Secure Messaging: First Steps | Rise of the CNIO | The Upbeat Job Candidate

Healthcare Informatics

February 2012

Volume 29, Number 2

Healthcare IT Leadership, Vision & Strategy

THE 2012 INNOVATOR AWARD WINNERS

Building Healthcare's Future

www.healthcare-informatics.com

VENDOME GROUP

One too many hats?

Allow your team to focus on building a system that supports preeminent patient care.

With over ten years of EMR systems' training experience, count on **Sedona Learning** to design and deliver an EMR training program that matches your organization's vision for excellence.

EMR Education is all we do. **Period.**

Online, In the Classroom, On the Floor

Visit us at
***HIMSS** in Las Vegas*
*—booth #**13025**—*

SEDONA
Learning Solutions

sedonalearning.com | 602.840.1000 | info@sedonalearning.com

InterSystems

Enlightened action. Connected care.

The technology you need to achieve your vision.
InterSystems' strategic informatics platform.

- Embed active analytics in your applications to drive actions based on real-time insights
- Connect all your applications to share data across a hospital system, community, or a region
- Develop new functionality quickly to fill gaps in your applications

InterSystems.com/HIMSS12X

Visit us at HIMSS Booth 3045

CONTENTS February

On the cover: Leaders of the New York City Department of Health and Mental Hygiene Primary Care Information Project, which earned first place in *HCI*'s 2012 Innovator Awards. Pictured from left to right are: Jesse Singer, D.O., M.P.H.; Sheila Anane, M.P.H.; Michael Buck, Ph.D.; Sam Amirfar, M.D.; John Taverna, M.P.H.; and Remli Stubbs-Dame, M.P.H. Photo: Alexis Maindrault

COVER STORY

★ ★ THE 2012 INNOVATOR AWARD WINNERS ★ ★

8 INNOVATORS IN MOTION
For this year's Innovator Awards, *HCI* editors profile the top four healthcare organizations that are breaking new ground in healthcare with innovations that are, just as importantly, highly replicable by other providers. On the cover and on this page is this year's first place winner: New York City Department of Health and Mental Hygiene **BY MARK HAGLAND**

10 NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE
How a public health department created an extraordinary population health management initiative in the nation's largest city **BY MARK HAGLAND**

14 MICHIGAN HEALTH CONNECT
One HIE's innovative and cost-effective solution to link transitions between primary care and specialty practices has shown potential for wider healthcare applications **BY JENNIFER PRESTIGIACOMO**

20 BLESSING HOSPITAL
An advanced clinical decision support system pioneered at one community hospital has achieved stunning results over a two-year period **BY JOHN DEGASPARI**

26 MARSHFIELDC LINIC
A powerful population health management dashboard developed by a multispecialty group gives physicians real-time views of their patient populations **BY GABRIEL PERNA**

34 THE SEMI-FINALIST TEAMS
This year's Innovator submissions included exceptional examples from a variety of provider organizations. A look at the excellent work done by the 11 semi-finalist teams **BY MARK HAGLAND**

38 THE RISE OF THE SENIOR NURSE INFORMATICIST
The senior clinical informaticist role for those with a nursing background is rapidly becoming a nexus position at hospitals nationwide. Here's an inside look at how this position is beginning to gel in terms of pay, responsibilities, and reporting structure **BY JENNIFER PRESTIGIACOMO**

52 GETTING THE MESSAGE, SECURELY
Ready or not, hospital CIOs are faced with new challenges in "secure messaging"—shorthand for new technology that is transforming how physicians communicate with each other and with their patients **BY JOHN DEGASPARI**

DEPARTMENTS

4 INSIDE

6 EDITOR'S PAGE

SECURITY UPDATE
60 UNSECURED MOBILE DEVICES: THE WEAK LINK?
A recent Ponemon Institute study reports the frequency of data breaches in healthcare organizations soared by nearly a third over the previous year, with unsecured mobile devices as the main culprit **BY DAVID RATHS**

CAREER PATHS
64 HALF-FULL OR HALF-EMPTY?
The power of the positive-thinking job candidate **BY TIM TOLAN**

46 PRODUCTS & SERVICES

Healthcare Informatics (ISSN 1050-9135) is published monthly by Vendome Group, LLC, 6 East 32nd Street, 8th Floor, New York, NY 10016. Periodicals postage paid at New York, NY and additional mailing offices. POSTMASTER: send address changes to *HEALTHCARE INFORMATICS,* P.O Box 2178, Skokie, IL 60076-7878.

Subscriptions: For questions or correspondence about a subscription, phone 847-763-9291 or write to *HEALTHCARE INFORMATICS,* PO Box 2178, Skokie, IL 60076-7878. If you are changing your address, please enclose entire mailing label and allow 6 to 8 weeks for change. Subscription rate per year (U.S. Funds): U.S. $99.00; all international $129.00 (includes air delivery). Single copy rate (U.S. Funds) except September and January: U.S. $20.00; all international $32.00. June HCI 100 $50.00 (U.S. Funds) includes shipping/handling to all countries. Add state and local taxes as applicable.

High stress

Can't sleep

Breathless

Your Voice Now Understood

RxNorm854875

ICD-9-CM-428.21

ICD-10-CM-150.21

Capture the whole story at nuancehealthcare.com/yourvoice

NUANCE

INSIDE

2012 Healthcare Innovators, CNIOs, Secure Messaging

As the healthcare industry moves forward on implementing healthcare reform, leading provider organizations of all kinds are hard at work leveraging technology to become more efficient and effective in improving healthcare in this country. This month's cover story package profiles the top four winning teams of the *Healthcare Informatics* Innovator Awards: New York City Department of Health and Mental Hygiene (page 10), Michigan Health Connect (page 14), Blessing Hospital (page 20), and Marshfield Clinic (page 26), which have broken new ground in leveraging clinical and non-clinical information technology with innovations that are replicable by other providers.

Associate Editor Jennifer Prestigiacomo explores the emerging role of the senior nurse informaticist, which is rapidly becoming a key position in hospital organizations nationwide. In the article on page 38, she provides a detailed report on how this new position is taking shape in terms of title, pay, responsibilities, and reporting structure.

Meanwhile, smartphones and other personal electronic devices that are transforming the way we communicate in our everyday lives are having a profound impact on the way physicians communicate with each other and with their patients. On page 52, Managing Editor John DeGaspari provides an in-depth look at what CIOs are hearing from their clinicians regarding their communication needs, and how technology is opening up secure communication channels, both inside and outside the enterprise.

On page 60, Senior Contributing Editor David Raths discusses the finding of a new report that reveals a huge jump in data breaches in healthcare organizations—and fingers the main culprit: unsecured mobile devices.

On page 64, Tim Tolan gives his take on the upbeat job candidate, and why a positive attitude on the job is so important to the general health of the entire organization.

As we begin a new year, the *Healthcare Informatics* team is proud to present its newly launched website (www.healthcare-informatics.com), which offers a host of improvements: easy navigability, better organized content, a powerful search engine, and better social media sharing tools. We hope it will meet your needs for accurate, incisive, and up-to-the-minute coverage of our rapidly evolving industry.

Healthcare **Informatics**
Healthcare IT Leadership, Vision & Strategy

EDITORIAL
EXECUTIVE DIRECTOR OF EDITORIAL INITIATIVES
Charlene Marietti cmarietti@vendomegrp.com
EDITOR-IN-CHIEF
Mark Hagland mhagland@vendomegrp.com
MANAGING EDITOR
John DeGaspari jdegaspari@vendomegrp.com
ASSOCIATE EDITOR
Jennifer Prestigiacomo
jprestigiacomo@vendomegrp.com
ASSISTANT EDITOR
Gabriel Perna gperna@vendomegrp.com
SENIOR CONTRIBUTING EDITOR
David Raths draths@mac.com

SALES
GROUP PUBLISHER
MIDWEST & WEST COAST ACCOUNTS
Nicole Casement ncasement@vendomegrp.com
212-812-8416
REGIONAL ACCOUNT MANAGER, EAST COAST SALES
Michael A. Moran mmoran@vendomegrp.com
212-812-8417
PROJECT MANAGER, DIRECTORIES/SPECIAL PROJECTS
Libby Johnson ljohnson@vendomegrp.com
216-373-1222

CIRCULATION
CUSTOMER SERVICE/SUBSCRIPTIONS
847-763-9291 healthcare_informatics@halldata.com

PRODUCTION
DIRECTOR OF PRODUCTION
Kathi Homenick khomenick@vendomegrp.com
ART DIRECTOR
James Gouijn-Stook jgouijn@vendomegrp.com
TRAFFIC MANAGER
Judi Zeng jzeng@vendomegrp.com
212-812-8976
All ad materials should be sent to:
https://vendome.sendmyad.com

CUSTOM REPRINTS and E-PRINTS
Erin Tyler
216-373-1217 etyler@vendomegrp.com

REUSE PERMISSIONS
Copyright Clearance Center
978-750-8400 info@copyright.com

CORPORATE
CHIEF EXECUTIVE OFFICER
Jane Butler
EXECUTIVE VICE PRESIDENT
Mark Fried
CHIEF FINANCIAL OFFICER
Mike Muller
EXECUTIVE GROUP PUBLISHER
Michael W. O'Donnell
HEALTHCARE MARKETING DIRECTOR
Rachel Beneventi

VENDOME GROUP
www.vendomegrp.com

HEALTHCARE CAN'T WAIT

FOR A NETWORK TO KEEP PACE WITH HIT INITIATIVES.

Comcast Business Class Ethernet can help improve the quality of care of your organization. With speeds from 1 Mbps to 10 Gbps, telehealth from multiple locations can be a reality. And it's flexible and scalable so it can grow right along with you while keeping costs in line.

Go to ***business.comcast.com/healthcare*** *or Call* ***866.429.3082***

Comcast BUSINESS CLASS

Innovation and the Emerging World

A JOURNEY TO NO-ONE-KNOWS-WHERE


Mark Hagland

I was absolutely fascinated to see a segment of *Fareed Zakharia GPS* on CNN in late December, in which Scott Snibbe was profiled. Now, how to even describe Scott Snibbe? Probably it would be best if you went to Wikipedia and read the entry on him, because what he does, at the intersection of computing, video art, graphics, and interactive media, is so unusual that it can't easily be described or summarized. Wikipedia refers to him as "an interactive media artist, researcher, and entrepreneur." The article goes on to note that Snibbe, born in 1969, "is one of the first artists to work with projector-based interactivity, where a computer-controlled projection onto a wall or floor changes in response to people moving across its surface, with his well-known full-body interactive work Boundary Functions (1998), premiering at Ars Electronica 1998."

Snibbe's work has been exhibited at numerous important museums and other forums for learning and interaction, and he is pioneering what he calls "feature-length experiences" in the "interactive experience" world. If that sounds a bit baffling at first blush, you'll just have to go online and get a better sense of what I mean. Here's the thing, though: just the night before I saw that CNN segment (and, I have to confess, at that point, I hadn't yet heard of Snibbe), I had seen the film *Hugo* by Martin Scorsese, which starts out in the guise of a children's mystery-adventure story, but by the end becomes a paean to the early filmmaking of Georges Melies (1861-1938), the French filmmaker who at the turn of the last century was pioneering techniques and strategies that would set the pace for early filmmaking.

And, watching the CNN segment, I saw the connection between what Melies was doing when he created *A Trip to the Moon* in 1902, and what Snibbe is doing today. In both cases, we are talking about innovators whose vision, energy, and enthusiasm have propelled them forward to truly "think outside the box" and transgress boundaries between different phenomena—in Melies's case, it was magic and cinema, while in Snibbe's, it is computers, video, art, and games—in order to create new things.

Fascinating stuff! Indeed, *Hugo* reminds us how terribly experimental the art of cinema was 120 years ago, at a time when, at first, no one even knew what should be in a movie, and when, despite the terrible limitations of the technology available at the time, early filmmakers' work exploded with creativity and innovation.

I honestly can see connections between that early era in filmmaking and our current age, not only in terms of the kind of work that artists like Scott Snibbe are doing, but also the intensely creative work being done right now in leveraging healthcare IT to improve patient safety, care quality, clinician effectiveness, operational efficiency, and cost-effectiveness. It's tremendously hard work, but the potential rewards are enormous.

When it comes to the four top-place finishing teams in this year's *Healthcare Informatics* Innovator Awards program—well, indeed, when it comes to all 15 finalist and semi-finalist teams whose work is described in this month's cover story package—we're witnessing a true Age of Invention in terms of leveraging IT to improve healthcare. What these teams, at hospitals, medical groups, integrated health systems, health information exchanges, and public health departments, are doing, is not only highly admirable; it's downright exciting. So, please enjoy the articles our team at *HCI* has written for this issue that describe this terribly important work, as some of our industry's top innovators show us how they're taking us, collectively, to places we've never been before.

Mark Hagland
Editor-in-Chief

Moving healthcare forward

IT and communications solutions for elevated performance

Our mission is to fulfill your vision of healthcare—in patient care and experience, in staff collaboration and communication, in business continuity and data security, and in the efficient running of your institution. With tailor-made solutions built on an in-depth understanding of your unique needs, strategies and objectives. Solutions that provide easy access to information and fast, effective communications among patients and staff—on site and at remote locations—reducing delays and improving quality of care. Learn how NEC's solutions and expertise in voice and data communications, networks and data storage can elevate your performance.

Learn how you can elevate your performance at **www.nec.com**/healthcare

Empowered by Innovation NEC

Innovators

Has there ever been a more challenging—yet exciting—time in healthcare? As everyone knows, our healthcare system is being challenged as never before, by purchasers, payers, and policymakers, to become more effective and more efficient—to improve patient safety, care quality, cost-effectiveness, and operational efficiency, all at once, even as the aging of the U.S. population and an intensifying explosion in chronic illness continue to add to providers' responsibilities.

Needless to say, this is an era in the history of U.S. healthcare that calls for innovators—individuals and groups willing to take risks and invest the proverbial "blood, sweat, toil, and tears" into efforts to improve American healthcare. Fortunately, the potential for leveraging both clinical and non-clinical information technology of all types to achieve innovation is also present. And that is exactly what this year's four winning teams—the New York City Department of Health and Mental Hygiene, Michigan Health Connect, Blessing Hospital, and the Marshfield Clinic—have done.

Each of these winning teams has created an innovation or set of innovations that is both worthy of recognition in these pages, and also potentially replicable by other healthcare organizations. And these four teams follow in the footsteps of three previous sets of winning teams, in the years since our publication has shifted the Innovators program from honoring individuals to honoring teams of leaders in healthcare and healthcare IT.

These teams follow a highly distinguished group of predecessors. In 2009, the first year in which our publication recognized teams, we awarded our first-, second-, and third-place prizes to folks from the Detroit Medical Center (Harper/Hutzel Hospitals), The Johns Hopkins Hospital, and BayCare Health System (Tampa). In 2010, our winning teams represented Children's Hospital of Pittsburgh, Children's Healthcare of Atlanta, and Chester (Pa.) County Hospital. Then in 2011, the top three teams were from Children's Hospital and Medical Center (Omaha), Southeast Texas Medical Associates (SETMA), of Beaumont, Texas, and HealthInfoNet.

In fact, last year was the first year in which non-hospital teams were recognized, with one being a multispecialty medical group, and the other being Maine's statewide health information exchange (HIE). And this year, our four winning teams represent a hospital, a medical group, an HIE, and, for the first time, a public health department.

That range of institutional types reflects the tremendous diversity involved in innovation these days, as healthcare organizations of all types move forward to create change. Indeed, as we enter into an emergent era in which accountable care, the patient-centered medical home, care management across transitions, and population health management are coming to the fore, true innovation will actually require healthcare organizations of all kinds to innovate collaboratively in order to move our healthcare system forward. What's more, the innovations that are emerging are of every type, clinical and non-clinical alike, as all will be needed.

For now, we welcome you to read this package of articles, and hope you will enjoy, and benefit from, learning about these four organizations and the innovations their leaders have created. Please join our entire editorial team in congratulating them, as well as the 11 semi-finalist organizations, for the work they have all done, and which can be sources of inspiration for their peer organizations nationwide, as U.S. healthcare moves forward in the coming years.

On behalf of our editorial team, congratulations to all!

Mark Hagland
Editor-in-Chief

In Motion

LOOKING BACK ON FOUR YEARS OF RECOGNIZING INNOVATIVE HEALTHCARE TEAMS

★ ★ ★ INNOVATOR AWARDS ★ ★ ★

FIRST PLACE ORGANIZATION:

NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Thinking Big

THE NEW YORK CITY DEPARTMENT OF HEALTH'S PRIMARY CARE INFORMATION PROJECT CREATES BOLD POPULATION HEALTH CONNECTIONS ACROSS THE NATION'S LARGEST CITY BY MARK HAGLAND

If you want to know what the future of healthcare in America looks like, a good person to consult would be Jesse Singer, D.O., M.P.H., of the New York City Department of Health and Mental Hygiene (NYCDH). Singer, an assistant commissioner who heads up the Primary Care Information Project in the NYCDH's Division of Health Care Access and Improvement, has been leading an extraordinary population health management initiative, one whose ultimate goals look a lot like what many industry experts believe the healthcare delivery system needs to look more like: that is to say, one in which clinical IT is continuously leveraged to support population health management, care management, and enhanced communications in all directions, including between physicians and public health departments.

Leaders of the New York City Department of Health Primary Care Information Project. Pictured from left to right: Jesse Singer, D.O., M.P.H.; Michael Buck, Ph.D.; Remle Stubbs-Dame, M.P.H.; Sheila Anane, M.P.H.; Sam Amirfar, M.D.; and John Taverna, M.P.H. Photo: Alexis Maindrault

And because of his and his colleagues' groundbreaking work, Singer and his fellow leaders in the New York City Department of Health and Mental Hygiene are the first-place winners in this year's *Healthcare Informatics* Innovator Awards program.

