

In Focus

INSIDE THIS ISSUE

Message from the President: Richard Atkin	2
Case Study: Children's Hospital & Medical Center	3
Delivering Meaningful Use ...	4
From the Executive Suite: Patrice Nedelec	5
Q&A: William Fera, MD	6
Sunquest's Most Successful Year	7

Please contact us at
sqmarketing@sunquestinfo.com
if you have any questions or
comments on this newsletter.

Achieving Meaningful Use with Lab Information

“Meaningful use” of electronic health records, the measure for healthcare providers to qualify for incentive payments under the federal stimulus package, is keeping many hospital executives awake at night due to extensive criteria and quickly approaching deadlines (2011, 2013 and 2015). The

laboratory service line is essential to meeting the criteria of meaningful use because lab reporting and data are specifically defined within the meaningful use matrix.

This matrix, “Health IT Policy Council Recommendations to National Coordinator for Defining Meaningful Use,” is available on the HHS website at <http://healthit.hhs.gov>. The regularly updated guide defines for providers and hospitals the meaningful use criteria and includes nearly a dozen measures for 2011 alone that require the interoperability of a Sunquest LIS to enable communication of necessary data. For example, organizations must report to CMS such quality measures as percent of diabetics with A1c or LDL under control. These criteria also incorporate medications, procedures, radiology tests



and referrals—entered directly by physicians through CPOE. Other measures include the percent of patients over age 50 with annual colorectal cancer screenings and the percent of lab results incorporated into the EHR.

Final definition of meaningful use is

expected to be ready mid-to-late spring 2010 after a preliminary version is released for comment at the end of 2009. Laboratory data is specifically highlighted in the quality criteria of the meaningful use matrix because of its critical significance in improving care delivery and ultimately patient outcomes. Sunquest's diagnostic IT solution helps improve the communication of diagnostic data and elimination of errors to facilitate the transformation of care.

As a traditional leader in automation, the laboratory and its enabling LIS provide an important model for automation of health information and healthcare reform. Driven early on by targeted cuts in reimbursement as well as its own need for process precision, laboratories learned to automate and re-engineer workflow earlier than other departments

(Continued on page 2)

“Message from the President”



This is an exciting time for the diagnostic IT industry today. Meaningful use, HITECH stimulus and healthcare reform are phrases that have transformed even the language of every day discourse in our industry. “This changes everything,” one expert said in reference to the meaningful use incentives and other federal health initiatives.

As laboratory information professionals we’re more than familiar with the need to use clinical information in a meaningful way. Information provided by the lab through an LIS—highlighted in our case study of Children’s Hospital & Medical Center in Omaha—can influence up to 80 percent of clinical decisions while accounting for only 3 percent to 4 percent of healthcare costs. That astonishing statistic is emblematic of diagnostic IT’s successful track record and is central to the message we must convey to the rest of the industry at a time the nation is seeking models for healthcare reform.

This message is reinforced in our Q&A featuring Dr. Bill Fera of UPMC, who upholds the value of diagnostic IT in meeting meaningful use criteria. He emphasizes that what meaningful use aims to achieve is what laboratory professionals have been doing for years with diagnostic IT to enable better patient outcomes.

Sunquest has articulated this vision in The Five Rights of Laboratory Testing™: Ensuring that the right patient has the right test performed at the right time for the right indicators leading to the right diagnosis. These “five rights” provide the foundation for safe, effective and efficient patient care.

Whatever model healthcare reform ultimately takes, Sunquest’s diagnostic IT-enabled clinical business intelligence will help drive increased quality, eliminate medical errors and facilitate better patient outcomes. The result is increased satisfaction and quality for both the patient and provider. ■

ACHIEVING MEANINGFUL USE WITH LAB INFORMATION *(Continued from cover)*

The results have been dramatic. Ron Workman, MD, VP for system laboratory operations at Sacramento, California-based Sutter Health, notes that while healthcare costs in general have continued to climb faster than the GDP since 1984, the average cost of a lab test has dropped from \$10 to \$8.99 per test today. “The lab has been on an entirely different cost curve than the rest of healthcare. The reason for that is the ability of the LIS,” he says, to eliminate errors and automate workflow to become more efficient while completing additional types of tests and a higher volume of tests. “Lab operations nationally have steadily improved 1 percent to 2 percent in productivity each year over the last 25 years,” notes Workman.

