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Patient portals, please don’t disappoint me again

During the interviews for the C-Suite Innovator feature on page 6 in this issue, I spoke to Lynne Gordon Thomas, CEO of AHIMA. We had a discussion about patient portals, which we also featured this month. I mentioned to her that I had a negative experience with one.

About a year ago, I was diagnosed with a pretty serious medical problem and wanted to take control of my own care, starting by accessing my medical records and supposedly being able to interact with the physician through the portal. When I went to sign up, I was asked a series of questions that didn’t apply to me or who I was at all and got rejected from the portal—for not being Janette Wider. But I am Janette Wider, so I attempted to email the help address provided on the page that rejected me. I did this, got no response, tried emailing again, and was told I would have to call to set up the service.

Well, by this time I had mostly lost interest because the questions I had for my doctor were already answered via phone. I never pursued it further and just ended up calling the office anytime I had a concern or question. The whole experience of it not being seamless really turned me off. Lynne told me that technology is developing to make these interactions smoother, especially for those of my generation that will lose interest as I did if something doesn’t operate correctly. I eventually got my records in the mail, but felt like they were being held hostage for a while.

Kim Labow, CEO of Medfusion, wrote in her article this month (page 12), “One way to build a strong foundation of patient engagement is through a user-friendly, effective, online presence. And the cornerstone of that strong foundation is a modern, intuitive patient portal.”

I completely agree with her, especially about the user-friendly aspect. I think back to all the websites I’ve been on or apps that I’ve used that don’t have user-friendly interfaces. It makes me not want to use them, so I eventually stop, no matter how helpful the information they can potentially give me is. I’d like a patient portal that I’m using to be held to a higher standard, where everything functions properly and doesn’t give confusing instructions.

Perry Price, CEO, President, and Co-founder of Reivant Systems, also weighed in on patient portals on page 10. He wrote, “The security of patient portals is perhaps one of the greatest challenges. According to the U.S. Department of Health and Human Services Office for Civil Rights, over 16 million health-care records were compromised in 2016. Although this is a significant drop from 2015, which posted an all-time high of 113 million accessed records, the number of data breaches is one of the main arguments against the implementation of patient portals for the remaining providers not currently offering them.”

My next thought has to do with just that. What about my security when I am using a patient portal? Since healthcare breaches are so high, isn’t involving a portal just asking for trouble? I’m not sure I want to provide my social security number and other personal information to something that may or may not be secure. I’m sure no one is interested in my medical condition; what they would be interested in is stealing my identity. We have to provide so much information when we go to a doctor that adding in another avenue for it get stolen is a risk that I’m not sure I’m willing to take until the breaches slow down. But, I remain hopeful. I want to be better informed about my personal healthcare and feel like the advancements with patient portals will do just that—it’s just a matter of time.

Thanks for reading. I welcome your feedback at jwider@healthmgtech.com.
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Cybersecurity
Alarming increase in targeted attacks aimed at politically motivated sabotage and subversion

Cybercriminals revealed new levels of ambition in 2016—a year marked by extraordinary attacks, including multi-million dollar virtual bank heists and overt attempts to disrupt the U.S. electoral process by state-sponsored groups, according to Symantec's Internet Security Threat Report (ISTR), Volume 22.

Symantec's ISTR provides a comprehensive view of the threat landscape, including insights into global threat activity, cybercriminals trends, and motivations for attackers.

A new breed of attackers revealed major financial ambitions, which may be an exercise to help fund other covert and subversive activities. Today, the largest heists are carried out virtually, with billions of dollars stolen by cybercriminals. While some of these attacks are the work of organized criminal gangs, for the first time nation states appear to be involved as well. Symantec uncovered evidence linking North Korea to attacks on banks in Bangladesh, Vietnam, Ecuador, and Poland.

In 2016, Symantec saw cybercriminals use PowerShell, a common scripting language installed on PCs, and Microsoft Office files as weapons. While system administrators may use these common IT tools for daily management tasks, cybercriminals increasingly used this combination for their campaigns as it leaves a lighter footprint and offers the capability to hide in plain sight. Due to the widespread use of PowerShell by attackers, 95% of PowerShell files seen by Symantec in the wild were malicious.

The use of email as an infection point also rose, becoming a weapon of choice for cybercriminals and a dangerous threat to users. Symantec found one in 131 emails contained a malicious link or attachment—the highest rate in five years.

Ransomware continued to escalate as a global problem and a lucrative business for criminals. Symantec identified more than 100 new malware families released into the wild, more than triple the amount seen previously, and a 36% increase in ransomware attacks worldwide.

A growing reliance on cloud services has left organizations open to attacks. Tens of thousands of cloud databases from a single provider were hijacked and held for ransom in 2016 after users left outdated databases open on the internet without authentication turned on. Cloud security continues to challenge CIOs. According to Symantec data, CIOs have lost track of how many cloud apps are used inside their organizations.
Mobile Communications

Part two of seventh annual Spok survey confirms infrastructure improvements and mobile device diversity

Spok released the second part of the company’s annual mobility in healthcare survey. Spok has been conducting this survey since 2011 to assess mobile workflow enablement trends in hospitals across the country. More than 300 U.S. healthcare professionals responded to this year’s questions about mobile strategy development, bring your own device (BYOD) policies, communications infrastructure, and opportunities to improve mobile communications.

The first installment of our 2017 research, released last month, examined how hospitals are developing, maintaining, and executing on their mobile strategies,” said Hemant Goel, president of Spok. “This second piece in our two-part series looks at the details behind these strategies. For example, we asked about the types of mobile devices particular staff carry, what challenges hospitals are encountering with mobile device usage, and whether they support BYOD programs.”

The research this year reveals that hospitals are making progress in addressing the previously identified infrastructure gaps in order to better support mobile strategies and devices. “Forty-five percent of respondents answered that Wi-Fi coverage is a challenge for mobile device users, and 38% cited cellular coverage as problematic. Both of these data points showed a nine percentage point improvement over 2016,” said Goel. In addition, data security as a mobile device challenge dropped from 43% to 31%. “Though there is still a lot of room for improvement, the responses this year demonstrate that hospitals are taking action and making progress addressing these important issues,” Goel stated.

Survey findings also revealed that hospital staff still carry a diverse mix of mobile devices to do their jobs. For the sixth straight year smartphones are the most popular device, with 77% of respondents saying their organization supports them while other tools, including pagers, maintain strong representation. “Again this year, the survey shows that pagers play a major role in hospital communications,” said Vince Kelly, chief executive officer of Spok Holdings, Inc. “As part of Spok Care Connect, our enterprise healthcare communications platform, we continue to support the paging needs of the market, including secure paging. Twenty-one percent of surveyed healthcare professionals said their organization uses encrypted pagers. This mobile device diversity confirms our strategic direction to provide integrated communications across the health system and let leaders decide what devices are most appropriate for their staff, based on the workflows they support,” Kelly concluded.

The report also assessed the backup communication plans hospitals have in place should cellular networks become overloaded or fail and the perceived reliability of different communication channels. Survey participants were also asked to identify the biggest opportunity for mobile communication improvements over the next three to five years. Answers included enhancing patient care team collaboration and using mobile strategies to simplify technology and bring uniformity across hospital systems.

Business Wire

Software

Carestream introduces software to reduce effects of scatter radiation

Carestream Health has introduced SmartGrid software that can reduce the damaging effects of scatter radiation in a radiographic image and help eliminate the need for an anti-scatter grid. This optional capability is available for use with Carestream’s portable and room-based DRX imaging systems as well as its DRX-1 retrofit system that converts computed radiography systems to digital radiography. The SmartGrid feature has received FDA 510(k) clearance and is scheduled to begin shipping in the third quarter of 2017.

Scatter radiation degrades image quality by creating a haze within the image that reduces both contrast and detail. It is prevalent when imaging thicker anatomy and when collimation is not close enough to the anatomy of interest. An anti-scatter grid can be placed over a detector but it’s heavy and bulky, making positioning and alignment difficult and typically requires an increase in radiation dose.

In addition to enhancing image quality, use of SmartGrid software can boost productivity by reducing the need for technologists to place cumbersome grids over detectors. SmartGrid is an enhancement algorithm that estimates low-frequency scatter distributed throughout an image and removes it. Many physical factors affect the properties of scatter including energy spectrum of the beam, thickness and size of the object, and collimation. Using physics and empirical modeling, SmartGrid software can accommodate these factors through estimation of the algorithm parameters that are tuned to replicate anti-scatter grid visual performance.

SmartGrid image processing software is available for room-based and portable AP chest, AP abdomen, AP pelvis, AP hip, and AP spine exams for adult patients. Carestream
It isn’t news that the health information technology field is constantly changing. Who better to ask about these changes and innovations other than the leaders of the industry themselves? Health Management Technology sat down with Pamela Arora, Senior Vice President and Chief Information Officer of Children’s Health; Nader Mherabi, Senior Vice President, Vice Dean, and Chief Information Officer of NYU Langone Medical Center; Dr. Sudeep Bansal, Chief Medical Informatics and Quality Officer for Saint Francis Healthcare Partners; Lynne Gordon Thomas, CEO of AHIMA; and Paul Black, CEO of Allscripts to discuss their careers, challenges being faced in the healthcare information technology field, rewarding aspects of their job, and perhaps most importantly, where the future of healthcare is headed.

Going mobile is trending quickly
The one thing that most everyone seems to agree upon is that healthcare is going mobile and changing quickly. Pamela Arora said, “Healthcare is going mobile, but we need to understand how the business model is shifting.” Lynne Gordon Thomas voiced much of the same, “Whether everything is on our phones, like EHRs, or whether its telemedicine and you’re talking to your doctor on your phone, things are changing and they are changing quickly.” Paul Black touched on interoperability regarding value-based care. “There is only one answer to successfully make the shift to patient-centered, value-based care: open and interoperable solutions.”

Embrace change
These three industry leaders really hit the nail on the head; we need to embrace these changes and advancements, but ensure that everything “running in the background,” is keeping up and making things easier, not harder.