What Singer and his colleagues at the NYCDH are doing emerged organically out of the creation of the Primary Care Information Project (PCIP), which began operation in 2005. "Our mission," Singer explains, "was to improve health through the use of health information technology. So we've been doing go-lives with physicians across New York City," with 2,900 practices of all sizes (from solo practices to outpatient community health centers) and representing more than 2,900 providers, going live with electronic health records (EHRs) since 2007. "We estimate that we cover about 2.5 million patients in New York, with 400,000 encounters per month," he adds.

TARGETING RESOURCES FOR OPTIMAL ROI

But helping physicians implement EHRs (and in fact, the NYCDH has been designated as a regional extension center for nearly three years) has been just the first phase in participation in the broader population health management effort. The Primary Care Information Project has established a data reporting and physician alert infrastructure, grounded in an electronic hub platform (co-developed with the Westborough, Mass.-based eClinicalWorks) that allows the NYCDH to gather information on the prevalence of both acute disease outbreaks and of levels of chronic disease in different neighborhoods across New York City. Singer says the need was

DOES YOUR TABLET MAKE THE CUT?

Motion™

Get the Serious Tablet PCs for Serious Professionals

When real-time access to information is critical, you need a tablet that's dedicated to patient care. Motion® Tablet PCs powered by up to the Intel® Core™ i7 vPro™ processor running Microsoft® Windows® 7 are the only serious solution for healthcare organizations that need to keep their mobile providers productive and connected to the enterprise.

GET SERIOUS ABOUT MOBILE PRODUCTIVITY WITH MOTION TABLET PCS.

Visit Motion at HIMSS in booth 4230 to see our full line of Tablet PCs for Healthcare and register for a chance to win a Motion Tablet PC!

www.MotionComputing.com | Info@MotionComputing.com | 1-866-MTABLET

intel inside™
CORE™ i7 vPro™
Protect. Manage.

clear to focus on three specific types of data—clinical data from the EHR such as blood pressure control; utilization data, such as rates of e-prescribing; and syndromic surveillance data.

"Because we have very limited funds, we wanted to know what neighborhoods to target for certain things, such as, neighborhoods with high diabetes rates," Singer says. "We asked ourselves, what can we build without requiring constant re-intervention by a vendor? So we built a vendor-neutral hub, which allows us to securely do three different things. One is to allow us to push electronic messages directly to providers into their inboxes. The second was the ability to query all of our electronic health records in a secure way. And we built this very securely so that it doesn't identify individual patients, in order to avoid any HIPAA violations; it just counts up the number of people. For example, if we wanted to know the rate of obesity in different areas of New York City, we could do that. And we purposely built the system to avoid getting any PHI." In fact, the department is pushing out queries on a daily basis to support its ongoing chronic disease surveillance.

The third element, Singer continues, is patient-specific clinical decision support, which he says the department will be focusing on more intently going forward. The potential here is broad: for example, recently, the NYCDH pushed out a message to its connected providers regarding a nationwide medication recall, providing them with a link to more information, and using the Primary Care Connect system to query in order to determine how many of the doctors' patients were affected. So, Singer explains, if a particular patient was on the recalled medication, the department alerted the doctor to click on an icon, and from there, the doctor could query his or her EHR for more specific information.

The Primary Care Information Project was actually begun by Farzad Mostashari, M.D., now the national coordinator for health IT, when he was at the NYCDH, Singer points out, and was continued by a second NYCDH administrator, before Singer continued and expanded the program. Since the PCIP began tracking public health-related measures through its quality reporting system, the following advances have occurred:

- New York City primary care physicians who have implemented EHRs in their practices and who are participating in the PCIP have seen an average increase of 0.1 percent in primary care visits, and an average 2.4-percent increase in hemoglobin A1C screenings.
- Through PCIP, more than 100 sites have been recognized as patient-centered medical homes (PCMHs), making New York City the largest concentration of physician practices with that designation in the U.S.
- As of October 2011, 410 physician practices had been connected to the PCIP's hub system, with those practices serving more than 1.8 million New Yorkers.

Among the 700-plus unique queries the PCIP program has run to date have been queries around such questions as total patient load, encounters per year, BMI profile, diabetes and hypertension prevalence, adherence to recommended medication guidelines, distance patients travel to providers' offices, and age, gender, race, and ethnicity distributions.

Meanwhile, in the trenches, practicing physicians say they are delighted with the PCIP program. "It's totally changed the way I practice," exults Michael Richter, M.D., a primary care physician who serves about 2,000 patients in the middle-class neighborhood of Rego Park in Queens. The program "is of value to me and to public health," he attests. "Doctors don't have time to report every case of gastroenteritis, so collecting syndromic data is automatically fantastic," says Richter, who went live with his EHR (and whose go-live was facilitated by the NYDH) in 2009.

THE PROGRAM IS OF VALUE TO ME AND TO PUBLIC HEALTH. DOCTORS DON'T HAVE TIME TO REPORT EVERY CASE OF GASTROENTERITIS, SO COLLECTING SYNDROMIC DATA IS AUTOMATICALLY FANTASTIC. —*MICHAEL RICHTER, M.D.*

POTENTIAL FOR REPLICABILITY

Ultimately, Singer's vision for the PCIP is as an initiative that can proactively improve care for New Yorkers of all backgrounds and neighborhoods, through a strong and continuous interaction between the health department and the primary care physicians taking care of patients city-wide; and that includes next moving into a still-broader phase involving creating a city-wide health information exchange (HIE). Still, Singer says, not every city or county health department will be able to achieve what New York has. "I think the stars have to align a bit," he cautions. "We've had buy-in and support from the very top; we have a mayor who cares about public health and about technology; and commissioner of health who believes in what we're doing, as well as tens of millions of dollars in grants," not all of which have gone directly to the program, but which have created the technological infrastructure to support it.

Nevertheless, Singer reports that numerous representatives from health departments around the country have expressed interest in attempting similar initiatives, which he says indicates the potential for this kind of work to spread to communities across the U.S. In the end, he says, such work will necessarily be first and foremost about the health of communities. "As we say, health IT is just a vehicle we've chosen for public health, it's not a be-all and end-all. And though we're all geeks here and love information technology, in the end, it's all about the public health for us," Singer concludes. "It's just lucky that we get to combine that commitment with our love for information technology." ◆

Find documents faster

From the world's fastest high-volume scanners for digitizing medical records, to easy-to-use hard card capable scanners for the front desk, Fujitsu has the scanner for you. And integration with dozens of leading EMR software providers lets you create a robust and reliable solution upon which to grow. Stop looking and start doing by finding your solution with Fujitsu today.

The Fujitsu Electronic Record Solutions Center @ us.fujitsu.com/hci

shaping tomorrow with you

FUJITSU

★ ★ ★ INNOVATOR AWARDS ★ ★ ★

SECOND PLACE ORGANIZATION:
MICHIGAN HEALTH CONNECT

Bridging the Referral Divide

A MICHIGAN HIE FINDS AN INNOVATIVE, COST-EFFECTIVE WAY TO LINK TRANSITIONS BETWEEN PRIMARY CARE AND SPECIALTY PRACTICES

BY JENNIFER PRESTIGIACOMO

Attempting to bridge the divide between primary and specialty care, Michigan Health Connect (MHC), a Grand Rapids-based health information exchange (HIE) founded by leading Michigan health systems, developed a free eReferrals app for community physicians. The value and ease of use of that app spurred rapid adoption and made this project well-qualified for the *Healthcare Informatics* Innovator Award. What really is impressive is how this app can not only be used to transform communication between primary and specialty care, but how it can be applied to other areas of healthcare.

Doug Dietzman

ADDRESSING PRACTICE PAIN POINTS

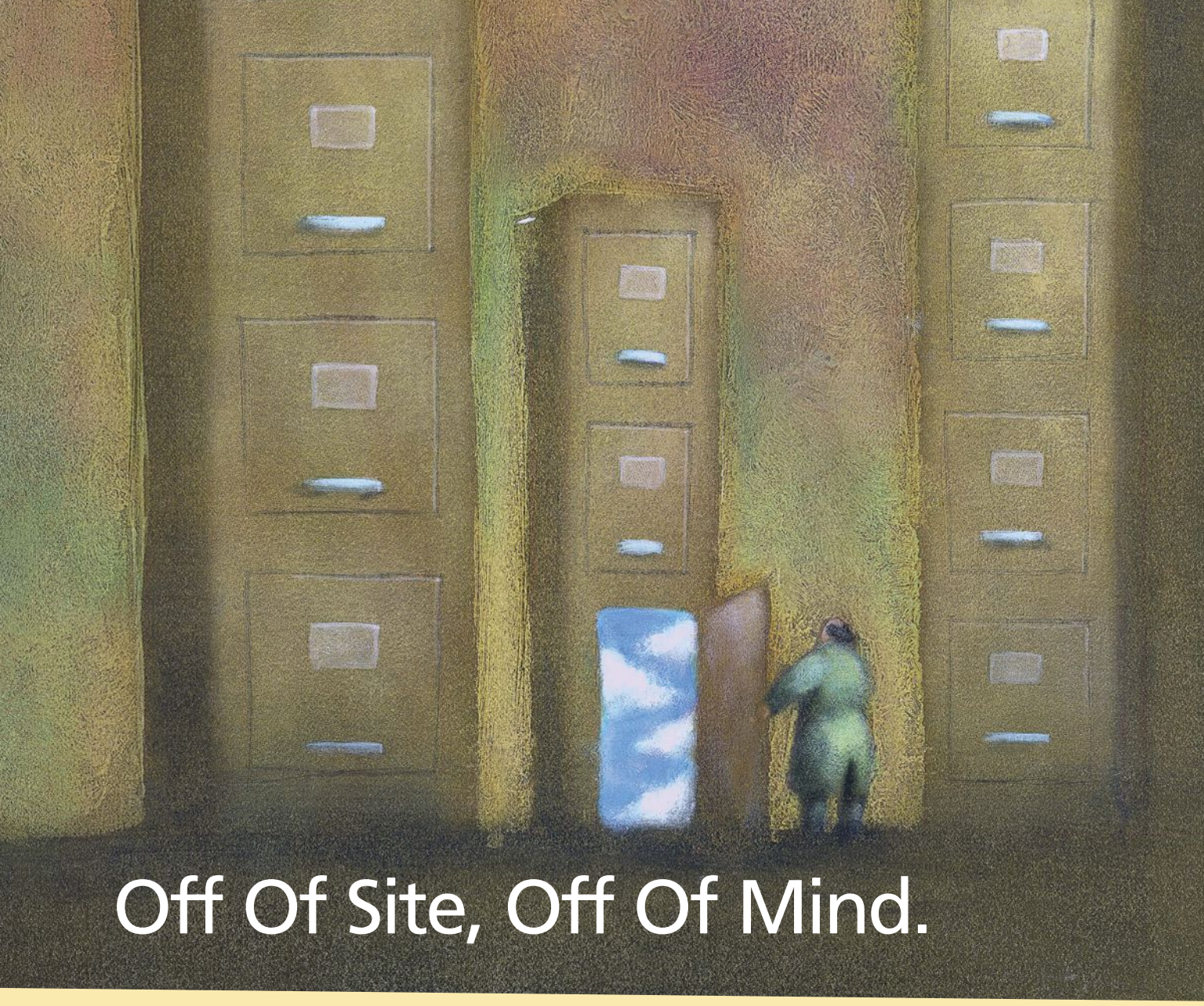
The eReferrals app was designed to solve a major practice pain point—specialist referrals—and eliminate a workflow bottleneck. Julie Klausing, senior program manager at MHC, says that her organization's strategy has been to really assess their business processes and figure out where the greatest need to enhance efficiency in patient care is needed, instead of simply throwing technology at physician practices. "As [we thought about this], we looked at it as an HIE; so instead of building Mecca and trying to get everything done, [we said] let's deal with the pain points; they're not pretty or flashy, but it's these things that make a difference," adds Steve Spieker, senior solution specialist, MHC.

Doug Dietzman, MHC's executive director, adds that the HIE was formed with the specific intent of trying to solve real problems in healthcare, rather than attempting to implement the theory of HIE. "One of the big components that is often talked about is patient care transitions and moving from one setting to another and how to eliminate some of those hand-off and quality issues," he says.

The manual process of referring patients to other practices involves filling out and faxing paper forms, followed by numerous phone calls between practices to ensure all of the information is passed from the referring provider to the receiving provider. This process is repeated in reverse if the referring provider wants to follow up on the results of the referral. Since gaps in the care record frequently occur at care transition points, MHC asserted that providing electronic referral functionality would not only ease administrative processes in the practices, but also significantly improve care coordination and quality across the community.

HOW IT WORKS

Within an hour, a physician practice can be up and running on the eReferrals app; that includes both the time required to download the app and the hands-on staff training, Spieker says.



Off Of Site, Off Of Mind.

ClickON® Hosting Service—All of the Functionality, Minus the I.T. Hassles.

Technology That Fits: The Need To Simplify

The responsibility of maintaining and supporting the I.T. infrastructure that runs your business office software can be both time-consuming and costly. With all of the pressure to work more efficiently and effectively, letting go of on-site hosting just makes sense.

ClickON® Hosting Service is the dependable, cost-effective answer to all of your I.T. infrastructure and accessibility needs. Your enterprise will enjoy 24/7 application accessibility and support, high-level security, ongoing performance tuning, even business continuity and backup assurance. Now is the time to decrease your responsibilities and overhead, while seeing a larger return on your I.T. investment.

Pass the buck to SSI (and save several) with our Hosting Service.

SSI®
MORE THAN YOU THOUGHT

Technology That Fits: Healthcare's New Reality

For more on our Hosting Service and other recent SSI innovations, visit www.TechnologyThatFits.com or call 1.800.881.2739

HIMSS Booth 3855

The app runs from the MHC Command Center and is powered by the iNexx solution from Medicity (Salt Lake City, Utah). When the referrals app is first deployed in a practice, MHC asks for contact information for the three to five sites with which the practice exchanges the highest volume of referrals.

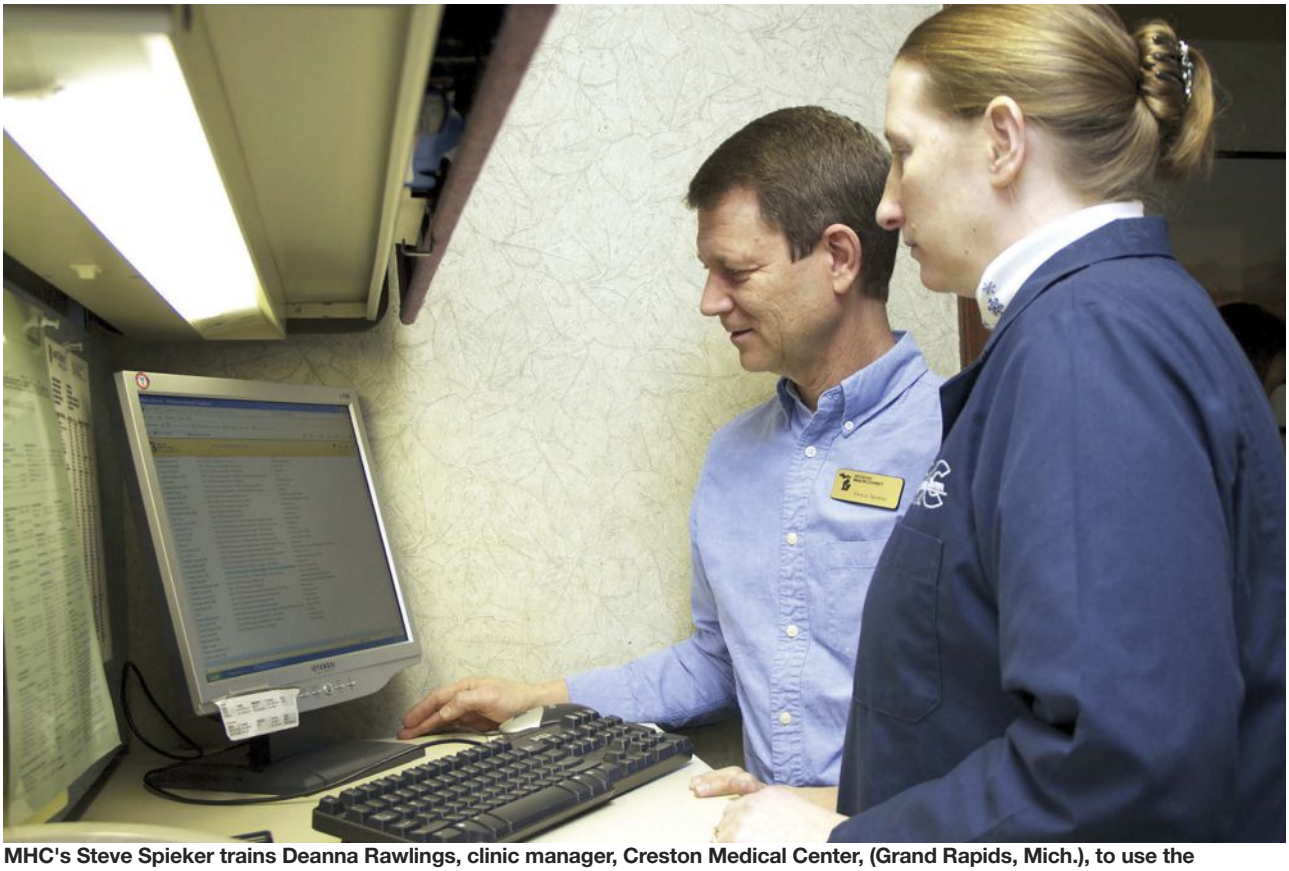
When a primary care practice wants to make a referral, it looks up the provider or specialty in the app and chooses the appropriate office. Then it creates a referral for the patient, attaches any clinical documentation, and hits send. The app tracks all sent referrals and records when they are received, which Spieker notes is key from an accountability standpoint. On the specialist end, the office can either accept or decline the referral; but if it declines the referral, a reason has to be given. The specialist can also set up an announcement that can include information like if the practice is not admitting any new patients or provide mandatory questions like insurance information to be filled out by the PCP.

