Scottsdale Institute 2017 Chief Medical Information Officers Fall Summit

The CMIO's Emerging Role in Enterprise Leadership

October 26–27, 2017 | Chicago, IL

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Executive Summary

Seventeen Chief Medical Information Officers (CMIOs) of leading health systems and Scottsdale Institute member organizations gathered in Chicago to share best practices and lessons learned regarding change management, clinical systems optimization, training and strategies to avoid clinician burnout amid increasing EMR documentation requests. This report captures their discussion and shared insights.

CHIEF MEDICAL INFORMATION OFFICERS FALL SUMMIT PARTICIPANTS

- **David Classen MD**, CMIO, Pascal Metrics and Associate Professor of Medicine, University of Utah (SI Board Member)
- **Nicholas Desai MD**, CMIO, Houston Methodist
- **David Hall MD**, Senior Vice President, CMIO, OSF Healthcare
- **Julie Hollberg MD**, CMIO, Emory University Hospital and Associate Professor, Division of Hospital Medicine, Emory University
- **Stanley Huff MD**, CMIO, Intermountain Healthcare
- **Michael Kramer MD**, Former SVP, Chief Quality Officer, Spectrum Health
- **Michele Lauria MD**, System CMIO and VP, Eastern Maine Health Systems
- **David Liebovitz MD**, CMIO, University of Chicago Medicine and Associate Professor, Clinical Medicine, University of Chicago
- **David Mohr MD**, VP, Clinical Informatics, Sentara Healthcare
- **Thomas Moran MD**, VP, CMIO, Northwestern Memorial Healthcare
- **Brett Oliver MD**, CMIO, Baptist Healthcare System
- **Luis Saldana, MD**, CMIO, Texas Health Resources
- **Louise Schottstaedt MD**, CMIO, Centura Health
- **Irshad Siddiqui MD**, CMIO, West Florida Division, Adventist Health System
- **Jeffrey Sunshine MD, PhD**, CMIO, University Hospitals Health System, Professor of Radiology, Neurology & Neurosurgery, Case Western Reserve University, and Vice Chair, Radiology, CWRU and UH
- **Mary Ann Turley DO**, CMIO, HonorHealth
- **Alan Weiss MD**, CMIO, Ambulatory, Memorial Hermann Health System

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Introduction

Chief Medical Information Officers from 17 prominent Scottsdale Institute health systems convened in Chicago on Oct. 26-27, 2017 to discuss the "The CMIO's Emerging Role in Enterprise Leadership," addressing the CMIO as a change agent, as a leader of EMR optimization and mastery, as a driver of clinical excellence across the enterprise and as a key executive to address clinician burnout. The objective of the Summit was to foster collaboration and learning from shared best practices, insights and challenges. Key topics addressed and themes that emerged are summarized in this report:

- The CMIO role today: change agent, missionary and translator
- Enabling CMIOs as solution-ists
- Alleviating clinician burnout
- Shifting from training to continuous learning
- Repositioning EMR value with "soft communications" and storytelling
- Common problem areas and shared solutions
- Driving clinical excellence
- Readying the next generation of CMIOs: developing future physician leaders

Actionable insights and tips are called out throughout the report.

Change Agent, Missionary and Translator: the CMIO Role Today

With hospitals consolidating, regulations increasing and patient-care processes becoming more complex and demanding, the role of the CMIO is expanding in reach, influence and importance. The role as change agent is key, and CMIOs must demonstrate abilities as "missionaries," "translators" and even "sales people" to successfully drive change.

"We must be missionaries for what we do. No one knows the clinician perspective like we do. We need to better sell ourselves and be proactive with our CMIO 'sales pitch': Let us help you get the value from the infrastructure and technology investments we have made and let us help make sure this works at the physician-patient level," advocated Dr. Thomas Moran, VP, CMIO, Northwestern Memorial Healthcare.