Nader Mherabi adds an interesting point as well, “It’s not always easy for a large institution [NYU Langone Medical Center] to adapt to the digital world. We’re not Uber or Amazon, so we didn’t start digitally.” He adds, “Healthcare is more complex and personal, which is why it’s important to work together as an institution to provide world-class medical services to our patients, leveraging the most innovative technology.”

Saying that it is a challenge for organizations that did not start out in a digital space to move to one is an understatement. New technologies are always emerging and changing. Organizations need leaders, like those we interviewed, to lead the way into the future.

Continue reading to see what insights each C-Suite innovator gave us into what can only be described as an ever changing, constantly evolving, and frankly fascinating industry.
challenges that every organization is experiencing. It’s changed dramatically, and you have to be constantly working that area. Children’s Health has worked to bolster our cybersecurity defenses; we are using a multilayered approach to security, but beyond technology measures that we have in place, it is also really key to have great training and education to address the human element. We’ve been working through that aspect, and our team has been strengthening our defense to ransomware, especially email. When you take a look, healthcare has had increased interest from the bad actors—it’s one of the biggest challenges—but every industry is finding this difficult.

It isn’t a matter of if you will be compromised, it’s when. Children’s Health has implemented a security operations center that has enabled us to closely monitor our environment to achieve early detection. If we find out early, we can detect risks and attacks before they become a big problem.

**Where do you see the future of healthcare going?**
Healthcare is going mobile, but we need to understand how the business model is shifting. It is moving outside the walls of hospital systems. From a patient standpoint, we need to be able to allow patient families to take accountability of their wellness, and we need to be a partner to them. We want to be there as a support, where they live, learn, and play. It isn’t the health system that should be at the center; the patient family should be at the center. Because of this, we need to go mobile and deliver care in the home.

Healthcare organizations must look at ways to innovate delivery. For our part, we’ve embarked on a significant number of telemedicine programs. Our TeleNICU program connects our neonatal ICU and UT Southwestern physicians with remote areas of the state. Basically, we are allowing patient families to stay in the community where their support network is. Not only is it better for the patient, but it reduces the cost of healthcare.

We also have school-based telemedicine programs. Primary care physicians at Children’s Health partner with the school nurse so when a child is sick the student can be seen by one of our providers while he or she is in the nurse’s office, and the parent can even stop by the pharmacy and pick up their medication on the way to pick them up from school. Or if the child is well enough, they can go back to the classroom.

**What is your background up to your present role?**
My career spans 35 years, and I actually began working in computer science when I was a student at Wayne University where I was a programmer. After I graduated, I went to General Motors as an application developer, then on to EDS, Electronic Data Systems, as a team lead. Then I moved on to Perot Systems, where I had several different positions over 14 years—from team lead to marketing strategic manager, and ultimately, I became CIO for Perot Systems.

In 2003, I was the interim CEO for my own company, Liquid Agents Healthcare, which still does placement of travel nurses in the healthcare field. I wrote the business plan when I was getting my MBA from SMU. But I missed being a CIO, so I moved to MA to become UMass Memorial Healthcare’s SVP and CIO, and from there I came to Children’s Health in Dallas, where I’m the Senior Vice President and Chief Information Officer. I have been here for more than 10 years.

I’ve really enjoyed all these experiences, including those I had with consulting, because they applied well to CIO roles. When it comes to my current role, I find the greater purpose of making life better for children very compelling. It’s great to be applying information technology tools to a mission like that.

**What is the biggest challenge in the HIT field today?**
I think this is true across any industry, but cybersecurity is one of the biggest challenges that every organization is facing today in the field?
One of the biggest challenges I face is making sure there is alignment on a strategy that supports everyone’s goals from a technology perspective. NYU Langone has made a substantial investment in technology, so it’s my
job to ensure we leverage it in every way possible. It’s not always easy for a large institution to adapt to the digital world. We’re not Uber or Amazon, so we didn’t start digitally. Healthcare is more complex and personal, which is why it’s important to work together as an institution to provide world-class medical services to our patients, leveraging the most innovative technology.

What’s the most rewarding part of working in the healthcare field?

There are so many smart people in the healthcare field and particularly at NYU Langone. From clinicians, to scientists, to staff—most people in healthcare are highly educated, and I like that. It’s easy to find someone who’s smarter than you, and that’s very rewarding. I’m often faced with opportunities to solve unique challenges by working collaboratively with our colleagues, and I find it incredibly motivating and fulfilling to problem solve in innovative ways, working on a team.

Another rewarding aspect of working in the healthcare field is the willingness of my colleagues to teach each other new skills and share helpful information. The academic side of this institution is always teaching, so instead of asking, “Why don’t you know this,” they’ll help you. We all help each other, and it’s rewarding when people explain and teach others.

Where do you see the future of healthcare going?

I feel that a lot of people or companies are trying to “disrupt” the healthcare technology space. Uber did it with transportation, Amazon did it with shopping, and the list goes on and on. However, healthcare is much more complex and is constantly advancing, so it has been very difficult to disrupt it in a major way like we’ve seen in other industries. The transactions made in healthcare are personal, complex, and unique, which makes the entire industry personal and unique. And there’s also the question of how we regulate it that adds another layer of complexity.

As I mentioned, healthcare technology is constantly evolving. While surgeons are completing same-day surgeries, we are developing technology to improve patient monitoring and recovery methods from home. Our goal is to make same-day surgery a more common practice whenever possible. Of course, care will still be provided in the hospital, but ideally, the available beds and rooms would be for those patients who are very sick or need specialized care. My prediction is that we’ll see significant changes in healthcare technology within the next five to fifteen years.

Other key technologies that have promise are AI, robotics, and virtual reality, including predictive analytics, machine learning, mobile and intelligent devices, and real-time simulation. When those converge, we will see a major change in how healthcare is delivered. For example, when we were growing up, all our mothers used a thermometer to take our temperature. Imagine a device that is much smarter, able to take all vitals (temperature, pulse, etc.), and connect to an app on a smartphone and provide first-level diagnosis.

Sudeep Bansal, MD, MS, is the Chief Medical Informatics and Quality Officer for Saint Francis HealthCare Partners

What is your background up to your current role?

I am an internal medicine physician and started my professional life as a Hospitalist physician at Saint Francis Hospital and Medical Center in Hartford, CT. When the HITECH act was passed, I took on the role of Physician Informaticist and helped with implementing Meaningful Use in the hospital. When we made a decision to switch our hospital EMR to Epic, I took on the role of Chief Medical Information Officer to help implement Epon. In the interim, I also became board certified in Clinical Informatics and completed a Masters in Health Informatics from Northeastern University, Boston, MA.

Currently, I work as Chief Medical Informatics and Quality Officer for Saint Francis HealthCare Partners (SFHCP), which is the Physician Hospital Organization and ACO. I am also currently enrolled in a certificate degree program in Population Health at Jefferson School of Population Health, Philadelphia.

What are you doing to lead St. Francis’ journey from population health to precision medicine?

SFHCP is leading the change from volume to value. All our major contracts with insurance companies are value-based contracts, and therefore we are responsible for the population that is attributed to us.

We are using care coordination to take care of our population. The care coordinators talk to patients that need help, develop a rapport with them, assess their individual needs, and then attempt to address these needs. To me, that is precision medicine—tailoring interventions to the needs of a patient. For example, we had a patient who kept going to the emergency department for uncontrolled diabetes. Our care coordinator spent time with the patient to find the reason why she would not take her insulin. The patient did not have a refrigerator at home to store insulin so she could not stock insulin at home. The care coordinator was able to procure a refrigerator with the help of community resources, and the patient stopped going to the ED.

Every patient is different, and they have socio-economic needs, values, and preferences. For me, precision medicine is attempting to identify individual patients that need help the most and then creating programs to help them. It is not about genetic analysis and targeting medicines based on your genome. That part of precision medicine, for the most part, is still experimental, and there is lot we can do in the interim.

Where do you see the future of precision medicine going?

Precision medicine, in my opinion, is still a theoretical framework on how to think about “personalized healthcare.” In five to 10 years, this framework will be developed further to use patient-generated health data and biologic data (genomic, unique needs, and then metabolic data) and attempt to target therapy to an individual. The difference between the five and 10-year span will be that we will add more data to the mix. While we will have some success, especially in treating genetic disease based on mutations, we have to remember that most chronic diseases are caused by interaction of multiple complex factors consisting of individual’s biology, behaviors, and environment.
Precision medicine, in my opinion, is a very narrow interpretation of complexities of what constitutes health and disease. Health begins where you live, work, and play (Source: Robert Woods Johnson Foundation).

The solution to improving health of the people needs to be multifaceted and will need to target an individual’s biologic profile (including precision medicine), changing behaviors, (individual, family and cultural behaviors) and improving public health services.

Lynne Gordon Thomas, CEO, AHIMA

What’s your background up to your current role?
I started my career in health information management, and I was in that role for quite a few years. Then, I went back to school to get my MBA and started taking on more departments in addition to health information management, including revenue cycle, social work, quality, child life, and clinics. To make a long story short, as I grew in my career, and I took on more and more responsibility, I morphed into a director of operations job. So I was responsible for everything in the hospital except medical staff, human resources, and nursing.

Then I moved to become COO of a hospital, running the whole operations team. At my next job, I was a hospital administrator. Then I worked at Rush University Medical Center for children’s and women’s services and all of their related clinics.

Finally, AHIMA asked me to consider the CEO job. They needed someone to lead our association who really understood and had been in our shoes, which is how I knew I fit the role. I’ll be finishing up my sixth year this fall. It’s gone quickly, and I’m really excited to see where the profession is going. As you know, technology is changing our world, making it a very exciting time to be in health information management.

What are some of the biggest challenges that you are facing today in the field?
One of the things we always say is that we need to be moving faster on the inside than on the outside. If you’re not moving fast enough internally, you’re not going to remain relevant. Our biggest focus at AHIMA is to provide expertise to ensure trusted information for healthcare, and the best way to do this is through information governance. We feel information is a strategic asset and the key that unlocks the door to driving down costs, improving quality, and taking care of the communities we serve.