WE'VE SIGNED UP A COUPLE OF LARGE PHYSICIAN ORGANIZATIONS IN SOUTHEAST MICHIGAN WITH THE INTENT ON THEIR PART TO TIE THEIR PHYSICIANS TOGETHER USING THIS REFERRAL TO MANAGE THE TRANSITIONS AND CARE OUTSIDE THEIR ORGANIZATION. —*DOUG DIETZMAN*

SUCCESSFUL PILOTS

The eReferral app evolved out of a problem that an MHC anchor hospital, Saint Mary's Health Care in Grand Rapids (owned by the 47-hospital Trinity Health system based in the Detroit suburb of Novi, Mich.), had been having in coordinating dental referrals with the local federally qualified health center (FQHC), Cherry Street Health Center. The eReferral app replaced a very time-consuming process involving inputting referrals and payment arrangements manually onto a spreadsheet. Four Trinity Health primary care practices—Trinity Sparta Health Center, Trinity Clinica Santa Maria, Trinity Browning Claytor Health Center, Trinity Heartside Clinic—piloted the app in October 2010.

Feedback from the pilot spurred such additional functionality as the ability to print referrals and import all referrals onto a spreadsheet. Also the tool now allows the user to move a scheduled appointment, cancel a referral, and show the history of changes. Another enhancement allows referrals to be assigned to alternate staff members, like for example if someone goes on vacation. "They can be reassigned and show up on someone else's work list to make sure that nothing falls through the cracks," says Dietzman.



MHC's Steve Spieker trains Deanna Rawlings, clinic manager, Creston Medical Center, (Grand Rapids, Mich.), to use the eReferral app. Photo: Michigan Health Connect

Uptime. Virtually Everywhere.

Powered by anton bauer EST 1970

Metro® Mobile Workstation with Anton-Bauer swappable power system

Point-of-care solutions for any application with 24/7 uptime.

Metro mobile workstations with swappable power offer healthcare facilities a point-of-care computing solution with 24/7 uptime. This solution features an advanced power system from Anton-Bauer® that provides market-leading reliability and durability. By combining fully-integrated workstations with trusted power innovations, we are eliminating downtime and promoting workflow in healthcare facilities *virtually everywhere* around the world.

Be part of the Metro Experience at **HIMSS Booth #1329**. Learn more about our latest innovations and see them in action.

Care. Virtually Everywhere.℠

Visit **metro.com/pointofcare** or call 800-992-1774 to learn more.

METRO®

EMERSON.

EMERSON. CONSIDER IT SOLVED.™

On the heels of the success of the pilot, MHC has been leveraging its member organizations and using those relationships to further deploy the eReferral app throughout its physician population, including primary care providers, specialists, a medical equipment supplier, home care providers, behavioral health organizations, and long-term care facilities. "We've signed up a couple of large physician organizations in Southeast Michigan with the intent on their part to tie their physicians together using this referral capability to manage the transitions and care outside their organization," says Dietzman. MHC also builds awareness for the app through webinar training.

Julie Klausing

So far, MHC has deployed the app to at 220 sites across 159 specialties, in 58 cities and 27 counties statewide. Soon, more than 1,000 physicians in Michigan will be using the technology, and the list of interested practices continues to grow. The quick spread of the technology is due not only to the ease of implementing the app and MHC's streamlined processes, but also to word of mouth among providers, says MHC.

FREEING UP PROVIDERS' TIME

MHC is able to offer the app free to providers, as the HIE sustains itself on revenue from electronic results delivery. Reed City Hospital, a 25-bed hospital in Grand Rapids, Mich. affiliated with the eight-hospital Spectrum Health, started using the app in Spring 2011, and now has nine referral specialists sending at least 100 referrals a week via the app, across three family practices and three specialist practices. Mindy Fewless, operations manager, family practice, Reed City Hospital, says the app has proven to be a huge time-saver for her office. She adds that communication is much better now between the specialty offices, and the ability to track the sending and receiving of referrals has really cut down on the number of phone calls.

Klausing sees the efficiencies gained from this app really freeing up time for providers to focus more on patient care. "This app is allowing PCPs and specialists to connect in a way they've never been connected before," she says. "It's allowing this electronic conversation to easily track referrals, so there are no more black holes with the fax."

When a referral is made for a patient, those offices are now connected and become a virtual care team, says Dietzman. "The ability of both offices to stay in sync with the scheduled appointment time, and if the office changes that scheduled appointment, it automatically lets the primary care office know that that appointment has been changed," says Dietzman. He foresees patients will be seeing quicker times to get an appointment because of this tool.

Dietzman says the app helps facilitate meaningful use requirements. An image or a CCD can be attached to the eReferral to create a smooth care transition. He also sees this tool as a favorable way for PCPs to coordinate with mental health providers without sharing certain sensitive data that cannot be shared in a medical home scenario.

As the industry is figuring out the next steps toward forming accountable care organizations, Dietzman says that more practices will be working in an environment with multiple vendors and providers that aren't owned by the same system, which will make communication all the more challenging. That's why a simple, web-based app could be a good connector for those communications, he says.

Klausing notes that the tool gives specialists a competitive advantage. "Say they're a cardiologist and they're listed in a particular area and their competitors aren't; guess who's going to get the referral?"

ENHANCEMENTS, DIFFERENT USE CASES

In the future, MHC's leaders would like to interface the eReferral app with practices' EHRs, and build encounter triggers for sending CCDs. But Dietzman says vendors need to become more mature to allow for this functionality. Klausing also wants to get insurers involved in order to develop an enhancement to automate health plan authorizations.

Further functional development, Dietzman says, will be "not so much massive changes to the tool, but rather, [enhancements] where the tool can be applied to solve more problems in the community." One application that Spieker is really excited about is for Child Protective Services teams to use the messaging and tracking capability for receiving referrals on children they care for. The State of Michigan started a pilot in Kent County in January 2012, and hope to roll the app out to all CPS workers in the state. "Child Protective Services realizes how this could really impact helping children, being able to track if they've been referred in the past and pulling all information into one spot so when they go to court, so everything is in one area," Spieker says. ◆

THIS APP IS ALLOWING PCPs AND SPECIALISTS TO CONNECT IN A WAY THEY'VE NEVER BEEN CONNECTED BEFORE. IT'S ALLOWING THIS ELECTRONIC CONVERSATION TO EASILY TRACK REFERRALS, SO THERE ARE NO MORE BLACK HOLES WITH THE FAX. —*JULIE KLAUSING*

NetApp®

IRON MOUNTAIN®

Innovative Storage Solutions for Healthcare

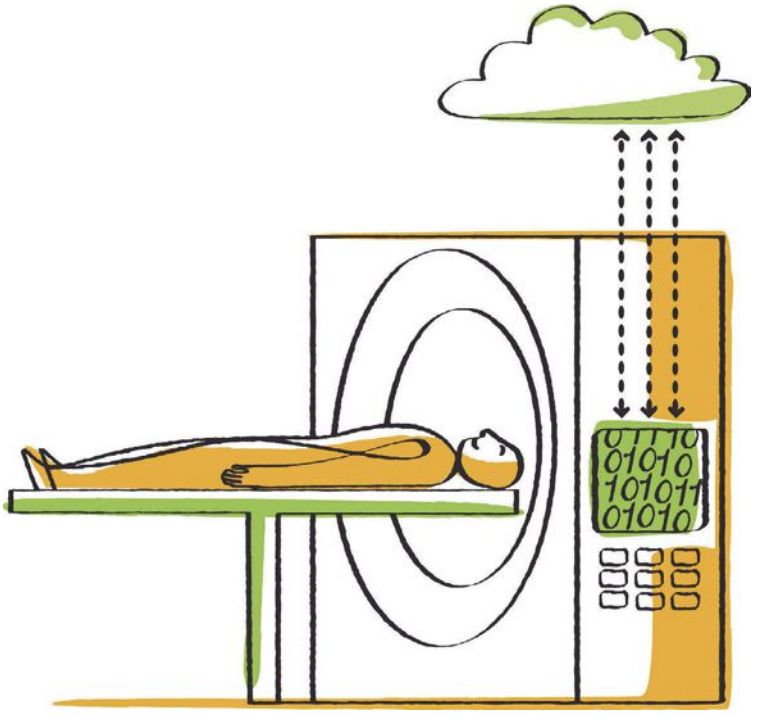
Clinical Data Storage

Higher Performance, Higher Reliability

NetApp healthcare IT and clinical data storage solutions help you improve patient care by providing simplified and centralized medical data management, sharing, and archiving.

Contact us today to learn how cloud-based solutions can help you reduce the cost and complexity of managing medical images with Iron Mountain's archiving and disaster recovery services built on NetApp StorageGRID™.

Discover NetApp's passion for helping health organizations around the world go further, faster at www.netapp.com/healthcare



Visit us at HIMSS12, Booth #4062 and register to win an iPad 2

★ ★ ★ INNOVATOR AWARDS ★ ★ ★

THIRD PLACE TIE ORGANIZATION:
BLESSING HOSPITAL

Decision Support

AN ADVANCED CLINICAL DECISION SUPPORT SYSTEM DRIVES BETTER OUTCOMES AT ONE COMMUNITY HOSPITAL BY JOHN DEGASPARI

These are exciting times in healthcare, and one of the most transformative trends is taking place in the clinical arena. Simply put, the electronic health record (EHR) has made it possible to provide precise information to clinicians on an unprecedented scale in near real-time. The result? Physicians now have a powerful decision support tool that enables them to focus with laser-like efficiency on critical patient data and act on it in a timely manner.

Blessing Hospital, a 420-bed facility in Quincy, Ill., stands out as an example of what that means in hard numbers. The community hospital, which went live with its EHR (supplied by the Chicago-based Allscripts Healthcare Solutions Inc.), in 2005, has developed an advanced clinical decision support tool (aCDS), and documented some stunning results over a two-year period, among them: a 45.5-percent drop in its mortality rate; an 8.9-percent decrease in length of stay, resulting in a savings of $744,000; and a drop in variable cost per case of 4.2 percent, resulting in an additional savings of $524,000.

Maureen Kahn, R.N.

Those outcomes were surprising to CEO Maureen Kahn, R.N., her IT informatics leaders and IT team, to which she gives full credit for achieving those impressive results. "For the first time, we had data about ourselves that we could consistently take a look at," she says, noting that the improvements are evidence of success for the project teams in changing practices to achieve better care outcomes.

A STRATEGIC FOCUS

Kahn says the aCDS project grew out of the hospital's IT strategic plan. "As we brought in the electronic health record and started to capture data, it was very obvious to all of us that the data was now available at our fingertips, to be able to use it and share the information with our providers, so that we could begin to make sustainable improvements in the quality of care that we deliver in our organization," she says. Having that capability, the hospital began comparing its own internal data, and, later on, benchmarking against outside databases.

In looking at its own practices, Blessing identified the variability in the approaches and compared provider-to-provider. It also identified evidence that could be used to apply a consistent approach to the care of its patients, to minimize variability of care and try to discover how to improve patient care within the organization. Where it made sense in delivering positive outcomes, the hospital shared best practices with other providers in the organization, she says. "We were looking at our own data and saying, what can we do to drive compliance with evidence-based guidelines."

Kahn describes the aCDS project as part of a journey of discovery: "We are not 100-percent there; we are taking one project at a time," she says. The process involves "bringing all stakeholders to the table to understand what the data is." One thing it is not is a finger-pointing exercise, she emphasizes. "This is about how do we take this information and ask, 'Is there something that we can learn from one another to improve performance?'"

KEY FEATURES

The aCDS tool grew out of the hospital's computerized physician order entry (CPOE) implementation. Julie Duke, administrative director of revenue cycle, informatics and quality, explains that through CPOE, "We looked at all of the physicians' processes and at how they input orders. We were able to streamline processes for them and to provide evidence-based order sets that will allow them to move throughout their workflow with their patients."

The aCDS goes beyond traditional au-

WHO'S SUPPORTING YOU ON THE ROAD TO ACCOUNTABLE CARE?

MedeAnalytics' Accountable Care Solution—for both Medicare and commercial ACOs—provides scalable clinical integration and analytic technology, as well as the change management expertise required for successful operation of an ACO.

Visit **www.medeanalytics.com/aco** or call MedeAnalytics at **510-379-3300** to learn more.

MedeAnalytics delivers performance management solutions across the healthcare system—including hospitals, physician practices and payers—to ensure accountability and improve financial, operational and clinical outcomes.

MEDEANALYTICS®
MEASURE. MANAGE. LEAD.

tomated alert-based systems as a form of clinical decision support. The drawback of that traditional approach is that it often results in "alert fatigue," causing caregivers to ignore the alerts. Blessing Hospital's innovation has avoided alert fatigue with a form of clinical intelligence that searches all documentation and detects what may be too complex for clinicians to discern. Using the aCDS, physicians are better able to identify their patients' needs, and address them while reducing unnecessary variations in practice.

**AS WE BROUGHT IN THE ELECTRONIC HEALTH RECORD AND STARTED TO CAPTURE DATA, IT WAS VERY OBVIOUS TO ALL OF US THAT THE DATA WAS NOW AVAILABLE AT OUR FINGERTIPS, TO BE ABLE TO USE IT AND SHARE THE INFORMATION WITH OUR PROVIDERS, SO THAT WE COULD BEGIN TO MAKE SUSTAINABLE IMPROVEMENTS IN THE QUALITY OF CARE THAT WE DELIVER IN OUR ORGANIZATION. —*MAUREEN KAHN, R.N.*

Active order sets adjust recommendations to reflect patient-specific clinical characteristics, histories, diagnoses, drugs, lab results and reports. Intelligent order sets guide physicians to make the best decisions. The intelligent order sets are updated for advances in treatment options and evidence-based medicine. In addition, adherence to best practices has been maximized across traditional care boundaries for acute episodes, chronic conditions, and health maintenance issues. These capabilities are integrated into the normal workflows.

Order sets are created to be as user-friendly as possible, Duke says. Medications, for example, are grouped in the most common types of practices, she says. Physicians are given prompts for certain medications to determine whether or not the physician wants to continue, she explains. "When a patient comes out of surgery and the physician is doing his post-ops, the system allows them to be prompted for the orders they want. By doing that, they have their documentation built and their orders sent," she says. She adds that the prompts result in more complete documentation, which allows the hospital to code more appropriately for reimbursements.

Blessing uses sophisticated alerts, called medical logic modules, which are embedded in the electronic record. "We set some rules up from the very beginning of the design of our informatics system that we felt were high patient safety issues, and that we were going to put the alert in front of the practitioners or the providers," Kahn says. Other conditions are monitored behind the scenes to minimize alert fatigue, she says. "We want to make sure that when we put an alert in front of a physician, there is meaning to it," she says. Kahn adds that other programs are running in the background, such as a pharmacy monitoring system to help monitor dosing of medications and potential side effects, based on the medications that are being ordered, with data shared with the physicians.

Kahn maintains that the human connection remains important as a resource for physicians. Clinician documentation

The redesign team for CPOE, made up of interdisciplinary staff that worked on developing the processes and testing the system before activation. Photo: Blessing Hospital

Introducing

VHRC™ Series

Variable Height Roll Cart

TILT & SWIVEL ADJUSTMENT

COMPATIBLE ACCESSORIES

INNOVATIVE STOR-LOCX™ DRAWER

VERTICAL HEIGHT ADJUSTMENT

SPACE SAVING 18" X 14" SLIM-LINE BASE

DIRECTIONAL LOCKING CONTROL

Customizable. Adjustable. Indispensable.

GCX's new feature-filled VHRC Series is designed to meet your specific needs. Its open architecture construction allows you to customize the configuration to fit any accessory and its adaptable features allow multiple users to adjust for optimal ergonomics. With its innovative components created to maximize usability by healthcare practitioners, you can do it all with one flexible solution. Call 800-228-2555 to create your custom VHRC solution.

VISIT US AT
HIMSS BOOTH #4227

gcx.com
one tool. one source.

GCX
Mounting Solutions

experts are stationed on patient floors to provide guidance to physicians. "These are nursing experts who are talking with physicians, are reading their notes, and who want to make sure that the [care] plan is well defined," she says.

GETTING STAKEHOLDER INPUT

According to Duke, all groups of stakeholders were consulted in developing the system. The IT team brought in groups of physicians, pharmacists and nurses, each of which presented its perspective, she says, noting that Debra Phillips, M.D., the hospital's CMIO, was heavily involved in the rollout. "We made sure we had all of the stakeholders involved, and looked at ways to gain wins," she says.

That stakeholder involvement has been important, Kahn says, adding that the hospital has not been perfect in designing some of its processes. "It has been the feedback of clinicians and providers that have made us go back and revise a process, revise the software, and get it to the best way it works for the people in this organization," she says.

Core users are clinicians and other care providers, but the system also has benefits in the business sense as well, Khan says. "As we start to look at Medicare's bundled payments, we will need this data to understand our business," she says.

Kahn maintains that its physicians have embraced the system enthusiastically. She notes that Blessing never used the word "mandatory" when it rolled out its CPOE, yet 90 percent of orders were electronically entered within three months. The hospital's informatics team trained the physicians at their convenience, "morning, noon, or night—whatever worked for them," Kahn says. After the system went live, "super-users" were assigned to physicians to coach them as they did their rounding and put their orders in.