It doesn’t stop there. “An enterprise data warehouse of comprehensive lab information offers a rich mine for health services and clinical research,” says Workman. The LIS can also provide the basis for business intelligence, analytics, and evidence-based medicine (see Children’s Hospital & Medical Center case study on facing page) which will be critical to measuring the criteria for meaningful use as we strive to improve the delivery of healthcare. ■

Children's Hospital & Medical Center by Kelly Feist



Lab data influence 70 percent to 80 percent of clinical decisions — and yet account for only 3 percent to 4 percent of the healthcare dollar. Given this, it stands to reason that the comprehensive lab information system (LIS) at Omaha-based Children's Hospital & Medical Center has become an important contributor to the organization's business intelligence (BI) strategy.

As the only stand-alone pediatric facility in the state of Nebraska and a referral center for young patients in surrounding states, the 145-bed Children's Hospital & Medical Center has become an industry leader in the strategic use of IT. Children's was recently recognized as one of 2009's "Most Wired" hospitals in the July issue of *Hospitals & Health Networks*.

A key component of Children's IT strategy is business intelligence (BI), a foundational element of which is the organization's laboratory information system (LIS).

A Transformative Tool

BI uses data warehouses, high-powered analytical tools, and dashboard displays to help users critically use the information from an organization's numerous databases in real-time, thus eliminating the need to wait for the development of complex queries. It is designed to help healthcare organizations become high performers.

BI's emergence as a major transformative tool in health care complements another transformation taking place at hospital laboratories. Leading-edge hospitals no longer view their labs as simple cost centers, but as revenue-generating service lines that conduct the latest molecular tests, draw blood specimens at the point of care using mobile wireless devices, and extend the hospital's presence in the community through physician and patient outreach. Pathologists are also shedding their traditionally isolated role for more active participation on the clinical team. The future promises even more data-driven change for labs as genomic testing ushers in predictive and personalized medicine.

Unified Intelligence

"We look at the lab as not just a tactical solution but as a service line," says Children's Allana Cummings, vice president and chief information officer. As a result, she says, lab data is not a commodity but a critical component of the organization's business intelligence strategy. Analysis of lab data has supported Children's regional expansion into outreach clinics located in areas such as Lincoln, Neb. "We recognize that lab outreach generates revenue and solidifies community relations for the core lab," says Cummings.

"The LIS provides value-add integration with our health information system and ambulatory information system. We describe Children's data architecture as unified intelligence from multiple source systems. Our organization sees tremendous patient throughput, which requires that patient data be quickly analyzed across the enterprise."

For example, using a revenue cycle management tool for BI analysis, lab managers and hospital executives can analyze lab and other service area revenue in terms of several variables, including payer or billing status. On the infection control front, the hospital has been able to analyze multiple sources of data to create a series of lab dashboard views that can pinpoint a list of suspected cases of infection; this allows infection control specialists to focus on these patients and provide necessary treatment faster.

(Continued on page 4)

CASE STUDY: CHILDREN'S HOSPITAL & MEDICAL CENTER *(Continued from page 3)*



"We've gotten to the point that no matter what the business need, we can use our BI strategy to create views into data that are not possible with conventional

static reports. Many are using BI in niche areas. For us it's a pervasive business-use case," says Cummings.

Improvement Opportunities

Cummings explains that BI should be a means of realizing improvement opportunities in your organization through more effective and efficient data analysis. "For this to happen, the tools must be easy to use. The online analytical processing cubes are no longer sufficient for meeting an organization's data agility requirements in today's healthcare environment," he says.

In ambulatory care, for example, Children's was able to develop multiple BI applications to support the American Academy of Pediatrics' quality indicators within a six-week period. One of those applications, used to track immunizations, has resulted in improvements in immunization rates. Another application allows users to see the percentage of strep-throat tests performed when antibiotics are given. "It's not about presentation of data," says Cummings, "but rather, 'Do those data provide valuable insights?'"

