

In Focus

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Please contact us at
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if you have any questions or
comments on this newsletter.

Securing Real Time Business Intelligence

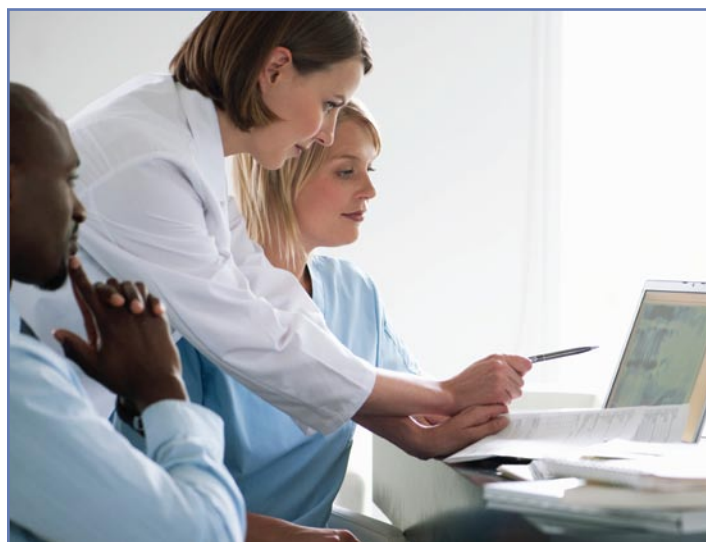
by Eric Buckley, Sunquest Product Manager

Analyzing company revenue, costs and operational data and using the analysis to support decision making is not a new idea. Collecting and viewing data and preparing snapshot reports of the latest week, month, quarter or year has been a cherished operational task for decades. In recent years, such analysis has gradually evolved into the more formal realm of business intelligence (BI), which seeks to use a company's data to provide historical, current, and predictive views of business operations.

Reporting, analytics, data mining, business performance management, benchmarking, and predictive analytics, are some of the primary uses for business intelligence today.

What jumps off the page with today's BI methods is the use of technology to gain access to dynamic, actionable data in real time. This facilitates constant awareness of the status of the operations and use of data in meaningful ways, including alerting users to any potential problems forthcoming.

The Sunquest Business Intelligence solution enables laboratories to monitor the financial and operational health of their business, providing access to metrics that will guide them in making decisions about reducing costs, improving efficiency, or providing data to research teams and auditors.



The Sunquest solution provides drill-down and information analysis capabilities and delivers dashboard-like metric comparisons of information for decision makers at all levels.

The information can be acquired and displayed in real time. It is scalable to drive business intelligence data for a single user or a large global enterprise.

USING DATA TO DRIVE RESULTS

Why are laboratories turning to business intelligence technologies to guide their decision-making? One reason is that laboratories are subject to economic pressures like any business. They use business intelligence to get a handle on ways to cut costs, reduce waste, and increase revenue to improve their bottom line.

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“Message from the President”



Managing Your Business and Owning Your Community

The strategic importance of laboratory results within the healthcare industry has an impact on activities across the entire enterprise. From doctor's offices and clinics to ambulatory care centers, inpatient facilities, and wards, the lab is hugely important to the continuum of care.

At Sunquest, we focus on the fact that efficient, effective operation of the laboratory is integral to healthcare. As 70% of a patient's records are laboratory data, and over 70% of clinical decisions are based on laboratory data, we understand the importance of helping laboratories to manage their business enterprise and to own their community and marketplace.

When we look at the value that Sunquest brings, we do not merely enable the laboratory to operate efficiently and effectively. It is critically important that we enable the laboratory to communicate with its customers efficiently, effectively, and seamlessly. The Sunquest ICE Physician Portal™ is one mechanism by which our customers can connect to their customers and provide efficient services, get results back in a timely manner, and utilize correct patient care protocols.

Similarly, laboratories require data at their fingertips to demonstrate their efficiency and continuously improve operations.

Business Intelligence is able to delve deeply into data and posture it into actual results and findings. Matters that get attention are those that are measured; so our customers must be able to drill down and turn data into information that is accessible as well as actionable.

Managers and leaders of these organizations are enabled to enhance awareness of the performance of their organizations, their improvement opportunities, and the value that they bring. Only then are they empowered to improve their customer service levels and their cost base so they can continue to compete and grow their businesses.