The decision support activity and function are truly driven from the clinical documentation system, Kahn says. "We identify in the documentation system the key elements that we know we are going to want to abstract, or we know we are going to want to search on patients. And we designed our system to make sure that we will be able to pull data and be able to abstract. As we developed this sophisticated documentation system, decision support becomes a byproduct of all of our work of putting this information in the system."

The metrics have been impressive. Examples of additional gains include: a 29-percent cost-per-case decrease in septicemia, saving $64,600 annually; a 7-percent decrease in cost-per-case digestive disorders, saving $10,400 annually; and a 13-percent decrease in cost-per-case pneumonia, saving $19,200 annually.

Blessing Hospital has recently been recognized by the Illinois Hospital Association for its improvement in preventing deep vein thrombosis (DVT), which dropped 37 percent over the course of one year. "It was the physicians and nurses working together on a new process; and they used the computer system to leverage it, to improve the screening of patients who are potentially at risk, and developing those rules and alerts to make sure that we are providing the patients with evidence-based interventions to decrease their potential risk of developing DVT," Kahn says.

For other hospitals interested in implementing an aCDS system, Kahn offers this advice: work toward getting relevant information that can drive change. It's a good idea, she says, to work with a well-defined, step-by-step process and "not try to cure everything in one fell swoop." ◆

The IS and informatics team that led the implementation. Photo: Blessing Hospital

Private Wealth Management Medical Specialty Group. For you, a clear diagnosis and attention to detail are a must. With SunTrust's Medical Specialty Group, that's just what you'll get. Dedicated client advisors who understand your challenges and the unique needs of your practice — from lending options to cash-flow management. You could say their specialty is making your job easier. How can we help you? **Call 877.782.3847 or visit suntrust.com/medicine.**

SUNTRUST
Live Solid. Bank Solid.

★ ★ ★ INNOVATOR AWARDS ★ ★ ★

THIRD PLACE TIE ORGANIZATION:
MARSHFIELD CLINIC

Population Health Management in Real Time

MARSHFIELD CLINIC HAS CREATED A DASHBOARD APPLICATION THAT ALLOWS PHYSICIANS TO VIEW REAL-TIME, USABLE DATA ACROSS THEIR ENTIRE PATIENT POPULATION BY GABRIEL PERNA

The benefits of the population health management dashboard application created by Marshfield Clinic, a 779-physician multi-specialty group based out of Marshfield, Wis., are obvious to Theodore A. Praxel, M.D., medical director of Marshfield's Institute for Quality, Innovation, Patient and Safety (IQIPS). Dr. Praxel, whose team at the IQIPS had a major hand in creating the application, says it shows physicians the entirety of their patient populations, as well as allows them to view and use real-time specific data across all levels of care.

"Progressively, we've been building the ability to mine data and provide that data in the form of usable, actionable information to providers, not just at the point of care but in between care and in between visits, and [the dashboard] allows us to work on taking care of populations," Praxel says. "At the touch of a button, I can see my entire patient panel, which is different than seeing my entire registry. It's not just limited to a disease…this shows me all the patients who are attributed to me who are in my population."

PROGRESSIVELY, WE'VE BEEN BUILDING THE ABILITY TO MINE DATA AND PROVIDE THAT DATA IN THE FORM OF USABLE, ACTIONABLE INFORMATION TO PROVIDERS, NOT JUST AT THE POINT OF CARE BUT IN BETWEEN CARE AND IN BETWEEN VISITS, AND [THE DASHBOARD] ALLOWS US TO WORK ON TAKING CARE OF POPULATIONS. —*THEODORE A. PRAXEL, M.D.*

Marshfield Chief Information Officer Ken Letkeman says the population health application can produce a wide assortment of metrics across a broad system in a timely manner. Not only does this kind of information make it easier for clinicians to make short-term changes, but according to Kate Konitzer, the solutions director responsible for clinical informatics at Marshfield, it can improve the healthcare quality and cost curve in the long-term by keeping more patients out of hospitals.

EVOLUTIONARY APPLICATION

Konitzer says the application has been seven years in the making, evolving from data on spreadsheets to a fully automated dashboard with automated feedback.

...a ***single*** user interface that captures the patient's entire oncology chart

With MOSAIQ®, it's reality.

Centralization of radiation oncology, particle therapy and medical oncology patient data into a readily accessible EMR is essential for timely and informed clinical decision making. Now, with the unique comprehensive chart that MOSAIQ provides, you can quickly find what you need when you need it – all in a single system.

LADMSQ110628 v1.0

Experience the Elekta Difference
More at elekta.com/imagine

ELEKTA

What began as an initial desire to make evidence-based management of patient populations a priority, developed into a full-on collaborative effort between Marshfield's information systems (IS) team and its data analytics and data warehouses groups, with Praxel and the staff from IQIPS providing a clinician perspective to the initiative.

The glue that held it all together was Konitzer, according to Letkeman. She worked closely with both the physician and technical sides of the operation. "She works with clinical sponsors and is responsible for ensuring the delivery and solutions to their group," he says. "She has developed a great deal of domain expertise in population health management, but remains an IS resource."

Theodore A. Praxel, M.D.

Ken Letkeman

Kate Konitzer

INSIDE THE APPLICATION

Real-time data would be thorough as is, but the application also comes with physicians and certified nurse specialists from the IQIPS who work hand-in-hand with each department to better understand the results. The application itself works within the same data set as Marshfield's electronic health record (EHR), Cattails M.D., an internally developed solution. It allows data that is collected at the point of care by physicians on their tablet devices to be sent to an enterprise data warehouse, where it's stored and later sent back to the EHR for real-time analytic usage.

On the dashboard application, Konitzer notes there are four population views: summary of current information, trending information from back to 2004, a comparative view among peers, and monthly control charts that measure impact of a specific initiative. There's also a part of the application that allows patients to chart their own progress.

The idea that physicians might not be willing to compare against each other was never an issue, says Letkeman. In fact, the comparison against other physicians had the opposite effect during the initial physician demonstration project. "In some practices that might cause issue," he says. "In ours, they were told, 'It will be blind for a period of time then it will be unblinded.' One of the revelations that we saw was that this was very effective in getting the tool more widely used."

CHALLENGES IN DEVELOPMENT

Naturally, developing the application came with a number of challenges. Letkeman says creating the data set and figuring out the right metrics and benchmarks was a difficult task. Once those were determined, Konitzer says it wasn't easy finding the technical tools within the application that could add efficiency while effectively looking at complex healthcare data.

Even before the application was ever created, Letkeman says there was difficulty in getting people on board with the population health management direction that Marshfield was taking. "That largely fell on Dr. Praxel, his predecessors and the physician leadership, who at the time made the bold decision to say, 'This evidence-based medicine, this seems to be the way to go.' They took to chronic-care disease management, I'd argue, before it became fashionable," he says.

The team says that through a thorough collaborative effort, the application was not only developed, but has already become an early success, with 65 percent of Marshfield's physicians and managers having already adopted it. Not only that, but because of the application, the Center for Medicare & Medicaid Services (CMS) has awarded Marshfield approximately $56 million for their shared savings of $118 million in its Physician Group Practice (PGP) Demonstration program.

"I don't think the collaborative nature of this can be underestimated," Praxel says. "There are times that Kate and I will be talking about something, and she'll know where I want to go and say, 'What if we do it a little differently?' She'll help me get the answer and display what I want in a way I wouldn't have thought about because they understand the data better, but they also understand what we need to do to do the clinical job."

NEXT ON THE HORIZON

The work is far from done for those involved with Marshfield's population health management dashboard application. Konitzer says one of the goals is to integrate the application into more point-of-care processes to create even more real-time feedback.

"Right now it's pretty timely," Konitzer says. "But we want to use the same data to facilitate the scheduling process more—to make sure patients are coming in and for instance, if they are diabetic, getting their A1C, LDL and microalbumins scheduled. That's marrying population health with real clinical care, CPOE [computerized physician order entry], care plans and order sets."

Praxel says the rise of accountable care organizations and working with managed populations will only create a "moving target." Constant refinements, he says, will be necessary since there are always reasons to not treat a patient in the usual manner. "I think we're just starting to scratch the surface of understanding how to turn data into actionable information and not just to make a piece of paper happy, but to benefit patients," Praxel says. ◆

The New B3000 Communication Badge

Communicate without barriers – Care without distractions

- Durable Design
- Acoustic Noise Reduction
- Light Weight & Wearable

Vocera® Voice Communication enables caregivers to directly connect to each other and their patients from anywhere, in real time and at critical hospital speed. The new B3000 provides voice-controlled, immediate, hands-free communication at the point-of-care – allowing caregivers to focus on their priority: their patients.

The Vocera Communication Platform

vocera

Voice has never been so vital.
Learn more at **vocera.com/badge**

Where workforce management and quality care intersect: A Q&A with Brian Graves, a Global Practice Leader in Healthcare at Kronos.

From your perspective, what are some of the biggest workforce management issues that you see in the healthcare industry?

Brian Graves: Healthcare reform is driving changes to reimbursement. Medicare and Medicaid reimbursement is changing and being directly linked to the delivery of quality of care. That connection between quality and reimbursement has become critical to the health of provider organizations. And there is a lot of pressure on them to perform well and deliver the highest quality care possible.

The right workforce management foundation can help with that. And with the right tools, you can ensure you are delivering the right high-quality staff to deliver that high-quality care.

What would you say are the biggest misconceptions that healthcare companies have concerning workforce management?

Graves: Before healthcare reform was instituted last year, you had the American Reinvestment and Recovery Act (ARRA) that was putting $19.2 billion of incentives out there for the adoption of electronic health records (EHRs). We know that organizations are incentivized right now to concentrate on EHRs because there will be penalties if they're not at a certain adoption level quite soon.

What workforce management can do is help drive that effort. It's not a distractor, a loss of focus, but a driver. Healthcare organizations can ensure the success of their EHR plans because they will know that they have the right staff in place that is driving both the project and patient satisfaction. So what we see is that workforce management is just one of those underleveraged ways in which healthcare organizations can ultimately help deliver high quality care, ensure happy patients and drive revenue.

> "... Workforce management is one of those underleveraged ways in which healthcare organizations can ultimately help deliver high quality care..."
>
> —Brian Graves

Let's talk about risk management. You argue that the right workforce management practices and tools can help mitigate risks. How so?

Graves: There are plenty of studies that show a correlation between outcomes and staffing. We're actually investing dollars in future research to even better understand the connection between them. But if you read the current literature, you'll see a strong connection between high occurrence of overtime or agency use with a higher incidence of mortalities, injuries, falls, things like needle sticks and other errors. It's clear that fatigue and safety go hand in hand. So some of what Kronos can do is help give you the right visibility into things like overtime so managers are proactively aware when key staff is approaching it. That not only helps manage the budget more effectively but also increases safety.

From a risk standpoint, this is something we think our customers need to be looking out for. And tools like ours offer visibility to information like high use of agency, high use of overtime and other indicators of potential safety issues.

Many healthcare managers and administrators have a lot on their plate—especially with EHR adoption. How do you let them know that workforce management isn't just another box on the to-do list but something that will make their jobs ultimately easier?

Graves: From a management perspective, it's really all about giving visibility to the right information. What we can do is help managers strike the right balance. Some of our customers are using our solution to ensure that they have the right balance of novice nurses—placing those novice nurses on floors where they are balanced with

Brian Graves

Kronos may be known for their punchy timeclocks—but the company today is offering much, much more to hospitals, health systems, and long-term care organizations across the globe. Brian Graves, a Global Practice Leader in Healthcare at Kronos, discusses why there is more to healthcare information management than just electronic health records and clinical decision support. He explains how the right workforce management can help mitigate risk, reduce employee turnover and, ultimately, improve quality of patient care.

tenured or expert nurses, so that those novice nurses can get more experienced without losing quality of patient care. That, again, is something that helps mitigate risk. We have customers who are using our capability to make sure they are creating schedules with the right balance of experience—they have the right visibility for staffing and scheduling.

Others use our capability to manage productivity so they can see exactly what's going on within any given pay period. For example, a manager can look and see when they are getting close to budget. Maybe they've incurred some overtime or some shift differentials. Maybe they've used too much agency. But this visibility lets them know where they may be going over budget in terms of hours per patient day or dollars and let them make some different decisions to better manage all aspects of staff—and, in turn, better manage their financials simultaneously with quality of care for patients.

> "It's really all about giving visibility to the right information."
>
> —Brian Graves

KRONOS®

One of the things Kronos offers is help in finding "best fit" employees. What's involved with that?

Graves: Kronos has spent a number of years developing a scientific method to finding best-fit employees. What it entails is finding employees that are aligned to the employer's goals for any given job. As you can imagine, we're not always consciously aware of what exactly our preferences are. So Kronos offers a scientific approach where we work with customers to provide them assessments. They can then use those assessments to find employees who are best aligned to the organization's goals and objectives.

Here's an example of how it works—we have a set of functionality in our workforce acquisition product that allows a prospective employee to try out the job in a sense. It's an online virtual tutorial where they can walk through the role and find out what it's all about. We've found that it helps potential employees get a better sense of what the job is and help employers see if a candidate is well-suited for the position. When you think about the costs involved with on-boarding employees, this is a big help. Because there is a significant cost to hiring someone and then finding out two months later that it wasn't a fit. This works particularly well with long-term care where you can see employee turnover as high as 60, 70 or even 80 percent.

Where do you see Kronos going in the next five to ten years?

Graves: First and foremost, Kronos will continue to grow—throughout the nation and throughout the world. Our newest release, a color touchscreen terminal that replaces our previous timeclock is really a departure from what anyone else is doing in this space. It not only allows a company to collect time information but also to support other applications. For example, say you are a nurse working the late shift. You can use the terminal to order a meal and then have it debited directly from the next pay period's check. Beyond that, our new user interfaces have leveraged concepts from consumer technology so they are very robust but also attractive and easy to use.

And, finally, we've created a strong platform for mobile. We can offer mobile scheduling, which allows for information to be sent via text to staff members' phones. Staff can be notified immediately when a new shift is open that they might be eligible to work so there is quick turnaround filling those shifts. And there are also mobile manager functions so that managers can review timecards and approve them quickly and easily on a device like an iPad.

Simply stated, Kronos will continue to look at what technology is coming and leverage it so we can provide the most advanced workforce management suite to our customers, both here and abroad.

This is how we help strengthen and grow your physician network.

Your Growing Network of Providers

Benefits to Your Health System

- Strengthened physician network
- Greater visibility into and control over order patterns
- Better care coordination with community physicians
- Improved patient experience and loyalty

athenaCoordinator℠, athenahealth's new cloud-based care coordination service, makes your health system easier to do business with. Your providers can send orders with greater efficiency and less work than ever. You receive clean orders, reducing denials and bad debt. And your network grows larger and better connected every day.

1

athenahealth Liaisons provide outreach to your community equipping providers with a free web portal, training, and support.

2

Provider enters orders into a free, web-based portal that includes demographics, insurance info, and order details.

3

Rules Engine checks real-time eligibility ensuring appropriate coverage is in place.

4

athenahealth staff takes on your administrative burden conducting benefits analysis, handling patient registration, scheduling, and collection of patient payments.

5

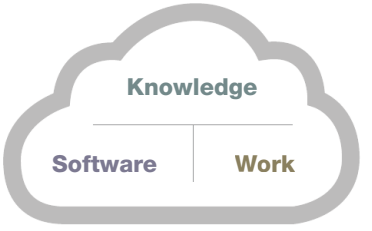
Patient arrives at your facility ready for care dramatically improving patient satisfaction.

6

Discharge summary/ results are delivered to the provider

7

Provider electronically receives detailed summary/results effectively closing the loop on patient care.



Benefits to Affiliated Providers

- Free pre-authorizations, reducing staff work
- Reduced time managing outbound orders
- Greater visibility of patient status & results
- Closed-loop reporting

To find out how to grow your physician network with athenahealth, visit athenahealth.com/HI. Or call 866.928.2843.

HIMSS Annual Conference Booth #831 & #1029

athenahealth
there is a better way

Innovator Awards 2012

The Semi-Finalist Teams

ELEVEN OTHER INNOVATOR TEAMS OF DISTINCTION BY MARK HAGLAND

The 2012 *Healthcare Informatics* Innovator Awards Program received well over 60 submissions from healthcare organizations across the U.S., including hospitals, medical groups, integrated health systems, health information exchanges, and public health departments. All were honorable and of interest, and many were exceptional. The *HCI* editorial team reviewed all the submissions, chose 15 semi-finalist submissions, and forwarded those to our distinguished panel of judges, who themselves were the leads or co-leads of past winning teams (see sidebar below for more information on this year's judges).

Because of the exceptionally high quality of all 15 semi-finalist submissions, the *HCI* editorial team plans to profile each of the semi-finalist teams during issues throughout the remainder of the year. Below are brief capsule descriptions of the 11 semi-finalist submissions, presented in alphabetical order by organization name. Please continue to turn to *HCI*'s monthly issues for longer articles on these admirable teams and their innovations. Congratulations to all the semi-finalists!

Allina Hospitals and Clinics (Minneapolis)

Leader: Susan Heichert, CIO

Project: Patient Census Dashboard

In 2011, leaders at Allina Hospitals and Clinics set out to build an application to help ensure that patients' unique needs are matched with appropriate resources in order to help keep them healthy and out of the hospital. An interdisciplinary team from 10 hospitals worked to understand the barriers to coordinating care for patients with complex needs, with one of the outcomes being the Patient Census Dashboard, a business intelligence application developed internally to assess patients' risk levels.

Eisenhower Medical Center (Rancho Mirage, Calif.)

