Newsbytes, 7/14

Raymond D. Aller, MD, and Hal Weiner

The benefits of building versus buying lab software

Like many in the field of pathology informatics, John Sinard, MD, PhD, does not believe that one-size-fits-all when it comes to laboratory software systems. But unlike many of his peers, he does not choose to live with the discrepancies or purchase a new product.

“When our system doesn’t do what we want it to do, we make it do what we want it to do,” says the professor of pathology and director of pathology informatics at Yale University School of Medicine.

Pathology groups that shy away from developing their own informatics tools are likely exaggerating the risks and, more importantly, losing out on significant benefits, says Dr. Sinard. “The biggest misconception out there is that in-house, custom software development requires a lot of people. In fact, it simply requires the right people to work together as a team, who understand the vision. With a total of 1.8 to two full-time equivalents, we’ve produced a number of applications that we use on a daily basis.”
Noting that it took his pathology department several tries over 14 years to assemble the optimal team, Dr. Sinard recommends that at least one member of the group be a pathologist who understands the workflow of the department. The Yale clinical software development team includes a pathologist informatics director, nonpathologist physician associate director of informatics, and nonmedical application programmer, with one more programmer being integrated.

“In the growing field of pathology informatics, there are individuals who can . . . serve as a go-between or translator from the end user’s needs to the engineers who will build the product,” Dr. Sinard says.

So why go through the effort of building instead of buying? The key benefits of custom-developed software are substantially improved workflow “due to the exquisite fit into your environment,” the ability to adapt the software as the lab’s needs change or become more defined, and the ease of adding new functionality, says Dr. Sinard, who discussed the upsides of custom software development in a presentation at the USCAP annual meeting, held earlier this year.

Dr. Sinard cites as an example how the Yale team developed a histology asset tracking system. In developing the system, he explains, the team took into account that histotechnologists occasionally find that an embedded block of tissue can’t be cut because the tissue wasn’t processed correctly, “and you need to be able to somehow mark that block for reprocessing. That part we had thought about in advance. What we didn’t think about was that we would need to reorder any slides we had already cut, so that when the block is remade, we know we have to cut those slides off the remade block.” An employee could go back into the information system and reorder the slides manually, but because the software already “knew” what slides had been cut and that the block had been marked for re-embedding, “it was a minor change to tell the software to automatically reorder those slides for you.”

The automated solution is not only faster than manual entry, he adds, but more accurate because “no one can forget to do it, and there’s no possibility we were going to reorder the slides on the wrong block or on the wrong case.”

Cost savings too is a benefit. Cost savings may be difficult to measure precisely, but that doesn’t mean it isn’t there, Dr. Sinard notes. “How do you put a dollar value on the frustration level of your employees? When people aren’t frustrated, they tend to be more productive. They get frustrated by systems that don’t do things the way they want to do them—for example, ‘Why can’t I do this task with two clicks rather than 20?’”

Know precisely what your custom software needs to accomplish, Dr. Sinard stressed in his USCAP presentation.

Before moving forward, also consider such aspects of design as how and where the software is going to be used, who is going to use it and maintain it, and whether it will be able to withstand increased use or a growing number of users. Deployment issues must also be considered: Will the software be deployed in stages? Will it be synchronized with database and application changes? Is there a back-out plan? Who will provide the training?

Adding functionality to existing software becomes a process of evolution, says Dr. Sinard, and naturally tends to target bottlenecks in the workflow. "If you ask people, 'In an ideal world, what would you like?' they give you a long list. Then you go and write the software, and invariably they say, 'This is great, and what would really be nice is if it also did this.' You address a stress point or bottleneck and then something else becomes the bottleneck."

An example of this, says Dr. Sinard, is a workhorse at Yale called the repetitive task scheduling engine, or RTSE, a solution that was originally designed to look for newly created images and file them in an image repository and in the lab information system. "Once we had created this engine, we thought it would be nice if every morning we could send the pathologists a list of their overdue cases. And now we have our RTSE running about 35 automated tasks, which range from every 20 seconds to once a month."

Before a pathology department can begin developing customized solutions, however, it may have to contend with an institutional IT department that is philosophically opposed to using software that is not purchased from a long-established vendor, Dr. Sinard says. Propose a small endeavor initially, he advises. "Build confidence at the institution that you can create something of value without the whole system collapsing and it will build enthusiasm" for future projects.—*Jan Bowers*

CDC report urges pathologist involvement in improving EHRs

Laboratory professionals play an essential role in improving the safety and effectiveness of electronic health record systems, according to a report released by the Laboratory Health Information Technology Team at the Centers for Disease Control and Prevention's Division of Laboratory Programs, Standards, and Services.