Business Intelligence and the Physician Portal assess important areas for our customers, and we are in a fantastic situation to be able to provide these solutions and help them improve their businesses. In addition, we are pleased to utilize this issue of *InFocus* to present these ideas and findings.

Meaningful utilization by our customers allows us to deliver meaningful results. We prove that managing your businesses and owning your community are great advantages when running a large operation.

Since the laboratory is a strategic business unit and profit center within a hospital, it is invaluable to be able to demonstrate performance. At Sunquest, we deliver by helping our customers understand their goals, assess their performance, and utilize that information to justify further investment and demonstrate the value that the laboratory brings to the organization overall. ■

HITECH Act Update

Sunquest continues to lead the way in industry thought leadership as new *ARRA* and Meaningful Use regulations unfold. Meeting with government officials and continuously monitoring client preparedness are just two of the ways that Sunquest helps its clients complete the three steps for earning incentives: adopt certified EHR technologies, achieve Meaningful Use objectives, and apply for incentive payments.

Our solutions ensure customers understand and enhance the relationships within their community. Due to the seamless interoperability of our products, facilities will be able to reap these benefits without having to purchase all new equipment — another way in which we positively impact their bottom line.

At Sunquest, our commitment to physician and patient affinity provides us with the vision necessary to stay on the cutting edge of technology and ahead of the curve on government policies. Proudly, we continue to deliver Meaningful Use and drive the future of diagnostic IT. ■

Sunquest Secures High Marks in KLAS

Sunquest Information Systems earned a 'Top 5' overall industry-wide vendor ranking, and the highest ranking for a laboratory software company, in the 2009 KLAS annual research survey. The KLAS survey result information is supplied by healthcare professionals and organizations, and is used by the industry to make informed decisions on acquiring health information technology. ■

Q&A with Allana Cummings, EMBA, PMP, CPHIMS

Using Business Intelligence to Drive Organizational Efficiency

Sunquest recently talked with Allana Cummings, EMBA, CHCIO, PMP, CPHIMS, on the growing value and role of business intelligence in developing both the strategy and tactics for developing and running a laboratory system.

Ms. Cummings is Vice President and Chief Information Officer (CIO) for Children's Hospital & Medical Center, Omaha, Nebraska. Founded in 1948, the hospital had a vision that "no child in need of medical care would be turned away due to an inability to pay." Today, the institution is a regional and community health resource leader covering five states and serving over 250,000 children annually.



What is the over-arching value of business intelligence to a health organization of any size?

Healthcare organizations have been overwhelmed by a plethora of reports and data. Business intelligence tools have allowed us to examine our data and glean "useful information" to help make informed decisions for our organizations. Previously, departmental leaders would have had to analyze various static reports to try to determine what type of business decision should be made for their particular service line or function area.

We are now able to share information with management in a way that gives them an "at a glance" picture of how the operation is performing. This allows leadership to gauge the levels of performance throughout their organization, while providing different indicators to measure success and quality.

The graphical view of performance provided by business intelligence allows leadership to take the pulse of what is going on in their organization, and at the same time, BI allows them to drill down in a very efficient way to study what is the root cause of a situation. This capability has empowered people within our organization to do much more with data as a whole than ever before.

Before business intelligence, leaders received stacks of reports, which made it extremely difficult and time-consuming to properly analyze or attend to the most important items. With business intelligence, leaders in all sizes of organizations are able to study and analyze data more efficiently and effectively, and receive a much clearer picture on the overall operation and quality of their organization.

Many organizations still see the lab as cost center versus a profit center to a business organization. Does BI help orchestrate the true value and profitability of a laboratory system?

Absolutely! A major challenge for any executive team is to distill data into a meaningful picture in order to assess business operations and value. The ability to have business intelligence tools analyze the impact of your lab as a true service line in the organization is key.

BI tools allow an executive to view the amount of direct revenue that the lab contributes to the organization as well as the revenue stream that lab services provide through other service lines, thus providing a

view of the lab as a service line that creates opportunity in the business. Without BI tools to tie data together and observe the true service line impact, an executive may not recognize the full value and offerings of the lab.