Leaders: David Perez, CIO; Steven Arendt, M.D., CMIO

Project: Leading Change, Advancing Health: A Model to Transform Practice

Looking for a way to prevent ventilator-associated pneumonia and to better manage stroke care, leaders at this community hospital in Southern California deployed a clinical IT solution that uses embedded logic to analyze charting and orders and display adherence to the best practice standards of care.

Hospital for Special Surgery (New York City)

Leader: John Cox, CIO

Project: Reduction of Unnecessary Transfusions

Seeking to improve patient safety by reducing the risks of potentially unnecessary transfusions, as well as to conserve the precious resource of transfusion-dedicated blood, leaders at this specialized Manhattan hospital have been using a combination of strategies, including best-practice and evidence-based medicine tools, education of orders, electronically delivered risk assessments, alerts, and order sets, with significant success.

Phoenix Indian Medical Center (Ariz.)

Leaders: John Meeth, M.D., CIO; Anthony Dunnigan, Director of Medical Informatics

Project: EHR Implementation

Phoenix Indian Medical Center's EHR implementation represents the largest EHR implementation in the Indian Health Service to date.

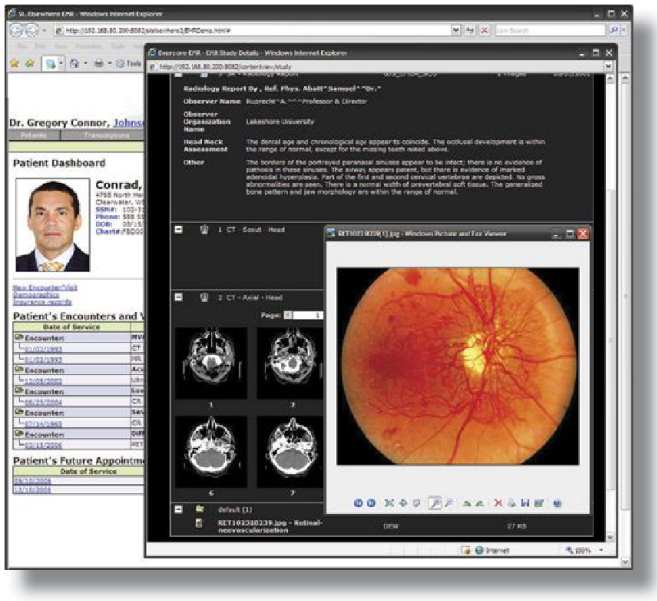
Maximize
Your EMR Investment
& Help Attain Level 7 Certification

All images
All multimedia content
All departments
Your viewer of choice

Simplify your Workflow by Image-Enabling your EMR

TeraMedica provides cost-effective ways to get the most out of your EMR investment:

- Access all data and images within one patient record
- Access all native data formats (DICOM, MPEG, JPEG, PDF and more) from all departments
- Connect your EMR to the image viewer of your physicians' choice through one-click access



Visit Us at HIMSS12 in Booth 4202

TeraMedica®

Las Vegas, NV • February 21-23rd, 2012
www.teramedica.com/himss12 • 866.290.8880

Texas Health Resources (Arlington)

Leader: Mary Beth Mitchell, Chief Nursing Information Officer
Project: Nurse Champion EHR Optimization

Following a 13-hospital EHR implementation, Texas Health Resources' CNIO determined that there was an opportunity to improve nursing workflows and nursing documentation. Accordingly, a team of "nurse champions" has reorganized the patient admission history, optimized several key nurse workflows, and improved support to nurse end-users of the organization's EHR.

Visiting Physicians Association, U.S. Medical Management (Troy, Mich.)

Leader: Michael Reed, CIO
Project: Applying Technology to Mobile Medicine

The Visiting Physicians Association, an affiliate of U.S. Medical Management, brings high-quality patient care directly to the homebound elderly nationwide, using 170 doctors in 30 locations to serve about 50,000 patients a year. By rolling out an advanced mobile EHR solution, the organization has enhanced the information available to physicians at the point of care, and improved ordering capabilities.

University Hospitals Cleveland (Ohio)

Leaders: Beverly Rosipko and Danielle Sines, PACS management
Project: PACS Integration

Leaders at University Hospitals, Cleveland, have been working assiduously to create system-wide connectivity in imaging informatics in order to provide their end-user physicians with a seamless, integrated experience with their PACS and RIS systems. They have developed access based on an EMR-based launch into PACS.

University of Missouri Health Systems (Columbia, Mo.)

Leader: Michael Heller, Software Architect
Project: Well Baby Nursery Automation/Paperless Rounding

Using the latest agile methodologies with an embedded team of software designers and engineers, developers at the University of Missouri Health Systems have created a dynamic, web-based dashboard called the WBN Multi-Patient List MPage, which is being used very successfully by clinicians doing rounding in the flagship hospital's well baby nursery.

University of Pittsburgh Medical Center

Leader: G. Daniel Martich, M.D., CMIO
Project: Online e-visits

The UPMC health system has made it possible for patients to participate in an innovative e-visits program, one in which they complete carefully designed questionnaires that provide medically relevant data to physicians through a secure online portal, allowing those patients to ask questions of their doctors in more than 20 different topic areas. Importantly, the UPMC staffers who designed the program incorporated a reimbursement model into the program using CPT code 99444 to allow for physician reimbursement through insurance.

University of Pittsburgh Medical Center

Leader: Dan Drawbaugh, CIO
Project: Digital Pathology Consultation Portal

UPMC has internally developed a set of web-based tools to support digital pathology consultations and allow the digital viewing of whole slide images. The web-based program overcomes the challenges associated with the size of digital pathology studies and the lack of imaging standards.

University of Pittsburgh Medical Center

Leader: Dan Drawbaugh, CIO
Project: Payer-Provider Clinical Information Integration

The UPMC health system, which has an affiliated health plan, has created an industry-first patient-centered clinical record that integrates both payer and provider data. The solution, implemented in the autumn of 2011, is being used to foster greater levels of insight into the patient's complete longitudinal record. The combined record overcomes limits embedded in federal regulations that prohibit the co-storage of data from both provider and payer databases, through the use of an interoperability solution. ◆

Our Judges

Six individuals participated in the judging of the entries submitted to the 2012 *Healthcare Informatics* Innovator Awards Program. Each was the team lead or co-lead of one of the top three winning teams in the 2010 or 2011 program. They are:

Jim Levin, M.D., Ph.D., CMIO, Children's Hospital of Pittsburgh

Praveen Chopra, Vice President and CIO, Children's Healthcare of Atlanta

Ray Hess, Vice President of Information Technology, Chester County Hospital

George Reynolds, M.D., CIO and CMIO, Children's Hospital and Medical Center (Omaha)

James L. Holly, M.D., CEO, Southeast Texas Medical Associates

Devore Culver, Executive Director, HealthInfoNet

We are deeply grateful for their participation in judging this year's submissions.

As a *Healthcare Informatics* reader, you're invited to our 5th Annual *Healthcare Informatics* IT Innovators Awards Reception at HIMSS

Please Join Us At

yellowtail
JAPANESE RESTAURANT & LOUNGE
CHEF AKIRA BACK

Tuesday, February 21 | 6:00-10:00 PM

Mingle with key industry C-suite executives and enjoy the open bar and hors d'oeuvres from award-winning chef Akira Back...



All while enjoying the Bellagio Fountain show!
RSVP at www.healthcare-informatics.com/rsvp


SPONSORED BY:

hp intel KRONOS fdb™ First Databank

Other sponsorships are still available, contact
Nicole Casement at ncasement@vendomegrp.com or 212-812-8416
Michael Moran at mmoran@vendomegrp.com or 212-812-8420

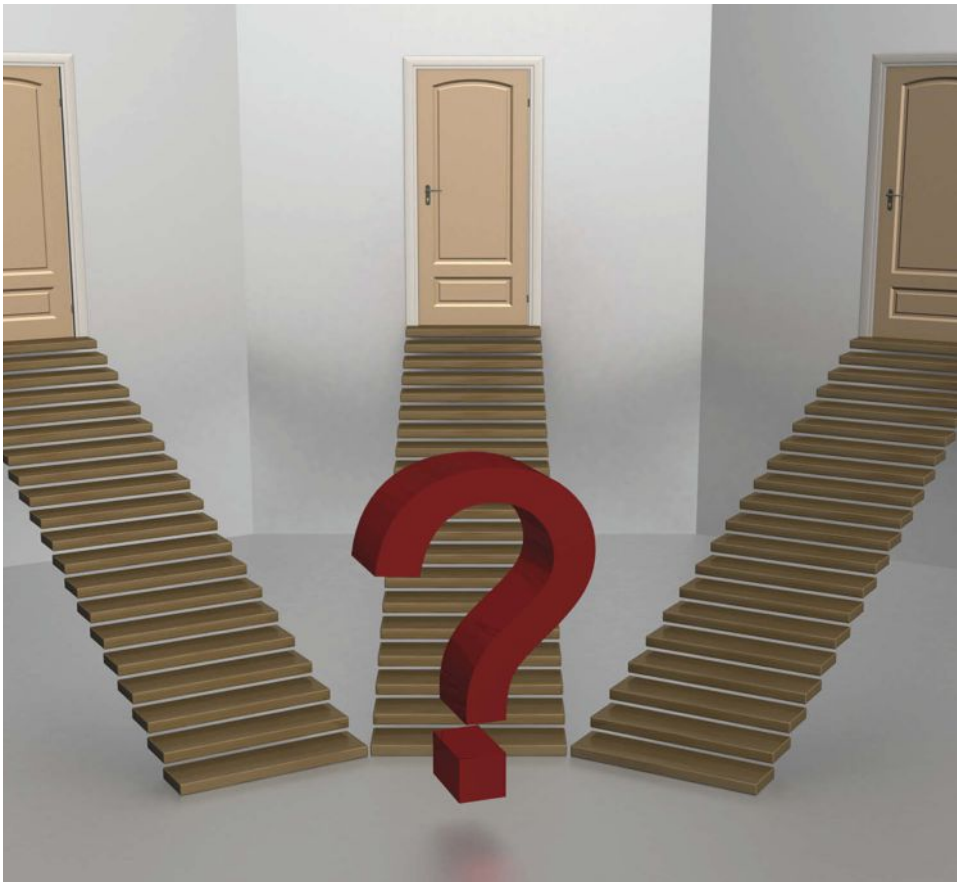
FEATURE

The Rise of the Senior Nurse Informaticist

WITH MEANINGFUL USE AND ACCOUNTABLE CARE TRANSFORMATIONS UNDERWAY, EXECUTIVE NURSING INFORMATICISTS ARE BECOMING MORE INSTRUMENTAL THAN EVER BY JENNIFER PRESTIGIACOMO

EXECUTIVE SUMMARY:

The senior clinical informatics role in patient care organizations for those with a nursing background—variously given the title "CNIO," "vice president of clinical informatics," and other labels—is increasingly becoming a nexus position in hospital-based organizations nationwide. Yet this position is only beginning to be standardized in terms of title, pay, responsibilities, and reporting relationships.



The necessity for nursing informatics leadership has never been more clear and present, driven by a variety of healthcare reform-related initiatives, some of them mandatory and some voluntary. Those factors are combining to force patient care organizations forward as never before to better coordinate care across the continuum, improve patient safety, and better document care delivery. Nurse informaticists, healthcare leaders are coming more and more to see, are instrumental in helping their organizations to meet a variety of meaningful use requirements. Indeed, more than ever, organizational leaders are seeing nurse informaticists as one key element in success across a variety of meaningful use-related areas, including the implementation of necessary IT infrastructure, the integration of IT systems across the healthcare continuum, and the optimization of these systems for point-of-care data collection and clinical decision support.

Yet even as healthcare organizational leaders nationwide are beginning to realize that informatics leadership is truly needed for nurses, who represent

the largest group of clinical IT users (at 3.1 million nurses nationwide), there remains a lack of any sort of consistency of title, reporting structure, and responsibilities of this senior nursing informatics role, which is still shaking out and heavily dependent on the organization.

SO MUCH OF WHAT NURSES DO IMPACTS OUTCOMES AND SAFETY. I THINK THE ROLE HAS EVOLVED AS A RESULT OF THE DEMAND FOR THIS NURSING LEADERSHIP THAT HAS INFORMATICS AND CLINICAL KNOWLEDGE.
—MIRIAM HALIMI, R.N.

THE TIME IS NOW

Industry experts and clinical informaticist leaders say that the time for nurses to get a seat at the informatics table is now, as nursing informaticists are becoming more integral to the healthcare IT puzzle than ever before with the amount of point of care documentation and care coordination mandated by the American Recovery and Reinvestment Act/Health Information Technology for Economic and Clinical Health (ARRA-HITECH) Act. Miriam Halimi, R.N., D.N.P., director of clinical informatics, at Holy Cross Hospital, an academic medical center in the Washington, D.C. suburb of Silver Spring, Md., says the chief nursing informatics officer (CNIO) needs to be prepared and have the experience to lead the care transformation by redesigning a culture and workflows, as well as understanding the impact this has on all the disciplines. "So much of what nurses do impacts outcomes and safety," she says. "So I think the role has evolved as a result of the demand for this nursing leadership that has informatics and clinical knowledge."

With emphasis on care coordination in healthcare, many see the CNIO role key not only in coordinating IT efforts in nursing, but also in ancillary services as well. With more and more healthcare organizations adopting electronic health records (EHRs), the reality that nurses touch more than one depart-

ment is even keener. Halimi points out that through computerized physician order entry (CPOE), nurses engage with pharmacy and laboratory. "This is a new role, the chief clinical informatics role," she says. "I think it would be a tremendous role if that person is a nurse. But I think the focus is greater than just nursing, it's about the collaborative impact of all the areas using technology correctly."

Linda Hodges

Kara Marx, R.N.

The Healthcare Information and Management Systems Society (HIMSS) position statement, "Transforming Nursing Practice through Technology & Informatics," which was approved by the HIMSS board on June 17, 2011, advocates that nurse leader roles, such as the nursing informatics executive, the CNIO, the chief clinical information officer, and the vice president of nursing informatics, be true partners with the chief nursing office (CNO) and other executive leaders to transform healthcare through technology "that is interoperable, patient-centric, user-friendly and focused on quality outcomes." Due to a breadth and depth of nursing engagement in all aspects of healthcare, the report advocated these roles to "champion the redesign of clinical workflow and processes essential for the adoption of new technology" and help disperse information and informatics literacy throughout all nursing staff.

In 2008, The Robert Wood Johnson Foundation (RWJF) and the Institute of Medicine (IOM) launched a two-year initiative to assess the nursing profession. In October 2010, those organizations issued a report recommending that nurses' roles, responsibilities, and education should change significantly to meet the increased demand for care that will be created by healthcare reform and that nurses should be seen as full partners with physicians and other healthcare professionals, to redesign this transformation.

The report advocated residency training for nurses and laid out a goal to increase the percentage of nurses who attain a bachelor's degree to 80 percent by 2020, and to double the number of nurses who pursue doctorates. The IOM also sought to remove regulatory and institutional obstacles—including limits on nurses' scope of practice—so that healthcare organizations could take advantage of the full benefit of nurses' training, skills, and knowledge in patient care.

Nursing informatics is gaining prominence on a national scale, especially with the recent elevation of Judy Murphy, R.N., to the No. 2 spot at the Office of the National Coordinator for Health IT (ONC). As Deputy National Coordinator for Programs and Policy, she oversees the ONC offices of standards and interoperability, provider adoption support, state and community programs, and policy and planning.

COMPENSATION ON THE RISE

According to the 2011 HIMSS Nursing Informatics Workforce Survey, the average nurse informaticist salary increased 17 percent from 2007 and 42 percent from 2004. HIMSS reported that this particular metric spoke volumes to the importance and value of nurse informaticists in the healthcare industry today.

Linda Hodges, senior vice president and leader of the executive search practice at the Oak Brook, Ill.-based Witt Kieffer, also sees a dramatic uptick in salaries across the board for CNIOs, chief medical information officers (CMIOs), and CIOs with clinical systems experience. "Some of that is being driven by meaningful use and organizations' desire for and interest in hiring these people," she says, "and there's also competition from the consulting firms and vendors for people with these skill sets." Hodges adds that most of the vice president-level nursing informatics positions her firm has placed recently at large health system or academic medical centers have been paying in the $200,000 to 250,000 range (plus bonus).

Murphy is seeing salary ranges that are all over the map, some right on target, but some "dismally low." "I'm not sure the industry has completely figured this out, but I do see that a fair number [of organizations] generally recognize that this is an executive position that warrants a $200,000-plus salary level," she adds.

Janine Gesek, R.N., director, clinical informatics, Virtua Health, a four-hospital system headquartered in Marlton, N.J., says a shortage of skilled professionals is driving the salary increase since there is such a demand for clinical skills. Kara Marx, R.N., CIO at Methodist Hospital, a 460-bed hospital in San Gabriel Valley, Calif., agrees that there is a shortage of qualified nursing informaticists, which is reflected in compensation packages. "If you were to ask me in my department, who was the last role to have a salary adjustment—just for

market increase—it is informaticists," she says.

INCONSISTENT TITLE, REPORTING STRUCTURE

As the chief nursing informatics position evolves, a range of titles and reporting structures is emerging that is largely shaped by the individual healthcare organization. As reflected in the industry, the nursing executives interviewed for this article had a variety of titles from director of clinical informatics to vice president of information services to chief of clinical informatics. (Interestingly, no one interviewed for this article actually had the CNIO title.) Many report seeing this position more at large academic medical centers, rather than at smaller rural hospitals. Karen Carroll, R.N., Ph.D., manager of clinical informatics at Children's Memorial Hospital in Chicago, says the title is dependent on the needs and culture of the particular organization. "A nurse in a nursing informatics leadership position is most successful when they participate in the policy, direction, and funding of informatics projects within an organization, and that the position should be on par with the chief medical information officer," she says.