The report, titled "The Essential Role of Laboratory Professionals: Ensuring the Safety and Effectiveness of Laboratory Data in Electronic Health Record Systems," outlines three broad strategies to help laboratory professionals improve how EHRs use lab data. The strategies are for lab professionals to provide expertise in designing, developing, and implementing EHR systems nationally and locally; guide and maintain the integrity and usability of lab data to ensure that they are presented accurately in the EHR and available at the point of care; and join with other stakeholders to promote innovation in an effort to reduce lab data-related errors caused by faulty EHR systems.

The report recommends including laboratory professionals in national health information technology policy and standards decisionmaking. It also provides examples of health IT-related problems that affected patient care and EHR interoperability and display issues.
"The purpose of this paper is to illustrate the seriousness of laboratory data-related interoperability issues and display discrepancies in EHR systems and propose focus areas for action by laboratory professionals to support resolving those issues," the report says.

Speech-recognition product offers structured resulting

Voicebrook has released a module of its VoiceOver speech-recognition and digital dictation software that provides structured results entry for cancer reporting. VoiceOver SRE is intended to help pathologists comply with CAP reporting guidelines.

"In the past, pathologists have had to manually navigate CAP electronic cancer checklists in order to comply with pathology reporting of primary cancer cases. With our new solution, Voicebrook has created a module fully supported by speech recognition. We import the CAP eCC files and make them available to our customers through a user-friendly and efficient front-end interface," Tami Abell, Voicebrook's director of product management, said in

a statement.

Voicebrook reported that it will deliver to its clients CAP-issued checklist content changes as the checklists are updated. The SRE module features a data-validation process to help ensure that pathologists provide acceptable answers to all required questions before completing the report. Pathologists also can insert narrative text to elaborate on structured answers, providing additional information about the patient's diagnosis.

VoiceOver integrates Nuance Communications' Dragon Medical 360 speech-recognition technology.

***Voicebrook**, 516-326-9400*

FDA initiative simplifies access to health data sets

The FDA's Office of Informatics and Technology Innovation has launched OpenFDA, an initiative to make it easier for software developers, researchers, and the public to access and use the health data sets collected by the agency.

"In the past, these vast data sets could be difficult for industry to access and to use," the FDA acknowledged in a press release.

OpenFDA (https://open.fda.gov/) will render the agency's publicly available data accessible in a structured, computer-readable format. A search-based application programming interface makes it possible to find structured and unstructured content.

"Software developers can now build their own applications (such as a mobile phone app or an interactive website) that can quickly search, query or pull massive amounts of public information instantaneously and directly from FDA data sets in real time on an 'as-needed' basis. Additionally, with this approach, applications can be built on one common platform that is free and open to use," the FDA reported.

Leica enhances mobile app

Leica Biosystems has added several features to its PathLead mobile app for iPhone, iPad, and Android devices.

Leica has expanded the educational tool's antibody citation index to more than 100 antibodies, with continuous updates and an extensive immunohistochemistry image library. Health care professionals in the field of surgical pathology and diagnostic immunohistochemistry can now also access antibody lecture series and educational webinars in concise 10-minute podcasts. All videos can be streamed or downloaded and viewed in full portrait or landscape orientation.
The information provided on PathLead does not endorse specific companies or products.

***Leica Biosystems**, 800-248-0123*

Telcor POC system meets EHR certification criteria

Telcor has reported that its QML version 2.3 point-of-care software has achieved ONC HIT 2014 Edition Modular Inpatient and Modular Ambulatory EHR Certification, which designates that the software is capable of helping eligible hospitals and other providers meet stages one and two meaningful use measures. QML version 2.3 was certified by ICSA Labs, an Office of the National Coordinator-Authorized Certification Body.

***Telcor**, 402-489-1207*

Advanced Data Systems EHR gains Quest certification

Advanced Data Systems recently announced that its MedicsDocAssistant version 7.0 electronic health record

system has been certified as a silver quality solution under Quest Diagnostics' Health IT Quality Solutions program.

The certification indicates that ADS has been recognized by Quest for meeting or exceeding industry standards for health information technology quality and for providing a streamlined, interoperable product that allows secure clinical lab ordering and results reporting through Quest's connectivity solutions.

***Advanced Data Systems**, 800-899-4237*

[hr]

Dr. Aller is director of informatics and clinical professor in the Department of Pathology, University of Southern California, Los Angeles. He can be reached at raller@usc.edu. Hal Weiner is president of Weiner Consulting Services, LLC, Florence, Ore. He can be reached at hal@weinerconsulting.com.