Five years ago, "we were regarded as IT, so there are transitional and translational issues at play as we work to proactively reposition our roles within growing health systems," noted Dr. Irshad Siddiqui, CMIO, West Florida

Adventist HEALTH SYSTEM

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Division, Adventist Health System. Dr. Jeffrey Sunshine, CMIO of University Hospitals Health System, agreed that the translator role remains key to CMIO effectiveness: "We need to effectively communicate to clinicians the 'whats' and 'whys' of EMR systems and technical demands. At the same time, we need to translate clinical needs to IT teams. We need to speak both languages." Dr. Michele Lauria, CMIO at Eastern Maine Health Systems, pointed out that this translator role has become even more complex due to new quality and regulatory requirements.

"IT is commonly regarded as a thing that causes annoyance. We need to be the thing that brings value back and break the IT mentality that often surrounds our work, as it has a different status level in perception," summarized Dr. Moran of Northwestern Memorial. "We are not IT, but we make IT better," he ad-libbed, quoting from a popular BASF ad campaign from the 1990's that brought chuckles around the table.

ENABLING CMIOS AS SOLUTION-ISTS

For better or worse, CMIOs are regularly on the firing line for frustration about EMRs and clinical systems. Yet, many noted they too often are charged with tackling tasks that haven't been sufficiently thought through before being handed over to CMIO or IT teams. CMIOs are solution-ists, yet many requests often come to the CMIO with solutions already in mind. "How are you reframing the 'asks' that come to the CMIO function to be more solution-driven?" probed session moderator Dr. Mark Snyder of Deloitte. Asking, "what is it you are trying to solve?" can come to an entirely different set of solutions than a requestor's preconceived notions.

Dr. Alan Weiss, CMIO, Ambulatory at Memorial Hermann, shared an illustrative example. "Our IT team is often challenged to fix issues which are themselves ill defined, both clinically and operationally. Certainly everyone wants to improve sepsis mortality, as an example, but how do we flag it clinically inside the EMR to trigger something to happen, and what is that 'something?' Too often users come to us with a problem lacking a clearly defined technical solution." Northwestern Memorial's Dr. Moran concurred that this happens at his institution as well: "Many come to us with a solution that they've already decided on and try to force it into our systems. We need to flip this process. Ideally, we should be collecting desired outcomes. Then, we can come up with solutions that meet the need and that, [more] importantly, work at the physician-patient level."

MEMORIAL HERMANN

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– **Alan Weiss, MD**, CMIO, Ambulatory Services, Memorial Hermann Health System

> **TIP:** Dr. Louise Schottstaedt, CMIO of Centura Health, reported how processes at her organization have become more solution-focused. "We changed our work request processes and forms. We now ask up front, 'What is the clinical problem you are trying to solve?' and 'What needs to be better at the end of this project?' We intentionally don't let requestors talk about things like specific alerts or specific order sets. We are aiming to move from an 'I need an alert' conversation to a solution-ing exercise. They think they want to fix one specific thing, but the 'What are you trying to solve for?' is a more meaningful conversation. It also often helps them understand that, while informatics can be a tool, it can't be a problem-solver on its own."

ALLEVIATING CLINICIAN BURNOUT

A core element of a CMIO's role as a change agent is also to focus on alleviating clinician burnout. "There is not one more click or one more screen we can throw at providers unless we can remove or simplify a burden. How are you working to alleviate EMR exhaustion and burnout?" questioned Deloitte's Dr. Snyder as he kicked off the conversation on this topic. Many shared tips to address burnout, while others cautioned that EMRs should not shoulder the full blame for burnout.

SPECTRUM HEALTH

"Meaningful Use, ICD-10, electronic quality measures; these are not the fault of the EMR or the CMIO. We are not responsible for this burden. We can be part of the solution to streamline and simplify, but we need resources. We need to be able to support physicians."