I'M NOT SURE THE INDUSTRY HAS COMPLETELY FIGURED THIS OUT, BUT I DO SEE THAT A FAIR NUMBER [OF ORGANIZATIONS] GENERALLY RECOGNIZE THAT THIS IS AN EXECUTIVE POSITION THAT WARRANTS A $200,000-PLUS SALARY LEVEL.
—JUDY MURPHY, R.N.

Hodges says that she has been seeing mostly director and vice president-level titles and adds that some nursing informatics executives have commented in a Witt/Keifer survey that organizations have been balking at adding the new CNIO title because they say they already have too many C-level titles. "It's a title that when we're doing our searches, most of the people that we talk with who are qualified really want that [CNIO] title," Hodges says. She sees a parallel to the organizational resistance that some

had to the CMIO title years back, which diminished over time as organizations began embracing the CMIO role.

Patty Sengstack, R.N., D.N.P., deputy of clinical informatics, Department of Clinical Research Informatics, National Institutes of Health (NIH), sees a variety of titles across the nation. She found herself genuinely puzzled by the HIMSS position statement. "They mentioned two titles in the HIMSS position statement, which I thought was interesting because I had never heard of this 'nursing informatics executive' before," she says. "There's nobody I know across the nation that uses that title. I thought well, 'there's a new one.'"

Gesek was at a conference recently and saw "quite a mix in terms of titles and their specific roles and responsibilities." She adds: "I think that is probably why this role hasn't really been seen that much because it really hasn't been well defined."

Another variable of this nascent role is its diversified reporting structure. According to last year's HIMSS Nursing Informatics Workforce Survey, reporting structures for nurse informaticists did not change substantially in the past three years and more than half of the nurse informaticists (52 percent) continue to report to the IT department. Other departments nurse informaticists report to nursing (32 percent) and administration (22 percent).

With regard to reporting structures, Sengstack says she hasn't seen a trend emerge yet. She admits that reporting has a lot to do with the priorities of an organization. "If the organization is in the beginning of an implementation of an electronic health record, then nursing needs to be so involved and entrenched in that work so the CNIO would be really aligned with the chief nurse [officer]." At NIH she reports to the CIO and has a dotted line to the CNO. She adds that in reality there are more dotted line reporting relationships for this position than what is written on an org chart. "If you're involved with something that impacts nurses and ancillary departments like respiratory therapy, lab, rehab therapy, social work, then you're going to have dotted lines to the administrators that manage those areas," she says.

IF YOU'RE INVOLVED WITH SOMETHING THAT IMPACTS NURSES AND ANCILLARY DEPARTMENTS LIKE RESPIRATORY THERAPY, LAB, REHAB THERAPY, SOCIAL WORK, THEN YOU'RE GOING TO HAVE DOTTED LINES TO THE ADMINISTRATORS THAT MANAGE THOSE AREAS. —*PATTY SENGSTACK, R.N.*

At press time, Murphy was still at her previous position at Aurora Healthcare, a 15-hospital system based in Milwaukee, Wis., and reported to her CNO. She feels that the chief nursing informaticist needs to be aligned within nursing, as health IT is more about adapting technology to the organization's policies, practices, and workflows, rather than the technology itself. "Aligning within the technology area might put more focus on the software than is probably ideal," she says. "So that's where in my mind alignment within nursing makes more sense because you want to lead with the practice change and follow with the technology."

Holy Cross Hospital's Halimi works within a unique reporting structure, as she and the CMIO both report into the vice president of quality, who then reports to the CEO. Halimi feels strongly that "clinical informatics departments belong in quality."

"I have the ability to interface with all interested parties; this facilitates the ability to review and influence the strategic clinical informatics direction of our organization," says Carroll.

Carroll reports to the CNO of Children's Memorial Hospital and is tied in with the information management department through various dotted lines.

What is consistent, though, among these nursing informaticists is the importance of a healthy relationship with their physician counterpart, the CMIO. Virtua Health's Gesek says the CNIO and CMIO

need to be "connected at the hip" and that close collaboration is essential between these positions because of the breadth and depth of stakeholders that depend on leadership to make sure information systems are designed well. Halimi meets weekly with her organization's CMIO and shares leadership over an integrated clinical informatics council, a collaborative team that focuses on maintaining key processes and implementing new solutions and projects. "I think it's a critical partnership for success of IT because with integrated systems you have to be able to work together because what one discipline does affects the other," Halimi adds.

GROWING POTENTIAL

Those interviewed for this article see tremendous growth in the chief nursing informatics role. As meaningful use Stages 2 and 3 are further defined, these positions will be even more coveted, says Gesek. "Once you get systems in, you then have to optimize the systems and measure how you're doing; so you need good reporting tools," she adds. "It opens up the opportunity to really show that you're leveraging the technology well, and you have the people to drive strategy to help you get to where you need to go."

Halimi agrees, saying "I think there is so much that envelops the CNO or CIO right now; they really need someone to look to for guidance for best decisions on tactical methods for systems implementations, or what systems to purchase."

The benefits of enhancing an EHR are clearly and quantifiably justified, Sengstack says, and healthcare executives are increasingly depending on data to make a variety of organizational decisions. "If you're able to articulate IT needs and benefits, that puts you at the table with the rest of the team," she says, "and that helps tremendously with making enhancements to the system that ultimately improves patient care and safety."

Others see this role as a possible launching pad other positions in the industry like the CIO, CNO, chief training officer, and chief adoption officer. "For some this might be their terminal position," Murphy says. "Others may want to use it as a launching pad for a chief nurse position or a CIO position." She says that CNIOs are also well positioned to be recruited by software vendors or consulting firms to help guide health IT innovation. Despite inconsistencies with this position, what remains constant is the industry's need for more qualified chief nursing informaticists throughout the country. ◆

Change of Face: Q&A with Greg Dorn, President and CEO of First Databank (FDB)

Tell us a little bit about your role as President and CEO of FDB.

Greg Dorn: I'm focused on taking our company and making it integral to clinical decision making. Our products help deliver drug knowledge and improve medication-related decisions now, but we're really looking for opportunities to build on an already strong platform. My role involves looking closely at where we can add even better medication decision support to doctors, nurses and pharmacists—and ultimately positively impact their patients who are being treated in hospitals, physician practices, retail pharmacies and every other segment of healthcare. My job, as I see it, is to identify pockets of innovation where we can really make a difference for busy clinicians and improve clinical care.

You came from Zynx Health, an evidence-based clinical decision support company. What does that experience bring to your new role at FDB?

Greg Dorn: It goes back to those pockets of innovation. The main questions my experience at Zynx has me asking is, "How can FDB innovate to make clinical decision support better, and what can we do to enable clinicians to use our technology more effectively?" And to that end, we're developing solutions that will optimize alerts for clinicians so the noise level goes down, utilization and reliance goes up, and they can do their work with more efficiency and with fewer interruptions. We are also proud to have released FDB OrderKnowledge that displays optimal medication orders based on unique patient situations to help optimize and accelerate the order writing process.

What is the role of drug knowledge in clinical decision support?

Greg Dorn: What's fascinating about clinical decision support is that, when done the right way, many people don't even realize they are using it. Drug knowledge is so enmeshed in how pharmacy systems work; and also in how a doctor prescribes a drug today. So, obviously, it plays an important and pervasive role. But the question that still remains is: What kind of impact does it have on clinical outcomes and patient care? The right drug knowledge can help clinicians select the right medication at the right dose for the right patient at the right time. Our goal is to provide the drug knowledge that will help drive the clinician, at critical decision-making junctures, to make the right choices. Because we know that, in the absence of this kind of decision support, errors can and do occur.

> "The right drug knowledge can help clinicians select the right medication at the right dose for the right patient at the right time."
>
> —Greg Dorn

The company website says that FDB is working towards "a world free of medication errors." How so?

Greg Dorn: We are currently the only global integrated medication decision support organization. And we take that seriously. But no matter where you are, you can see a scenario where a physician accesses an electronic medical record and has to make a decision about a medication. With the right drug knowledge—dosing, interactions, drug-disease recommendations, drug-allergy screening—all optimized for exactly that patient—it is easier for the clinician to make an optimal drug choice, to provide the right drug without error. There is no reason why we can't get medication errors to less than one in many, many millions with the right support systems in place.

There is a great deal of attention being paid to meaningful use in the development of healthcare information systems. How can drug knowledge help achieve it?

Greg Dorn: Simply put, in the absence of our drug knowledge solution, information systems cannot meet all the meaningful use criteria. With our solutions,

Greg Dorn

With advances in information technology, it's clear that the face of clinical decision support is changing. As part of this new clinical landscape, First Databank has evolved their name, their brand and their drug knowledge solutions. Greg Dorn, President and Chief Executive Officer (CEO) of the newly-minted FDB, discusses the role of drug knowledge in clinical decision support, how good systems can help physicians avoid "alert fatigue," and how FDB is changing to meet current and future drug knowledge needs.

particularly in support of clinical decision support, CPOE medication reconciliation, interoperability, and so on, it does. But I don't want to focus too much on that. Meaningful use is simply an enabler of the bigger goal—to reduce medication errors and help outcomes improve.

Many clinicians complain about "alert fatigue," or having too many alerts or pop-ups in systems that are simply not meaningful. How is FDB addressing this problem?

Greg Dorn: The literature shows the vast majority of information system medication alerts are simply overridden by clinicians. And that is because the settings for those alerts are derived from manufacturer-established interactions or side effects which can sometimes be overly inclusive. So we have a situation of over-alerting and questionable clinical value. And that can lead to clinicians developing alert insensitivity or alert fatigue—so much so that they become accustomed to just clicking through these alerts until there's that one time when a significant alert is dismissed and adverse drug event occurs that could have been prevented.

We want to change that. So we're looking at all of the pre-determined editorial choices in our programmed alert interaction levels. And our clinical experts are going through each one, looking at what we know from the literature and actual clinical events, to improve it. Also, we collaborate with our clients to provide solutions to enable them to work through different clinical scenarios and to customize alerts to their specific workflow, their local population and their practice patterns. Between those two efforts, FDB is improving the efficiency and the specificity of alerts so that clinicians pay attention to them and ultimately protect patients.

> **". . . We collaborate with our clients to provide them solutions to enable them to work through different clinical scenarios . . ."**
>
> —Greg Dorn

fdb™ First Databank

What do you see as the future of FDB?

Greg Dorn: I see FDB evolving to a point where we are able to personalize clinical decision support—where a particular medication order is optimized for the patient scenario and where alerting customization occurs at an institutional level—or even at an individual level. So if you are an individual with a particular genotype and a particular type of cancer, then we will have the medication decision support to align the medications that are personally optimized for you. I can see that happening in the next 5 to 10 years.

How is FDB changing its brand to reflect changes in the drug information management space?

Greg Dorn: First Databank has traditionally been much like the name says: a purveyor of drug data. But the healthcare environment has changed and so have we. Medication decision support has gone well beyond where it started more than 30 years ago in supporting pharmacy systems for the dispensation of medications. We still dutifully serve those critical information systems, but the automation of the healthcare clinical process has expanded exponentially to the entire spectrum of care. We've evolved our offerings to be much more sophisticated in our decision support capabilities—to drug knowledge—which means the term "Databank" is not really relevant anymore. Drug knowledge offers so much more to enhancing decisions and making information systems more useful and valuable. Moving forward, we're keeping the name First Databank because it has so much recognition in the marketplace, but we're evolving to our initials, FDB, to reflect all of this. It's a big change—but it's one we're very excited about.

SK&A
A Cegedim Company

Reach the Right Physicians With Your EHR Solution

Where do the opportunities exist for your EMR/EHR solutions? SK&A, through our ongoing market research, knows the answers. Target doctors by region, specialty, office size, patient volume, and more. Call now to learn more about our list of 700,000 prescribers and gain access to their addresses, phone numbers, and email addresses.

SK&A, A Cegedim Company
(800) 752-5478
www.skainfo.com

NEXTGATE

EMPI+Provider+Relation+Location Registries

Proven solutions for coordinating and integrating reference data in your enterprise. Locate, link, and coordinate patient and provider data for accurate and secure data exchange within your organization or across entities, like an HIE, ACO, or IDN. The cornerstone for an organized view of patients, providers, and their relationships.

Visit us at HIMSS
Booth #7000

NextGate
(626) 262-4010
www.nextgate.com

"Model ES" UPS—4500 VA to 15500 VA Single Phase

If power quality problems are affecting the performance of your healthcare IT networks, then such disruptions are costing your enterprise money and compromising patient care.

Featuring an innovative design and user-friendly operation, our "Model ES" UPS provides conditioned, continuous back-up power to today's mission-critical healthcare IT applications.

Controlled Power Company
(800) 521-4792
www.controlledpwr.com

MCCS LLC

Flash Code™ is ICD-10 ready!

Flash Code™ users will find the transition to ICD-10 easy. Our ICD-10-CM coding module includes ICD-9-CM to ICD-10-CM code mapping (GEM), ICD-9-CM to ICD-10-CM Side-by-Side™ display, and ICD-10-PCS Code Builder™. Contact us for a demonstration.

Medical Coding & Compliance Solutions, LLC
(800) 711-7873
www.flashcode.com

BEST IN KLAS 2011

TRANSTECH™
MEDICAL SOLUTIONS
COMMITTED TO SERVICE, TRANSCRIPTION AND TECHNOLOGY

Best In KLAS Medical Transcription Services

TransTech provides 100% domestic transcription and speech recognition editing services. We reduce transcription costs by transitioning the hospital staff to our payroll and benefits plan, and boosting efficiency with our advanced speech recognition technology. We also offer partial outsourcing assistance for HIM & Imaging departments. Contact us for a free consultative assessment.

TransTech Medical Solutions
(713) 686-2111
www.transtechmedical.com

InfoPartners℠
Healthcare's Partner in Information Systems Management

IS Management Partnership Service for CIOs

InfoPartners provides IS/IT management and consulting services to hospitals. Through our unique offering, we provide an advocate-driven collaborative service for CIO's, assisting with IS leadership, planning, best practices, operational improvements and implementation assistance. InfoPartners currently assists over 40 hospitals via this unique, cost-effective service model.

Visit us at HIMSS
Booth #5124

InfoPartners, Inc.
(615) 297-4215
www.infopart.com

HEALTHCARE CAN'T WAIT

FOR A NETWORK TO KEEP PACE WITH HIT INITIATIVES.

Comcast Business Class Ethernet can help improve the quality of care of your organization. With speeds from 1 Mbps to 10 Gbps, telehealth from multiple locations can be a reality. And it's flexible and scalable so it can grow right along with you while keeping costs in line.

Go to ***business.comcast.com/healthcare*** *or Call* ***866.429.3082***

Comcast BUSINESS CLASS

Care360

Looking to expand your physician community?

Accelerate your competitive advantage by joining our existing Care360 network of more than 200,000 physicians in 80,000 physician offices. Care360 EHR with Data Exchange is a secure and robust electronic health record and data exchange solution connecting hospitals with community practices to build a healthcare network.

Visit us at HIMSS
Booth #2813

MedPlus, a Quest Diagnostics Company
(800) 444-6235
www.Care360.com/EHR

VITAL
A Toshiba Medical Systems Group Company

VitreaView

VitreaView is a universal viewer that addresses the needs of physicians who want universal access, through a simple intuitive user interface for patient imaging. It offers secure integrated access to imaging through EMR, EHR, or HIE. VitreaView also enables access to images from disparate databases, providing one integrated universal viewer.

Visit us at HIMSS
Booth #6052

Vital, A Toshiba Medical Systems Group Company
(952) 487-9500
www.vitalimages.com

Mobile Technology Cabinet

Rubbermaid Medical Solutions' innovative Mobile Technology Cabinet was designed to optimize maneuverability by blending premium cabinet aesthetics with the flexibility of mobile computing carts. Features include the ability to conceal technology when doors are closed, adjustable height capabilities, and a large work surface with raised edges for paperwork and supplies.

Visit us at HIMSS
Booth #5150

Rubbermaid Medical Solutions
(888) 859-8294
www.rubbermaidmedical.com

holon
Complex Problems. Simple Solutions

Holon's CollaborNet

Collaboration improves lives. Holon's CollaborNet™ manages the assembly, packaging, routing, and delivery of vital health information using the systems you currently have in place. CollaborNet builds value from the bottom up by delivering information WHEN, WHERE, and HOW you need it.

Visit us at HIMSS
Booth #12214

Holon Solutions
(678) 324-2060
www.holonsolutions.com

SMARTMED
MEDICAL TRANSCRIPTION SINCE 1981

Medical Transcription

- Exceptional quality and turnaround
- Web-based browser
- Customer access to voice and text
- Toll-free dictation, handheld units, or offload voice directly from your system
- Electronic signature and document delivery
- Permanent archive of text and original voice files
- On-demand, easy access billing audits
- No long-term contract required

SmartMed, LP
(832) 364-6738
www.smartmed.info

InterSystems

Enlightened action. Connected care.

InterSystems Corporation is the worldwide leader in software for connected healthcare. Our advanced data management, integration, and active analytics technologies enable hospitals, IDNs, and regional or national HIEs to capture, share, analyze, and act upon their data. InterSystems products are used by thousands of hospitals and labs worldwide, including all 14 hospitals on the Honor Roll of America's Best Hospitals as rated by *U.S. News and World Report.*

Visit us at HIMSS
Booth #3045

InterSystems Corporation
(617) 621-0600
www.InterSystems.com

InterSystems

Enlightened action. Connected care.

The technology you need to achieve your vision.
InterSystems' strategic informatics platform.

