

INSIDE EDGE

CNIO Outlook 2017

INTRODUCTION We like to stay innovative in our 'traditional' January "Outlook" issue for SI's *Inside Edge* report and we think we've achieved that with our first "Chief Nursing Informatics Officer (CNIO) Outlook for 2017." Trailblazing health systems—no earlier than 2010—created the CNIO title in recognition that nursing is a co-ruler of the EHR space with the medical profession. It's simple math: Nurses have more sustained contact with patients than any other clinicians and more nurses use the EHR than doctors.

Of course, CNIOs are also CCOs—chief collaboration officers—as evidenced in our discussion, which features conversations with CNIOs and the executives to whom they report from leading health systems Advocate Health Care, Banner Health and Texas Health Resources. Each health system has a different CNIO reporting relationship, which highlights the continuing evolution of the CNIO position and its growing role in optimizing the EHR to achieve patient safety, quality of care and efficiency of operations.

We asked three questions:

1. What is the role of the CNIO at your organization?
2. Why did you design the particular CNIO reporting relationship you have?
3. What are your top CNIO strategies for 2017?

Advocate Health Care

The CNIO reports to the system chief nursing officer (CNO) at Downers Grove, Ill.-based Advocate Health Care, the largest health system in Illinois, with 12 hospitals and 35,000 associates serving the Chicago metro area.

"The CNIO role is new to Advocate," says Kristen Hagerman, CNIO and VP of nursing informatics,

Advocate Health Care

who came to Advocate two-and-a-half years ago as the organization's first CNIO. She says the CNIO's role provides strategic nursing leadership pertaining to the evaluation, deployment, optimization and integration of clinical information systems and new technologies; ensuring it maximizes patient safety, improves quality of care, end-user satisfaction and operational efficiencies.



Kristen Hagerman,
CNIO & VP, Nursing
Informatics, Advocate
Health Care

Advocate's CNIO leads a high-functioning team of 60 informaticists focused on supporting clinicians—including 11,000 nurses and 6,300 affiliated physicians—with clinical technology adoption. The CNIO also acts as the liaison between nursing and IT, as collaboration with IT is vital to success. Partnerships are key, she says. "The CNIO has to be extremely facile at developing relationships."

Identifying gaps in 'systemness'

CNIO Hagerman reports to Susan Campbell, senior VP and system CNO at Advocate. "As the first system CNO for Advocate, I recognized the need for a CNIO almost immediately. Advocate was an early adopter of the EHR and it was implemented when we were functioning more as a holding company. As a result, the medical record was customized to meet the needs of the individual operating units. As we shifted to being an operating company, we began standardizing our practice and needed our EHR to support this strategy. We had a lot of clinical workflow variance based on our customization," says Campbell. The CNIO role was critical to support practice through technology optimization and standard workflow development.

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**Susan Campbell, SVP
& System CNO, Advocate
Health Care**

“When I arrived three years ago, there were no formal nursing leadership positions at the system level. Now we have Kristen sitting at the table with senior nursing leaders across the system to help shape our nursing strategy and to ensure we get the most from our technology investment,” she says.

Corporate gravitas for nursing’s voice

Hagerman says as health systems consolidate into ever-larger entities, the CNIO title and nursing generally become more significant in governance.

“Due to Advocate’s size and complexity, it’s an enormous undertaking to standardize care. I felt it was important that the role of CNIO report up through the system nursing structure with strong ties to IT in order to be successful. We wanted to make sure practice was a key driver of any technology implementation with a focus on standard tools and workflows,” says Campbell.

“I have been fortunate in my career to report directly to various C-suite leaders such as CFO, CIO, CMIO, COO and CNE,” says Hagerman. “I took the CNIO

job at Advocate specifically because it would be under the leadership of the system CNO, and that the clinical informatics department report up through the organization’s clinical arm. This would help drive nursing-focused IT initiatives, as well as ensure an end-user-focused support model for our nurses and providers.”

Campbell was equally adamant the title should be CNIO and not, say, director of nursing information. “I was very deliberate about that. Without the title and prestige I would have struggled to get someone of Kristen’s caliber.”

Top strategies for 2017

CNIO Hagerman’s first priority for 2017 is to optimize and standardize nursing documentation within Advocate’s EHR, which she says has been customized over many years.

“We will be focusing on simplifying documentation content, creating new system design to improve navigation, and provide an overall positive end-user experience. Today, our nurses are struggling with the ability to quickly ‘tell the patient story’ and have relevant meaningful clinical data at their fingertips. The overall goal is decrease the time nurses spend documenting in the EHR, allowing them to spend more time at the bedside,” says Hagerman.

