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

Howard Landa, MD

VP of Clinical Informatics and EHR
Sutter Health

HIMSS

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Vision

To realize the full health potential of every human, everywhere.

Mission

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

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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.

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Welcome

Harm Scherpbier, MD, MS

HIMSS Physician Committee Member
CMIO, HealthShareExchange
Moderator

Howard Landa, MD

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- 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.

Medicine and Technology

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.

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

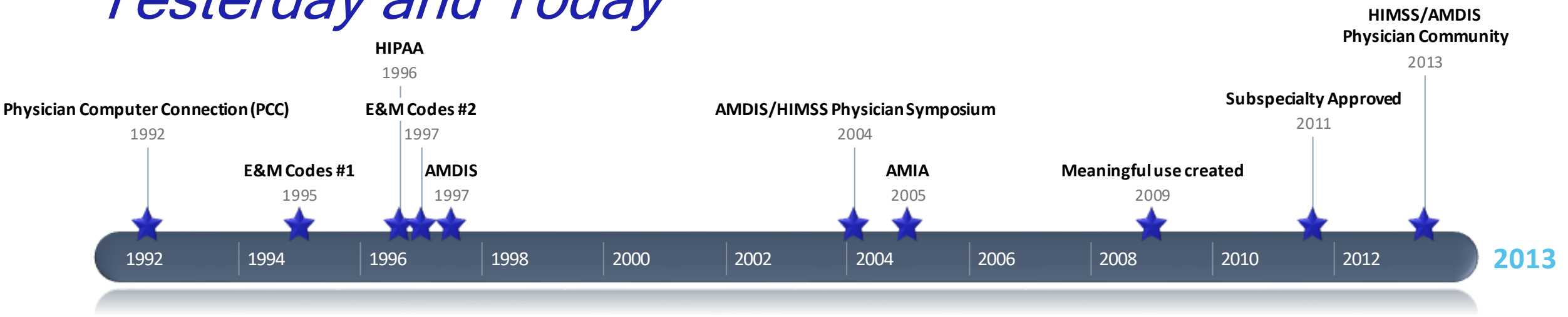
Dr. Clem McDonald

"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 book keeping 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 Subspecialty 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

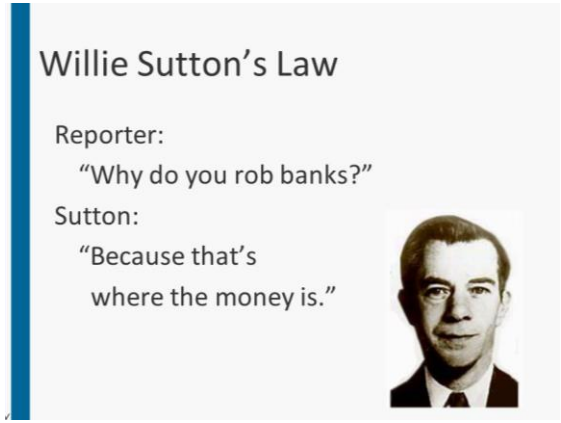
Us Common Mortals and Our Tools

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
- PATH audits ('95-98), HIPAA (1996), E&M coding (1995-97) "To Err is Human" (IOM 1999)
- 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

Physician Champions: Pre-Informaticists:

- **Inspired Physicians saw the benefits of technology**
  - Willy $utton 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***



EHRs (and Clinical Practice) in Evolution

- **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.***

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."

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

CMIO / CHIO Role

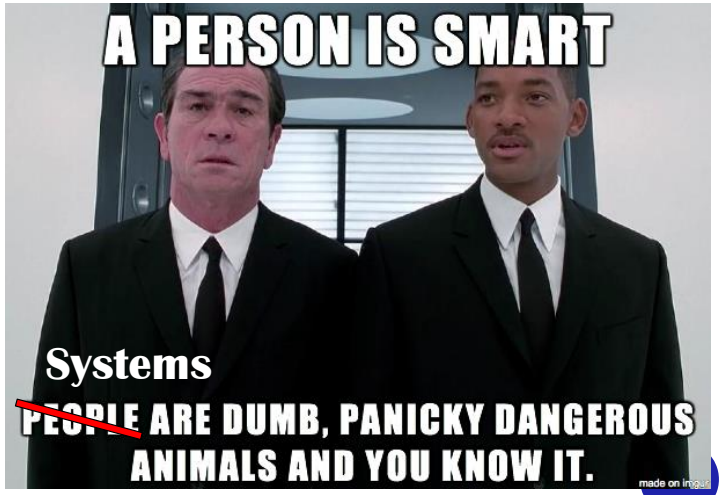
- **Medical Executive Leader of Informatics.**
  - Always a clinician and usually a physician
- **Historically someone who lead an EHR implementation**
- **Comprehension that go-live is the start not the end of the project**
- **Leads governance from the informatics viewpoint**
  - Intake, upgrade, expansion, 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**
  - Contract law, Privacy and Security Regulations, Stark Provisions
- **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**

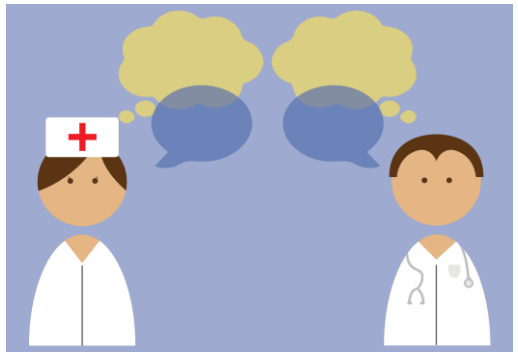
Assets and Liabilities

- **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**

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?

Save the Date

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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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