Improving the Health of a Population: The Journey from CMIO to Informatics Executive

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HIMSS is a global advisor and thought leader supporting the transformation of the health ecosystem through information and technology.

As a mission-driven non-profit, HIMSS offers a unique depth and breadth of expertise in health innovation, public policy, workforce development, research and analytics to advise global leaders, stakeholders and influencers on best practices in health information and technology.

With more than 350 employees, HIMSS has operations in:
North America | Asia Pacific | Europe | Latin America | Middle East | United Kingdom
Vision
To realize the full health potential of every human, everywhere.

Mission
Reform the global health ecosystem through the power of information and technology.
About AMDIS

• Founded in 1997, the Association of Medical Directors of Information Systems has been the premier professional organization for physicians interested in and responsible for healthcare information technology.

• AMDIS Members are the thought leaders, decision makers and opinion influencers dedicated to advancing the field of Applied Medical Informatics and thereby improving the practice of medicine.

• With our symposia, blogs, on-line forum, journal, presentations, sponsored and co-sponsored programs, and networking opportunities, AMDIS truly is the home for the “connected” CMIO.
Welcome

Harm Scherpbier, MD, MS
HIMSS Physician Committee Member
CMIO, HealthShareExchange
Moderator
For over 25 years, my role has been to use technology to support the Quadruple Aim even before it had that moniker.

I have held leadership positions in Safety-net organizations (Alameda Health System), Health Maintenance Organizations (Kaiser Permanente) and academic institutions (Loma Linda University) before joining Sutter Health.

As Chairman of AMDIS I have been the Director of the annual AMDIS meeting since 1997. I have also collaborated for many years with HIMSS including being a past president of the HIMSS Physician Community.

I received my Medical Degree from the Robert Wood Johnson School of Medicine practiced Pediatric Urology for 25 years.

Howard Landa, MD

VP of clinical Informatics and EHR, Sutter Health
Love/hate relationship.

• The stethoscope was initially seen a heretic innovation coming between the patient and their physician.
• Exploratory Laparotomy → cross-sectional imaging → Interventional radiology and laparoscopy
• Nothing compared to the opposition that arose from CPOE, CDS and EHRs.
• Despite the resistance that still exists, few would want to do away with these technologies...but everyone wants them better.
The Field of Medical Informatics at the Start

- The intersection of information science, medicine and health care.
- It deals with the resources, devices and methods required to optimize the acquisition, storage, retrieval and use of information in health and biomedicine.
- Health informatics tools include not only computers but also clinical guidelines, formal medical terminologies, and information and communication systems.
- Wagner (1949) established the first informatics organization in Germany.
- 1950s: The development of expert systems such as MYCIN and INTERNIST-I. In 1965, the NLM→MEDLINE and MEDLARS.
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Brief History Medical Informatics (‘60s-’70s)

- Morris Collen, developed computerized systems (Kaiser) to automate aspects of multi-phased health checkups in the 1960s.
- Lockheed Martin + El Camino hospital (2964) → Technicon (TDS),
- El Camino went live in 1973 with what is touted as the first computerized physician order entry (CPOE) system
- Homer Warner: Dept. of MI at the University of Utah in 1968.
- Larry Weed developed the “Problem Oriented Medical Record.”
  - His “Problem List” was adapted as an MU requirement. He also helped
  - PROMIS (1969), a computerized medical information system
“Our goal was to solve three problems: (1) to eliminate the logistical problems of the paper records by making clinical data immediately available to authorized users wherever they are – no more unavailable or undecipherable clinical records; (2) to reduce the work of clinical bookkeeping required to manage patients – no more missed diagnoses when laboratory evidence shouts its existence, no more forgetting about required preventive care; (3) to make the informational ‘gold’ in the medical record accessible to clinical, epidemiological, outcomes and management research.”
Clinical Informatics Subspecialty

• We leverage technology to support Healthcare Organizations in the delivery of the Quadruple aim: Quality/Safety; Efficiency, Patient Satisfaction; Clinical Satisfaction.

• We collaborate with other health care and information technology professionals

• Transform health care by analyzing, designing and implementing HIT Solutions
  • Accurate and complete Information, Healthcare Operations Support, Clinical Decision Support, Data and Analytics, Individual and population health outcomes

• Clinical Informatics was recognized as a Subspeciality in 2011.

