My Life as a CMIO

A Meaningful Drama of Epic Proportion with scenes from before and after…

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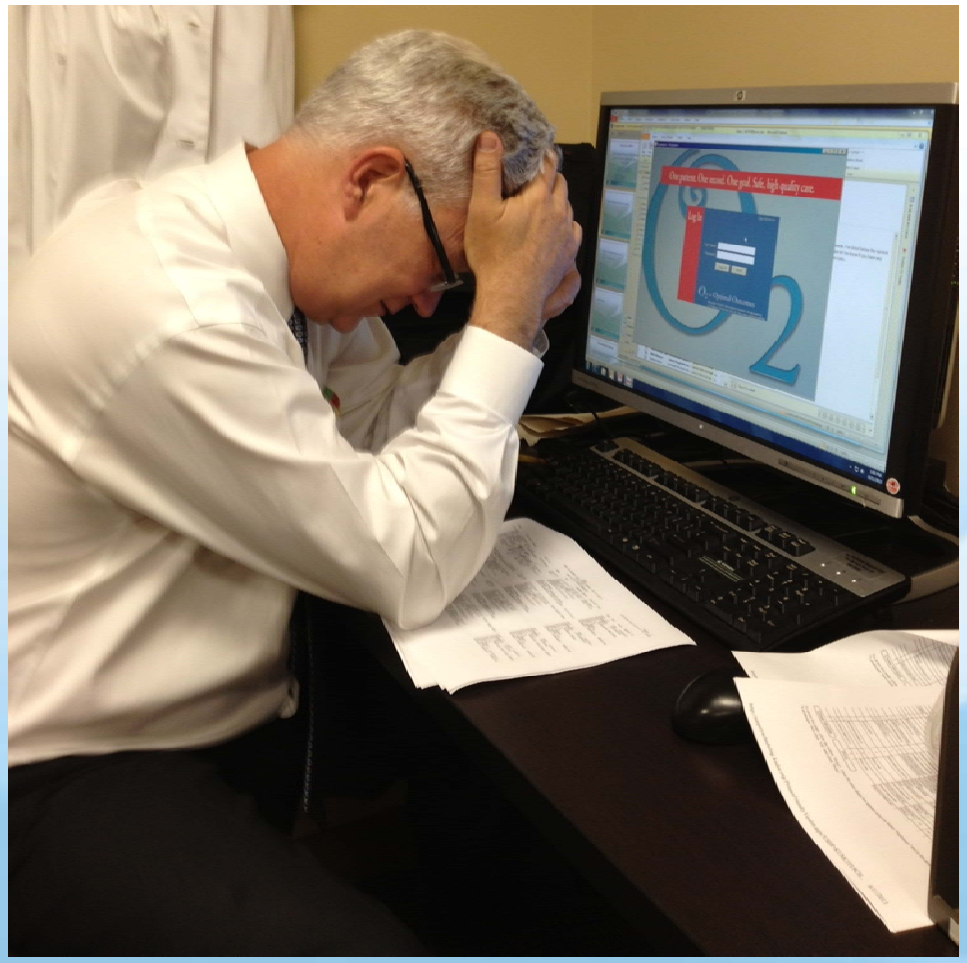
Before Meaningful Use

Dr Ator: "I'll have several decades to get people to use the problem list, and get them to respond to suggestions to do the right thing. We'll work it out together."



After stage 1 of Meaningful Use

Dr Ator: “ Listen up folks. We have to maintain the problem list, med, and allergy list and get the best discharge summary out faster than ever before. Also quite scratching those scripts on the pads….Give me that pad!! I am trashing that right now!”

Some years after Meaningful Use V

Dr Ator: "Yes Doctor Smith, is it amazing how O2 helps you take better care of your patients. And to think you used to hate the system. Telling us that you did go to school half your life to be a typist, and how the system was made for internists not surgeon, and how……"

The Current Reality

We are currently in a volume based system that slows physicians down in many cases and doesn't provide many wins for them. Most vendors are bogged down in MU rather than making the system more intuitive or efficient.

