Newsbytes, 1/17

Raymond D. Aller, MD, and Hal Weiner

How informatics tools can boost QA in anatomic pathology

Love and marriage, cookies and milk . . . quality assurance and informatics? In pathology, the latter pair are a natural fit, says Liron Pantanowitz, MD.

“If you look at the life cycle of a specimen in the laboratory, with all the data that gets generated and all the people who are touchpoints along that process, there are many opportunities to use informatics to improve the quality check measures and to do it on an ongoing basis,” says Dr. Pantanowitz, professor of pathology and biomedical informatics and director of pathology informatics at the University of Pittsburgh Medical Center. “If you have a quality issue,” he emphasizes, “you should look for an IT solution to improve it.”

Dr. Pantanowitz and UPMC colleague Douglas J. Hartman, MD, associate professor of anatomic pathology and associate director of pathology informatics, shared their knowledge of how to use informatics tools to solve quality related issues in pathology in a chapter of the new book from CAP Press titled Quality Management in Anatomic Pathology: Strategies for Assessment, Improvement, and Assurance (see story, page 5). The chapter targets not only pathologists but also laboratory administrators and supervisors who oversee informatics or quality assurance projects “but may not have put them together in the most effective ways,” Dr. Pantanowitz says.

The colleagues contributed the chapter, aptly titled “The intersection between quality assurance and informatics,” because at UPMC “we live and breathe this stuff and have published a lot of the work we’ve done using informatics tools to improve quality,” explains Dr. Pantanowitz. “Our intention was to let pathologists know that this synergy exists, to give them specific examples, and to show them how we do it at our institution.”

Case in point: pre-sign–out peer review. Having another pathologist review a case is a key component of quality assurance, but due to logistical hurdles, “it’s often done after the case has been signed out, when there’s less time pressure,” says Dr. Pantanowitz. The downside, adds Dr. Hartman, is that “after 20 to 30 days, there can be all kinds of problems in locating the slides. And often, when you do catch an error, the patient’s care plan has been initiated. We realized it was better to do it in real time, before the first pathologist signs out the case.”

Consequently, the IT team programmed into the LIS instructions to randomly flag cases for review before sign-out, without letting the pathologist know in advance that a case would be reviewed. “When the computer picks the case,” says Dr. Pantanowitz, “you hand the case over to another pathologist on service; they do a quick check and say whether they agree or disagree. Thereafter, you can go ahead and correctly sign it out—making sure no mistakes are made.” The percentage of cases selected for review can be customized for each pathologist; newer staff members might have as many as 20 to 30 percent of their cases reviewed, he adds.

Implementing quality assurance within a pathology department starts with collecting and analyzing data, and if the data are “hard to come by, hard to use, hard to manipulate or understand, that can impair the ability to perform good QA,” asserts Dr. Pantanowitz. Informatics tools such as LIS modules or middleware can simplify the collection and analysis of data and allow labs to apply the findings more broadly, he continues. “You can now start to tap data from many different systems and put them together. You can put the CAP benchmarks in place and have real-time assessments for quality improvement. . . . We’re a large pathology department spread over many different integrated hospitals. If we did not have [such] informatics tools, we would not be able to roll out our QA plan and program to the whole system.”

“I think it’s a challenge,” adds Dr. Hartman. “You really cannot effectively implement informatics without understanding the quality component. That’s where workflow becomes really important. These IT solutions, in order to improve safety and quality, have to be optimized for the workflow of the people in the lab.”

In addition to describing the UPMC peer-review solution, the book chapter, which is peppered with figures and tables, addresses numerous other suggestions for improving LIS functionality, such as employing biometrics, building decision support tools, and initiating tracking of operations, workload, and inventory. The authors also discuss regulatory compliance, coding, specimen labeling, and other factors that influence quality assurance efforts.

"Not all LISs do a good job of allowing us to collect, analyze, and manipulate data for QA purposes," says Dr. Pantanowitz, adding that for some quality assurance tasks, data must be exported to an Excel spreadsheet or other tools. "Today, the issue is working with small amounts of data; in the future, it will be big data," he notes. "Analyzing data from the LIS along with raw data from other systems allows you to do so much more, such as generate inferences and check on outcomes—you can determine whether the things you're doing in the lab are having an overall positive or negative outcome. The LIS needs to be able to accommodate these needs."—*Jan Bowers*

Carequality and CommonWell announce collaboration

Two names that have become synonymous with interoperability in health care are officially linked.

CommonWell Health Alliance, a nonprofit trade association of health information technology companies and other organizations operating a vendor-neutral network for data exchange nationwide, and Carequality, developer of a common interoperability framework that supports data exchange between and within various types of health data sharing networks, have joined forces to further their cause.

Under a three-pronged agreement announced last month:

- CommonWell will implement the Carequality framework to allow CommonWell subscribers to exchange information directly with Carequality participants.
- Carequality will work with CommonWell to make a version of the CommonWell record locator service available to Carequality provider organizations.
- CommonWell and the nonprofit Sequoia Project information exchange network, under which Carequality operates, will explore future collaborative endeavors.

"While future collaboration could touch on many different areas within health care IT, the immediate focus of the work between Carequality and CommonWell will be on extending providers' ability to request and retrieve medical records electronically from other providers," according to a press release from CommonWell.

Together, CommonWell and Carequality participants represent more than 90 percent of the acute EHR market and nearly 60 percent of the ambulatory EHR market, CommonWell reports.
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FDNA releases suite of phenotypic apps

FDNA has launched its Face2Gene suite of phenotypic apps for evaluating genetic disorders, which includes an application for pathology labs, as well as apps for clinicians, researchers, and educators.

Users of the HIPAA-compliant Face2Gene suite upload patient photos into the appropriate app, which extracts de-

identified data points from the photos and compares them to a database of hundreds of thousands of similar data points from patients that have been diagnosed with rare and ultra rare genetic disorders. This information, which serves as the basis of a list of genetic syndromes, supports clinical evaluations and genetic testing analysis and interpretation.

Users of the lab application can access patients' phenotype data securely and review plausible syndromes, prioritize variants using the human phenotype ontology terms provided by clinicians, and communicate with physicians via plug-and-play application programming interfaces.

"Face2Gene boasts world-class computer vision, deep learning, and artificial intelligence technologies that work with real-world phenotype data to add a novel dimension to variant programming and prioritization," FDNA reported on its website.

***FDNA**, 617-412-7000*

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Data-management system attains DoD certification

Alere Informatics has announced that its Rals data-management system for point-of-care testing has passed the Department of Defense's Defense Information Assurance Certification and Accreditation Process.

DIACAP, now the DoD Risk Management Framework, or RMF, is intended, in large part, to ensure that information systems used by DoD sites have achieved an appropriate level of risk management.

***Alere Informatics**, 888-971-7953*

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