• The clinical informatics subspecialty board was first administered in Oct. 2013.
Yesterday and Today

Today’s (Informatics) Challenges

- Healthcare Financial Challenges
  - The Affordable Care Act/Medicaid Expansion
  - MACRA/MIPS/ACO
- The transition from FFS to Value-Based Care
- Clinician Burnout
Us Common Mortals and Our Tools

In the beginning we were “tinkerers.”

- Known as “CompUdocs,” “DataDocs,” “Computer Nerds with Stethoscopes” and worse.
- We said “Vision,” but “they” heard “Use this EMR I made in my garage.”
- Medicine got more complex, Technology more advanced, and Payers more demanding.
- Technology: “Fools Errand” and Distraction to something that was promising and foreboding.
- In the 2000s, large organizations implemented EHRs with varying degrees of success and the importance of physician leadership became apparent.
- Then, it was the best of times, it was the worst of times, it was Meaningful Use time.
- Respect: "Physician Champions" → "Medical Directors of Informatics" → CMIO/CHIO
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**Physician Champions: Pre-Informaticists:**

- **Inspired Physicians saw the benefits of technology**
  - Willy Sutton Rule-Billing systems
  - Patient lists, research, presentations, data retrieval
  - Computerized transcription = “Electronified” paper records
  - Clinical Data Repository (CDR)

- **Visionaries?**
  - TDS CPOE, Garage-grown and Homegrown organizational EHR

- **Physician Champions**
  - Liaison between Clinical Operations and Information Services
  - Physician specific workflows
  - Realistic clinical content
  - Manage change

- **The role still exists and provides value**
Early EHR goals: (1) make data available; (2) to reduce “clinical book keeping;” and (3) to make the information accessible outside direct care (McDonald).

• “The Chart” became much more then a Chart...

Patient acuity rose, payers matured and medical practice evolved to incorporate value-add workflows (Med Rec, problem list, CDS, etc.)

Revenue implications: E&M coding, ABN, patient email (HIPAA), etc.

The EHR transitioned beyond electronified paper:

• Integrate support for value add workflows
• Foster clinical communications as physician workload increased
• Electronic communication (order and result transmittal)

Other technology: Radiology and other imaging, physiologic monitoring
Medical Director of Information Systems

• First real “Informaticists”

• Still in the Liaison Role (but not the “Doctor Police!”)

• “Electronified paper” <> EHR
  – Clinician and Physician workflows
  – Leverage electronic support of workflows
  – Quality and safety enhancing tools

• Addressing data and reporting requirements (MU)

• Recognizing the value of analytics

• Early comprehension of the dichotomy of value-based vs FFS medicine

• The role also still exists and provides value.
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Modern EHRs and Evolving Practice

- Meaningful Use: the functional “Least Common Denominator” [Just click the box!]
- EHR Workflows (clinical and billing) became established
  - ADT, ICD/CPT coding, advanced CDS
- Quality reporting for CMS, for Payers, Public Health, etc.
- FFS → Value-based care support
- Population Health Management
- Triple Aim 2007 → Quadruple Aim 2014 → Burden and burnout issues

“EHRs are not the cause of burnout, but have been inadequate in their mitigation of the outside factors that create burden.”
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Medical Informatics Leadership

• “Transform health care by analyzing, designing, implementing, and evaluating information and communication systems that enhance individual and population health outcomes, improve patient care, and strengthen the clinician-patient relationship.”

  Elevator speech: The leveraging of Healthcare Information Technology in the delivery of the quadruple Aim.

• Physician engagement is identified (repetitively) as key success factor

• Technology governance is critical for the efficacious use of technology in healthcare

• The Dyad of Operations and Informatics is for creating technology governance

• Still the liaison between Operations and Information Services
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**CMIO / CHIO Role**

- **Medical Executive Leader of Informatics.**
  - *Always* a clinician and *usually* a physician

- **Historically someone who lead an EHR implementation**

- **Comprehension that go-live is the start not the end of the project**

- **Leads governance from the informatics viewpoint**
  - Intake, upgrade, expansion, integration
  - Support and alignment of organizational Initiatives
    - Mission/pillars/goals
    - Payment programs are expenses NOT revenue streams and are not truly “optional”

- **Change Management is the Stock-In-Trade of the Informatics Professional**
CMIO / CHIO Role (2)