– **J. Michael Kramer, MD**, Former SVP, Chief Quality Officer, Spectrum Health

"Even if we fully 'fix' EMRs, there will still be burnout. It's not the EMR, it's the way the health system functions. It's the workflows that commonly get blamed on the EMR, but in reality it is the larger ecosystem, the payers, etc. Yet, it is simpler and easier to blame technology, because that's what you interact with every day. It's a blame game, and we need to be aware that we can have impact on only a part of it," argued Dr. Weiss, Memorial Hermann. Dr. Michael Kramer, who recently departed Spectrum Health and is incoming System CMIO at OhioHealth, concurred, "Meaningful Use, ICD-10, electronic quality measures; these are not the fault of the EMR or the CMIO. We are not responsible for this burden. We can be part of the solution to streamline and simplify, but we need resources. We need to be able to support physicians."

Blame game aside however, CMIOs can and should play a key role today in simplifying demands on physicians and alleviating burnout. "Burnout has become an important cost issue," noted Eastern Maine's Dr. Lauria. "We've had doctors leaving medicine because they need to stay so many extra hours each night doing documentation. Every time someone leaves it costs us money, so it's worth investing to protect our physicians from burnout."

The usability of EMRs—or lack thereof—remains a contributor to clinician complaints and burnout. "When compared to EMRs, there is no app out there today that is so fundamentally not focused on the user action. Vendors need to be better at usability," said Dr. Sunshine of University Hospitals. Dr. David Mohr, Sentara Healthcare's VP of Clinical Informatics, agreed: "When EMR vendors say optimization, they mean add more features. They put more on the screen, but we need to simplify and reduce options. We need better filters." "We need to find pleasure in using it," summarized Dr. Lauria of Eastern Maine, reporting with reserved optimism that EMR-vendor Cerner has hired a well-regarded gaming specialist to address this very issue.

PASCAL METRICS

"We are working with the American Association for the Advancement of Medical Instrumentation (AAMI) on developing a new set of standards on health IT and EMR usability based on human-factors science. AAMI would like to create voluntary standards based on best practices that can enhance EMR capabilities."

– **David Classen, MD**, CMIO, Pascal Metrics, Associate Professor of Medicine, University of Utah, and SI Board Member

Enhanced inclusion of human-factors science can also positively impact usability of the EMR and other health IT systems, noted Dr. David Classen, CMIO of PascalMetrics and Scottsdale Institute Board Member. "We are working with the American Association for the Advancement of Medical Instrumentation (AAMI) on developing a new set of standards on health IT and EMR usability based on human-factors science. AAMI would like to create voluntary standards based on best practices that can enhance EMR capabilities." Dr. Classen previewed several standards and guidance documents—coming soon from AAMI and the FDA—in the area of digital health and patient and clinical decision support software and referenced these websites: http://www.aami.org/standards/ and https://www.fda.gov/medicaldevices/digitalhealth/.

ALLEVIATING BURNOUT: CMIO INSIDER INSIGHTS/TIPS FROM THE TRENCHES

> **Capture the cost of the burdens to the health system**: "We look at the cost on the physician side to help determine who can take on some of the work in a more effective model. For example, we looked at the expected discharge-date data in our EMR. That pop-up screen comes up at admission, and you could answer it or pass the screen. We calculated time to enter data into the screen, and time to exit the screen. We have 125,000 admissions per year, and determined that responding to this screen was $3.5 million of doctors' time. Collecting the expected discharge date is important for workflow planning, but the cost helped illustrate that this data point did not need to be entered by our physicians. We ultimately took it out from the doctor's responsibility to enter." (Dr. Thomas Moran, Northwestern Memorial Healthcare)

> **Involve the people in the workflow in the decision-making**: "Many of my issues today are because we didn't adjust the workflow or didn't get it out to the right people or didn't have the right people in the room when we set it up. Barriers to workflow are burdens to clinicians and barriers to care. " (Dr. Mary Ann Turley, HonorHealth)