“Our approach is to ensure that nursing practice drives technology decision making. We were very successful last year as nursing practice partnered with clinical informatics and education to lead our Interdisciplinary Plans of Care initiative,” she notes.

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A second 2017 strategy is to standardize and improve Advocate’s patient-throughput process, which like the EHR is riddled with local customization. “We’re looking at technology, practice and workflow. Instead of having eight interfaces, we’ll have one. We are applying robust analytics to view the entire organization and be able to target specific bottlenecks.”

The art of the possible

Campbell says nursing’s approach is to take advantage of opportunities presented. “The organization was reengineering the revenue cycle so we decided to leverage the opportunity to reengineer patient throughput, which otherwise might not have been our first priority.”

A third priority for the year is to create a unified clinical communications system for nurses and physicians. “We have multiple ways of communicating, so streamlining the platform is a priority. We’re looking at texting and more complex ways with mobile technology,” says Hagerman.

While Advocate does not plan to jettison its nurse-call system, it does need to develop an overall strategy for multiple communication modes, some of whose functionality overlaps. Advocate is testing out new nursing communication tools at three sites which use smart-room technology, including smart phones.

Banner Health

Banner Health is a Phoenix-based health system with 29 hospitals and more than 47,000 employees



Banner Health.



Barbara LaBranche,
CNIO, Banner Health

in seven states. A 29-year veteran of Banner, [Barbara LaBranche](#) has witnessed the organization’s explosive growth and maturation, including creation of the CNIO position three years ago when she was offered the job. Previously senior director of informatics design and usability, she says her CNIO responsibilities cover “anything to do with the EHR that’s not physician-related,” including nursing, respiratory and physical therapy and pharmacy.

LaBranche’s design-and-usability team includes 15 clinical informaticists and serves as the liaison between clinical users and IT, focusing on EHR content and workflow.

As CNIO, LaBranche, who was named an [“EHR Game Changer”](#) by Health Data Management, reports to Twila Burdick, VP for organizational performance, and helps develop EHR strategy and assess its operational impact on the organization, especially in the acute setting—but more and more on longitudinal care. She’s responsible for what goes into the EHR including, for example, nursing documentation for which she is leading a streamlining initiative. “We’re trying to keep documentation to a minimum.”

A big strategic focus is on early EHR adoption, which for an HIT leader like Banner has turned out to be a double-edged sword, according to Burdick.

“Many years ago we began customizing our EHR because it was pretty rudimentary,” says LaBranche. “Now we have a complicated EHR. So we’re working with our vendor Cerner’s recommendations to upgrade forms and flowsheets to current software versions. As CNIO I focus a lot on workflow, how people use tools in their daily routine. I also serve on a team reviewing new technologies and how they impact clinicians.”

Need to upgrade

Burdick notes that as EHR vendors have evolved to deliver more clinical content and workflows, “Our ability to upgrade to the next version is sometimes affected by decisions made several years earlier, making taking those upgrades a complicated process.”

Banner’s enterprise approach to quality improvement drove the CNIO’s emergence. “A key reason for creating Barb’s role within my scope was because Banner’s approach to quality is all about clinical reliability—across the organization in any care setting. We’re heavily reliant on informatics expertise working closely with process engineers and others to help design the tools that support the delivery of reliable care after our Clinical Consensus Groups have defined what care should be delivered. That’s why reporting to me was important,” she says.



Banner Health.



Twila Burdick, VP,
Organizational
Performance, Banner
Health





LaBranche was already functioning at a high level to align nursing care with technology—but needed to be viewed as a senior executive in order to help lead corporate strategy. “Sometimes titles matter,” says Burdick. “Creating the CNIO role enabled her

to be part of the right conversations and information exchange internally as well as externally.”

LaBranche adds, “In this organization it was important to acknowledge with whom I would be working. We have a CMIO, but more nurses use the EHR than physicians. ‘Nursing Matters’ became a rallying cry.” This shouldn’t be surprising given that of Banner’s 47,000 employees nearly 20,000 are nurses.

2017 strategies

Banner’s informatics strategies for 2017 start with achieving an integrated medical record. “A lot of our strategies,” she says, “have to do with improving the longitudinal record for seamless use across the enterprise, including doctors’ offices. If we get that right it helps us in population health, patient registries and Stage 3 of Meaningful Use.”

In that same vein, Banner is implementing a new patient portal in 2107 that is better integrated with the EHR to improve communication with patients and consumers. “We had a third-party vendor for our patient portal and it was messy, very clunky. So we’re converting to Cerner’s portal, another move to standardize on the same product,” says LaBranche.

