The CMIO’s Role in 2015

Same Title, Different Job?
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Executive Summary

Challenge

The title “Chief Medical Information Officer” has been in use for over 20 years. The position was originally created to address the need for a senior physician/administrator to serve as a liaison between the provider organization’s IT department and its practicing physicians. But the business of providing care has changed dramatically in recent years, driven by forces including health care reform and the Meaningful Use program. We undertook the current interview-based research to learn how these forces have changed the role and responsibilities of the CMIO in 2015.

Analysis

The Meaningful Use program has driven an extraordinary rate of EHR adoption in the past five years, and many large provider organizations have completed basic EMR implementation. The CMIO role, accordingly, has shifted from a having a primary focus on EMR implementation to encompass a broader range of roles and responsibilities. Clinical knowledge management remains an essential CMIO responsibility, but new areas of responsibility at some organizations include analytics and population health management leadership.

Almost all of the CMIOs interviewed for this report came from backgrounds in physician leadership; none were computer scientists. People skills, continued clinical practice (or substantial clinical experience in the past), an interest in process design and improvement, and a commitment to continual learning in the field of informatics were identified by interviewees as essential requirements for a CMIO.

The early success of CMIOs with responsibilities in new areas suggests that it would be a mistake for organizational leaders to pigeon hole the CMIO role and consider it too narrowly. They should instead begin to consider these physician executives for a broad range of responsibilities, in keeping with the growing demands for sophisticated clinical and informatics knowledge in support of population health management and analytics-based initiatives.

Action Items

- Organizations recruiting for the CMIO position should place leadership experience and historical relations with physician colleagues above technical knowledge when considering candidates’ qualifications.
- Support your CMIO’s efforts to remain current within the field of clinical informatics through attendance at conferences, AMIA and AMDIS membership and meeting attendance.
- Consider involving your CMIO in organizational strategic planning and population health management strategy development. Clinical informatics considerations are becoming critical to sound strategy.
- Large organizations should consider hiring one or more associate CMIOs to handle the large and ongoing volume of EMR-related work, such as optimization and new implementations.
Introduction

The title “Chief Medical Information Officer” has been in use for over 20 years. Originally created as a senior liaison between a provider organization’s IT department and their practicing physicians, the job of the CMIO has evolved in different directions over the past two decades. While liaison functions remain important, today’s CMIOs are increasingly engaged in executive-level strategy discussions and assuming responsibility for strategic organizational initiatives.

As always in health care, the proviso holds, “If you've seen one hospital, you’ve seen one hospital.” Similarly, no two CMIO’s jobs are alike. We undertook our current research to gain insight into the range of different kinds of work that CMIOs are doing across our membership—to define the “bell curve” of CMIO responsibilities in 2015. We interviewed 15 CMIOs of Advisory Board Health Care IT Advisor member organizations between late December 2014 and mid-February 2015. The organizations ranged in size from a provider with a single hub hospital and an ambulatory network, to multistate providers with 30-plus hospitals, to the United States Air Force.

Basics and Background

The CMIOs interviewed had been in their current positions for between two years and over twenty. All were practicing clinicians in direct patient care fields (i.e., not radiologists, pathologists, etc.). Most had trained in internal medicine, some in family practice, and one in surgery. All of them had certain characteristics and experiences in common.

Practitioners, Not Propeller Heads

There were no “computer geeks” among the interviewees. The surgeon comes closest. He began what would lead to his CMIO career by producing computerized rounding lists for his colleagues. He went on to produce computerized presentations (before the advent of PowerPoint). His interest in effective use of computer-based tools developed and he began to work with the CIO on clinical system implementations, acting as a clinical liaison and assisting with system configuration and adoption. His role evolved into that of CMIO over several years.

Physician Leadership Experience

Most of the interviewees came to be involved in IT after years as practicing clinicians and physician leaders. They had emerged as clinical and/or operational leaders first, for example as heads of hospitalist groups or regional practices. One CMIO who had been a practicing physician for over two decades only recently ceased caring for patients; the others continue to care for patients part-time. Many stated that continuing to care for patients helps them maintain credibility with their physician peers—in particular, as a fellow user of the EMR who must wrestle with the same usability issues that other physicians deal with every day.