- **Partner with HR or wellness officer:** "At Spectrum Health, the CMO, experience officer, and HR took on burnout together. We put together a system-wide approach that offered counseling, educational programs and other interventions. We even included the spouses of our providers. It was a significant undertaking, but how can you be a physician leader and not address burnout?" (Dr. Michael Kramer, formerly at Spectrum Health)
- **Keep practicing**: "My associate CMIO and my physician informatics team still practice at our health system. They are visible on the floors. They naturally gain acceptance and confer credibility. It was difficult for our administration to understand why my team needs to do both, but being able to be in our frontline physicians' shoes is key for us to be able to understand what they are confronting, what they are frustrated by and what we can do as CMIOs to help." (Dr. Nicholas Desai, Houston Methodist)
- **Don't underestimate the value of simple fixes: "**We did a double upgrade with all sorts of changes, updates, bells and whistles. Yet, the thing we got the most appreciation for was one of the simplest changes: we eliminated the number of steps to connect to the PMP for physicians who prescribe narcotics. This was a simple fix, but it meant so much to our clinicians that we were able to ease the way." (Dr. Mary Ann Turley, HonorHealth)
- **Take political action:** "Many of our problems are due to bad legislation and bad regulation. Meaningful Use was a mistake. There are laws and regulations that impede innovation and cause unnecessary burdens for clinicians. I am convinced that some of our challenges can only be addressed by making better laws and regulations. What is our obligation to try to improve legislation and regulation? Is it worth some fraction of our time to get involved on Capitol Hill and try to change things at their source? The biggest parts of our problems won't have technical solutions if they are driven by problematic regulations. What are our obligations in improving regulations and legislation that have such huge impacts on frontline physicians?" (Dr. Stanley Huff, Intermountain Healthcare) Many around the table responded that they were involved with their health system's government-affairs office and collaborated on submitting comments to relevant government policies.

Intermountain℠ Healthcare

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– **Stanley Huff, MD**, CMIO, Intermountain Healthcare

Continuous Learning, Not EMR Training

Continuous education of providers is essential to fully optimize an EMR and derive from it the most value. Yet, it is also one of the greatest challenges. Recasting the importance of EMR mastery is key, and many felt this effort will require revamping to the approach to and vocabulary around training. "We need to move from training to learning. We train dogs. EMR mastery and EMR optimization are about learning and education. Training feels negative. It is easy to ask to get out of training, but hard to ask to get out of learning," said Dr. Moran of Northwestern Memorial.

"We need to cast the EMR as a valuable tool in a clinician's tool chest," agreed Eastern Maine's Dr. Lauria. "If physicians regarded the EMR as a helpful tool, they would be willing to invest their time in it. A surgeon will willingly go from a scalpel to robotic surgery and take the time to continuously learn and keep up-to-date on skills they regard as valuable." To this end, Dr. Lauria and her team at EMHS have strategically and intentionally positioned EMR mastery "as a program of continuous learning to promote effective, efficient use of the EMR to meet the needs of the patients and the health system." Baptist Healthcare System's CMIO Dr. Brett Oliver agreed: "The EMR is an essential clinical competency to see patients. Our education and training programs must align around that."

EMHS
Access to Quality Healthcare SM

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EMR MASTERY: CMIO INSIDER INSIGHTS/TIPS FROM THE TRENCHES

> **Recruit a ringleader**: "We made training mandatory and informed clinicians they would be placed on administrative suspension if they didn't complete training. We collaborated informally with one of our top cardiac surgeons. He had to do the training, along with clinicians who were many years his junior. By picking a leading physician at our institution and showing that even he was completing the training, that helped support the notion that everyone had to do it. There were no exceptions. If he did it, how could others ask to opt out?" (Dr. Thomas Moran, Northwestern Memorial)

> **Identify and foster Super Users:** "We've created Super User networks, then we used social media collaboration tools to build a network so people could ask and answer questions among themselves. We have 300+ Super-Users and ask that they make it their responsibility to read our newsletters and share the updates. The best trainers are often other providers. We just needed to be careful not to burn those folks out." (Dr. Michael Kramer, formerly of Spectrum Health)