Value Based Purchasing

A model where
hospitals and other providers
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The CMIO Role at KU Med

- First in region
- 2004 - the then director sought to select a new system
  - Needing some “buy in”
- Meetings at 2pm on the same day
  - No food
  - Little physician involvement
  - Lots of complaining….
- Hospital acquired a large practice that had Logician (GE)

My Current Informatics Role

- Practice 40% - ENT surgeon

  "My people tell me"

- Informatics - bridge
  - People process to technology

Medical Director Program

- 1997
  - Physicians partnering with Hospital Counterparts
    - Big Dots - Patient Satisfaction / Mortality
  - 5 Star Goals
    - People
    - Quality
    - Service
    - Cost
    - Growth
  - Part time market based compensation - ~ $3 M annually
    - Not a hobby!

Informatics Adjunct

- 16 physicians (medical directors) in informatics
  - Ambulatory Lead, Inpatient Lead
  - ED
  - Hospitalists
  - Surgeons – Gen, Ortho, Urol, ENT
  - Ambulatory
  - Specialty
    - Cancer, Nephrology

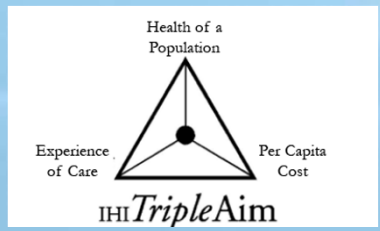
Nursing (Clinical) Informatics

- 10 RN's with education, inpatient and ambulatory roles
- Most important in CPOE
  - 5000 orderables - 800
  - 1200 paper order sets – 240
  - Complete redesign of clinical operations of hospital

Current State

Goals of HER
(According to my colleagues)

- Not merely read and find it…
- Culture lagging…
- Communication is a big part of the job
  - Vs Education….Why vs How.
  - Coordinated campaign – long term goals
- Survive and thrive in volume world
  - On way to the future….
- CDS
  - IHI Triple Aim, ACO, VBP, etc.



O2 Current State at KU

- Non big bang – Some model – non rev cycle inpt first
  - Very stable well behaved financial systems enterprise wide
- First EPIC install 2007
- 2010 Version – installed a year ago
- Completed
  - eMAR
  - CPOE
  - IP Documentation – Physician and Nurse
  - Ambulatory – all non-owned sites
  - HIMSS Level 7 except bar code