In terms of adapting with technology to meet information needs, we’ve gone from the horse and buggy to the model-T, and we’ve lost the rules of the road. We’ve adapted electronic health systems, and they are in the chunky phase, similar to when the first cell phones came out. We need make electronic health records like the iPhone or the Ferrari. Information governance is the answer.

Where do you see the future of healthcare going?
Technology is changing healthcare so much. Whether everything is on our phones, like EHRs, or whether its telemedicine and you’re talking to your doctor on your phone, things are changing, and they are changing quickly. We are not going to be Blockbuster. At AHIMA, we’re getting ready for the future before it’s here. Technology is going to change us so dramatically; I think it will seem like “oh that happened quickly.” But like many recent changes in health information management, I feel like we’ll be prepared and look back and say, “it wasn’t that bad.”

Paul Black, CEO, Allscripts

What is your background up to your present role?
Before joining Allscripts in 2012, I was retired for six years, where in addition to coaching youth sports, I served on several private company and nonprofit boards of directors for companies in healthcare and healthcare information technology, including as chairman of Truman Medical Centers, a 400-bed safety net academic hospital in Kansas City, MO. I spent 13 years with Cerner Corporation and another dozen years with IBM Corporation working in software, services, and health IT.

What are the biggest challenges you are facing in your current position?
Around the globe, healthcare is making a huge strategic shift from traditional fee-for-service models to value-based care. In the United States, many clients are feeling uncertainty over recent activity in Washington and what that will mean for the future. Meanwhile, their waiting rooms are full of patients with increasing demands for transparency, mobility, and quality. Until patients can go anywhere, anytime and know their care team is connected and up to date, our job is not done.

How are you solving these challenges?
There is only one answer to successfully make the shift to patient-centered, value-based care: open and interoperable solutions. This way, providers can exchange data with any system to give a complete picture of the patient’s community interactions. Better clinical decisions lead to better outcomes. We’ll only get there with a truly connected community.

What’s the most rewarding part of working in the health information technology field?
Knowing that Allscripts is building that connected community of health. That our solutions are based on a principal of being open and are enabling smarter care, delivered with greater precision, for healthier patients, populations, and communities.

Where do you see the future of healthcare going, five years from now, 10 years from now?
As patients bear more responsibility for the cost of healthcare, they will act more like they do in other industries: they will act like consumers. This trend will only increase over the next five and 10 years, and providers need open, interoperable solutions to meet increasing consumer demand. HMT
How today’s technology is shaping healthcare’s future

By Perry Price,
CEO/President and Co-founder,
Revation Systems

As industries across the nation continue to digitally transform, healthcare is certainly no exception—and, in many ways, is primed for profound reinvention. Recent technological innovations, such as smart medical devices, electronic health records (EHRs), and online patient portals, have been major players in the industry’s evolution toward virtualizing the overall patient experience. With these newfound technological capabilities, which allow patients and providers to communicate more efficiently and effectively across a wide variety of digital platforms, the delivery of healthcare is being reinvented and its future seems to shift with every new development.

Although there are many innovations currently impacting healthcare’s digital transformation, one of the most significant is the creation of patient portals. Online portals shift the landscape of digital healthcare by offering benefits to all parties involved. However, obstacles still remain regarding security and patient utilization of the platform. So what is it about this technology and its latest advancements that are so key to healthcare’s future? And how can providers address the current obstacles in a way that continues to reinvent the industry’s approach to patient engagement?

The why behind patient portals influence

With more efficient and effective patient-provider communication and improved accessibility to personal health information, online portals offer an array of benefits—with increased convenience being the most significant for patients and providers alike. Along with unmitigated convenience, another main benefit that patient portals offer is an enhanced level of engagement from those who utilize them. This is important because increased patient engagement results in better patient outcomes, which is certainly the overall goal of healthcare.

For example, the Office of the National Coordinator for Health Information Technology found that engaged patients often have the knowledge, skills, ability, and willingness to manage their health better and act on provider recommendations. Additionally, a recent study by the Journal of Medical Internet Research found that a high rate of patient satisfaction tends to coincide with the use of online portals, which enable patients to take an active role in their medical decision-making. So not only do portals impact the level of patient engagement—resulting in a sense of responsibility to partake in one’s own healthcare plan—they also cause a significant increase in effective care, which drastically improves patient outcomes.

The benefits of patient portals (aka the “how”)

One reason patient portals generate better outcomes stems from the significant amount of time saved. For instance, portals allow patients access to pertinent medical documents and forms that can be reviewed or completed prior to visiting a provider in the office, which allows more time for the actual visit to occur and for more effective care to be delivered. In addition to maximizing time during in-clinic visits, patient portals can also largely benefit chronic care patients in better managing their care through the enhanced level of communication with providers as well as a newfound ease and convenience in it—thereby often reducing readmissions related to the condition.

While improvements in patient engagement and patient outcomes are tangible and important benefits of patient portals, the reduction of cost is yet another major benefit. To this effect, the National Institutes of Health recently found that the use of patient portals improved functional status and reduced high-cost healthcare utilization in patients with chronic conditions. When patients are more engaged in and connected to their care, the likelihood of readmissions is dramatically reduced as the use of patient portals leads to stricter adherence to medication and follow-up with providers. In addition to reduced cost due to lower readmission rates, the use of patient portals also reduces the cost for providers by reducing the number of missed appointments and need for reminder phone calls.

In view of all this, it’s no wonder that (as of 2015) 87% of eligible healthcare professionals offered patients access to their personal health information elec-
tronically, according to a new report from the Government Accountability Office (GAO). However, despite this overwhelming adoption by providers and the numerous benefits for patients who utilize portal technology, the GAO found that only 15-30% of patients are taking advantage of this offering—highlighting important obstacles still facing the widespread use of telehealth services, including patient portals.

Challenges to using patient portals
Although patient portals can offer a wide variety of benefits for all parties in the healthcare system, there remain several challenges to their deployment. The security of patient portals is perhaps one of the greatest challenges. According to the U.S. Department of Health and Human Services Office for Civil Rights, more than 16 million healthcare records were compromised in 2016. Although this is a significant drop from 2015, which posted an all-time high of 113 million accessed records, the number of data breaches is one of the main arguments against the implementation of patient portals for the remaining providers not currently offering them.

As highlighted by the GAO’s study, another challenge is underutilization by patients who have been offered the use of portals. Providers in rural areas with high poverty levels as well as practices with more seniors or fewer than 50 practice members specifically saw lower use of patient portals, according to the report. Additionally, when compared to other industry “portals,” the technology still has much room for improvement. In some scenarios, patient portals often end up being utilized primarily as a recordkeeping tool, rather than a patient engagement tool, thereby falling short of the full potential they can have on patient engagement. With digital transformation on the horizon, however, advancements in patient portal technologies are quickly appearing and sending a strong message to the healthcare community that they are here to stay.

The future of healthcare and patient portal technology
Because of the numerous benefits, patient portals are clearly growing in popularity and use—and as related innovation continues to evolve, so does the user design. Mobile-friendly engagement, for example, is increasing, meaning that portals are now accessible to patients on-the-go via smartphone or tablet. Additionally, although not fully rolled out into production yet, the concept of interoperable patient portals is also growing in popularity. These portals would allow patients to access all of their health information, even from different healthcare facilities or providers, in a single place—eliminating the need to view different portals from separate providers.

As digital transformation continues to spread across all industries, healthcare in particular will continue to see increased use in and better design for patient portals. The increased efficiency and effectiveness of patient-provider communications, as well as the increased levels of patient engagement, are just a few of the numerous reasons why patient portals will help launch the future of healthcare technology and create a higher standard of care for the future. HMT
any healthcare providers place “improve patient engagement” at the top of their priority lists. It’s the topic of conversation at every trade show, on the pages of journals, and in the back offices of practices. But when practices and providers begin to consider an overall strategy for patient engagement, they’re wise to approach the big picture in a series of incremental steps. When providers find new and improved ways to connect with patients and then implement each one in a logical sequence, they stand out in a competitive market.

But where’s the best place to start? One way to build a strong foundation of patient engagement is through a user-friendly, effective online presence. And the cornerstone of that strong foundation is a modern, intuitive patient portal. Not your run-of-the-mill Meaningful Use kind of portal—but a patient-centric one that becomes the hub of the patient experience and practice efficiency.

Current consumer trends—and patients are indeed consumers—mean patients not only prefer to transact business online, they expect it. Surveys show that 82% of patients would select a doctor with online scheduling, even if it means fewer appointments to choose from. Today’s patients want to schedule appointments, pay bills, and request prescription refills online. They also expect those online interactions to be simple, seamless, and available 24/7. Trying to complete an online task that seems difficult or results in errors force patients to the old way of conducting business—picking up the phone and placing a call (during business hours). This added barrier to engagement often manifests in a greater no-show rate, lower chance of fully paying a bill, and fewer referrals. And it becomes an added burden on office staff. When patients are empowered to interact online, anytime, it’s putting them to work for the practice—offloading administrative tasks to willing recipients.

What are some ways smart healthcare providers can harness or transform the power of online tools to improve patient engagement? And beyond the benefits of satisfied, loyal patients, how can providers justify the time and investment required when choosing, implementing, or switching to a new patient portal?

Think “patient first”
It’s logical to start thinking about patient engagement at the place where they have been directed for years—the patient portal. Portal adoption rates can vary dramatically with arguably world-class numbers as high as 86%2, but most offices hover around 20-30%. The key to higher adoption often comes in usability and robustness—how well does the portal become an online presence for your office (not just a Meaningful Use check box).

What would happen if a patient finds a portal difficult to use and instead calls the office repeatedly? What would happen if a portal involves a complicated registration process and complex PIN while a practice down the street allows direct booking of appointments right off their website? What if patients have to mail in checks for their balances instead of paying with the click of a button from the comfort of their sofa?