The LIS continues to play a major role in Children's BI initiative. For example, physicians shared concerns with IT about the occasional lack of newborn screening blood draws prior to blood transfusions. The IT team was able to create a clinical alert to address the issue. "We were able to use data from the LIS to create a trigger, asking 'Did you do a blood draw?' It's often simple stuff like that that's so helpful." she says.

As part of its mission, Children's focuses not only on patient safety but also on the comfort of its patients during treatment. No matter the patient's age, needle sticks are no fun. The medical center was able to successfully leverage its lab data to reduce the number of unnecessary lab draws by immediately presenting information on canceled lab orders to the clinician or phlebotomist.

The LIS provides a particularly rich set of data for such analysis, says Cummings. "When you have the data available, you can do some pretty amazing things." ■

Reprinted with permission from the Fall 2009 issue of HFMA's Strategic Financial Planning Newsletter

DELIVERING MEANINGFUL USE

Meaningful Use Requires Meaningful Laboratory Information

At Sunquest, we believe that meaningful use of an EHR system achieves the goals of increased quality and safety, improved efficiency and transparency, and an enhanced ability to provide patient-centered care.

The recent passage of the 2009 ARRA provides significant incentive for organizations and providers to achieve meaningful use of an EHR, but meaningful use doesn't start or stop there.

Studies show that 70% of all patient information in an EHR is comprised of laboratory data. Further, the Washington G2 Report, Lab Industry Strategic Outlook: Market Trends and Analysis 2009, states that 2.3% of all healthcare dollars are spent on laboratory testing.

However, laboratory testing impacts 70-80% of the clinical decisions made. Meaningful laboratory data is delivered by Sunquest to over 1400 customers worldwide every single day.

Meaningful use requirements and measures are tied to Sunquest's goals of:

- Improving quality, safety and efficiency
- Engaging patient's in their care
- Increasing coordination of care
- Improving the health status of the population
- Ensuring privacy and security

Contact us by calling (800) 748-0692 to learn how we can help you achieve your 2011 Meaningful Use Measures today. ■

FROM THE EXECUTIVE SUITE:

Patrice Nedelec, Vice President, Quality, Regulatory Affairs and Program Management

Anyone following the evolution of meaningful use of health data understands those criteria are based on national care goals focused on improved quality and better patient outcomes. They are IT-enabled, not IT-centered. This is consistent with Sunquest's vision: diagnostic IT is an enabler of a patient-centered transformation of healthcare delivery and quality is indispensable to achieving that vision. This is why quality literally touches everything we do at Sunquest.

After joining Sunquest a few months ago following 20+ years of experience working in quality management, audit and certification, I quickly realized Sunquest was the most quality-infused organization I'd ever seen. Some of this is attributed to Sunquest's focus on client satisfaction, and to a degree upon laboratory services and information being highly regulated. But it is also based on Sunquest's view of the laboratory as a service line which has caused the company to develop a strong governance structure around quality, patient safety, and rigorous standards.

Here's how quality permeates everything at Sunquest. The structure of my department includes five different teams that support our quality objectives and regulatory compliance. The first group under my department is Quality Assurance Management, which ensures that there's a quality system in place that implements the Company's own objectives and at every site has quality certificates complying with applicable ISO standards.

An example of a quality objective is when clients are asked about satisfaction and whether we provide support adequately. The ultimate goal is to make sure the client is satisfied while meeting federal and international quality standards applicable to the product.

A second area is Regulatory Management. This group ensures Sunquest complies with all regulatory requirements from the US FDA, the European Union's regulatory arm and beyond as we continue to develop business internationally.



Third, we have a Project Management Office that ensures proper organization internally, especially within development operations, ensuring software development activities are organized with quality processes in mind. The Project Management Office makes sure that development teams file regular progress reports, communicate internally on status and externally with beta trial sites.

A fourth area related to Quality Assurance but also distinct is Sunquest's Continual Improvement office. This group is specifically concerned with aligning operations with the

quality system and implementing a constant drive for better performance in all operational areas of the company: Yes, Sunquest quality policies applies throughout the client experience cycle, from a prospect demonstration with identified quality criteria, to development and maintenance of product, client communication, purchasing activities, implementation and support services.