One CMIO came from a fairly unique background, and her story illustrates the importance of interpersonal and leadership abilities over technical background. She had been a physical education major in college and was working as a personal trainer when a relative offered to pay the cost of the MCAT if she would take it. She went on to become a Chief Resident in her internal medicine program, and was then asked to start a clinic and a hospitalist program at a community hospital. Frustrations with
administrative issues led her to become more involved in medical staff leadership, which she did for 10 years before becoming a physician champion for their EMR rollout.

Another interviewee became interested in IT while doing pay-for-performance work. He began incorporating predictive analytics into his personal office practice. He designed workflow such that a nurse would see each patient at the start of the visit, obtain vital signs, and ask a series of health and lifestyle questions. While he was performing the examination the nurses would use a computerized tool to calculate the patient’s risks for heart disease, diabetes, and stroke; he would then give each patient customized risk counseling before the visit’s end. He was recruited to be a physician liaison during the organization’s EMR rollout and was later appointed as CMIO.

Informatics Education

All of the interviewees were primarily self-educated in informatics, with on-the-job training supplemented by coursework. Several had done master’s program coursework but not pursued degrees. Many had attended AMIA 10 x 10 courses. All indicated that they attended conferences such as AMIA and did a lot of reading and peer networking.

Informatics Certification

A new feature in the CMIO world is the availability of specialty board certification in medical informatics. Most of those interviewed had pursued and achieved board certification; those who hadn’t were older and well established in the field, and felt that the credential would not be of significant value to them in their careers.

Most (including those who opted out of certification) felt that the development of formal training and certification was, overall, good for the field, and that certification will become a must-have qualification a decade from now. Some wondered what would happen if future medical school graduates start to select purely non-clinical informatics training pathways. All agreed that while such physicians may find important niches in IT organizations, in the absence of significant clinical experience they will not be qualified to perform the work of the CMIO as a physician executive since they will lack essential experience with the workflows around patient care, as well as credibility with their peers.

Several CMIOs were critical of the utility of the examination for determining one’s capabilities as an informatics leader. One interviewee who took and passed the examination found the questions extremely oversimplified; another remarked that the feedback he received was that his weakest performance was in the change management area—and this was a CMIO who had overseen multiple successful EMR implementations in large organizations. Several acknowledged that the examination is new, and they expect it will improve over time.

Several interviewees chose to obtain formal training in process improvement/Lean methodologies as they were drawn into leadership positions in operations improvement roles, either within IT or, more commonly, focused on multidisciplinary clinical processes.

Reporting Relationships

To Whom Does the CMIO Report?

One of the most frequently asked questions about the CMIO position is: To whom should the CMIO report? Reporting relationships will necessarily vary between organizations and the people in the different executive seats, and there is no absolute best solution.¹ The CMIO’s job is clinical and operational (and increasingly, strategic) first and technological second, so it is logical for the role to report to a clinician executive

rather than an IT executive. In the current research we found that the most common reporting relationship is to the Chief Medical Officer (CMO), with a dotted line report to the Chief Information Officer (CIO).

However, there were a variety of other structures as well. Four report to the CIO (one of whom is himself a physician). One reports to the Chief Quality Officer. Two report to the Chief Operating Officer. One reports jointly with his CIO peer to the organization’s Executive Vice President. One CMIO had the CIO reporting to him for a period of time. Several mentioned that they are seeing more of their IT-minded colleagues transitioning from CMIO to CIO.

The interviewees agreed that, in any case, having collaborative working relationships with the CMO, CIO, Chief Quality Officer, and Chief Nursing Officer is far more important to their effectiveness than the specific reporting structure.

A significant number of CMIOs described having physicians reporting to or partnered with them. These other physician leaders—called medical directors for IT, associate CMIOs, and other titles—are taking on more of the ongoing focused EMR implementation and optimization activities, which frees the CMIO to work on a broader range of strategic organizational objectives, such as population health management, analytics, and general strategic planning. Some interviewees at large, multistate organizations have multiple regional CMIOs reporting to them.

CMIO Responsibilities

The interviewees had several important responsibilities in common; others varied greatly across organizations.

The CMIO role originated with the need for an effective leadership-level liaison between practicing physicians and the IT organization, and that role remains an essential element of most CMIOs’ jobs. The day-to-day activities of the liaison vary depending primarily on the organization’s place in its EMR journey.