In looking at the online customer experience across industries, the companies who make that experience easy for consumers have become household names—consider “1-click” purchases of books or household items from Amazon. Or the no-risk, try-before-you-buy experience consumers have when buying eyeglasses from Warby Parker. Healthcare isn’t directly comparable to paper towels or reading glasses, of course, but patient engagement has been directly affected by what consumers have come to expect in their daily lives. Providers who don’t offer this kind of easy interaction can be at risk for higher attrition and lower patient satisfaction. Sixty-six percent of patients report they would trade the convenience of having a doctor nearby for the convenience of online scheduling.3

Portals done right are a cornerstone of patient engagement

By Kim Labow, CEO, Medfusion

Courtesy of Medfusion
Satisfied patients, productive staff
When a practice puts patients first by adopting a patient experience platform that exceeds expectations, they may also realize benefits in their practice operations and efficiency: If a percentage of patients register for, and come to rely on, the self-service aspects of a portal, they are reducing the level of repetitive tasks for staff. Engaged portal users might schedule or change appointments, pay bills, review his or her lab results, and request a prescription refill. What does that mean for office staff?
When engaged patients schedule their own appointments, it can translate to reduced call volume and no-shows. When patients complete intake forms online— and they flow directly into the PM or EMR system, office staff can easily save 15 minutes per patient and cut down on errors caused by translating sloppy handwriting. And just a 20% increase in portal usage over a 12-month period can result in nearly a 5% increase in self-pay yield (while also reducing back-office staff required to send multiple statements).

Think about the before and after
Thoughtful portal implementation can enhance patient engagement, improve staff productivity, and help providers stand out from the competition. But what are some of the key points to consider when mapping a route to success? In short, look to the future and consider past experience. Providers who take such a before-and-after approach can transform “old-school” tasks into modern-day differentiators. Some potential benefits of a before-and-after approach include the following:

• Before: Providers control schedules by requiring patients to call in for every appointment-related task. Monitors covered in sticky notes capture the rules about when providers and resources are available.

• After: Patients are empowered to view, book, and reschedule available appointments online 24/7. And practices retain schedule control by only offering certain types of appointments for patient self-scheduling, and by using an integrated solution, double-booking is eliminated.

• Before: Staff spends time on repetitive, routine tasks and data entry.

• After: Reduced phone traffic, time spent on collections, and form entry can mean increased staff satisfaction and reallocation of their time to patient care.

Build on the strong foundation
Gone are the days when a patient portal was nothing more than view, download, and transmit patient health data. Today’s portals are robust online patient experience platforms—offloading time-intensive, yet low-value, tasks from practice staff while empowering and delighting patients. Because present-day—and future—patients have a consumer mindset, a robust and easy-to-use portal has become not only a key part of doing business, but also the cornerstone in the strong foundation of patient engagement. HMT

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Empowering patients helps improve your bottom line

By Eric Arnson,
Senior Vice President and General Manager,
Change Healthcare

We are reaching the end of an era, an era where healthcare networks like health maintenance organizations and preferred provider organizations were the norm. Patients paid their insurance premiums and assumed their only additional costs would be their copay. Physicians accepted whatever reimbursement the insurance company would pay, often choosing to write off remaining patient balances; they were just too time-consuming to try to collect. This system worked fine until healthcare costs soared and it became necessary to share financial risk among the payer, the provider, and the patient.

The new reality
High Deductible Health Plans (HDHPs) now are the preferred commercial insurance offerings, both to employer-sponsored and individually purchased plans. A HDHP is defined as having an individual annual deductible of at least $1,300, and/or a family annual deductible of at least $2,600. However, HDHPs may range from these minimums, which carry relatively-high premiums, up to several-thousand-dollars deductibles, and have lower premiums.

While insurance carriers benefit from reduced financial risk, providers and patients struggle to adapt. Patient responsibility accounts for a growing percentage of a practice’s accounts receivable, and that number can be even higher in the early part of the year as many plan deductible reset in January. Providers that don’t take action are putting their practice at risk.

Know what they owe
Many members of HDHPs don’t understand how their plans work because they haven’t adjusted to the new paradigm of taking on the majority of the “downside risk” that insurance companies historically carried with traditional plans. We’ve all overheard friends’ and coworkers’ misconceptions of their plan design or their bill-shock once they realize that for the first $1,300, or more, depending on the plan, they are responsible for paying all expenses themselves.

Price transparency is becoming increasingly important as we usher in the new era of healthcare consumerism. As members seek higher quality affordable care, many provider offices that have yet to embrace a price transparency policy may lose current or potential new patients. Cost-of-treatment conversations are often hampered, not for competitive or proprietary reasons, but because the provider’s office lacks the capacity to reflect the member’s specific benefits and plan-negotiated price discounts. But when it comes to understanding what patients owe, providers can no longer afford to be left in the dark.

The IRS defines a high deductible health plan as any plan with a deductible of at least $1,300 for an individual or $2,600 for a family. An HDHP’s total yearly out-of-pocket expenses (including deductibles, copayments, and coinsurance) can’t be more than $6,550 for an individual or $13,100 for a family.

Technology can help
Fortunately, providers now have access to simple financial clearance tools that help both them and their patients understand what is owed. It also helps providers begin the conversation with their patients.

One of these tools is a patient responsibility estimator, which provides accurate and timely estimates of a patient’s financial responsibility based on their insurance plan and benefits. Providers can print a copy of the estimation and share it with their patients either before their appointment or at the time of service.

Doing so empowers patients by helping them prepare ahead of time to determine the best method of payment. It also increases the likelihood that the provider will be paid faster and in full. Unlike hospital financial clearance solutions, which can take many months and thousands of dollars to implement, provider practices can take advantage of smaller-scale solutions that are quick to install and fit seamlessly with their practice management systems.

Putting it all together
Consider this, with the percentage of a provider’s revenue coming directly from patients expected to increase by 50% in the next three years, it’s easy to see how important it is to help educate patients about their payment responsibility. It begins with communication. Providers need to:

• educate staff and practitioners about the new reality of HDHPs and how they impact the health of the practice;
• provide accurate estimates to patients, either prior to the appointment or at the time of service, to help them understand what they will owe beyond just copays and deductibles; and
• utilize technology by implementing a patient financial clearance solution that fits within existing workflows and integrates with the existing practice management system.

At Change Healthcare, we often talk about “the consumerization of healthcare.” We expect that plan members will eventually adapt and respond to the new HDHP paradigm by becoming more educated on how their insurance works. Once enlightened, informed consumers will take a proactive role not only in their choice of treatment they wish to receive, but also in where to receive treatment. Providers can begin today preparing for this new reality. The health of their practice depends on it.

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KPIs are not the answer

But how you prioritize and act on them is

By Jason Williams,
Vice President, Business Analytics, Software and Analytics,
Change Healthcare

No industry is safe from buzzwords. Blockchain buzz has energized the computer industry, self-driving vehicles are driving the auto industry wild. And in healthcare, there’s no shortage of enthusiasts evangelizing analytics as the silver bullet to optimizing the revenue cycle. Ask yourself, how many times you have heard the words actionable intelligence in the past year? There’s no disputing that analytics have brought us to the cusp of a new era in better understanding and better managing the revenue cycle. But beware of the one-list-fits-all approach that tends to be the message around KPIs (key performance indicators). Instead, start with your organization’s business objectives and map those back to the metrics that matter most.

There’s a common set of business needs that are universal to the revenue cycle. These are best summarized as the need to quickly secure accurate payment for services rendered, at optimal cost, working across a mix of teams, and with minimal errors. But the root cause elements that should be acted on to deliver on those needs vary from health system to health system. You may track a list of KPIs, but can your team name the top three to watch?

KPIs need to be tracked

For every provider, there’s a short list of KPIs that should be used to track the most pressing needs for ongoing process correction, risk mitigation, and other initiatives. This list can and should change over time as priorities are realigned. Thresholds and resources vary. The team can choose to focus more time or deploy more people to collect and improve accuracy.

But this drives up administrative costs. On the other hand, the team can push bills out quickly, but that may leave money on the table or introduce errors that require rework. A tight filter process to “perfect” claims prior to submission requires more resources and time, but a looser filter speeds the process at risk of missing charges or other information for payment. Each organization has to decide the right balance to monitor.

Consider a hospital that has an incredible 0.1% denial rate. They’re collecting nearly every penny they’re entitled to, but deployed a small (and costly) army of 40 people as well as a third-party collection agency to get there. They are not focused on industry-leading bill to collect. This isn’t possible for organizations with limited resources that must collect as much as they can by focusing on claims that deliver the most impact as opposed to trying to work them all.

Monitoring KPIs covering every stage and influence on the revenue cycle is certainly possible, but it’s not realistic to think an organization can optimize all metrics simultaneously. Some KPIs are in conflict. For example, an organization can have stellar cost-to-collect metrics but poor A/R days if staffed too leanly. Again, the choice of which KPIs to include depends on the organization’s strategy (i.e., its goals and priorities for the period) and realistic self-assessment of areas that can drive meaningful gains.

Accurate payment as a concept

Consider the concept of accurate payment. This is based on contracted rates with payers and agreements with patients. If a facility isn’t vigilant, it leaves money on the table from payer underpayments and inefficient consumer collections. Also, how much time does it take to collect? What’s acceptable? How much effort is being used to collect? How many people? At what cost?

Rather, focusing on the overall patient reimbursement rate will influence how other metrics are used. How does the organization work the reimbursement rate? It might drive up the cost to collect. That might lead to a decision to cap that expense or the number of billers employed.

Patient mix and service mix vary widely between organizations, so the cost and time to collect will also vary, as will the reimbursement rate. These variables are intertwined. Avoid getting lost in detail. A team can monitor dozens of KPIs and track everything from patient registration accuracy and efficiency to services rendered, billing efficiencies, reimbursements, denials, payer relations, and more. But which KPIs align best to helping the organization meet its current challenges? And is there one metric that tends to move others through a ripple effect?

Meta KPIs

To get started, consider these four “meta KPIs.”

1. If the organization is struggling with reimbursement accuracy, reimbursement rate looks at how effectively the hospital is being paid at contracted rates and collecting from patients. This important metric is often elevated at hospitals engaged in complex alternative payment models, such as bundled payment. The slightest shifts in the reimbursement rate can impact the bottom line.