- Aligned with clinical leadership and information services
  - Reporting relationships varied, matrixed, multidimensional
- Ambiguity is the order of the day
- EHRs, Data and Analytics: Essential for the move from FFS to value-based care
- Responsibility can extend across care continuum, potentially including the Technology of Patent Engagement, Data and Analytics, Innovation and more as the paradigms of care delivery & reimbursement evolve.
CMIO / CHIO Role (3)

- Appreciation of System-ness, Standardization and Rationalization
  - single integrated system won over Best-of-Breed
  - an appreciation of the benefits of Standardization and “Rationalization”
  - never forgetting that change management is our Stock-in-Trade

- Expanding responsibility for evolving technologies:
  - predictive analytics
  - prescriptive populations health management
  - personalized medicine, AI/ML
  - virtual care, etc.
The Medical Side of the Training vs. Informatics

• Medical school
  – We don’t know what we don’t know.

• Residency is an “Apprenticeship”
  – Small hierarchical team with clear boundaries.
  – Mastery over time with increasing responsibility with a “backstop.”
  – Selects for or develops “captain of the ship” leadership.
  – Engrained responsibility, accountability and autonomy.

• Medical training does not train you for complex, hierarchical, matrixed leadership.
Classes I missed in Med School

- Change Management
- Legal classes, in particular
- How to read the federal register
- Healthcare Economics (and the “Revenue Cycle”)
- Information Security, Databases, Virtualization and Interoperability
- Accounting and Budgeting
- Business Case Development
- Principles of Business and Technology Governance
CMIO Competencies

• Vision: Leveraging investment in clinical, financial, care management, analytics and patient engagement systems to drive value creation and realization
  • The ability to think systematically about the health system as a whole

• Change management

• Ability to work with legal services in a collaborative and thoughtful way

• Understand Healthcare Economics

• Convening multidisciplinary teams to improve care practices and processes

• Collaborating with executives to lead the convergence of quality, informatics and analytics, and operational alignment

• Leading teams of informaticists, process engineers, data analysts, content management specialists, change management experts and curriculum designs to standardize care processes

• Enabling patient and consumer engagement technology (Wellness, Chronic Dx, etc.)
Soft/Interpersonal skills

- Personally Love change
- Leadership Skills: Leadership is all about getting people to follow you
- Communication: Clear, concise, directed and appropriate
- Teamwork: This is not a job done by one person
- Adaptability: Beating your head against a wall does not make it a door…pivot or fold
- Big picture thinking
- Critical observation and problem solving
- Conflict resolution and courageous conversations
- Humility
Assets and Liabilities

- The 2 (+) letters after your name
- Dotted lines
- Influence vs authority
- Patient and population care
- Appreciation of the narrative
  - VR → NLP: Speech → Text → Data → Human processible information
- Informatics teams
- Partnership and support
- Connection to purpose/safety reflections
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**Good Judgment comes from Experience... Experience comes from Poor Judgment!**

- Our job to make HIT more intuitive
  - Because it isn’t!
- I will make up that...
  - Then validate
- Engage brain before putting mouth in gear
- Read the...
  - Contact, law, report
- Look at the...
  - Patient, document, EHR

What about the pets?

Where are you calling from?
Educational Resources

- HIMSS
- AMDIS
- AMIA
- CHIME
- Not-so-Boondoggles
- Networking
  - Medicine is the original “Open Source” entity
Take Home Messages

• The Quadruple Aim is your touchstone and Change management your Stock-in-Trade
• “I don’t know” is better then “I was wrong,” but use both!
• Lead by example
• Be bold in all sure things: “You can say that because you’re a doctor”
• Doctors are people too
• Your job is to think outside the box
• Not to decide is to decide
• Support and protect: The buck stops here
  – Nobody cries during a go-live
  – “Howard said so” & “Talk-to-Howard”
Questions?
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AMDIS Crash Course
Sunday, March 8, 8:30am – 4:30pm ET

AMDIS-HIMSS Physicians’ Executive Symposium
Monday, March 9, 8:30 – 4:30pm ET

AMDIS CMIO Roundtable
Tuesday, March 10, 10:00am – 2:00pm ET

HIMSS CMIO Roundtable and Reception
Tuesday, March 10, 4:00pm – 6:00pm ET
Thank you.

Contact Yvonne Patrick
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