conversation about value, hospital leaders may want to start by seeking a fuller understanding of a pathologist’s job and how they impact costs and the patient experience (both health outcomes and satisfaction).

Pathologists’ long-standing contribution to medicine has been as diagnosticians. “We call the diagnosis, and as soon as possible,” says Sue Chang, M.D., FCAP, assistant clinical professor, Department of Pathology, City of Hope, Duarte, Calif.

To ensure accurate diagnoses, pathologists must identify the right laboratory tests to give to the right patient at the right time using the right methodology. “It’s about preemptively saying, these are the three tests that are most important to include in, for example, a sepsis panel,” Chang says. “If these tests are positive then we may move on to another test. But there’s no point in going down that path until we get these initial results.”

Pathologists are essentially advising other medical specialists on what tests to order. “A physician doesn’t order a test, a physician consults a pathologist,” says Jeff T. Mueller, M.D., FASA, associate dean for hospital practice, Mayo Clinic, Rochester, Minn. “No test — whether to detect abnormal potassium levels or examine tissue from a surgical biopsy — has value without context. Pathologists understand a test’s probability to predict.”

Because they are experts in blood and blood products, pathologists also commonly manage hospital blood services and consult on transfusion and anti-coagulation cases. “Because we control the blood and know how some of the pharmaceutical agents work, we’ve become a resource for our clinical colleagues,” says Arthur Bracey, M.D., FCAP, associate chief, pathology, CHI St. Luke’s Health, Houston. “For example, I had a patient with low blood platelet counts who was being tested for thrombotic thrombocytopenic purpura, a rare blood disorder. But the lab results helped us rule out this disease, which would have required an expensive treatment. I worked hand in hand with the hematologist in making the treatment decision.”



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Sue Chang, M.D., FCAP, assistant clinical professor, Department of Pathology, City of Hope, Duarte, Calif.

2 What disruptive innovations and trends are affecting laboratory medicine, particularly related to improving value?

Precision medicine is one disruptive trend that hospital and pathology leaders may want to discuss. Fueled by advances in molecular and computer science, precision medicine aims to identify the most effective treatment for a patient based, in part, on genetic mutations identified within diseased cells, such as those affected by cancer or HIV.

As the ones identifying the genetic abnormalities, the pathologists are being invited to participate in treatment discussions. For instance, at City of Hope, Chang sits on tumor boards, or multidisciplinary teams of clinicians that discuss cancer cases. “This is a collaborative process, and we work together to end up with a cogent treatment plan,” Chang says. “For instance, I might say, ‘The tumor sample is defined by XYZ molecular mutation,’ and then the oncologist might say, ‘There’s a new drug that targets the XYZ mutation.’”

Improving the patient experience is another hot topic for discussion between hospital and pathology leaders. As more hospitals make laboratory results available to patients via online portals, pathologists are thinking about ways to make these reports easier for lay people to understand. “Patients are looking at these reports with a critical eye and trying to make sense of them,” Reichard says.

Other patient-friendly changes include offering convenient sites and hours for laboratory draws. City of Hope, a cancer hospital that draws patients from the Greater Los Angeles area and Nevada, is electronically networking with community hospitals around the region. “We’re trying to interface directly with community hospitals where our patients get their labs drawn so they don’t have to drive across town to get a plain old CBC,” Chang says.

Many other innovations and trends have the potential to affect quality and costs in pathology. One example is the use of computer algorithms (aka artificial intelligence) to help review and identify cellular abnormalities on slides that indicate disease. While still in its infancy, artificial intelligence may eventually help ease pathology workloads by assigning simple diagnostic cases to computers.



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Diego Health

3 What quality controls does pathology have in place to ensure the right test is performed for the right patient at the right time in the right manner?

Hospital executives can get a sense of the strict quality controls that govern every laboratory process by asking pathologists for a play-by-play of one laboratory test — from preparing the patient and extracting the blood or tissue sample to staining the sample for microscopic viewing and storing the specimen after a diagnosis is made.

To attain CAP accreditation, hospital laboratories must comply with comprehensive and scientifically endorsed laboratory standards. Detailed accreditation checklists, with about 3,000 specific requirements, help laboratories ensure they have up-to-date protocols in place. “This is really the playbook on how to run a quality lab,” Myers says.

One reason pathologists follow strict procedures is because they recognize that patients are on the receiving end of every test result. “Everyone thinks pathologists don’t have patients,” says Mojgan Hosseini, M.D., FCAP, assistant clinical professor, UC San Diego Health. “But anyone who has a simple blood draw, a biopsy or a surgery, is my patient, and what I do can improve their quality of care.”

Because molecular science is always advancing, laboratory protocols must be continually updated. For instance, the American Joint Committee on Cancer recently released updated cancer staging criteria for different types of cancer. As a result, UC San Diego Health had to update all its grossing manuals, which detail the essential steps to be taken to obtain and prepare a specimen. “We also had to train all of our residents and physician assistants on how some specimens have to be grossed differently because of the new criteria,” Hosseini says.

Not all pathology quality controls are based on national guidelines. Sometimes laboratory staff identify creative solutions. For instance, UC San Diego Health was throwing away large supplies of unused blood products. The expensive products were sitting in operating rooms unrefrigerated, and unused products became too warm to use safely. To address the problem, laboratory leaders purchased portable refrigerators. Now, before surgeries requiring large supplies of blood products (e.g., transplants), a refrigerator stocked with red blood cells, platelets and plasma is transported to the OR. “When the OR team uses up about 50 percent of the supply, they call us for another refrigerator full of blood products,” Hosseini says. “We send the second fridge and bring the first one back. This way the blood products are being handled in a temperature-controlled manner. We’re saving precious blood products while decreasing our costs.”