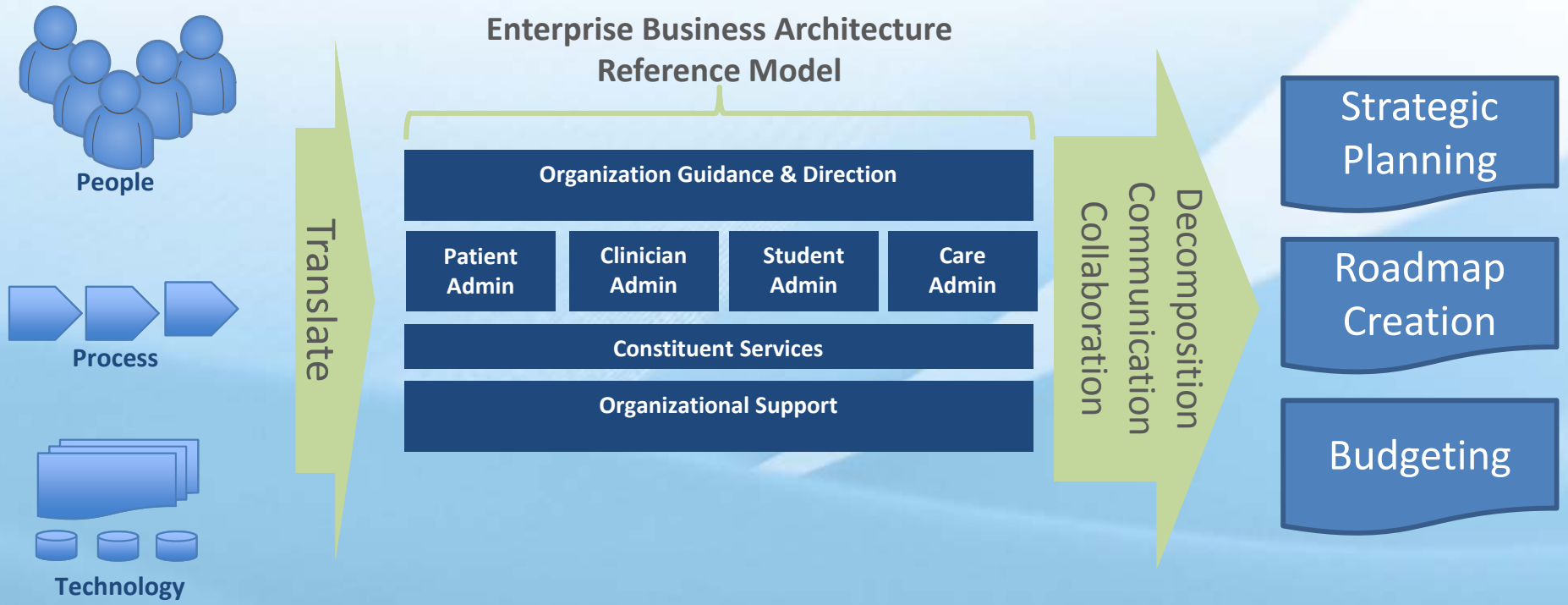
O2 Status

- Projects ahead….
  - Rev cycle/Access for enterprise – GoLive Aug 1
  - Hospital owned ambulatory – 60+ sites
  - Bar code meds
  - Optime – anesthesia
  - Maintenance
  - Optimizations

Data Warehouse Strategy

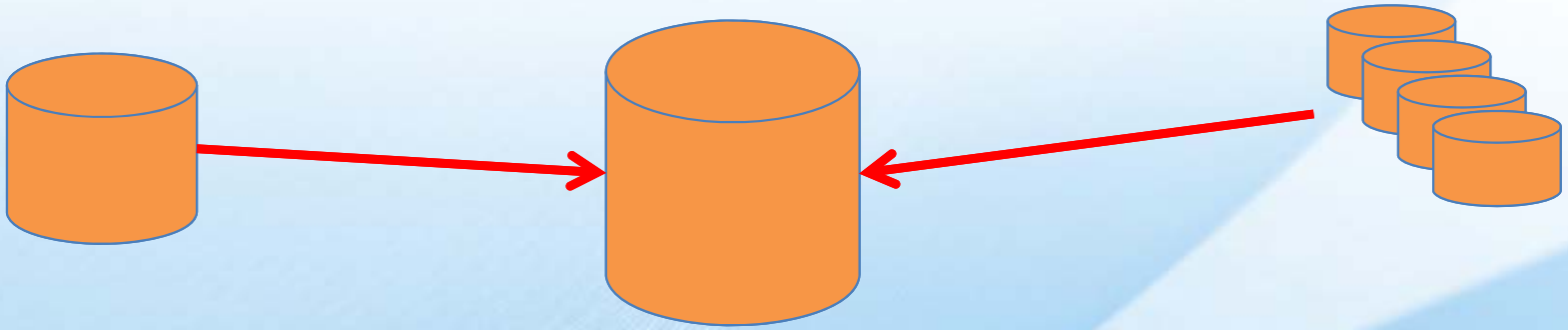
- Not first adopter
  - Sharepoint distribution now
- Governance important
- Research
  - I2B2 – open source software – anonymized
  - Self service database browsing
  - Further queries with IRB #
  - Multi site networks under development
    - PCORI submission
- Hired Business Architecture team from payor firm
  - Strategy underway

Define Our Capability



Cogito ergo Sum

(*Epic + Non-Epic data)*



Clarity Epic Data

- Visits, Admissions
- Patients, Providers
- Medications, Labs
- Problems, Diagnoses
- Charges, Claims

Cogito Data Warehouse

Non-Epic Data

- Patient Satisfaction
- Cost
- Claims
- "Epic-like" Data

Zynx

- Vendor – evidence basis of medicine
  - Updated regularly
  - Thoroughly research
  - Interventions plus metrics
- Basis of our order sets when no local preference exists.
- Gradually reviewing all order sets for proper evidence
- AuthorSpace / Viewspace

Mobility

- Fitbit
- Weight scale
- Lab - coags
- Wifi pill bottle

- Issue – streams of data – “executive summary”
- Support

Population Management

Population Management

- Patient Centered Medical Home
  - 2011 standards out
  - Specialty standards out
- HIT implications great
  - Community PCP, Acad IM, Acad Peds, Acad Fam Med
  - Standardization!