During selection and implementation of the EMR, the CMIO is responsible for developing a culture of clinician engagement and investment in clinical IT, and with assisting IT with the configuration of clinician- and workflow-friendly applications. Genuine clinician engagement during design and implementation is needed to ensure the proper consideration of workflow, information requirements, and change management required for successful EMR use. One interviewee’s organization is about to start an implementation; he expects, not surprisingly, to be spending most of his time on implementation over the next two years, and the remainder on the ongoing management of the legacy EMR pending go-live with the new.

Today, many large provider organizations are past the “hump” of enterprise EMR implementation. Of the organizations represented in this study, all but one had completed implementation between one and fifteen years ago. It should be emphasized, however, that the EMR journey of implementation and optimization is never-ending. One CMIO states that in the wake of a very rapid, multiregional EMR rollout, he spends a disproportionate amount of his time “looking backwards” and repairing the damage of an overly aggressive implementation.

Even in the best of circumstances, however, most organizations continue to implement new modules or roll out existing EMR systems to newly acquired physician practices; the CMIO usually remains engaged in these activities to some extent. The amount of time that CMIOs and their physician IT colleagues spend on EMR work post-implementation depends on many variables, including time since implementation, implementation size and scope, EMR vendor, and other factors.

The ubiquity of the EMR has brought with it a new responsibility for provider organizations: managing the clinical knowledge that is being built into clinical applications, such as order sets and clinical decision support rules. Left to itself, computer code remains relatively static; but clinical knowledge evolves constantly. Updating this built-in knowledge is essential, and ownership of the process by clinicians, enabled by IT, is frequently the charge of the CMIO.

Most of those interviewed indicated that they manage clinical knowledge using the tools of the EMR plus simple Microsoft Office-type applications. One CMIO reported his organization tried one of the commercially available CKM products. But he found that the automated collaboration functions of the application cut down on valuable time spent on in-person and phone-based conversations so the product was abandoned. Many had developed structures – mostly outside of IT – for assigning and tracking ownership and updates to knowledge content.

Many of the CMIOs interviewed have budgets and staff management responsibilities. These include informatics (medical and sometimes nursing) and user training for clinical systems. Most have partial responsibility for Meaningful Use compliance as well as Physician Quality Reporting System (PQRS) and other clinical quality reporting areas. Several CMIOs had responsibility for their organizations’ medical library. A few interviewees had responsibility for portions of their organization’s clinical applications portfolio.

One CMIO’s portfolio of responsibilities includes Health Information Management. When the interviewer remarked that this was unusual, the CMIO replied that it made perfect sense: HIM has responsibility for the legal medical record, including documentation quality and clinical documentation improvement efforts. He is leading the selection and implementation process for speech recognition and natural language processing products, and sees these as essential to the production of quality discrete data for future analytics efforts.

Several CMIOs have taken leadership responsibility for analytics—some at the enterprise level, others around more focused initiatives such as specific disease management programs. As one interviewee pointed out, there is logic to this structure as most physicians are trained in and comfortable working with large amounts of clinical data. One CMIO is leading his organization’s enterprise business intelligence work; he acquired the role by pressing his fellow executives for a more robust organizational effort to the point where they put him in charge of it. Another is leading his organization’s data governance initiative.

Others CMIOs have become deeply involved in aspects of analytics such as metric development, vendor selection, and disease registry management. Finally, several see the potential future value of analytics but are at this point most focused on the near-term objective of convincing their clinician peers that recording discrete data in the appropriate fields is of value.
Most of the CMIOs we interviewed have gotten involved to some degree in organizational population health and value-based care initiatives. Some became involved initially through managing value-based care initiatives in their own medical groups.

One interviewee indicated that his first experience with value over volume work (with attendant smaller patient volumes in his practice) was accomplished through conscientious use of important—and billable—services for preventive care such as bone density studies, mammography, and outpatient laboratory tests. Another has been involved at the group practice level in practice redesign, including adapting schedules and resources to accommodate the access goals of the patient-centered medical home, such as longer hours and weekend hours. He is now working on determining how he can be an optimal partner for population health efforts more broadly.