Does BI help drive patient safety and care by researching problems and determining solutions?

Yes, business intelligence plays an integral role in problem-solving as well as advancing practice by providing the ability to ascertain and assess the correlation between and effect of a patient's care with lab results. Areas that may be analyzed through BI include medications administered, procedures, and tests completed. Overall, business intelligence provides a means for practicing better evidenced-based medicine and highlights best practices by ensuring that lab data is at the core of revealing opportunities for improvement in patient care.

What is the future of Business Intelligence in driving the laboratory in the next decade?

BI advances in the next decade will grow through the creation of views that allow lab managers, lab staff, and medical directors of laboratory services to better understand their business. Advances in the areas of data analysis and understanding through BI will be used more pervasively throughout organizations and will lead to better patient care. Overall, it will become a mission critical tool for healthcare organizations to be successful. ■

Integrated Clinical Environment Physician Portal™

by Debbie Tillman, Sunquest Product Manager

Laboratories seeking to hit the ground running in the meaningful use marathon are looking for solutions to help them get started quickly and effectively.

Sunquest's newly released Integrated Clinical Environment (Sunquest ICE™) Physician Portal™ fits the bill. By providing an easy way for physicians to submit laboratory test orders and view results electronically, ICE Physician Portal meets several of the meaningful use criteria spelled out in *The American Recovery and Reinvestment Act of 2009 (ARRA)*. This puts them in line for immediate Medicare and Medicaid incentive payments, as well as reducing errors and improving workflow.

In addition, since laboratory testing has a bearing on 70 to 80 percent of clinical decisions made, the use of a system that provides meaningful laboratory results represents great opportunity for an organization to control a community's healthcare spending.

Quick to implement, ICE Physician Portal also reduces errors and improves workflow. In addition, it gives laboratories a tool for obtaining a better footprint in the community. By giving physicians an easy way to place orders into a system, it can capture market share for the laboratory outreach business.

Sunquest has a 10-year record of clinical success in the UK and around the globe with the ICE product, and currently has more than 300,000 users worldwide. With a successful track record to draw upon, the newly released U.S. version of the product will help deliver workflow excellence, improve productivity and reimbursements, support the criteria for meaningful use, and integrate meaningful laboratory results throughout the enterprise.

CONNECTING LABORATORY AND PHYSICIAN

ICE Physician Portal connects the laboratory with community-based physicians via an intuitive and innovative computerized provider order entry (CPOE) process. This allows laboratories to expand their outreach, giving them tools to allow new clients, for example another laboratory or a physician's office, to order tests and receive results electronically, even if the physician's office practice does not use an electronic medical records (EMR) solution.

The physician portal achieves several of the meaningful use goals detailed in the *Health Information Technology for Economic and Clinical Health Act*, or *HITECH Act* portion of *ARRA*.

Along with this powerful economic incentive, laboratories see great benefits in the physician portal, because it decreases errors, improves patient safety, improves workflow, and reduces doctor's office transcription errors.

Laboratory orders and results are part of a much larger issue raised by the national goal outlined in the *Centers for Medicare & Medicaid Services (CMS) Strategic Action Plan* to provide "Secure, interoperable electronic records [that] are available to patients and their doctors anytime."

EMR ADVANCEMENT

Practices are now implementing EMR systems to meet meaningful use criteria, but implementation of these systems is a long process and can result in disruption to the office workflow. By contrast, the ICE Physician Portal is easy to implement up front and meets many of the meaningful use criteria while cutting down on cost.

Existing users of Sunquest Laboratory products who extend ICE Physician Portal to their community-based physicians provide those physicians with a cost and time effective way to comply with meaningful use criteria for entering orders and receiving results electronically. If desired, ICE Physician Portal can be customized to a specific existing requisition form, but this process may take somewhat longer to implement.

OWNING YOUR COMMUNITY

In today's competitive environment, local and regional laboratories can gain a competitive edge by providing access to expert professionals and high service levels. Sunquest solutions empower laboratories to deliver quality, localized service in a cost-effective manner, creating the competitive edge needed to keep the community's healthcare where it belongs — in the community.

Along with the Outreach Advantage suite of software, ICE Physician Portal enables hospitals and laboratories to compete more successfully for outreach business. This includes Mobile Courier Management™ software to ensure quality specimen collection from acquisition to laboratory.