- Embed active analytics in your applications to drive actions based on real-time insights
- Connect all your applications to share data across a hospital system, community, or a region
- Develop new functionality quickly to fill gaps in your applications

InterSystems.com/HIMSS12X

Visit us at HIMSS Booth 3045

CONTINUUM
Power systems built for point of care workflow
AC + - DC

The Mobile Cart Power System You've Waited For

New Lithium-Iron battery solutions offer improved run-time, fast recharge, and virtually zero maintenance. Upgrade your carts with Continuum Power Systems.

- Retrofits most carts
- Up to 22 hour daily run-time
- Recharges in under 2 hours
- 5 year lifespan (NO MORE REPLACING BATTERIES)
- Weighs less than 20 lbs.

Visit us at HIMSS
Booth #4660

Futura Healthcare Technology
(215) 642-3363
www.futuraht.com

Elo TouchSystems Touch Portfolio for Healthcare

Interactive Elo touch systems from TE Connectivity support increased patient satisfaction, lowered costs, and improved efficiencies. A full product line carries certifications that support the unique needs of medical environments, can be customized to meet specific requirements, and integrates into existing infrastructure to maximize usage flexibility—desktop, kiosk, or mounted.

TE Connectivity—Elo TouchSystems
(800) 557-1458
www.elotouch.com/Solutions/Medical/default

Certify

Certify's Enterprise Health Information Exchange

Certify Data Systems is the fastest growing provider in the Enterprise HIE market. Renowned hospitals and health systems nationwide prefer Certify's hardware and software. It is easy to deploy, scale, manage, and support, and enables health practices to exchange essential health information in real-time without changing workflow.

Visit us at HIMSS
Booth #5934

Certify Data Systems, Inc.
(408) 236-7470
www.certifydatasystems.com

xpress pro encounter™

Xpress Encounter Pro (Medicaid and Medicare)

Medical Data Express provides MEDICAID and MEDICARE health plans with the most robust Encounter Reporting system:

- ANSI 5010 ready
- Scrub problem claims
- Maintenance covers:
  - New versions of HIPAA standards
  - MEDICAID state changes
  - MEDICARE changes
- Most claim payment systems and custom sources supported
- Automated handling of voids, replacements
- Complete historical tracking

Medical Data Express
(480) 839-0420
www.medicaldataexpress.com

MCN HEALTHCARE

Making Tomorrow's Workflow Better—Today!

MCN Healthcare's ellucid Policy Manager was designed for healthcare professionals by healthcare professionals. This sophisticated Software as a Service (SaaS) application allows for document management control at your fingertips. Create better compliance through customized processes and ongoing workflow improvement.

Visit us at HIMSS
Booth #13244

MCN Healthcare
(800) 538-6264
www.mcnhealthcare.com

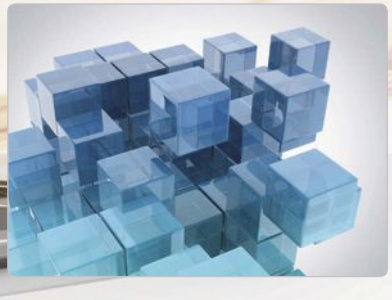
Find more Products & Services in our online resource directory at www.healthcare-informatics.com

VitreaView

Bridging platforms, improving access.

Manage access to disparate databases leveraging imaging interoperability.

Increase physician productivity through true zero footprint client accessibility.



Scalable and modular architecture through virtualization and systems standards.

Visit us at HIMSS 2012 | Booth #6052

www.vitalimages.com

ViTAL
A Toshiba Medical Systems Group Company

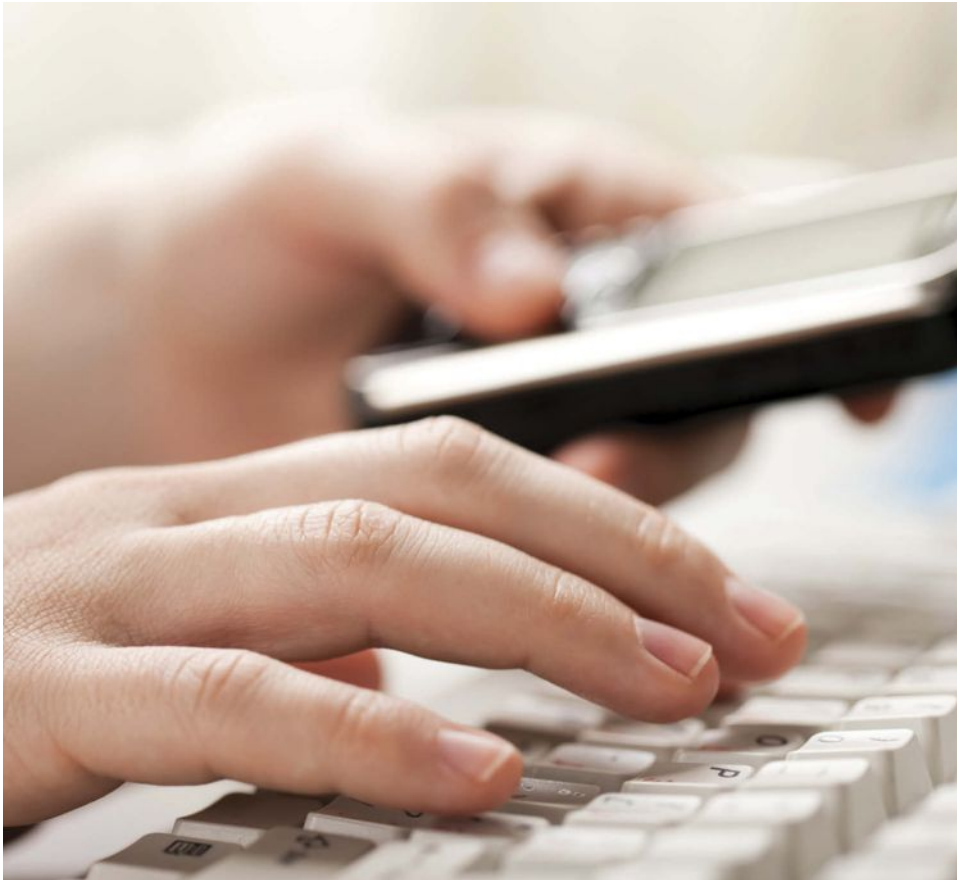
FEATURE

Getting the Message, Securely

NEW POSSIBILITIES AND CHALLENGES IN THE WAY CLINICIANS AND PATIENTS COMMUNICATE BY JOHN DEGASPARI

EXECUTIVE SUMMARY:

Secure messaging is of critical interest to physicians in how they communicate with each other and with their patients. CIOs and other healthcare IT leaders speak about what they are hearing from their clinicians, and what they are doing to meet their requirements.



As healthcare IT leaders are grappling with the many changes taking place under healthcare reform, communications technology continues to charge ahead. And this is to the good, opening up new possibilities in the ways physicians can communicate with each other and with their patients, both inside and outside the hospital IT enterprise. Many of the innovations are tied to healthcare reform as well as broader consumer trends, in the form of, for example, the increasing availability of patient portals in hospitals and the ever-widening array of smartphones that are being embraced by many physicians.

These innovations have come with their own sets of challenges, too, as hospitals struggle with privacy concerns, workflow issues, and the task of integrating new technologies into sometimes disparate existing IT systems. What's more, there really is no one-size-fits-all solution for hospitals that are unique in terms of their resources, IT infrastructure, and patient populations. Here is a look at the trends in the secure messaging arena and the strategies that leading healthcare organizations have adopted to move forward as rapidly as possible on workflow and technological issues.

BROAD DRIVERS

Harry Greenspun, M.D., senior advisor for health transformation and technology at the Washington, D.C.-based Deloitte Center for Health Solutions, observes that secure messaging is a broad trend that encompasses consumer and physician preferences, as well as payment issues. "Messaging is used everywhere, in

Fujitsu recommends Windows® 7.

Touch the future

Work anywhere easier.

Windows 7 Professional

The Fujitsu STYLISTIC Q550 Slate PC: Built for Business

Reach new heights with the FUJITSU STYLISTIC® Q550 Slate PC. Designed from the ground up to meet the rigorous demands of mobile business users, the STYLISTIC Q550 features a brilliant, 10.1-inch display with both touch and pen input. Running Windows® 7 Professional it easily integrates into your existing infrastructure. The STYLISTIC Q550 is built to MIL-STD-810G specifications and offers multi-level security features to protect valuable information from prying eyes and hands. With its removable quick-swap battery, you'll be able to stay productive even during extended shifts.

www.shopfujitsu.com

shaping tomorrow with you

FUJITSU

every industry," he observes. Using the retail industry as an example, he says that consumers are interested in the model where instant messaging is really an adjunct to features such as links and photos that provide a more robust consumer experience.

He also notes that secure messaging is really in its nascent stages in healthcare, a situation he attributes to the current payment structure: after all, doctors can't bill for an IM conversation, he says. That could change as the industry move forward on an accountable care model, where secure messaging can help increase patient satisfaction and reduce costs, he says.

Harry Greenspun, M.D.

He expects messaging to become more financially viable, especially in communication between physician and patient, but also sees plenty of potential in provider-to-provider communications. "With the move toward accountable care, there is a much bigger requirement for care coordination across providers and across care setting," he says. The ability to use secure messaging and coordination of care among providers can provide a competitive advantage for those groups, he says.

Jason Taule, corporate information security and privacy officer in the Civil and Health Services Group at the Falls Church, Va.-based CSC, agrees. As consumers, patients want greater responses, more accurate data and more information about their own health, he says. "They want to be more involved in the process." Secure messaging technology has allowed patients to play a bigger role in the patient-provider relationship, he says.

In his view, the game changer has been the availability of data that can be captured and provided in real time whenever it's needed. That's the paradigm in which secure messaging is the enabling technology in appropriate care settings, he says. "Most of us would agree that the emergency room is not where we should be providing primary care. As one possible alternative we can now consider home health solutions, given the availability of medical devices that capture information and report it back."

PROVIDER ORGANIZATIONS WEIGH IN

Experiences on the part of providers vary. Advocate Health Care, Oak Brook, Ill., is in the early stages of implementing a patient portal as a way for physicians to communicate with their patients, which went live in January of last year. The organization has been rolling out the portal gradually to its employed physician groups, and currently has 20 physician offices using it and about 50 physicians who are actively enrolled with some of their patients. Only about a dozen of those physicians are heavy users of the portal, according to Mike Delahanty, Advocate's vice president of applications.

Delehanty says he has observed some reticence on the part of physicians to take advantage of the patient portal, because they suspect that it will take up too much of their time. "In fact, it's probably more convenient to do it this way, because the physician can leave a secure message and the patient gets it when he wants; they don't have to play phone tag." Despite its relatively slow uptake, Delahanty sees potential for the patient portal. One of the hospital's more immediate goals is to use the portal to schedule appoints and fill out forms. "We believe that making more information available to the patient is good for everybody," he says.

The University of Rochester Health System, Rochester, N.Y., has embraced secure messaging among physicians and between physician and patient. In our institution, they are very different," says CIO Jerry Powell. "We are really moving electronic communication through our patient portal," he says. The hospital uses MyChart as the patient portal solution, which is a component of its electronic medical record (supplied by Epic Corp., Verona, Wis.).

The patient portal has been in use for about a year as part of outpatient Epic deployment in the hospital's cancer center. Powell estimates that the portal is being used by about 28 percent of the patients there. Overall less than 20 percent of the patients are using it system-wide, although he expects a rapid uptick in the next 12 to 24 months, after it is deployed for all of the hospital's outpatient services in May.

Powell adds that the main motivation for the hospital to implement the patient portal is better patient care and patient satisfaction from being more involved in their care. "We've seen a lot of interest in this area, and we think expectations are going to grow in this area of patient-provider communication," he says.

David A. Krusch, M.D., the hospital's CMIO, says the primary focus of the patient portal has been patients with can-

WITH THE MOVE TOWARD ACCOUNTABLE CARE, THERE IS A MUCH BIGGER REQUIREMENT FOR CARE COORDINATION ACROSS PROVIDERS AND ACROSS CARE SETTING.
—HARRY GREENSPUN, M.D.

A Step by Step Approach to Better Clinical Outcomes.

The CareAlign® Solution Suite.

With the ICA CareAlign Solution Suite—a comprehensive set of interoperability solutions to provide an infrastructure for care management, HIE or value-based reimbursement—you'll experience solutions that are agile enough to provide immediate value and dynamic enough to support future growth, allowing you to deliver advanced, patient-centric care.

CareAlign CareConnect provides an affordable start to this journey by leveraging data from existing sources to create an environment where physicians can quickly and securely communicate with each other with ease, allowing meaningful information to follow patients throughout the entire care process. A comprehensive automation workflow tool, CareAlign CareConnect also helps healthcare organizations nationwide tackle the significant challenges faced with The Direct Project implementation.

Visit www.icainformatics.com/solutions to schedule your demo of the CareAlign Solution Suite.

www.icainformatics.com | 615-866-1500 | info@icainformatics.com

ICA

cer and chronic diseases such as asthma, high blood pressure, and diabetes. "People who are followed for continuity of care purposes tend to be very vigilant about keeping up with results," he says. He adds that from his personal perspective as a physician, the patient portal has been "tremendous," because it takes a process that would have been synchronous and makes it asynchronous. "Based on how well it fits into my workflow or my nurse practitioner's workflow or my partner's workflow, I can review the information and, if I feel comfortable with it, push it out to the patient. I do that when it works for me, and the patient does it when it works for him," he says

Charles E. Christian

As far as physician-to-physician communication, Powell says the health system's 1,000 internal physicians communicate either through the hospital's EMR or through a secured email system that is separate from the hospital's wider email network. The secured email is available to providers and other health systems in the wider community.

BASED ON HOW WELL IT FITS INTO MY WORKFLOW OR MY NURSE PRACTITIONER'S WORKFLOW OR MY PARTNER'S WORKFLOW, I CAN REVIEW THE INFORMATION AND, IF I FEEL COMFORTABLE WITH IT, PUSH IT OUT TO THE PATIENT. —*DAVID A. KRUSCH, M.D.*

Powell adds that the hospital system does permit physicians to bring in mobile devices, but requires that the devices be registered with the hospital's IT department and encrypted. As new technologies and new devices become available, the hospital reviews them to apply existing policies or develop new policies to maintain data security, Krusch adds. Mike McClure, the hospital's chief information security officer, notes that many of the new devices have inherent features that allow the hospital's IT department to implement necessary security measures.

Charles E. Christian is CIO of Good Samaritan Hospital in Vincennes, Ind. He describes an ongoing project there—which is still a work-in-progress—known as Unified Communication, which will expedite the process in which caregivers can contact one another. He envisions a notification system that will alert clinicians that a lab report is ready for review, and will provide a way for the recipient to acknowledge that he received the notification, or to forward the notification to another specialist. If there is no response to a message within minutes, it will resend the message to a back-up recipient.

As a fail-safe, someone will be responsible for making sure that the proper notifications take place. "We can't 100 percent depend on technology, because there are too many places where technology can break down," he says. He adds that the same communications platform can be used for a variety of purposes, including meeting notifications or disaster notifications.

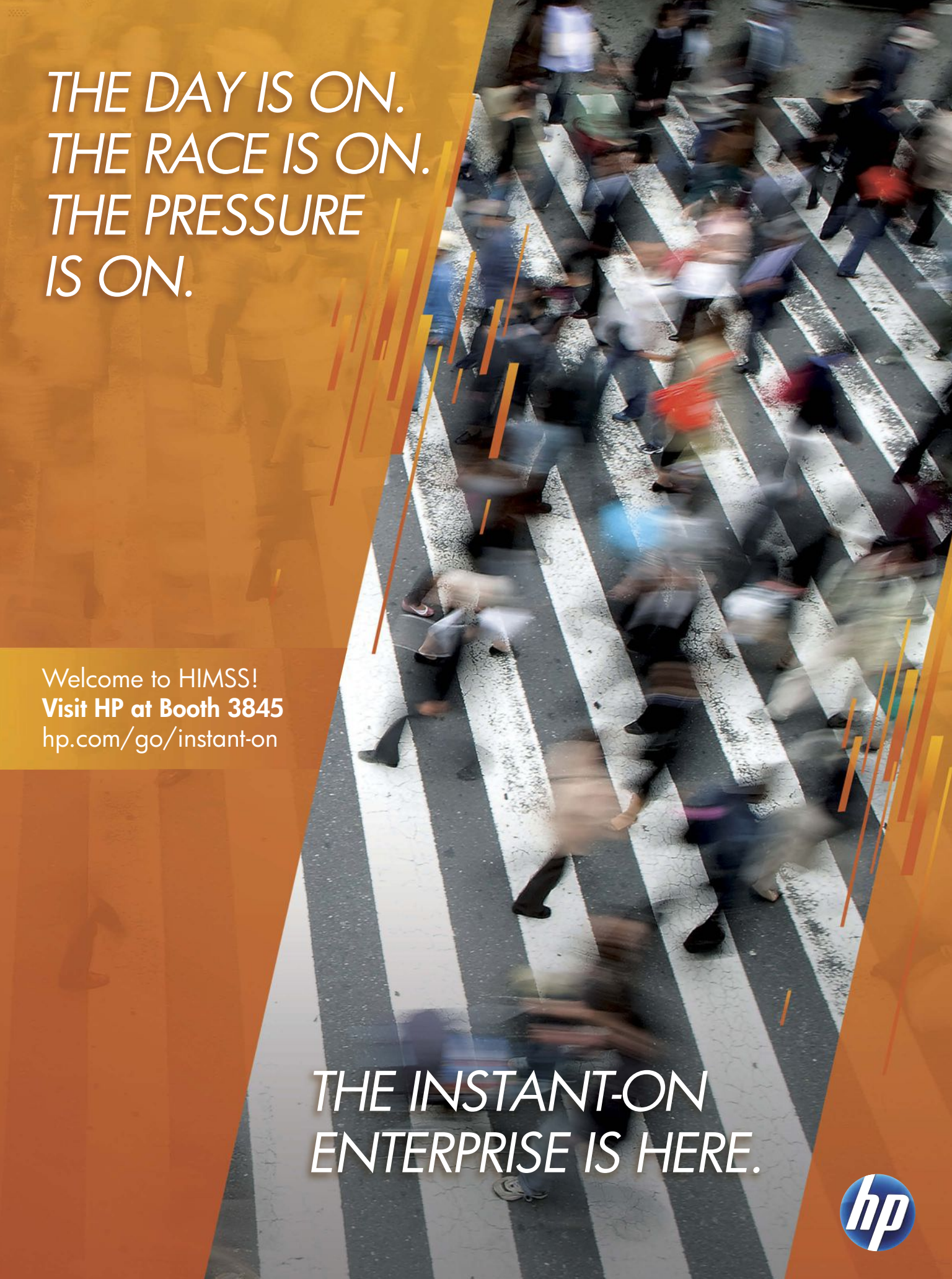
CLINICIANS' VIEW

Timothy Burdick, M.D., is a family medicine physician employed by Fletcher Allen Health Care, Burlington, Vt. As a practicing physician, Burdick says secure messaging has been helpful in improving transitions of care. "The advent of electronic health records that are enterprise-wide has made the issue much less of a problem," he says. At Fletcher Allen, the messaging to the physicians takes place through PRISM, which is the hospital's name for the EHR system (supplied by Epic Corp.), which has been live for about three years. Fletcher Allen went live with PRISM on the inpatient side in January 2009, and ambulatory clinics went live over the course of 2010, according to Burdick.