- **Deploy a mobile training team**: "We have training labs we do on a monthly basis and rotate around the city at our eight hospital locations. We launched a dedicated physician support team who can meet physicians on their unit or in their office. The solution isn't a class physicians need to attend. That is a burden. We can come to our clinicians and deploy trainers to address specific topics." (Dr. Nicholas Desai, Houston Methodist)
- **Incentivize and Genius Bar**: "We offered training with CME and also set some milestones that, if they hit, they could get compensation. In terms of improving the convenience of training, we've set up an Apple-style 'Genius Bar' in the doctors' lounge. Physicians can walk over with their coffee and quickly access EMR information and advice." (Dr. Thomas Moran, Northwestern Memorial)
- **Understand the EMR life cycle:** "We created an EMR life cycle. Like the fruit fly, there are patterns that repeat themselves: design, implementation, optimization and continuous education. Formal education and continuous learning are ongoing." (Dr. Michele Lauria, EMHS) "Education at go-live takes one format when clinicians are new to the system, but after they've done it for months and upgrades have been released, how do you get back out there—especially when interest has waned? There are different education needs and learning modules for that phase of the EMR life cycle." (Dr. Mary Ann Turley, HonorHealth)

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– **MaryAnn Turley, DO**, CMIO, HonorHealth

- **Embed personalization within EMR education:** "We embed personalization within our EMR education offerings. We have clinicians log in while they are there for training, build their templates and then go back to lessons. This is how we are promoting personalization." (Dr. Nicholas Desai, Houston Methodist)
- **Get creative**: "I know of one health system which took an aggressive approach to improving physician note quality. Every week, people could submit the worst notes they could find to the chief of staff. The worst one was then highlighted in his weekly newsletter (without listing its author). The note's author had to meet with the chief of staff and the winning submitter received a $50 gift card. This focus by leadership on a critical issue, illustrating the errors transparently and holding people accountable was very motivating." (Dr. Alan Weiss, Memorial Hermann)

Repositioning with "Soft Communications" and Storytelling

To motivate training, CMIOs agreed the EMR needs to be positioned as a critical tool to improve the practice of medicine in the 21st century. This will take a deliberate shift in communications and outreach. Newsletters, emails and alert updates can reach target audiences, but they often fall flat, go unread or are ignored. The value of storytelling and "soft communications" became a focus during conversations around communication strategies.

University Hospitals

"We've built some amazing things, but I remain concerned that we don't get that message out. We've updated, upgraded and led change management. But many times the value of these changes goes unnoticed. It is a library of greatness that nobody knows about."

– **Jeffrey Sunshine, MD, PhD**, CMIO, University Hospitals Health System

"We've built some amazing things, but I remain concerned that we don't get that message out. We've updated, upgraded and led change management. But many times the value of these changes goes unnoticed. It is a library of greatness that nobody knows about," commented Dr. Jeffrey Sunshine, University Hospitals. "The value of many of the things we do in the system is questionably evident to frontline providers. We need to change that. We need to better illustrate the anticipated impacts and improvements to workflow or to patient care," agreed Dr. David Liebovitz, CMIO, University of Chicago Medicine, kicking off a conversation about how the value of EMR and EMR updates can be better communicated.

AT THE FOREFRONT UChicago Medicine

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COMMUNICATIONS: CMIO INSIDER INSIGHTS/TIPS FROM THE TRENCHES

> **Familiarize yourself with soft communication**: Dr. David Liebovitz recommended Rich Karlgaard's book *The Soft Edge*, which discusses the three sides of a business triangle: the strategic base, the hard edge (traditional operations/systems) and the "soft edge" (trust, teams, emotion and story).

> **Put "We're here to make things better for you" front and center:** "We're now working to emphasize that any changes we've made are ultimately to make things better/easier. We show our clinicians how and why. We are putting that filter on all of our communications.

If the stated imperative to change is a regulatory measure, it is not inspiring. If the change can help simplify or speed or collect meaningful data, that is more motivating." (Dr. Jeffrey Sunshine, University Hospitals)

> **Collaborate with communications or marketing teams:** "We directly engaged with our chief marketing officer to develop a multi-prong strategy. Now, every other week we disseminate an EMR-optimization newsletter, including content points on (a) What we've just done/new changes, (b) What we are working on that will go live shortly, and (c) hints, tips and links to videos that highlight key EMR features." (Dr. David Liebovitz, University of Chicago Medicine)

EMORY HEALTHCARE

"We aim to acknowledge in our communications that, 'We heard your complaints about X, so we implemented Y.' We strive to connect the dots so that clinicians understand that we're implementing changes to address their frustrations."