These advanced software integration technologies can provide laboratory operations a "closed-loop" solution for delivering efficient, high-quality service to patients and physicians in a connected healthcare model. This in turn will affect the bottom line in reducing operational costs and enhancing the successful construction, management, and service of physician and patient relationships in the community. ■

Sources
Centers for Medicare & Medicaid Services Strategic Action Plan for 2006 – 2009, "Achieving a Transformed and Modernized Health Care System for the 21st Century," October 16, 2006.

Q&A with Jay B. Jones, PhD, DABCC

From Discreet Laboratory Data to Enterprise Analytics

Sunquest recently talked with Jay B. Jones, PhD, DABCC, to discuss the importance of standardized analytics in a laboratory and the role this data plays in an overall health system.

Dr. Jones is Director of Chemistry and Regional Labs at Geisinger Health System in Danville, Pennsylvania. Founded in 1915, Geisinger is a physician-led healthcare system spanning 42 counties of 20,000 square miles and serving over two million people. The system has more than 36 community practice sites, 8 larger group practices, 3 hospitals, and 227,000 Geisinger Health Plan members.



What is enterprise analytics and why is it important to the success of a laboratory?

It is critical that the laboratory break out of its silo and determine how best to support the overall enterprise most effectively with the laboratory values we provide.

I coined the term “enterprise analytics” to refer to concise standardized analytics that are used across an entire healthcare system, which in our case includes community practice sites, larger group practices, and hospitals.

An enterprise analytics system simplifies our operations, making it easier to integrate data into our overall information system. A unified system makes decision support more concise and decipherable. It is also much more efficient from a maintenance standpoint, because all information feeds into a single electronic health record through the department laboratory information system (LIS).

Who benefits from enterprise analytics?

We like to call it a win-win-win situation. Patients benefit from improved health outcomes, our payers (whether insurance or Medicare) benefit from reduced payouts, and Geisinger Health System benefits from improved outcomes and fewer complications that our healthcare system will have to pay for.

Tell us about how your enterprise analytics system evolved.

Geisinger’s new center for health research really had a lot to do with driving our strategy. The 20-million dollar building is filled with smart people looking to find ways to support outcome-based medicine. The effort includes looking at laboratory values and other departmental data provided through the electronic health

record (EHR) record to develop best practice alerts that will improve outcomes. To do this, clinicians must be working with a data set that provides the best quality outcome analysis — we simply cannot have a variety of laboratory results done by different methods at different locations.

For example, clinicians might be given an alert for a specific order set for specific diseases states, for example, diabetes, cardio vascular disease, or osteoporosis. The order set would contain the predetermined list of the most valuable tests for the particular disease state.

How has enterprise analytics played a role in showcasing the laboratory’s value?

Our laboratory is already regarded by the corporation and sister service lines as a very valuable financial asset of the entire organization. We work efficiently, because we do not support multiple systems. We practice efficiently with enterprise analytics, reaching top tier pricing, and using group purchasing to cut costs. More recently, we have provided even more value to the organization by helping to produce discrete laboratory values that can be used to obtain pay for performance.

For example, the hemoglobin A1c test is recognized by the National Committee for Quality Assurance (NCQA) as the single gold standard for measuring the health status of both the individual and overall community’s diabetic population. Geisinger has about 25,000 diabetics in its system, and our enterprise analytics system allows us to monitor effectively A1c levels; we will be rewarded for controlling our diabetic population by getting A1c levels down below 7 percent.

How does enterprise analytics help us achieve this? If a diabetic patient walks into any one of our community practices, larger medical arts group practices, or one of our hospitals (for whatever reason), the clinician will receive a “best practice alert,” an onscreen box showing 19 parameters that should be checked at prescribed intervals. The physician simply clicks on the box and any required tests (including the A1c test) are automatically ordered at that point, making for an extremely efficient patient encounter. The patient gets what he or she needs, and over time the organization benefits by receiving enhanced pay for performance for reducing our diabetic patient population’s A1c levels down to where they should be.