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Arthur Bracey, M.D., FCAP, associate chief, pathology, CHI St. Luke’s Health, Houston

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How can we reduce unnecessary and redundant lab tests?

Hospitals are taking several steps to reduce unnecessary testing, which not only saves costs but also reduces the number of painful blood draws and biopsies patients undergo. At City of Hope, the launch of a new electronic health record has forced pathologists to ‘clean house’ and standardize the laboratory tests that physicians can order to reflect current practice. “We spent a lot of time trying to figure out ‘Does anyone even order this test anymore?’” Chang says.

She was surprised to learn that oncologists and hematologists wanted to have standard sets of laboratory orders for different types of cancers available in the electronic health record system. “They wanted to be able to order the appropriate tests versus ordering a test that no one knows how to interpret so we end up having to run 17 other tests to negate the erroneously ordered one.”

CHI St. Luke’s Health has launched a multidisciplinary Laboratory Utilization Committee to help identify unnecessary laboratory tests and develop protocols for how often patients need to get follow-up tests for monitoring purposes. “We’re in nascent stages, but it’s an exciting opportunity,” Bracey says. “We’re going for the low-hanging fruit, including getting rid of obsolete tests that we’ve been using mindlessly.”

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How can we improve efficiencies and reduce waste inside and outside the lab?

University of California Irvine Health (UCI Health) is a good example of the potential for improvement in the laboratory. As part of an 18-month operational transformation initiative, the Department of Pathology and Laboratory Medicine identified \$2.6 million in annual savings.

“We looked at how we could improve all of our front-end processes,” says Tara Kasmarek, chief administrative officer. “We looked at what we do manually and if there were opportunities for technology system improvements. We looked at staffing, including whether people were working at the highest levels of their license.”

In addition to dramatically cutting costs, UCI Health saw improvements on various quality and productivity metrics compared to benchmarks. “We have improved our patient wait times from 60 minutes, to less than 30 minutes 95 percent of the time, in our patient service centers. Prior to operational transformation, we weren’t monitoring patient wait times. We now include this metric in our monthly quality and service level reporting,” says Kasmarek.

As part of its continuous-improvement efforts, Mayo Clinic has invested in RFID technology to track specimens from the point of acquisition (e.g., an endoscopic gastrointestinal biopsy) through various stages of specimen transport, Reichard



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says. The RFID tags are also helping to ensure specimens are properly labeled. “We are focused on protecting these precious specimens that are irreplaceable,” Reichard says.

6 What do pathology leaders need from hospital executives to achieve value goals?

UCI Health’s experience points to two specific ways senior executives can assist laboratory leaders. One is by assuring pathology staff that patient safety and quality of care will not be sacrificed to attain cost-reduction goals. The second is by investing in technology and other resources that can help pathologists achieve transformational improvements.

When the academic medical center first launched its operational transformation, pathology faculty expressed frustration. “They went into this with brakes on, worried about cutting costs and potentially having to lay people off,” Kasmarek says. “So we went to the faculty and said, ‘We know you want to ensure quality and ensure that patients are taken care of. What if we promise to ensure those two things, and what if we promise to invest in improvements that you’ve wanted to make for the last 10 years?’”

These conversations between senior leaders and pathologists energized the entire initiative and contributed to its success. So did the fact that senior leaders stuck to their promises. When pathologists said they needed electronic interfaces built so that UCI Health could exchange information and images with other laboratories, senior leaders ensured that these requests were prioritized by the hospital’s IT team. “The IT queue gets so full and having executive leadership say ‘this is important to us’ really made a difference,” Kasmarek says.

Key Take-Aways

- Pathology, like many medical specialties, is complex. Taking time for regular conversations about how to improve value in pathology and laboratory medicine can help hospital executives and pathology leaders understand each other's perspectives and reach consensus on how to proceed.
- By accurately diagnosing diseases in a timely fashion, pathologists help ensure patients receive needed treatment and prevention. With the growth of precision medicine, pathologists are also playing a role in identifying personalized treatments for patients based on genetic information.
- Pathology has a long history of putting quality controls in place to ensure the right test is performed for the right patient at the right time and in the right manner. Reviewing current practices and procedures and streamlining those efforts creates efficiencies, adds value, and improves safety (e.g., managing blood-related products in the OR).
- One specific way pathology can enhance value is by reducing unnecessary and redundant testing via collaboration with other clinicians. Because clinical testing makes up a large portion of a patient's medical record, clinicians must work together to understand the value in ordering the right tests — not every test — for high-quality patient care and the best clinical outcomes.
- Opportunities to make pathology processes more efficient — both inside and outside the laboratory — are being identified across the nation. The active support of hospital executives can help pathology leaders engage faculty and staff in attaining efficiencies and reducing costs without harming quality or patient care.

About the College of American Pathologists

As the world's largest organization of board-certified pathologists and leading provider of laboratory accreditation and proficiency testing programs, the College of American Pathologists (CAP) serves patients, pathologists, and the public by fostering and advocating excellence in the practice of pathology and laboratory medicine worldwide.

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