2. If the issue is timely collections, payment velocity reports how quickly the organization is being paid. A/R days is the standard metric. Increases usually indicate a process problem, such getting claims out the door in a timely manner. Finding the root cause of the slowdown and having easy-to-interpret velocity data to share with stakeholders is crucial to making improvements that speed payment.

3. When a drop in payment velocity is suspected to be due to internal factors, quality and productivity metrics, such as Days Not Final Billed reveals how long it takes to get a claim out the door. This KPI is also likely to light up early due to improper integration between the clinical and financial systems. That’s why it’s crucial to establish integration points between the systems.

4. If the organization is experiencing a high rate of denials, look to claim quality to see what is influencing everything downstream. Something is amiss when denials climb. Zeroing in early on the cause and having data to support appeals can help get the errant processes back on track and denials under control. Establish alerts for timely filing thresholds to ensure your team doesn’t miss deadlines.

There’s no shortage of cool, granular metrics for revenue cycle leaders to eyeball and consider. But a catalog of metrics isn’t the answer. The metrics that matter are. And those vary from hospital to hospital. Start with the problems the team is trying to solve and then choose the metrics that matter to drive activities that make the most difference.
By Bob Zimmerman, RCM Solutions Manager, Healthcare, Hyland

In today’s ever-changing healthcare marketplace, organizational profit margins are under severe pressure. Regulatory changes contained in the Affordable Care Act, Budget Control Act, and the American Tax Relief programs continue to shift payments from fee-for-service to riskier value-based models.

Pressure on increasing margins
Rising patient responsibilities are snowballing into the likelihood of increased bad debt. Declining reimbursement rates from both the government and managed care companies to cover medical costs exacerbate all of these challenges. Manual, paper-based revenue cycle processes often exacerbate the challenges. Manual, paper-based procedures mean that collections and claims processing are inefficient, time-consuming, and often error prone. These ineffective processes result in high costs for hospitals and low satisfaction for patients.

With these ever-increasing pressures, many healthcare institutions are looking for ways to improve their bottom lines. Much of this focus has led to organizations placing an increased value on their revenue cycle performance. However, with all of the options available in the market, how do you know where to start? Is it a need to replace your billing system or a move to a new clearinghouse vendor? Or, will a bolt-on technology solution work best? Selecting the right solution can dramatically improve the efficiency of revenue cycle processes, reduce costs, and improve patient satisfaction—and improve the bottom line.

Consider the solution and platform
When considering your options on how to improve your revenue cycle performance, one consistent theme among revenue cycle management (RCM) executives is consistently sharing information throughout the enterprise. This rings true from both clinical and financial sectors, regardless of the data source and the information format. As a result, where most solutions fail short is that they have not been architectured on an enterprise content management (ECM) platform. Moreover, even the newest, most expensive billing platforms consider document imaging and workflow management as secondary requirements within their solution designs.

ECM technology is certainly not new; however, consider deploying that tried and true technology in conjunction with RCM-specific business application workflows. By layering ECM solutions on top of an ECM platform, data and document sharing is solved—and it accelerates organizations forward via a single enterprise level solution for all your business needs. This includes almost every step within the revenue cycle, from the front to the back.

Capture solutions now include everything from data captured via HL7 integration, voice MP3 files, digital photography, DICOM imaging, or computer output, faxed, or scanned images. With all that is available in a single capture, storage, and access platform, the opportunities for business process improvements are virtually endless: built-in functionality of electronic forms, mobile apps, optical character recognition, check-listing, case management, vendor neutral archives, customizable revenue cycle workflows, business intelligence, analytics tools, and more.

A single platform across the continuum of care
Many organizations have existing systems that perform well. They may also feel that they do not have the necessary capital budget, or maybe they are undergoing a merger and acquisition. If a hospital purchases a physician practice, it also acquires its billing system. The hospital may want to allow practices to continue to use their existing applications rather than replacing them. Even if a hospital maintains many systems from different vendors, the right RCM solutions can enable it to streamline the end-to-end revenue cycle. An RCM system can deliver a single platform across the continuum of care by integrating and exchanging data across siloed applications. Such a solution can also import correspondence, claims, payments, denials, or other information from systems inside or outside the organization.

Implementing a checklist solution in patient registration, for example, can help ensure that you have captured all documentation for a workers’ compensation claim with automated system checks for signatures and other deficiencies. Further integration with a denial management solution in patient finance can facilitate education and compliance within registration on denial or reject data.

In the not too distant past, hospitals wishing to understand revenue cycle trends once had to enter data into a spreadsheet or task a report writer to create reports. This process could take days or weeks. Such inefficient processes made it difficult for quick, well-informed decision making. Yet many healthcare organizations lack a data analytics solution to improve the revenue cycle.

A purpose-built, integrated RCM solution makes all of the data available in one common repository. Centralized data gives organizations a consistent view of all health data across the enterprise and a single source of the truth. When an RCM solution includes reporting and analytics tools, managers and executives are empowered to use that data to monitor business performance and to make more informed business decisions.

Cost restructuring vs. reduction
These are just a few examples that a single ECM platform with specific revenue cycle workflow automation delivers. However, much of this automation can result in significant labor savings—labor savings that with a cost-restructuring mindset can result in the reallocation of staff to more revenue-generating opportunities.

For instance, what if you could improve a patient account representative’s productivity by even 1-2%? Or, what if you could reallocate three, five, or even 10 full-time equivalent personnel to working down outstanding accounts receivable? The impact to your bottom line can represent millions in savings compared to the fully loaded salary costs of labor, often generating a return on investment in less than 12 months.

Conclusion
Today’s ECM solutions are no longer just the traditional scan, store, and access solutions of the past. They have matured and transitioned into true electronic information management systems that can have a tremendous impact on your organization’s bottom line, especially when leveraging a purpose-built ECM solution layered on top. Selecting the right solution may provide the funds to make a difference, so you can become the acquiring facility—rather than being acquired.
ver the past decade, there has been significant progress improving performance in the acute revenue cycle for hospitals and health systems. Leading performers have standardized their approach, invested in technology, and strengthened talent. However, the revenue cycle could evolve to better serve current needs. The traditional approach has focused on financially driven process improvement and workforce efficiencies without prioritizing the needs of patients and physicians. As a result, today’s revenue cycle management is suffering in several ways. First, the patient experience is poor. Patients are often confused, inconvenient, and dissatisfied.

According to recent studies, more than 60% of patients don’t understand their bill, 88% of scheduling is still done by phone (vs. online), and 96% of patient complaints relate to customer service.

Redundant paperwork

Despite available technology, patients are stuck filling out paperwork and providing the same information multiple times. In addition, health systems could achieve improved economics as studies have shown that more than 30% of referrals don’t turn into visits. Physicians are also challenged with care coordination, scheduling issues, and too much administrative burden. Lasting, existing processes are too costly and resource intensive. Clerk-led workflow for patient access and registration requiring repetitive data entry drives up cost and worsens the patient experience. Looking ahead, a new approach is needed to improve the patient experience, better support physicians, and achieve a revenue cycle infrastructure for the future.

RCM with consumer in mind

A significant opportunity exists to transform the revenue cycle from the patient and physician perspective. Emerging solutions could make it easier for provider and patient collaboration to improve the experience and outcomes. This would be a shift from today’s disjointed contacts and onerous scheduling options for the patient (and physician) to a simplified process enabled by technology. In addition, the revenue cycle could empower patients through online self-service options and deliver a more personalized experience leveraging information at the right time.

Consumer-facing technologies could be better utilized, integrated, built using modern design methods, and scaled in healthcare to enable patients to engage the way they do in day-to-day life. Omni-channel communications and easy-to-use digital solutions could be part of a seamless and engaging experience for patients. It would be supported by a technology infrastructure that’s secure, reliable, and scalable—and increasingly cloud-based. The experience and supporting technology would be rooted in a sophisticated operating model incorporating efficient workflow, intelligent-routing, automation, analytics, and talented professionals.

The new revenue cycle could extend to payment models and settings of care. The experience and supporting technology would be rooted in a sophisticated operating model incorporating efficient workflow, intelligent-routing, automation, analytics, and talented professionals. The new revenue cycle could extend to give health systems a more comprehensive financial infrastructure that spans payment models and settings of care.

With a new approach, the patient experience can be transformed from one that is frustrating, confusing, and burdensome to a future that keeps patients healthy and happy—where patients are engaged, supported, and well served. Imagine a simple experience that’s easy to navigate—a workflow where a physician places an order through an app that instantly clears and chat or speak live with a counselor to understand coverage options before arriving for the visit.

By making it convenient for the patient, providers are more likely to get accurate and complete registration information. When the patient arrives for care, he/she quickly checks in via a kiosk (without a barrage of questions and paper forms). The concierge (transformed from registration clerk) is expecting him/her and prepared to provide personalized guidance if helpful. The concierge is able to concentrate on patients who have unique issues or just need extra support. Throughout the experience, the patient—whether at home, on the go, or at check-in—is at the center.

Blockchain opportunity

Over time, new opportunities will arise through more advanced predictive analytics and cognitive computing in the revenue cycle. In addition, new models, such as blockchain technology, could someday be adapted to healthcare to improve how we maintain health records, complete transactions, or engage with stakeholders. Right now, patients simply want a better experience, and providers need a commercial infrastructure that yields better performance, so they can focus on what matters most. By beginning to look at the back office from the front, there’s an opportunity to create value for patients, physicians, and health systems alike. Patients could understand and navigate the system in a way that’s easy for them. Physicians could focus on delivering outstanding care. Health systems could improve cash yield, revenue, and market share with higher patient and clinician satisfaction. Through technology, intelligent design, and greater focus on the patient and physician, the revenue cycle could soon be on the road to recovery.
As healthcare shifts toward risk-based payment, an increasing number of health systems intend to become insurers. Over the past two years, the number of provider-sponsored health plans has more than doubled, surpassing 270 health plans. In fact, 50% of U.S. health systems have applied, or intend to apply, for an insurance license. Top financially performing provider-sponsored health plans (PSPs), on average, improved their underwriting margin from 2.4% in 2012 to 2.6% in 2014. Other health plans lost money, on average, with an underwriting margin of -0.8% in 2014.