Several CMIOs lead their organizations’ population health analytics work, such as claims-based risk stratification, enterprise data warehouse data aggregation efforts, and analysis of utilization and spending. They have participated in population health vendor selection to accomplish some of these activities. Another CMIO, however, is happy to leave this business to the organization’s payer partner because, in his words, “I don’t believe in claims data” [as an accurate indicator of clinical activity]. Thus, attitudes and approaches to population management vary within the group!

This is one area of population health management on which many of the CMIOs are expending much time and effort. Promoting patient portal adoption—by patients, but first by the practitioners and office staff—was a common topic of discussion in our interviews. Another area of interest is developing secure systems to handle patient and provider text messaging around patient care, and to promote health and wellness programs.

The range of challenges faced by CMIOs is as broad as the spectrum of job responsibilities, but some challenges are nearly universal. First among these is dealing with frustrated physicians in the post-EMR setting. It is well recognized that, for numerous reasons, not all physicians return (at least in the short- to-medium-term) to full pre-go live productivity levels, and many of those who do so spend an extra hour or two per day at the office to accomplish this.3

In these situations CMIOs and their delegates must spend time listening to their colleagues’ frustrations, relaying issues back to the technical team, retraining users, experimenting with different workflows and configurations, and sometimes simply acknowledging that the system is not yet able to accommodate the user’s needs in an efficient manner. In settings where a large number of users are dissatisfied, the CMIO often feels, as one interviewee put it, like “the press secretary for an unpopular administration.”

Another frequently encountered challenge and source of frustration for CMIOs is having to cope with individuals and groups who launch significant projects that depend upon IT support without first consulting the CMIO or anyone from IT. This situation is hardly

unique to CMIOs, but they are frequently called upon to address issues that arise when
the users are physicians or other clinicians.

Executive Politics and Refighting Past Battles

A frequently voiced frustration among CMIOs is the increasingly political nature of their
job. This was the case even though most CMIOs came into their roles following years of
experience in leadership; none of those interviewed come across as naïve regarding the
realities of organizational politics.

Many CMIOs, even in post-EMR implementation organizations, described having to
repeatedly educate or argue the value proposition of the EMR to non-clinician
executives, particularly in situations where organizational change or acquisitions result in
significant executive turnover. One interviewee found it paradoxical that in an age of
Meaningful Use incentives and a shift toward value-based care, so many executives still
fail to understand that the EMR is vital strategic asset.

Mission Creep

Several CMIOs who had long tenures with their organizations described having become,
in effect, victims of their own success: they had become so well known that multiple
parties routinely involved them in numerous projects and meetings. These individuals
had to go through a process of withdrawing themselves from the resulting pattern of
over-commitment as their role became more strategic.

Summary

The CMIO role today, as seen in the descriptions by those interviewed for this study, is
as varied as ever. Elements of the old liaison model remain, but there are also a variety
of new responsibilities. The stage of the provider organization’s EMR maturity is
probably the most significant determinant of how the CMIO and his or her IT physician
colleagues focus their efforts. Clinical knowledge management will likely remain a
central responsibility for CMIOs well into the future. New areas of CMIO responsibility at
some organizations include analytics and population health management leadership.

The early success of CMIOs with responsibilities in these new areas, as judged by their
descriptions of their work and the broader range of responsibilities they are assuming,
suggests that it would be a mistake for organizational leaders to pigeonhole the CMIO
role and consider it too narrowly. They should instead begin to consider these physician
executives for a broad range of responsibilities, in keeping with the growing demands for
sophisticated clinical knowledge in support of population health management and
analytics-based initiatives.

Action Items

• Organizations recruiting for the CMIO position should place leadership experience
  and historical relations with physician colleagues above technical knowledge when
  considering candidates’ qualifications. In addition, look for someone who has
  practiced or is still practicing and can also think strategically.

• Consider informatics certification as a useful credential when considering CMIO
  candidates with little experience in the role. It probably is not a must-have credential
  at the present, but this will likely change in the near future.
• Support your CMIO’s efforts to remain current with the field of clinical informatics through attendance at conferences, AMIA and AMDIS membership and meeting attendance, and work toward informatics certification.

• If you are not already doing so, consider involving your CMIO in organizational strategic planning and population health management strategy development.

• In large organizations, it may be wise to hire one or more associate CMIOs to handle the large and ongoing volume of EMR-related work such as optimization and new implementations. This can free up the senior physician IT executive for involvement in broader strategic issues.