Table 1: Summary of NCQA PCMH 2011 Standards

Standard	Content Summary
PCMH 1: Enhance Access/Continuity	• Patients have access to culturally and linguistically appropriate routine/urgent care and clinical advice during and after office hours • The practice provides electronic access • Patients may select a clinician • The focus is on team-based care with trained staff
PCMH 2: Identify/Manage Patient Populations	• The practice collects demographic and clinical data for population management • The practice assesses and documents patient risk factors • The practice identifies patients for proactive reminders
PCMH 3: Plan/Manage Care	• The practice identifies patients with specific conditions, including high-risk or complex care needs and conditions related to health behaviors, mental health or substance abuse problems • Care management emphasizes: – Pre-visit planning – Assessing patient progress toward treatment goals – Addressing patient barriers to treatment goals • The practice reconciles patient medications at visits and post-hospitalization • The practice uses e-prescribing
PCMH 4: Provide Self-Care Support/Community Resources	• The practice assesses patient/family self-management abilities • The practice works with patient/family to develop a self-care plan and provide tools and resources, including community resources • Practice clinicians counsel patients on healthy behaviors • The practice assesses and provides or arranges for mental health/substance abuse treatment
PCMH 5: Track/Coordinate Care	• The practice tracks, follows-up on and coordinates tests, referrals and care at other facilities (e.g., hospitals) • The practice manages care transitions
PCMH 6: Measure/Improve Performance	• The practice uses performance and patient experience data to continuously improve • The practice tracks utilization measures such as rates of hospitalizations and ER visits • The practice identifies vulnerable patient populations • The practice demonstrates improved performance

New model in PCP

Team-based care:culture shift

- Instead of: “what can I do to maximize the care of the 30 patients on my schedule today?”

Monday	Patients
8:00AM	Ms. Ngo
8:15AM	Mr. Barnes
8:30AM	Ms. Reilly
8:45AM	Mr. Padilla

- The future: “what can we do to maximize the care of the 1500 patients in our panel?”

PCMH Issues

- Disease registries
  - Diabetes – who is a member (who has the disease)
  - Importance of terminology – From beginning to end
  - Markers of performance
    - HA1C – collection and values
    - Foot exam
- How to manage patients on the panels
  - Lots of reporting
  - Data on performance into hands of team

PCMH Issues

- Attribution
  - Who is responsible for patient care
- How to effect better care
  - Change behavior in the management of those patients

PCMH

- Not the physician alone - Team based
  - Physician
  - Nurses
  - Care Manager - Coordinators
  - Medical Assistants
  - Front desk – receptionists
- Patient must be at the center…

Population Management

- All teams members have a role and all have standards to perform to
- Many new tools
  - Outreach to populations
    - CDS – next visit in Ortho clinic – scheduler as if ready to schedule colonscopy
  - Tracking performance
  - Patient Engagement

Office of Patient Engagement

- Every interaction needs to be structured to maximally engage patients
- Patient portal – customized to their conditions
- Education – customized
- Navigators – cancer – care pathways and process customized

Patient Engagement

- MyChart
  - Epic patient portal – results, refills, limited visits (no chest pain)
  - Patient intake – new history
- After Visit Summary (AVS)
  - Instructions
  - Problem lists
  - Medication changes
  - Follow ups

Meaningful Use I-II-III

Stage 1
Capture, share data

Stage 2
Advanced care processes

Stage 3
Improved outcomes

Meaningful Use – I-II-III

- Stage 1 underway or completed, 2 & 3 coming
- Eligible Provider (Ambulatory)
- Eligible Hospital (Inpatient)