– **Julie Hollberg, MD**, CMIO, Emory University Hospital

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> **Have a custom communication for different audiences:** "Ideally, we need a communications plan for every population we want to reach, because ambulatory physicians are different from hospitalists, primary care are different from surgeons, etc." (Dr. Nicholas Desai, Houston Methodist)

> **Take out the technical**: "We are working to eliminate jargon. A recent email went out communicating that 'The med-list lives at the person level.' What the heck does that mean to a frontline provider? We now strive to remove technical jargon from updates and put it in words a provider or medical assistant can understand." (Dr. Alan Weiss, Memorial Hermann)

> **Classify levels of change and the communications for each level**: "We had developed a system to categorize changes. Level 1 (minimal change that did not even require newsletter update) to level 4 (change that required communications together with at-the-elbow classroom training). By having clear communications standards for change, we could streamline how to communicate to 180+ practices." (Dr. Michael Kramer, formerly of Spectrum Health)

Common Problem Areas, Shared Solutions

Several of the most common and frustrating EMR problem areas—such as problem list (the focus of a Scottsdale Institute CMIO Work Group), order sets and use of scribes—were discussed, with helpful insights shared.

SCRIBES

CMIOs had differing opinions on the use of medical scribes to enter data into EMR systems. Some deployed scribes successfully, others less so. For several attendees, the very issue of scribes was regarded as controversial. There are personnel costs to consider, and many expressed concern that by relying on a scribe, physicians would not have the motivation to become proficient on the EMR. Experiences were shared:

- "With some of our physicians who are older but who will still be practicing for another five to 10 years, I am fine with bringing in scribes to support them, especially if they were slow adopters to begin with. I want to keep these doctors happy and practicing, as some of my senior physicians are the reason people come to my organization." (Dr. Nicholas Desai, Houston Methodist)
- "We were early adopters of scribes in our ED, and have seen that scribes helped improve physician satisfaction with the EMR. Scribes off-load some of the cognitive burden and let our physicians focus on the patient rather than the notes. We use a local company and the ED pays for it." (Dr. Luis Saldana, Texas Health Resources). Saldana pointed at several studies that support the use of scribes (*Dr. Saldana provided these reference articles regarding scribes:* **http://www.annfammed.org/content/15/5/427** *and this systematic review of several other papers on scribes with a comprehensive look at efficiency, physician satisfaction, productivity impacts as well as impact on patient-clinical interaction impact in various care settings,* **http://www.jabfm.org/content/28/3/371.full**).

Texas Health Resources®

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– **Luis Saldana, MD**, CMIO, Texas Health Resources

Others have considered alternatives to scribes, such as enabling voice recognition for dictation or deploying rolling computer stations in convenient areas to make entry and updates as easy and convenient as possible. "There was a group of physicians who wanted scribes so they could be completely hands-free of the keyboard, and we didn't feel that was appropriate. On the other hand, the millennials in our practice want to know why we are even talking about scribes, but we need to constantly remind them to look at the patient," said Dr. Nicholas Desai, Houston Methodist, to laughter and groans of shared experience.

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– **Nicholas Desai**, CMIO, Houston Methodist

ORDER SETS

While order sets are widely regarded as helpful in clinical decision support and improving processes of care, they have also created their own unique CMIO frustrations. To be useful and usable, order sets require clinical leadership, planning and ongoing maintenance. CMIOs shared insights on how they are tackling order-set challenges:

> **Remove those that aren't regularly used:** "We went from 575 order sets to 313, and soon we'll be back at 500, as there will be many that are never touched. Many times they are asked for, never used, and then we remove them." (Dr. Thomas Moran, Northwestern Memorial)

> **Establish an order set team:** "We established ownership for order sets—a clinician decision group. If the order set hadn't been used in five years, we removed it. If it hasn't been updated in three years, we take it to the committee for review. If clinicians want to keep the order set, we make them do the work to ensure it's valuable and used. We went from 1,000 to a much smaller number." (Dr. Michele Lauria, Eastern Maine)

> **Convene advisory councils:** "We have organized a multi-disciplinary order set advisory council with physicians, nurses, pharmacists and administrators." (Dr. David Hall, OSF Healthcare.)