“A strategic theme for next year is integration,” says Burdick, noting that Banner has been replacing a separate ambulatory vendor with Cerner. She recalls how LaBranche and her counterpart CMIO performed a skit for the Banner board that conveyed the value of integration partly by mocking the lack of integration in “the old days.”

Banner’s need for integration is immediate: It is still assimilating the University of Arizona Medical Center which it acquired in 2014. “We have two facilities and many clinics in Tucson that are Epic clients moving to Banner’s version of Cerner,” says Burdick. “Integration helps us so much with clinical reliability—and that’s across the continuum in hospitals, ambulatory or consumer spheres. Our clinical consensus groups set clinical standards that are built into CDS and other areas of workflow. Barb and her team make sure the workflow is correct across the continuum.”

The order sets stop here

That’s integration with a capital “I.” Other areas of focus for 2017: integrating biomedical devices—vital signs, ventilators and IV pumps—with the EHR.

“We use one platform,” says LaBranche. “We don’t build order sets differently for each hospital. It’s become an expectation for this organization. Any group standardizing a care service develops a care plan, creates order sets and alerts and designs reporting mechanisms. It’s the culture. It’s not a big battle anymore.”

Burdick says having a single IT platform makes the CNIO role even more important for the organization. “Alignment is so important to get right.”

For the CNIO to achieve alignment via a standard IT platform requires collaboration, but also the ability to say no to custom tweaks to the EHR, says LaBranche. “I can speak very highly of my team. Sometimes the answer is ‘That’s a great idea but it’s not likely to happen.’ I’m always surprised when I hear that rules and alerts are for other people. ‘I don’t need the reminders and alerts but those people do.’”

Texas Health Resources

Although Mary Beth Mitchell is the chief nursing information officer (CNIO) at Arlington, Texas-

“I’m always surprised when I hear that rules and alerts are for other people. I don’t need the reminders and alerts but those people do.”

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Finally, here is a website that brings together nursing-informatics professionals under one “umbrella” organization: <http://www.allianceni.org/>





based Texas Health Resources, she is quick to note *informatics* is her focus and that the *information* in her title is a vestige of ‘earlier days’—five or six years—ago when informatics was a subset of IT. “Lots of traditional informatics programs reside in IT. We’re really trying to approach informatics as a separate discipline, although we work closely with IT.”

She was hired as CNIO six years ago and has been working in informatics since 1998. “When Texas Health created the CNIO role it was really brand new,” she says.

As CNIO, Mitchell reports to Ferdinand Velasco, MD, chief health information officer (CHIO) at Texas Health. “Some organizations have a CNIO and that’s it, but we’re so large that a single CNIO can’t be



everywhere so we built a nursing-informatics team,” he says.



Ferdinand Velasco, MD, CHIO, Texas Health Resources

“It’s natural for us to have a reporting relationship as my own role has changed. Fourteen years ago I was the organization’s first CMIO focusing first on the EHR. When I started at Texas Health, informatics was very much in its infancy and was more IT-driven. We did not think about nursing or medical operations. As our own organization has matured, my role changed to CHIO over

medical informatics, nursing informatics, data analytics and clinical business intelligence. That’s when Mary Beth began reporting to me with continued dotted-line reporting to the CNO.”

A small-but-influential informatics team

Texas Health is a large and complex organization serving north Texas with 29 hospitals both owned and affiliated, 23,000 employees and 7,500 nurses. As CNIO, Mitchell supports 17 hospitals primarily using the Epic EHR, although like many health systems Texas Health is still in the process of fully integrating Epic as some applications like Lab and ADT are still other vendor products.

Given Texas Health’s size, Mitchell has a relatively small informatics team—five certified nursing

informaticists who, like her, operate out of corporate headquarters. “My role is primarily as an influencer of strategic direction, to support and enhance clinical care and improve outcomes. I’m the clinical voice with IT and the technical voice with nursing. The goal is to advance the use of technology by nursing.”

That means helping nurses better manage documentation as well as adopt new technology like IV pumps and ventilators. “Technology is so tied into care today.



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They can’t not use the computer because it’s inextricably entwined with the care process. How do we advance clinical practice using technology? That’s what’s important to me,” says Mitchell.

She serves as a peer on the Texas Health CNO council to facilitate system-wide improvement in nursing care. Although her nursing-informatics team also works out of corporate offices, they work some with physicians, understand clinical workflow and help implement adoption of new technology like handheld mobile devices. “We go hospital by hospital determining the kind of technology that’s best for nursing, and how it’s to be used, assisting with developing training and the initial adoption.”