That sets us apart from our competitors. An objective of ours is to ensure we use an ISO standard targeted toward continual improvement, as the demanding ISO 9004 standard helps us create a quality system that is client-centric, but also improvement-centric.

Validation is the fifth area of focus. We have an independent validation team that makes sure our software products meet client requirements and market expectations before we release anything to the market. Among other factors, this team ensures that no regression exists compared to earlier releases, and that specific product quality objectives are achieved. The decisions we make regarding products depend on recommendations from this team. For example, the team makes sure that Sunquest products enable or improve client workflows.

Validation helps improve patient care and product integration. While third-parties have also conducted validation activities, Sunquest is breaking new ground by taking a more active role in this area.

(Continued on page 7)

Q&A with William Fera, MD



Sunquest is pleased to feature the following interview with Bill Fera, MD. Dr. Fera is currently the VP of Medical Technologies and Medical Director of Interoperability at the University of Pittsburgh Medical Center. Sunquest asked Dr. Fera to join its Executive Advisory Board, which meets with the Sunquest Executive Team

on a quarterly basis to discuss global healthcare trends.

Dr. Fera is an active participant in the clinical and healthcare technology industry and is respected nationally as an expert on EHR, patient safety and quality of care. With this background and experience, Dr. Fera is well-positioned to provide his thoughts about the following topics including how meaningful use requires meaningful laboratory data and the future of the laboratory as a service line.

How important is diagnostic IT reporting to UPMC in meeting meaningful use criteria?

It's extremely important that diagnostic IT reporting meet meaningful use criteria. The lab is sometimes taken for granted because it was one of the earliest disciplines to automate. Doctors often take for granted that lab reports are online. It's interesting that in the CPOE criteria for meaningful use lab information is understood to be available electronically and intrinsically valuable.

Diagnostic IT is the low-hanging fruit. Many people think meaningful use necessitates this huge electronic initiative. The ARRA healthcare provision doesn't indicate that electronic documentation is required, but people are afraid when they hear meaningful use because it is perceived as a huge change. We're already performing this exchange of data in the lab. Really, meaningful use is just maximizing use of what we already have in place. Meaningful use is about getting people to start using the electronic capabilities we already have that's manifest in the LIS.

What is your vision of the future of the lab service line?

My immediate vision is to achieve electronic ordering and automated reporting globally. The next step is to make that information available to consumers and help them start taking responsibility for their own health. In places that have made lab data available to consumers it's really made a difference. Initially, physicians receive more phone calls from patients inquiring about the results, but as people become more educated over time the frequency of calls decreases. Consumers will play an important role in personalized medicine going forward. We start by looking at lipid profiles and genetic data will follow. In the next five to 10 years we'll see accelerated growth in personalized medicine as more genetic information becomes available.

To recap, in the near term, we'll see utilization of existing technology to make lab data available to patients today. It's a partnership with patients. Interoperability will allow this lab information to become available. New technology such as genetics will allow it to become more personalized. In many ways it's an issue of change management. People have to reframe how they think about information and in the process both the patient and provider will become more satisfied.

What role can lab services and diagnostic IT play in healthcare reform?

In terms of its impact in healthcare reform it's going to come down to management of patients and receiving reimbursement for virtual or remote-care services rather than for just physically seeing a patient. A patient can be well cared for using remote technology. As diagnostic IT allows care to become more virtual there needs to be a change in the reimbursement paradigm. A diabetic patient can be remotely monitored by taking a digital picture of their feet and include a whole series of virtual diagnostic services. But reimbursement must be included for managing the patient. If a physician is given a global fee for that management, that's where diagnostic IT becomes involved. Remote diagnostic IT will allow for more real-time management of patients in a less-invasive manner compared to what is used today.

How will healthcare reform play out and how will it impact the lab?

Healthcare reform (if approved) will allow for a more patient-centered approach to care with global payments not only paying for treatment but rewarding preventive services. Lab services that support primary, secondary and tertiary prevention will become more prevalent.