That's an astonishing number, since managing health insurance is vastly different from delivering healthcare. Sponsoring a health plan requires a completely different business model from the hospital-centric, fee-for-service-based delivery system that is still the norm in much of the United States. Although many payment models adjust for quality or cost performance, most reimbursement for healthcare is still paid separately for each service like an office visit, test, or procedure. It isn't easy to dismantle the traditional revenue model without interrupting the system of care delivery.

Yet, the trend toward provider-owned or provider-sponsored health plans does make sense. Providers know that payers intend to increase at-risk payment to upward of 60% to 70%. For health systems easing into risk-sharing agreements, a health plan makes it possible to set some of the terms. Owning a health plan means the health system can channel more patients to its own doctors and facilities, and it also offers the promise of combining data analytics, information technology, and other resources to better manage population health.

Provider organizations may choose to leverage their existing internal health plan, partner with an external plan, or even create a new health plan—all with the goal of reducing healthcare costs and improving outcomes. There are five challenges these new plans can’t afford to underestimate: payment design and incentives, provider network management, care management, risk management, and technology infrastructure and data sharing.

Payment design and incentives
Most of the newer health plans, certainly the smaller ones, are likely to pay their providers based on fee-for-service, possibly at similar rates or with the same quality incentives used by other payers. This approach, however, doesn’t help differentiate the health plan in the marketplace, nor does it offer the greatest profitability. For growth and sustainability, the health plan needs to consider including incentives for the following goals:
- achieving clinical, cost and/or utilization targets;
- enabling shared-savings;
- participating in bundled payments; and
- improving the patient/provider relationship.

Provider network management
Network management involves more than simply owning a medical group. Successful provider-sponsored health plans must enlarge their ecosystem beyond acute care and ambulatory services to include post-acute services, primary care, retail pharmacy, home health, and long-term care. These “owned” entities must offer high-quality services at a competitive price, which requires the following:
- referral patterns that avoid revenue leakage and direct members to high-value providers,
- member access to the right care in the right setting at the right time, and
- sufficient plan members to justify changes in practice management.

Care management
Health systems have made huge improvements in reducing readmissions...
and hospital-acquired infections. With an affiliated health plan, a health system must translate hospital-based care coordination into population health management. It has taken provider organizations many years to develop programs for managing the quality of acute care. It will take a similar effort, but broader, to keep health plan members out of the hospital or emergency department, make sure they take medications properly, direct them to preventive care, encourage follow-up visits to manage chronic disease, and avoid unnecessary tests and procedures outside the hospital setting.

**Risk management**

Some health systems have tried to hedge risk by partnering with an insurer or third-party administrator to support claims processing, regulatory compliance, or financial risk management. Although it’s wise to have an experienced guide, it doesn’t insulate the health system from the risk of managing a new line of business in a competitive market space.

Even experienced insurers struggle to manage competitively priced health plans, especially when the risk pool is relatively small or when there is inadequate historical data to accurately assess member health risk. (Witness the exodus of health plans from state exchanges.) Health plans, even small provider-sponsored plans, need strong analytics capabilities to forecast market trends and population health risk. New technology and outsourced services can help PSPs augment their analytics capabilities, especially as they develop analytics leadership internally.

**Technology infrastructure and data sharing**

One benefit of getting into the insurance business is access to complete member and claims data. Health systems already have near-real-time clinical data. With access to multiple data sources, provider-sponsored health plans have an advantage for clinical and financial analytics. To overcome the challenges of health plan administration, health systems need to share data with physicians and other service providers—not only data, but data within population health management tools and integrated in workflows. Everyone within the care delivery system needs to know how they are performing, which members are at risk, and how to promote cost-effective care.

It’s a brave new world for provider-sponsored health plans, but promising, too, given the rise of technology. Health care has been slow to adopt digitization and big data. Now is the time to catch up to be able to manage the challenges of risk-based and value-based care.

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As a nurse, I rely on evidence to support treatment planning. When I work with healthcare customers, I apply the same principles to process improvement. Part of what I do is help customers look at RTLS patient flow data through a new lens, blending clinical expertise with in-depth data analysis. The data provides valuable discussion points for Six Sigma, Lean Six Sigma, Kaizen, and other quality management or performance improvement programs. Assessing RTLS data related to top key performance indicators aids us in identifying potential areas for process improvement.

Ongoing review of patient interactions and process trends also allows our clients to make evidence-based adjustments to processes, reallocate resources, and continue measuring successes. Sometimes small adjustments yield bigger improvements. Are patients waiting less? Is it easier to secure an appointment? What about satisfaction scores? How does the data improve your goal-setting?

Recently, one of my customers has been leveraging RTLS data to improve room utilization and patient throughput. Data revealed that assigning each physician to a block of exam rooms left many rooms unused for significant amounts of time. As a result, patient wait times were not in sync with clinic goals. Changing the rooming model to dynamic room assignment, or first-come basis, aided by real-time intelligence provided through the RTLS, improved patient throughput. With a focus on a more patient-centered environment, staff continue to examine the data, which may support introducing a self-rooming model in which patients bypass the waiting room altogether and move directly to an exam room.

With accurate RTLS data, available both in real-time and retrospectively, there are many opportunities to make and measure improvements, from patient flow and room utilization to resource allocation and patient satisfaction. However, you cannot get there with “patient tracking” alone. To begin the process improvement journey and guarantee successful outcomes, a diverse cross-section of the team needs to discuss workflow challenges from each perspective. Consider the insights of leadership, providers, front-line caregivers, registration staff, and the various roles intersecting the patient visit. Broad insight will enable the team to successfully map out the typical patient visit flow and highlight process gaps or areas for improvement.

Then, implement RTLS as part of an overall patient flow initiative, not to “track” patients and care teams, but to enhance productivity and the patient experience. The measure of success will be evident in the data. HMT
Tracking patients in disasters using technology support

By Mary Lou Weden, 
Product Manager of Business Solutions, 
Intermedix

Patient tracking during disasters, mass casualty incidents, and other large gatherings presents unique challenges to all involved. Its origins are in disaster management, but the need to track and manage individuals in need of care at large assemblies such as sporting events, marathons, and concerts is in high demand; it has become a necessity in order to develop situational awareness during these crowded and sometimes chaotic situations.

In addition, a challenge that many caregivers face in managing disasters is that they do not happen daily, so personnel are not familiar with the emerging systems and tools designed to help manage these events. There are various emergency management situations where patient tracking is utilized today, and these systems and tools have become vital to ensuring that the care of patients—from requesting care to release—is as effective as possible.

Coordinating response to any kind of mass casualty incident or large gathering is one of the greatest challenges the emergency response system faces. Even as caregivers encounter a large numbers of patients, there are often disruptions to communications and infrastructure that present further complications. When dealing with any type of large gathering or incident, it is imperative that all participating organizations and individuals know the scope of the incident and the availability of the resources most appropriate for caring for all patients involved.

Information on hospital availability and the number of ambulances available impact how patients are managed at the scene and determine the plan for their transport to the most appropriate facility. New technologies such as EMTrack—a web-based, multifunctional tracking system—have been employed to assist in managing several of these issues. The use of patient tracking during special occasions such as marathons and sporting events is also on the rise. When dealing with large gatherings of people, the potential to encounter many of the same obstacles first responders deal with during actual disasters is ever present. One advantage these situations have over disasters is that they allow for planning prior to the event.

Viewing these events as “planned disasters” allows responders to utilize the systems and tools they are familiar with. Patient tracking systems also provide a current and historical understanding of the demand placed on providers. During these events, patient tracking systems provide event organizers and management personnel with a common operating picture that allows them to communicate throughout the event and assign resources to the most appropriate in-need areas. This technology is also very helpful in the process of family reunification if event participants are transported to various care facilities.

Electronic patient tracking eliminates the need for paper-based, time-consuming administrative tasks. Historically, paper triage tags have been utilized to quickly identify, prioritize, and communicate the care needs of individuals at an event. While the tags worked well in the past, they fell short in a number of areas, which include only being able to capture limited details, potentially being impacted by weather conditions, and not being able to quickly disseminate information to other participants who could benefit from this knowledge as they plan for and respond to the event. Electronic patient tracking systems can capture this information quickly and share details on a wider scale. One example is the capability to scan a runner’s bib number or a spectator’s driver license so the user can identify the person and then determine and document the level of patient care needed.

Implementing electronic patient tracking systems on mobile devices and smartphones is also crucial when it comes to mobilizing needed personnel and resources as quickly as possible. Mobile devices have the capability to capture critical patient data—such as tying a triage to a unique identifier—and document care given as well as the anticipated care needed. As patients are triaged and transported, information, such as photos, can automatically be shared with responders managing the incident. This capability to gather and disseminate accurate information quickly allows for appropriate coverage and can positively impact the care provided by caregivers on scene as well as in the hospital.

Electronic patient tracking is truly an essential component when it comes to the management of large-scale disasters and mass gatherings. As hospitals are challenged to provide superior care, while still making sure patient flow is managed appropriately, patient tracking ensures all necessary parties are aware of a patient’s status and medical information as he or she moves through the care continuum. Providing responders with a mechanism to quickly and easily collect data by performing common, essential functions—such as scanning IDs or triage tags, gathering patient data, and instantly sharing that information with all stakeholders—is a tremendous asset offering significant benefits and one that impacts how events and incidents are handled moving forward.
Improving safety in the acute care setting

By Adebayo Onigbanjo, Director of Product Marketing, Zebra Technologies

Patient identification technologies like barcoded wristbands and labels that accurately identify patients have become mainstream across innovative healthcare centers and acute care facilities. This is a crucial first step to enabling a variety of use cases that link specimen and medication identification to patient identification for improving patient safety and reducing negative outcomes. Most barcoded wristbands can indicate who the patient is but the questions of where they are and how long they have been there remain a challenge for most healthcare facilities.