Mary Beth Mitchell, CNIO, Texas Health Resources

Clinical workgroups foster collaboration

Mitchell has created eight clinical work groups that meet virtually every month. Each is led by an informatics-team member and includes 15-to-20 people representing departments like the ED, med/surg, OB and critical care to make decisions regarding EHR optimization. Another 30-person nursing informatics council (NIC), also led by an informaticist with representatives from every hospital, and other non-nursing disciplines such as respiratory therapy and pharmacy, meets face-to-face every month.

“The clinical workgroups have allowed informatics to work closely with clinicians and have been very well received,” she says. Texas Health shone in two recent Magnet visits partly because staff mentioned the clinical work groups and how they made them



feel engaged, and how nursing informatics is part of shared governance. “Nurses really feel like they have a role in shaping the EHR, which is especially important because so much of a nurse’s time is spent on the EHR in documentation. That’s most gratifying.” Nurses serving on the work groups and NI Council are really supported by their CNOs and Nursing Leadership, since their time involved in these committees is paid for by their hospitals.

“We’ve moved beyond the point where the EHR is ‘the thing’ to where ‘the thing’ is safety, quality and efficiency supported by the EHR.”

A large-scale project led by the CNIO involved integration of 10,000 IV pumps into the EHR—a PMO project run through IT—that will allow bidirectional information flow: from the EHR to fulfill a physician’s order and from the pump to

input readings in the EHR. Even though there was an IT project manager, one of Mitchell’s nursing informaticists was the clinical lead and managed all clinical aspects of the project, which took almost two years to plan and deploy across 14 hospitals.

“Beyond the nitty gritty of EHR/device integration, Mary Beth and her informatics team had to sell the concept to get executive buy-in, including presenting at quality and safety meetings and other executive leadership meetings,” says Velasco. “They play a key role in executive buy-in by measuring value realization for these projects.”

Aligning informatics with strategic initiatives

Another CNIO-led project involved upgrading the patient portal, which allows inpatients to access their records and review educational materials on tablets. Mitchell’s job was to provide top-level support, obtain a budget, train nurses and provide IT support.

These initiatives must be aligned with Texas Health’s strategic initiatives. “A key component of what I do is to determine how to manage informatics within the organization’s vision, goals and objectives,” she says. Standardization across the enterprise is a key strategy that involves nursing informatics in numerous initiatives, including, for example, infection prevention. In this case, the CNIO and her team work closely with Texas Health’s infection-control department to help the organization migrate

from old software modules to the newer Epic-based platform.

In terms of IT strategies for 2017, the CNIO is guided by three principles. “There are three things I care about,” says Mitchell. “One is improving patient safety. Two, realizing the value of nursing care through analytics. And, three, making nurses more efficient.”

Much of that effort is focused on EHR optimization. “We’re at the point that we don’t spend a lot of time implementing EHRs. We’ve moved beyond the point where the EHR is ‘the thing’ to where ‘the thing’ is safety, quality and efficiency supported by the EHR,” she says.

Mobility, analytics and messaging

Texas Health’s CNIO 2017 priority list includes a focus on increasing mobility, especially the provision of handheld mobile devices to consumers.

A second priority for 2017 is to increase the use of predictive analytics in the EHR, including development of clear and direct clinician messaging like “Your patient has x, y or z condition.” This initiative combines advanced technology with traditional tools like MEWS, the Modified Early Warning System tool that identifies patients with declining conditions through vital-signs trending.

“We want to create more dashboards and easier displays. We do a lot of operational reporting but need to expand it for clinical care,” notes Mitchell. Finally, a fourth CNIO focus for Texas Health in 2017 is to standardize evidence-based care across the entire organization. “How do we use technology to assist us in standardizing care?” she asks.

None of this occurs unless it’s aligned with corporate strategy, says Velasco. “We don’t come up with our own priorities. We’re about to transition from our old 10-year plan to the next 10 years and we’re very attentive to the cascade of priorities from the CEO and the board.”

Conclusion

The emergence of the CNIO as a senior clinical informatics leader who works closely with CHIOs, CNOs, CMIOs and SVPs of performance improvement reflects the continuing transformation of healthcare into an IT-enabled, data-driven and population-health-focused environment. CNIOs signal that standardization, evidence-based medicine and EHR design and usability are non-negotiable. With their fluency in the languages that matter to value-based care—clinical, IT and executive collaboration—CNIOs prove that nursing matters.





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