> **Connect clinical, informatics and quality:** "We put together a clinical team and informatics team to work collaboratively on clinical decision support and order sets. Every order set developed was an interaction with quality and informatics. The quality team had the resources to do the analytics." (Dr. David Mohr, Sentara Healthcare)

"We have organized a multi-disciplinary order set advisory council with physicians, nurses, pharmacists and administrators."

– **David Hall, MD**, CMIO, OSF Healthcare

Driving Clinical Excellence across the Enterprise

The governance, structure and alignment of CMIO teams varied across the diverse health systems represented at the Summit. Some report to IS, others to medical, some to both, some to operations. Similarly, the disparate needs and challenges of ambulatory vs. inpatient was a recurring conversation theme, with some health systems even having separate CMIOs and/or separate implementation teams across the two. Whatever the governance structure, involvement of physician leadership was identified as a key success factor to translating EMR changes/updates to clinical outcomes and clinical excellence.

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"We have a good system-wide quality-improvement process that enables system-wide vetting. We have physician advisory groups that stand for the practicing physician. If a quality initiative comes forward we work it through these advisory groups. There will always be regulatory issues we have to comply with, but we can always show that physician advisory boards have vetted difficult issues and decisions. The frontline physicians know they have been represented."

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CMIO INSIDER INSIGHTS/TIPS FROM THE TRENCHES

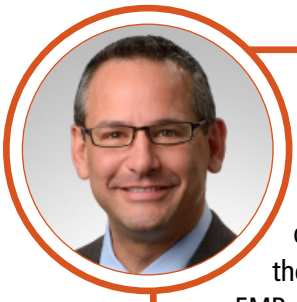
- **Link order sets to outcomes:** "The accountability for order sets is not informatics. Order sets are built to drive an outcome. We are trying to work with knowledge management and the clinical improvement team to better understand the outcomes of our order sets and map them to clinical leadership teams. This more concretely links order sets to clinical excellence." (Dr. Michael Kramer, formerly Spectrum Health)
- **Be creative about building a network within your network.** "We quickly went from 12 to 17 hospitals and transitioned to Epic. I went to the CMOs at the individual hospital level and requested a 'piece' of a physician in their hospital to serve as a medical director of informatics."

– **Louise Schottstaedt, MD**, CMIO, Centura Health

Centura Health®

went from 12 to 17 hospitals and transitioned to Epic. I went to the CMOs at the individual hospital level and requested a 'piece' of a physician in their hospital to serve as a medical director of informatics," said Dr. Louise Schottstaedt, Centura Health. "Those physicians are key assets, and the major drivers of design for usability for our physician users. At the system level the budget is kept very lean. This structure is somewhat like the diocese and the local church, but we found a way to distribute the cost and cobbled together a solution that is quite effective."

- **Take responsibility for usability.** "CMIOs do have a responsibility for usability above and beyond what the EMR systems currently provide. I asked my entire team to read a book called *Don't Make Me Think: A Common Sense Approach to Web Usability* by Steve Krug. The book is focused on principles of intuitive navigation and information design, but in practice it even helped us think through how we write an email or draft a PowerPoint, as well as configure components to a solution," said Dr. Michael Kramer, formerly Spectrum Health.
- **Build in "elasticity" for unplanned requests:** "On our team's architecture side, we allocate work for the year, divided against ambulatory, inpatient, finance etc. Priorities get set via a scoring tool—with inputs from our committees—and each optimization project gets a bucket of hours. Then we've created a bucket of 'elasticity hours' to cover the new projects that creep in, and we have a governance structure to decide what requests officially get added. This enables us to move forward with clinically important—but initially, unplanned—updates." (Dr. David Hall, OSF Healthcare)
- **Avoid a check-the-box mentality to implementation of regulations:** "I don't let my groups talk about checking boxes when it comes to regulations. We know the regs. We know there is data we need to collect. Yet our priority remains serving the right care at the right time to the right person. It takes a lot of reframing for the quality folks on our team. I remind them their role in our group is to not let us stray from getting the reportable data in the system, but we don't make that the primary focus of the system. The ultimate focus is to get the right care for the right patient, instead of about getting the right report to regulatory bodies or other stakeholders. For our doctors and nurses, that has become a guiding principle." (Dr. Louise Schottstaedt, Centura Health)