According to a 2012 National Institutes of Health (NIH) article, the combination of acutely and critically ill patients and high patient volumes creates a need for systems to support physicians in making accurate and timely diagnoses. Electronic patient tracking systems can potentially improve pediatric emergency department (PED) safety by reducing overcrowding and enhancing security.

Understanding a patient’s location and duration of treatment time in critical care settings is a daunting task when the primary goal is to maximize positive outcomes. Today, the patient journey is tracked using handwritten notes by care givers in contact with the patient. This manual process faces a number of challenges such as missing and inaccurate data, time-consuming collection, and analysis of collected data. Most importantly, this process lacks real-time information for the medical staff responsible for the patient’s care.

**Efficiency needed**
The need for a more efficient, accurate process to identify patients has given way for innovative solutions and services that target this problem. For instance, Zebra Technologies provides Patient Flow Analytics to enable hospitals to act quickly based on real-time data on urgent, time-sensitive cases. This solution, which takes advantage of Internet of Things, is comprised of smart wristbands, cloud-based analytics, real-time locationing, and mobile tablets. The smart wristbands are configured to provide a “digital voice” for the patients. They capture information like their medication status, specimen data, location, and duration of their stay in specific areas. This information is then processed and analyzed by the Patient Flow System, and intelligent data is then offered to the caregivers via a handheld or digital display. The solution also provides information such as real-time feedback of treatment time, notification of event, instruction alert, and a patient overview dashboard.

**Capture data in the ER**
To begin capturing data, the smart wristband is fitted to a patient in the ambulance or on arrival at the Emergency Department (ED). A beacon inside triggers the wristband to send out signals to the devices connected via Patient Flow Analytics, indicating the patient’s identity and journey within that hospital. For example, Leiden University Medical Center (LUMC) in the Netherlands is using Patient Flow Analytics to track and evaluate door-to-balloon time in myocardial infarction patients. The system provides reliable, real-time feedback of treatment time and has helped LUMC optimize the patient journey in acute myocardial infarction care, shaving several minutes off its door-to-balloon time. The staff now has better insight into potential delays and an accurate system for measuring door-to-balloon treatment time.

**REFERENCE**
Since opening a year ago, the new Stanford Children’s Health Specialty Services Sunnyvale location has been very popular with patients, providers, and staff, serving between 100 and 200 patients daily. Housing more than 20 clinical sub-specialties, it is the largest of 13 Stanford Children’s Health Bay Area specialty service centers. Some of its success is attributed to the facility’s family-friendly design and state-of-the-art medical and therapeutic services. Part of the latest technology includes a real-time locating system (RTLS). Stanford Children’s Health pursued this technology to try to increase visibility, automate workflows, and accelerate data collection.

Patients and families receive a battery-powered “badge” at check-in that they wear throughout their visit. Providers and staff also wear badges, which communicate to a wired network of approximately 500 RFID and infrared sensors located throughout the facility. The patient, provider and staff data is sent to 55" monitors located in provider and staff workrooms throughout the building that display real-time room status and visit data on maps of the facility.

Two-way visibility
The RTLS system by Versus Technology addresses common patient experience concerns from the start of a visit, beginning in the patient waiting areas. At Sunnyvale, there are multiple waiting rooms in each area of the facility—some with televisions, some without, and others with activities designed to keep young patients occupied. These waiting areas are divided into zones, based on the locations of receivers throughout each room. From their workstation, medical assistants can preview which zone the patient is sitting so they can approach the patient with a warm greeting, rather than calling out a name and searching the waiting room, which gives families the freedom to sit in any area they prefer prior to their appointments.

Once the patient is roomed, medical assistants press a button on the badge triggering a visual signal to the provider that the patient is ready to be seen.

Clinicians see communication benefits
In Stanford Children’s Health’s sub-specialized academic environment, there are often multiple providers and staff involved in the care of a patient. William Kennedy, M.D., chief of pediatric urology at Stanford Children’s Health, moved his practice from the Lucile Packard Children’s Hospital Stanford campus to the new Sunnyvale facility and sees the direct benefits of the RTLS technology. “When I have several trainees in the clinic on the same day I know exactly what room they are in and with which patient they are interacting. I even know the amount of time that they have spent with each patient,” Kennedy explains. “It enables me to efficiently manage my time by signaling when it is time for me to enter their room.”

Additionally, a common challenge for clinic managers can be identifying when and where wait times are occurring within a clinic. At Stanford Children’s Health Sunnyvale, wait times are made visible in the workrooms’ data displays, and managers receive automated emails and text messages anytime a patient has been in the waiting room or alone in an exam room for longer than a designated period of time.

Patient data tracked
Understanding duration of all components of a patient visit is key to understanding how to continuously improve flow, utilization of space and patient experience. Previously, when pursuing improvement opportunities, Stanford Children’s Health would tap valuable resources to collect data manually. However, the RTLS system now installed in Sunnyvale automatically captures data for every moment of every visit and every patient interaction, providing analytics to help teams more quickly and effectively identify gaps in efficiencies and determine ways these can be improved.

Stanford Children’s Health made the commitment to implement RTLS with a set of valuable use cases in mind, and as the design team began to appreciate the data the system captures, even more use cases have come to light. Stanford Children’s Health made the commitment to implement RTLS systems throughout the new Lucile Packard Children’s Hospital Stanford opening in late 2017.
Securing remote access at Genesis Health System

Genesis Health System is a 665-bed system based in Davenport, IA, that offers full continuum of care services in a 12-county region covering Eastern Iowa and Western Illinois. When the decision was made to move to virtual desktops, the IT team at Genesis also started to consider selecting and implementing a solution for two-factor authentication. Implementing such a solution would help to combat phishing attacks as well as support a larger, enterprise-wide security strategy.

The solution
After evaluating several two-factor authentication providers, Genesis selected Imprivata Confirm ID for Remote Access to help ensure secure but convenient access from outside the health system.

“Ultimately, whatever solution was selected will need to be used by our physician community,” says Dr. Anthony Carbone, CMIO at Genesis. “It had to be easy to use, it had to be reliable, with an authentication workflow that is seamless for end users."

Working with Imprivata
Genesis Health System knew Imprivata as a strategic IT partner before implementing Imprivata Confirm ID for Remote Access. Already, they were using Imprivata OneSign for their single sign-on (SSO) needs.

Imprivata OneSign is an SSO and virtual desktop access platform that secures PHI; allows clinicians to focus more on patient care with fast, secure No Click Access to patient data; and enables healthcare organizations to leverage the full benefits of their EMR and virtualization technology investments.

“Continuing to build our partnership with Imprivata made us feel more comfortable,” says VanDerHeyden. “Because Imprivata OneSign and Imprivata Confirm ID are so tightly integrated, enrollment and management became much easier.”

Seeing the results
With Imprivata Confirm ID for Remote Access, Genesis Health System has bolstered their security strategy and helped to guard against phishing attacks. Perhaps the greatest benefit, though, is for clinicians, who are now able to securely access their desktops—and patient data—from anywhere. “Our physicians are able to access crucial patient information from wherever they happen to be,” says Carbone. “And, with two-factor authentication in place, we can be sure that the security of the data is maintained. It’s a win-win for everyone.”

Down the road
Now that Genesis is using Imprivata Confirm ID for Remote Access, they’ve started thinking about how they can add two-factor authentication to a broader set of users and workflows.

“We’re looking to implement two-factor authentication everywhere,” says VanDerHeyden. “And knowing that we would be able to work with a trusted partner for all of our two-factor authentication needs gives us confidence that we can continue to improve security across our enterprise.”

By Aaron Miri, Chief Information Officer, Imprivata
Healthcare that transcends limitations of location

Healthcare companies are looking at how to digitally transform using new technologies to improve the patient experience while driving down costs. With digital transformation comes a new understanding that patient care must be accessible anytime, anywhere. Healthcare is no longer confined to brick and mortar buildings. The point-of-care can be at a local outreach clinic, a homeless shelter, a factory, a school … or even a bus.

Mosaic Life Care, a member of the Mayo Clinic Network, is one such organization undergoing this digital transformation. Mosaic is a regional healthcare mainstay covering 23 counties in and around St. Joseph, MO, and the Kansas City Northland. It is part of a multi-state provider network with 5,600 beds and more than 47,000 employees. Mosaic is shifting its business model to a life care plan for patients in order to deliver a better and more convenient patient experience through the use of telehealth. These new remote and mobile services enable patient care from more convenient locations closer to home, work, or school.

“Mosaic recognized that we needed to improve our overall patient care by extending access from the surrounding communities, but do this in a way that also allowed us to save on cost,” said Brenda Williams, Vice President of Technology for Mosaic. “We also needed to ensure that while we delivered increased mobility for our caregivers, we were also maintaining the sacred trust of our patients by securing their information.”

Virtualization provides path forward

Solving the “anywhere” part of the health services equation in a secure manner presented a challenge to Mosaic. The organization understood the security and compliance concerns associated with remotely accessing patient data and the technical complexity of the task. Mosaic worked with VMware to address these challenges.

First Mosaic deployed a digital clinical workspace using VMware Horizon. The virtual desktop infrastructure solution provides a way to access electronic health records, healthcare applications, and electronic protected health information from any location in a fast, secure, and available manner to any number of devices caregivers. “Improving the wellness of a community begins by ensuring patients have convenient access to healthcare providers who in turn have ready access to up-to-date patient information,” said Stephanie Sutton, director of clinical applications at Mosaic.

“This demands anywhere-access to patient information across distributed facilities and an increasing set of mobile devices to improve workflow.”

By presenting caregivers with a complete Horizon virtual desktop that resides in their data center and not on the endpoint device, Mosaic has reduced the risk factor from endpoint threats and lost or stolen devices. Horizon has also enabled Mosaic to adopt new approaches to where care could be delivered. Sutton noted, “Some of our large manufacturing employers have provided Mosaic the opportunity to go into their buildings and set up a mobile clinician space. Mosaic also has a bus that’s going around to different places and setting up an urgent care in parking lots.”