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SECURING REAL TIME BUSINESS INTELLIGENCE *(Continued from page 1)*

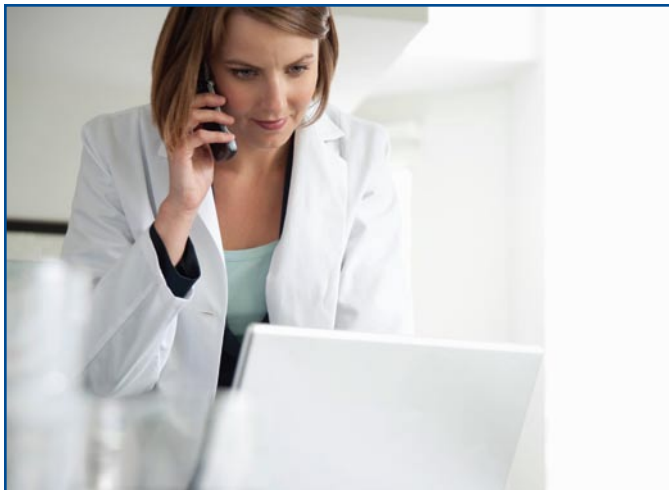
In addition to basic economic pressures, healthcare reform has made access to real time data a hot topic for laboratories. For example, *The American Recovery and Reinvestment Act of 2009 (ARRA)* includes billions of dollars in Medicare and Medicaid incentive payments to providers and hospitals for the “Meaningful Use” of certified health IT products. Other anticipated healthcare reform requirements are also expected to increase the need for a wide variety of data.

The Sunquest Business Intelligence software incorporates an easy, intuitive user interface that enables users to visualize data in ways that work best for them, from the most complex arrays to the simplest table. Several versions of the software are planned.

One of Sunquest BI’s benefits is that it has the potential to change the perception of laboratories within the enterprise that they support. Metrics gained from the Sunquest BI system, in conjunction with the automation benefits derived from Sunquest Laboratory software, are likely to show that laboratories are actually profitable revenue centers or service lines.

“The BI system further promotes the idea that your laboratory is a key partner in the successful treatment of all patients that come in and also a key partner in all your outreach programs,” said Kelly Feist, Vice President of Marketing for Sunquest.

“All our products reduce human error, but this BI solution adds another layer of confidence that the lab is run efficiently. If the data shows how efficiently laboratories are run, how they catch errors and increase revenues, all of this eventually combines to lead to higher satisfaction rates.”



BUSINESS INTELLIGENCE FOR THE LONG TERM

Sunquest Business Intelligence is a dynamic solution, which will adapt to changes in the healthcare environment. Over time, the system will expand to include even more intelligent data, actionable meaningful dashboards, and ways to help users make better decisions. Analytics will grow and change to adapt to the needs created by the *ARRA* and other health reform legislation.

“In the future, I predict that the first thing the laboratory supervisor will do each day is check his or her dashboard,” said Feist.

“The chief financial officer will check in to see up-to-the-minute information on charge backs from insurance, and write off scenarios, the chief information officer will check on the number and causes of errors in the system, and the operating officer will focus on cost data and ways to improve efficiency.”

HELPING LABORATORIES MEET THEIR GOALS

While not a brand new concept, Sunquest believes its new Business Intelligence software is a better way for laboratories to track their status. By taking data from all the Sunquest laboratory systems and showing it together in multiple views within one application, users get a vast amount of rich data that can help them make decisions, and respond to the many changes we see on the horizon. ■

Sources

Business Intelligence. (2010, January 24). In Wikipedia, The Free Encyclopedia. Retrieved 19:38, January 26, 2010, from http://en.wikipedia.org/w/index.php?title=Business_intelligence&oldid=339743664

Economic Stimulus and the Health Care IT Industry: What it will mean for you and the industry, Meaningful Use, Certification Criteria and Standards, and HHS Certification Process, Healthcare Information and Management Systems Society (HIMSS), <http://www.himss.org/EconomicStimulus/>. Retrieved January 26, 2010

Q&A WITH JAY B. JONES, PHD, DABCC (Continued from page 5)

The ability to track this data supports regional healthcare for diabetes, obesity, and numerous other conditions contributing to ill health in our communities. The laboratory becomes a cornerstone in the quest towards making populations healthier and improving quality of life.