As the primary physician, he receives an automated message when the patient is discharged from the ED or from the hospital. If that patient requires a care team of specialists, those clinicians receive the message as well. "That lets us see the medication list and see the discharge summary. It gives us the knowledge that this patient has had some event in their medical treatment recently that we need to pay attention to. It's been a huge advantage," he says.

Physicians who are not employed by the hospital but who are on the medical staff of the hospital also have access to the EHR, Burdick says. In addition, physicians who are not on the medical staff have secure read-only access to the EHR; that third piece extends to physicians in Fletcher Allen's catchment area, which includes across northern New York, Vermont, New Hampshire and Massachusetts.

The system has been particularly helpful for patients with chronic illnesses, which typically are the heaviest users of the healthcare system, from the ED to the hospital and various ancillary services. Having all of that information in one


THE DAY IS ON.
THE RACE IS ON.
THE PRESSURE
IS ON.
Welcome to HIMSS!
Visit HP at Booth 3845
hp.com/go/instant-on
THE INSTANT-ON
ENTERPRISE IS HERE.
hp

place "prevents miscommunication that would lead to worse clinical situations for those patients," Burdick says.

For physician-to-patient communication, Fletcher Allen offers MyHealth Online, which went live in June 2011. Burdick says Fletcher Allen has been gradually rolling out the system, and estimates that Fletcher Allen has about 10,000 patients signed up so far. Most patients use the system to review information such as their medical history, medication list, and immunization history, he says.

Burdick says he is somewhat selective in whom he offers MyHealth Online. "I ask about three-quarters of the patients I see and about three-quarters of those have an interest in signing up," he says. Of the patients who are given an access code, about 80 percent create an account within the next two months.

In Burdick's view, all of this bodes well for team-based care that is the concept of the patient centered medical home. "If we can get all of the providers across the care team on the same platform, then not only can we share the medical records, progress notes and medication lists, but there is also a messaging tool embedded in most EHRs," he says. "It's getting direct patient feedback to the patient portal. We can track the responses over time in a graphical flow sheet to see the trend in the EHR. It allows the patient to receive the right care from the right person on the treatment in the right timeframe. That's the epitome of the patient centered medical home," he says.

There are some interesting secure messaging developments outside the enterprise as well. Eric M. Hoenicke, M.D., is a cardiothoracic surgeon with a physician practice in Austin,Texas. He has been using a HIPAA-compliant mobile messaging platform (from Austin-based DocBookMD) to share medical information with his clinician colleagues for about three years, soon after it was first developed. The application is offered free to physician members of county and state medical societies.

Hoenicke says he initially used the app as a directory of his colleagues and now uses it for HIPAA-compliant messaging of text and images. One typical way he has been using it: "If a cardiologist sends me a consult about someone who needs a bypass procedure, I can go into DocBookMD and say I looked at his patient and here are my thoughts," Hoenicke says. In his view, the power of the DocBookMD tool is that it can be used to send text messages as well as images in a HIPAA-compliant fashion, in which both the text message and the image stays on the DocBookMD platform.

In his specialty, Hoenicke says he has used the platform to share X-rays or CAT scan images of cardiac catheterizations and echocardiograms. While he says the images are helpful in deciding how to approach a patient early on, Hoenicke acknowledges that not every hospital has the capability to make images viewable from remote locations. He has shared images on his iPhone, and says the quality of the images is quite good. "I see this as a useful tool for sharing multimedia," he says. So far, he adds, the widespread use of the app has been somewhat limited, but if everyone gets involved and uses it, the program works very well."

HOW SECURE?

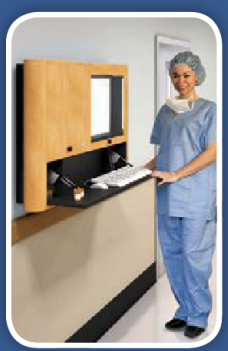
All of the CIOs interviewed for this article say security is a top concern. Charles Christian of Good Samaritan Hospital says, "The number one thing we have to be aware of is the security piece." The hospital employs Microsoft Office Communicator that allows text messaging in a secure fashion. Within the enterprise, physicians also communicate with each other through secure email. The hospital uses a solution that scans emails for certain types of information and will encrypt messages that may contain protected health information.

Jerry Powell, CIO of the University of Rochester Health System, says the organization is moving toward the use of virtual desktops, "where we are becoming agnostic to the actual device being used but still protect the environment." He adds that if messaging itself is not secure, there needs to be a different way to provide that information. One possibility is providing a notification that the information is available, and requiring the recipient to log in to the EMR to access it. ◆

ELECTRONIC MEDICAL RECORDS

Wherever ⇔ Whenever

Wall Mount with AFC7808 Arm



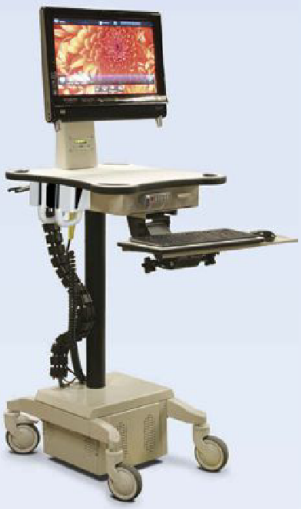
i-Center

i-Center with Z-Series Arm

Reference promo code **HCIJAN12** to inquire about our latest promotion

Telescopic Cart™ LTC4236-01

Laptop Cart LPC200



PC Cart™ 910

PC Cart™ 800

Tablet Cart LPC300

Pole Cart™ MPC200

We now offer Hot Swappable/LiFe/SLA Power Supply solution for all our PC (Point-of-Care), Laptop, Tablet, and Pole carts.

afc INDUSTRIES, INC.
Solution creators for working environments™

1.800.663.3412 www.afcindustries.com

Unsecured Mobile Devices: The Weak Link

DATA BREACHES ARE BECOMING MORE COMMON AND MORE EXPENSIVE, ACCORDING TO A RECENT STUDY BY DAVID RATHS

Although many healthcare organizations are making progress in their efforts to create an infrastructure to stop data breaches, a new study by the Ponemon Institute LLC, Traverse City, Mich., found that the frequency of reported data breaches among organizations in its study increased 32 percent from the previous year. Unsecured mobile devices are a key point of vulnerability, the study found.

Ponemon, which surveyed 72 healthcare organizations in the fall of 2011, also estimated that on average data breaches cost these benchmarked organizations more than $2.2 million, which represents an increase of more than $180,000 from its fall 2010 study.

"There are at least three reasons why the number of reported breaches is going up," said Larry Ponemon, Ph.D., chairman and founder of the Ponemon Institute. First, the greater regulatory requirements for disclosure are making organizations more self-aware and better at reporting the breaches that do occur. Second, the industry-wide shift from paper to electronic introduces some chaos during the transition, which leads to data leakage. Finally, he said, cybercriminals are targeting patient data more frequently.

The top cause cited for data breaches remains lost or

stolen computing devices, and the survey also identified unsecured mobile devices as a problem area. More than 80 percent of respondents said their organizations use mobile devices that may collect, store and/or transmit protected health information, yet 49 percent said their organizations don't do anything to protect these mobile devices, and 46 percent depend upon policies and governance. Only 23 percent use encryption to safeguard patient data. Only 15 percent are very confident and 23 percent are somewhat confident that patient data is protected from being accessed via mobile devices. "There are ways to secure them, but providers say it makes them less convenient if you have strong security settings," Ponemon said. "But for a relatively small cost, encryption and anti-theft solutions make a lot of sense. These are not free resources, but when healthcare organizations feel enough pain from breaches, they will do it."

Larry Ponemon, Ph.D.

Respondents also said third-party actions are the second most common source of breaches, followed by unintentional employee actions.

"The best way to address third-party snafus is to adopt your business associates and contractors," said Rick Kam, president of Portland, Ore.-based consulting firm ID Experts, which sponsored the survey. "Make clearer who is responsible for what PHI, and get them involved in your enterprise incident response planning system."

THERE ARE WAYS TO SECURE THEM, BUT PROVIDERS SAY IT MAKES THEM LESS CONVENIENT IF YOU HAVE STRONG SECURITY SETTINGS. —*LARRY PONEMON*

Here are a few other key findings from the study:

Employees are most often the group to detect the data breach (51 percent) followed by 43 percent who say it was through an audit/assessment and 35 percent say it was as a result of a patient complaint.

The average time to notify data breach victims is approximately seven weeks. Eighty-three percent of respondents believe it is critical to notify victims as soon as possible.

Perceptions that EHR systems create more security decreased from 74 percent in last year's study to 67 percent of respondents this year. A higher percentage (19 percent vs. 12 percent) of respondents in this year's study say EHRs have has made no difference in the security of patient data. ◆

Save the Date!

Healthcare Informatics Executive Summit 2012

May 5–8, 2012

Marriott Orlando World Center Resort • Orlando, Florida

Who Will Be There?

- Chief Information Officers
- Chief Medical Information/Informatics Officers
- Vice Presidents of Clinical Informatics
- Chief Technology Officers
- VPs and Directors of Information Systems
- Clinical Informaticists
- Chief Executive Officers
- Chief Operating Officers
- Chief Medical Officers
- Chief Nursing Officers
- Chief Quality Officers
- Chief Innovation Officers
- Members of Boards of Directors

Program Topics

- Data Warehousing
- IT Issues – Policy Strategies
- Patient Safety
- Evidence-Based Physician Ordering
- Revenue Cycle Management
- Health Information Exchange

Featured Session

Monday, May 7, 2012

Leveraging CPOE Implementation to Reduce Medical Errors and Improve Patient Safety

Christopher A. Longhurst, M.D.

Christopher A. Longhurst, M.D.

CMIO, Lucile Packard Children's Hospital (LPCH) at Stanford University

IT Innovation Advocate Awards

Tuesday, May 8, 2012

One of the highlights of the Healthcare Informatics Executive Summit is the presentation of the Healthcare Informatics/AMDIS IT Innovation Advocate Award.

For more information, visit

WWW.HCIEXECUTIVESUMMIT.COM

PRODUCED BY

Healthcare Informatics

Healthcare IT Leadership, Vision & Strategy

IN COLLABORATION WITH

KLAS™

Association of Medical Directors of Information Systems AMDIS

CLASSIFIEDS

Healthcare Informatics
Healthcare IT Leadership, Vision & Strategy

Professional Opportunities

Interested in Finding New Leads?

Contact our sales professionals to learn more about Professional Opportunities specials!

Midwest & West Coast Accounts
Nicole Casement
212-812-8416 • ncasement@vendomegrp.com

East Coast Accounts
Michael Moran
212-812-8417 • mmoran@vendomegrp.com

Consulting
Project Management
Implementation
Sales

If you're in healthcare information systems and it's time for a career change, get in touch with us at Belle Oaks of America. For 30 years we've worked exclusively with healthcare software vendors, health systems, and consulting firms to find them the very best candidates. If you want to make a career change, check out our website at **www.belleoaks.com** and click on our latest 'Hot Jobs' posting. If you're an employer, click on 'Hot Candidates' available.

BELLE OAKS
"Career Placement Specialists"

Ed Simmons, CPC
772-492-1844
ed@belleoaks.com

Peter Converse
323-369-3447
peter@belleoaks.com

AD INDEX

AFC Industries 59
athenahealth 32, 33
CareFusion ..... CVR 3
CDW Healthcare ..... CVR 4
Comcast Cable 5, 47
Connected Technology Solutions 61
Elekta 27
First Data Bank 44, 45
Fujitsu America 53
Fujitsu Computer Products of America 13
GCX 23, 39, 41, 43
Hewlett Packard 57
ICA 55
InterSystems Corporation 1, 49
Kronos, Inc. 30, 31
MedeAnalytics, Inc. 21
Metro 17
Motion Computing 11
NEC - International Media Division 7
NetApp 19
Nuance Communications, Inc. 3
Sedona Learning Solutions ..... CVR 2
SSI Group, Inc., The 15
Suntrust Wealth 35
TeraMedica, Inc. 35
Vital Images 51
Vocera Communications, Inc. 29

Half-Full or Half-Empty?

THERE'S NO SUBSTITUTE FOR A POSITIVE ATTITUDE BY TIM TOLAN

Tim Tolan

I've debated countless times on how much a candidate's attitude affects a potential employer's hiring decision. When it comes to the hiring game, there are many intangibles, and the one I hear about most often is attitude. Let's face it, if you want your team to perform at peak levels, adding a new team member is a very big deal, so let's take a closer look to see if seeing the glass half-full or half-empty really matters.

Half-full: People who possess a positive attitude generally have a more creative approach towards solving complex problems, as they're usually the last person to throw in the towel. These people tend to be optimistic about the outcome in advance and possess the necessary stick-to-itness to fail multiple times before finding the right solution. They're not afraid to get back on the horse because they believe the answer is just around the corner. Glass-half-full people are persistent, and that "never give up" attitude gives them the will to persevere—they are wired to expect success. An added bonus: optimistic people inspire others to persevere. All good…

HISTORY IS FULL OF GREAT 'GLASS-HALF-FULL' LEADERS LIKE CHURCHILL, WHO ONCE SAID, 'NEVER, NEVER, NEVER GIVE UP.'

Half-empty: Misery seems to dog negative people regardless of the situation. Try to pull them out of their rut, and they're usually uninterested in changing their point of view. You can keep trying to penetrate that negative wall, but it's a real struggle to help them move towards a more positive outlook. Only they can change their attitude, and until they do everyone around them will have to grin and bear it. Negative people tend to attract others who share their belief system (they travel in packs with other negative people). It becomes a feeding frenzy of loser worker bees that can permeate an organization like a fungus. This is NOT what I would call a way to build a successful and scalable HCIT team.

Under full disclosure, I tend to be a positive thinker, so I'm a little biased on this topic. During my career, I've done my fair share of hiring, and I've interviewed great candidates—some with positive attitudes, and unfortunately, some negative. If all things are equal, I always hedge my bets on the candidate with the can-do attitude—every time! I will bet on half-full over half-empty as life is just too short.

History is full of great "glass-half-full" leaders like Winston Churchill, who once said, "Never, never, never give up." Calvin Coolidge has a very famous quote as well that says it all: "Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful men with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent. The slogan Press On! has solved and always will solve the problems of the human race." People with a can do attitude usually have what it takes to forge ahead during difficult times or periods of adversity long after the half-empties have called it quits!

I've never presented a candidate who hasn't received an offer because they were too upbeat or positive. Organizations prefer those with a "glass-half-full" attitude over… well, you get the picture. Go the other way, and your new recruit has a better chance of falling flat on their face, and if you aren't careful, taking down the entire team. Measure attitude in your hiring and the next time you interview a candidate, make sure you have a chance to figure out which camp the candidate is in. It won't be hard to tell the difference from the winner or the loser. ◆

Tim Tolan is a senior partner at Sanford Rose Associates Healthcare IT Practice. He can be reached at tjtolan@sanfordrose.com or at (843) 579-3077 ext. 301. His blog can be found at www.healthcare-informatics.com/tim_tolan.

I need enterprise-ready technology.

Give me solutions that simplify and standardize processes.

Introducing the Pyxis® ES platform—the next generation of Pyxis solutions that provide powerful integration with HIT systems. Easily managed through web-based access, the Pyxis MedStation® ES system centralizes system management across the IDN to streamline users, formulary and barcodes. With flexible deployment, security, backup and domain capabilities, the system helps improve practice through direct synchronization with pharmacy, hospital and identity management systems. That's the CareFusion difference.

Join us at **HIMSS booth #2855** or visit **carefusion.com/MedStationES** to learn more.

Pyxis®

CareFusion

Stop by CDW Healthcare LIVE! at HIMSS12 booth 3034 and see what's next.
Get a first look at upcoming innovations in healthcare IT at the CDW Healthcare booth. Come meet your peers and industry experts to discuss emerging trends and get hands-on demonstrations of the latest advances in healthcare technology. Plus, talk with CDW Healthcare reps to see how we can keep you ahead of the technology curve.

Visit us at CDW.com/HIMSS for more information.

HIMSS12 ANNUAL CONFERENCE & EXHIBITION

LIVE! Must See I.T.

CDW PEOPLE WHO GET IT™ HEALTHCARE