In addition, Mosaic implemented VMware NSX network virtualization to protect information and applications inside the data center. NSX enables the segmentation of a network down to the individual virtual machine level, a concept known as micro-segmentation. Micro-segmentation enables security controls to be applied to all workloads within the data center. This stops the lateral movement of threats that have breached traditional perimeter firewalls. By extending these segments to clinician endpoints, such as mobile devices and virtual desktops, NSX helps mitigate the threats of malware and ransomware.

“By securing our environment with micro-segmentation, our workers providing services in the field can only access the data they really need,” said Sutton. “Even if an attacker makes it past perimeter security and into the network, they will be unable to move laterally to compromise the servers containing PHI and other valuable information.”

Redefining the patient experience

By using virtualization to transform security and deliver a digital clinical workspace, Mosaic is closer to achieving its goal of transforming its business to transcend the traditional physical limitations of healthcare. It’s helping the organization respond to situations in ways they could have never imagined before. Williams noted a situation recently where, “… a caregiver had a fire offsite. The building had to be evacuated and was closed for three days. As the caregivers were evacuating, we set up a secure, fully functioning alternate location for about 40 people with VMware. In less than 30 minutes they were back in business doing their job.”
AaaS for population health management services

Transcend Insights, a healthcare technology company offering population health management solutions via its HealthLogix platform, launched its next-generation enterprise Analytics-as-a-Service (AaaS) offering. This service is powered by the Anvita Engine, which is optimized for the cloud and available to clients through a flexible AaaS model. The AaaS offering provides health system executives and care teams a more flexible and cost-efficient way to deploy advanced analytics tools for managing risk and quality performance as part of a population health strategy.

In addition, the Anvita Engine features the use of a Fast Healthcare Interoperability Resources (FHIR) application programming interface (API). The FHIR-based interface enables clients to rapidly deploy custom population health management solutions and measurement capabilities extending from the Anvita Engine and in accordance with their unique needs and quality objectives.

Industry studies have found that many care teams feel unprepared for the transition to value-based care. A recent survey of provider organizations conducted by the Healthcare Information and Management Systems Society showed that only 3% of respondents believe their organization is highly prepared to make the pay-for-value transition. In addition, research from the Healthcare Financial Management Association found that only 40% of survey respondents did not believe that their organizations currently possess capabilities rated as extremely important to succeed in risk-based value arrangements, such as interoperability, business intelligence, and real-time data access.

Healthcare organizations adopt Tableau for measurable value

Tableau, a business analytics software company, announced the addition of several healthcare organizations and hospital systems to its growing list of healthcare customers. New customers included Memorial Sloan Kettering Cancer Center, NYU Langone Medical Center, and Glendale Adventist Medical Center.

Healthcare providers have deployed self-service data discovery and visual analytics from Tableau to improve their healthcare knowledge workers with actionable insights enabling better patient outcomes including the following:

- NorthShore University HealthSystem leveraged integrated dashboards to identify actionable insights that enabled the organization to proactively detect high-risk patients in need of care coordination and thus reduce 30-day patient readmission rates. These insights were accomplished by mining the clinical and administrative data maintained by NorthShore and integrating the results back into the EMR workflows for physician, clinician, and case manager intervention.
- Michigan Medicine has implemented Tableau to gain visibility into its revenue cycle management processes. The new initiative has seen significant benefits, including $3MM in funds recovered from payers and more than 10,000 hours saved through increased productivity on charge estimation, recovery audit contractor audits, automating cash reconciliation and relative value units reporting.
- Stamford Health, a not-for-profit healthcare system in Connecticut consisting of a new 640,000 square foot hospital, a large outpatient facility, and several ambulatory locations in their network, deployed self-service visual analytics from Tableau across the enterprise to power clinical, operational, and financial business processes. They have saved almost $500K in redundant software and outsourced consulting services, have reduced routine reports turnaround from four to five weeks to less than three days and have delivered $3MM in value and expect additional potential savings and cost avoidance through the usage of advanced analytics.

Jvion’s Cognitive Clinical Success Machine

Cognitive clinical science company Jvion rolled out the latest release of the company’s Cognitive Clinical Success Machine. This version of the leading cognitive clinical software includes new full-spectrum clinical success application vectors that take advantage of the ultra-definition patient view rendered by the appliance. These new vectors offer a way for providers to bundle target illnesses and conditions across specialties to drive more value and effectiveness through each individual episode of care.

The solution, which uses advanced self-learning clinical Eigen Sphere technology to determine the effective impact for each individual patient in a population, is helping hospitals and clinics. Jvion’s Cognitive Clinical Success Machine leverages the massive set of complex, incomplete, and volatile healthcare data to deliver an ultra-definition, patient-specific view of predispositions, risks, and interventions in real time. This view accounts for the clinical and exogenous factors that impact a patient’s health to enable the most effective clinical action. The machine’s full-spectrum clinical success vectors will help providers across key specialties including cardiac surgery, cardiology, dermatology, endocrinology, gastro intestinal surgery, gastroenterology, hematology, infectious diseases, nephrology, neurology, neurosurgery, orthopedics, and pulmonology.

South Central Ambulance Service gets to patients more efficiently with Qlik

Qlik, a visual analytics company, announced the South Central Ambulance Service NHS Foundation Trust (SCAS) is using Qlik Sense and QlikView across the organization to visualize its data for better understanding of where its ambulances are and need to be at any given time. Bringing the reality to life by visualizing vehicles on maps on screens within its command centers, the trust has a more efficient and accurate view of vehicle performance and locations, helping it to identify where improvements can be made to get its patients crucial care more efficiently.

From 78 sites serving Berkshire, Buckinghamshire, Hampshire, and Oxfordshire, SCAS was formed in 2006 following a merger of four ambulance trusts. An emergency operations organization with 3,000 staff serving more than 4.6 million people, the Trust has three main...
Machine-learning-enabled analytics

Applying machine learning techniques to more than 100M patient records from 23 different data sources, the CareSkore Zeus predictive analytics engine delivers accuracy in measuring relevant risks on a per-patient basis.

Most risk analytics tools limit themselves to claims data, which are incomplete and delayed. The others add in clinical (EHR) records, which give a bit more predictive accuracy. Zeus incorporates claims, clinical, and a broad range of social determinants, like whether a patient drives a car, lives alone, is married, or is employed, to create a much clearer picture of patient risk. Risks measured and analyzed include no-shows/cancellations, medication non-adherence, sepsis, chance of falls, and mortality.

Zeus generates real-time predictive and prescriptive analytics, continuously updating a patient’s risk measures per encounter via HL7 integration with the EHR. It is available both as a SaaS tool and as population health management as a service (PHMaaS), which acts as a back-end tool to feed risk analytics to the EHR that can be viewed from within the EHR app.

Zeus integrates with CareSkore’s AI-enhanced Iris patient engagement platform to deliver end-to-end, real-time personalized population health management. Effectively managing post-acute-care and chronic-care patients requires a deep understanding of the risks facing each patient so that preemptive actions can be taken to mitigate them. The integration of machine learning for risk stratification and AI for patient engagement delivers end-to-end population health management. The result is a stronger involvement of each patient in their own care, fostering much stronger clinical and financial outcomes.

CareSkore
The evolution of clinical mobility: Unifying communication and workflow

By Si Luo, President and CEO, PatientSafe Solutions

Technology’s capability to deliver simple, intuitive mobile user experiences that unify team-based collaboration with workflow and productivity tools has had a profound impact on the working world. So, what does this unification of communication and workflow look like in the healthcare world, where new technologies are subject to regulatory pressures, interoperability challenges, and fragmentation-inducing regulatory pressures, interoperability where new technologies are subject to flow look like in the healthcare world, unification of communication and work- on the working world. So, what does this tivity tools has had a profound impact l on reducing HIPAA exposure and the ap- on the working world. So, what does this tion that is common in the evolution of technologies. The adoption of basic and platform products certainly checked solutions in any category lose • Device Choice: Provider organizations are making a clearer distinction between shared devices and BYOD devices. With shared devices, health systems are more in tune with their unique needs for security provisions, mobile device management, charging solutions, single sign-on, battery life expectancy, and device life cycle management. User experience must be included in decision making. Finally, understanding that the mobile application, device, and network all need to be con- sidered for optimal performance is key. It may not be the device. To combat provider organizations’ limited reach to purchase smart devices for each member of the care team, many health systems are taking a new approach to BYOD. Future-focused organizations are adopting mobile communications platforms and apps that allow clinicians to streamline care using their own device.

• Clinical Workflow Integration: It is important to consider how much of the point-of-care workflow can be consolidated onto a single app and a single device, as this lowers cost of ownership and increases facilitation and cross functional coordination. How many care team roles can be linked through the solution—all of them enterprise-wide or just a few? Fi- nally, clinical mobility technologies must integrate with existing IT infrastructure and clinical systems.

• Platform Scalability, Reliability, and Manageability: Can the software platform scale with the provider organization’s growing business and user base without a surge in costs? A clinical mobility solu- tion should be a natural plug-in to existing investments rather than a bandage to sub- optimal solutions already in play.

The new imperatives for clinical mo- bility illustrate what the technology re- search company Gartner calls the “trough of disillusionment” in their Hype Cycle framework—the phase where first-gener- sion solutions in any category lose their luster as the true requirements of the field become clear. Clinical mobility has certainly come a long way, and the need for unified clinical communication and workflow solutions that will enable provider institutions to thrive is now clear. The drive to simplify the experi- ence of care by unifying workflow with communications will only become stronger and more valuable for hospitals and health systems, and the technologies that can do so seamlessly and intuitively will end up on top. There is an exciting jour- ney ahead.

Si Luo is the lead behind PatientSafe’s strategy, market development, and customer success efforts. He has been part of the founding team since April 2009. Prior to becoming President and CEO of PatientSafe Solutions, Luo served in strategy and operations roles across a wide range of industries, spanning private equity (Macquarie), biotechnology (Illumi- na), enterprise software (KMS Solu- tions), and venture consulting.
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