In addition, we are supporting our own health plan, because effectively treating diabetes in our population of 25,000 by reducing their A1c levels will result in fewer amputations, cataracts, and complications that the health plan must pay for.

How has enterprise analytics helped you “own your community”?

As a regional healthcare center with on practice sites in 22 counties, the Geisinger Health system already covers a very wide area, and our first efforts focused on owning ourselves before expanding to the outside. In other words, we began by conducting inreach as opposed to outreach, and developed an enterprise analytics concept that is broad, but also deep.

For example, we established a single chemistry platform, and we now have about 20 analyzers, all from the same vendor. They run tests on hundreds of different instrument channels spread out across the enterprise, all using the same reagents, calibrated with the same calibrator lot number and the same quality control lot number. Wherever they go in our system, customers will get the exact same information from a hemoglobin test or dozens of other chemistry and immunology tests. More than simply saving money by group purchasing from a single vendor, our system applies technology in a deep way, providing an enhanced service to our customers.

How has enterprise analytics contributed to your outreach efforts?

We have done so well with inreach that we are now marketing to outside organizations. For example, we are reaching out to for-profit laboratories and freestanding practices, as well as conducting an ongoing outreach program across the region. We have a fleet of 20 courier vehicles that pick up all over central Pennsylvania, an active client services center that keeps in touch with clients, as well as a sales force promoting our services.

We are also actively pursuing other ways of sharing ourselves outside of our system. We expect to pursue this further within the context of health information exchanges, where we would share our expertise with other healthcare organizations in the region, for example, outpatient facilities, and home care agencies.

The success of such a system would be based in large part on a robust information technology component that serves as the operating system for all, leveraging tools with an enterprise information approach, picking the best platform and delivering our product. The lab has also purchased Sunquest's Outreach Advantage™ in hopes of facilitating development of an enterprise solution.

In your opinion, would this model work for comparable regional centers?

Yes, but designing an enterprise analytics system requires a lot of foresight and strategy, especially if the enterprise involves the coming together of diverse health care partners. You have to pick a single EHR and LIS, choose one analyzer, and develop best practice alerts to produce state-of-the-art quality medicine. This was somewhat easier within our Geisinger system, because we have evolved as single system since 1915. There have been acquisitions along the way, but these have been consolidated into our system one at a time in a building block fashion, not because of a massive merger of equal partners.

Can you tell us a bit about the mechanics of the enterprise analytics?

There is a lot of information technology architecture and a top-notch LIS support team behind our successful enterprise analytics system. We have a whole host of information systems and the real backbone of the system is the wide area network that allows the entire system to work together. The WAN facilitates the instrument interface to the LIS, dispatch of couriers, tracking of errors, and provision of detailed procedure manuals, among other components.

“There is a lot of information technology architecture and a top-notch LIS support team behind our successful enterprise analytics system.”

Our Sunquest software is rock solid and plays well with all this integration. Sunquest programs accept our instrumentation well and provide effective departmental values to our EHR. Sunquest orders and results interfaces work well within our system and are part of our ongoing infrastructure. We also have middleware solutions that enhance what goes into our Sunquest solutions. With Sunquest, we get what I call “lean informatics,” simple to use structured systems that work well within the overall system we have developed. ■



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Sunquest is Proud to Support these Upcoming Events

2010 TRADESHOWS AND SPECIAL EVENTS:

HIMSS 2010 - Booth #1345, March 1-4, Atlanta, GA
www.himss.org

World of Health IT, March 15-18, Barcelona, Spain
www.worldofhealthit.org

US CAP 2010 - Booth #1008, March 22-24, Washington D.C.
www.uscap.org

BGS 2010 Scientific Symposium, April 23-25,
Durham, UK, www.bgsdurham.org

BioMedica, April 27-28, Dublin, Ireland

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

CLMA ThinkLab 2010 - Booth #519, May 4-6, Las Vegas, NV
www.clma.org

Focus 2010, May 9-13, Glasgow, Scotland
www.focus-acb.org.uk

G2 Lab Outreach, June 2-4, Baltimore, MD

Smart Health, June 15-16, London, UK

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

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

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

Pathology Informatics, Sept. 19-22, Boston, MA

CAP '10, Sept. 26-29, Chicago, IL
www.cap.org

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