Northwestern Memorial HealthCare

"We have a lot of stuff in our enterprise data warehouse. No one knows what's there. For all the talk about 'optimization,' EMR-driven informatics are worthless if they are not being used to improve care, metrics and/or revenue. They are worthless if they are not driving clinical excellence."

– **Thomas Moran, MD**, VP and CMIO, Northwestern Memorial

"Demonstrating the usefulness of EMR technology is key," commented Dr. Thomas Moran, Northwestern Medicine, who compared health systems' EMRs and enterprise data warehouses to a "Raiders of the Lost Ark" warehouse. "We have a lot of stuff in it. No one knows what's there. For all the talk about 'optimization,' EMR-driven informatics are worthless

if they are not being used to improve care, metrics and/or revenue. They are worthless if they are not driving clinical excellence." Dr. Brett Oliver, CMIO, Baptist Healthcare, agreed, summarizing: "Our most valuable asset is not only our data, but also how we use and apply it."

BAPTIST HEALTH

"Our most valuable asset is not only our data, but also how we use and apply it."

– **Brett Oliver, MD**, CMIO, Baptist Healthcare System

Developing Future Leaders: Readying the Next Generation of CMIOs

The Summit concluded with CMIOs reflecting on the key qualities that will be needed for the next generation of CMIOs to be successful leaders and change agents in the future. Key attributes identified for today's frontline physicians who may be tomorrow's CMIOs and executive leaders include:

- **Participative leader:** Serve as a "guide" but let other individuals and teams lead the process to get to the most appropriate solution.
- **Patience and patients**: Clinical care is often about quick resolutions and 7-minute appointments; CMIO projects can take years to implement. Yet it is through the CMIO's direct patient-care experience that CMIO credibility will be built and maintained.
- **Results oriented**: Be able to marry the EMR to outcomes and impacts.
- **Focus on the provider-patient experience:** Have the courage to remind business management that patients are never simply commodities.
- **Inclusive**: Be open to processes and alternative pathways to give physicians and clinicians a consultative voice.
- **Navigator:** Develop the ability to work across a complex matrix of corporate and clinical leadership, manage relationships and break down silos.
- **Effective:** Become priority setters and managers.
- **Resourceful:** Demonstrate stewardship of scant resources.
- **Wearer of "multiple hats"**: Develop the ability to work with and communicate effectively with the clinician community, health system business leadership and IT.
- **Ability to place the "person" within the technology framework**. At the end of the day, the EMR is about people: patient care and clinician excellence. Technology is just a tool to facilitate and direct human-centered behavior using computer-generated workflows. CMIOs of today and tomorrow shouldn't replace one for the other. They go hand in hand, and achieving that balance will likely be a perennial challenge for CMIO leaders today and in the future.

Conclusion

CMIOs stand at the intersection of clinicians and health information technology (HIT). The emerging role of the CMIO is one of rapid expansion and increased responsibility across clinical and enterprise systems. The CMIO role that initially grew from IT roots is now a key leader, change agent, solution-ist, burnout alleviator and missionary for clinical excellence. CMIOs speak the language of the clinician to IT and translate the IT/EMR capabilities to clinicians. CMIOs marry EMR analytics to clinical excellence for patients and providers and to corporate outcomes for health-system business leaders. By bringing clinical perspective and patient-care involvement to HIT, CMIOs make healthcare better.

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