We will also see the evolution of algorithms to interpret more and more data points including basic vital signs and more complex information using diagnostic IT. We'll see more computer-aided interpretation and, when appropriate, alerts triggered by those interpretations for nurses, health coaches and physicians.

How many lab tests does UPMC perform annually and how does UPMC use Sunquest to manage and report those tests?

We use Sunquest Laboratory™ for all of our in-house labs throughout our 20 hospitals, which total 70 million tests per year.

Has your LIS contributed to patient safety improvements at UPMC?

We've been able to integrate our LIS with our inpatient EHR which provides alerts to toxic drugs for patients with certain creatinine levels. This is just one tangible benefit.

What is UPMC currently doing in the way of predictive, personalized or genomic testing and reporting at UPMC?

We're routinely performing genetic testing especially around Breast Cancer Type 2 susceptibility protein, but we're at the very beginning stages of reporting personalized medicine.

What types of new testing do you anticipate using during the next three to five years?

The biggest growth will be in tests that result from more and more genetic markers becoming known. Initially most will be cancer-related, but they'll eventually grow beyond that. On a cautionary note, genetic testing could be used by insurance companies to deny coverage after the fact. We need to make sure that if you're going to be tested that it not preclude you from being covered by insurance. These are some implications of universal care and more advanced testing. ■

FROM THE EXECUTIVE SUITE: PATRICE NEDELEC *(Continued from page 5)*

While validation is a legal requirement, it also can take a long time and delay software development (potentially 12 to 18 months). Sunquest created this team to reduce that burden for clients and in so doing help them prepare to meet meaningful use deadlines. Our intention is to reduce the cycle time clients have to wait until a product goes live so that they can benefit from our latest releases earlier.

Finally, Sunquest's dedication to patient safety dictates that our products going to market are safe and effective. Sunquest is definitely a client-centric organization that prides itself on producing the right set of products that meet client satisfaction, reliability, ROI, safety and effectiveness. As a matter of fact, quality at Sunquest is a business-friendly function that maintains high health-care IT standards. A dedicated team of client advocates strives for better ROI and sets the industry standards for our clients and our competition. ■

SUNQUEST'S MOST SUCCESSFUL YEAR

Sunquest Information Systems, Inc. announced its most successful year in the 30 year history of the company. The privately held market leader in laboratory and diagnostic information systems ended its Fiscal Year 2009 on May 31.

Sunquest posted this strong fiscal year finish by completing sales that included signing eight laboratory information system (LIS) related sales that will improve care for patients at 28 hospitals. Sales of the company's diagnostic IT solutions remain robust.

This success is continuing into the new fiscal year, as sales orders for first quarter FY 2010, ending August 31, 2009 increased more than 30 percent compared to the same quarter a year ago. Revenue for Sunquest jumped 15 percent in first quarter compared to the same quarter in 2007 immediately prior to the company's acquisition by Vista Equity Partners. ■



250 S. Williams Boulevard
Tucson, Arizona 85711

Prsrt Std
US POSTAGE
PAID
AlphaGraphics
85745

Sunquest is Proud to Support these Upcoming Events

2010 TRADESHOWS AND SPECIAL EVENTS:

IHE North America 2010 Connectathon,
January 11-15, Chicago, IL
www.ihe.net/north_america/connectathon2010.cfm

Arab Health 2010, January 25-28, Dubai, UAE
www.arabhealthonline.com

HIMSS 2010, March 1-4, Atlanta, GA
www.himss.org

US CAP 2010, March 22-24, Washington D.C.
www.uscap.org

Executive War College 2010, April 26-28,
New Orleans, LA, www.executivewarcollege.com

CLMA ThinkLab 2010, May 4-6, Las Vegas, NV
www.clma.org

Sunquest Annual User Group Meeting 2010,
July 12-16, Tucson, AZ

HFMA 2010, June 20-23, Nashville, TN
www.hfma.org

AACC 2010, July 25-29, Anaheim, CA
www.aacc.org

For more information about Sunquest, call (800) 748-0692 or visit www.sunquestinfo.com.