Eligible Provider (Ambulatory) MU1

- Personal performance of provider
- Structured data capture
  - Problems, medications, allergy lists
    - (no discussion of accuracy of such lists)
  - Electronic medication prescribing
  - After Visit Summary – patient instructions
  - Quality measures reported – smoking cessation, BP control, etc.
  - Thresholds for some
  - All perfect or no payout
  - $44k MCare, $64k MCaid paid over years, wait to report penalties begin
- Most providers succeeded

Eligible Hospital (Inpatient)

- Similar to EP
- Group performance
- Problem, medication reconciliation, allergies
- Quality reporting
  - Stroke, VTE, ED throughput

Meaningful Use Stage 1

- Introduction to the power of EHR
- Structured data
- Reporting of data with easy thresholds
- Some quality measures
- Lots of attention from providers and vendors
- As of February 2013
  - $12.7B paid out
  - 75% of eligible hospitals have been paid, all committing to an HER
  - Almost 1 out of 2 providers participating

CMIO and MU

- Some providers say/said:

  "This too shall pass" "Another short lived government program soon to be reversed."

  Payments have squelched all that….this is for real. Driving providers behavior – from aversion to tolerate.

- Business model varies
  - Some providers see MU $ in an extra check to the bottom line, some general overhead – never see it.
  - No real-time knowledge of performance.

MU Cultural Issues

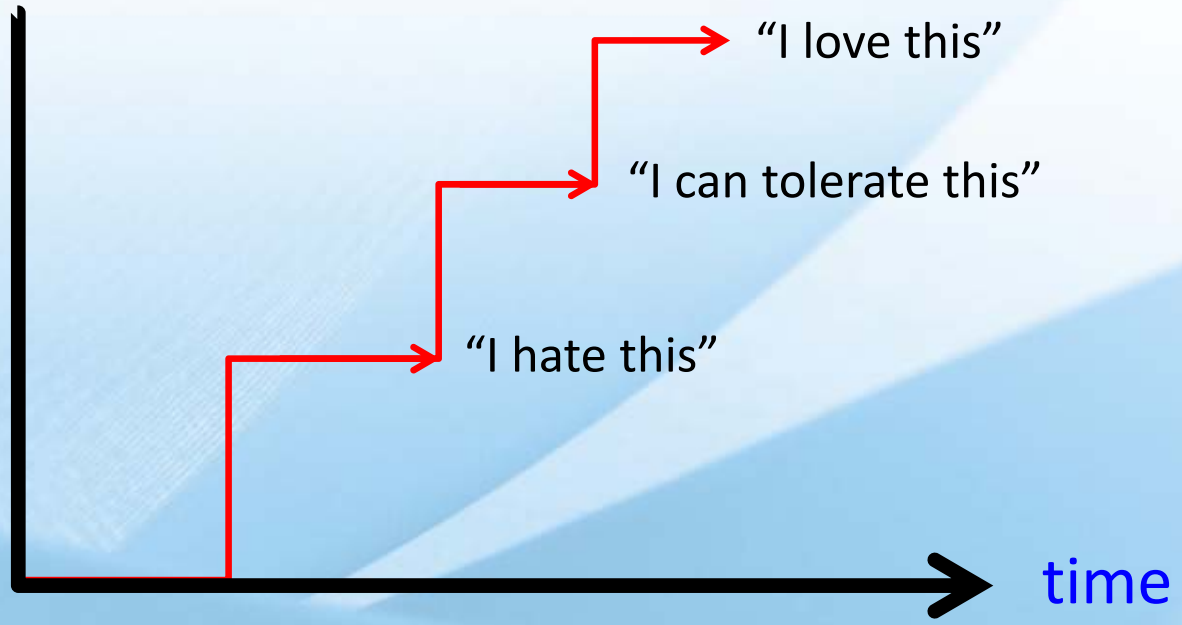
- Management of populations of patients
- Specialities have to measures and, gasp!, manage the blood pressure, obesity and smoking status!
- Progress still to be made…

CMIO and VBP models

- Prioritization
- Active support of leadership
- Primacy of adoption…

Adoption Curve

Adoption / CDS

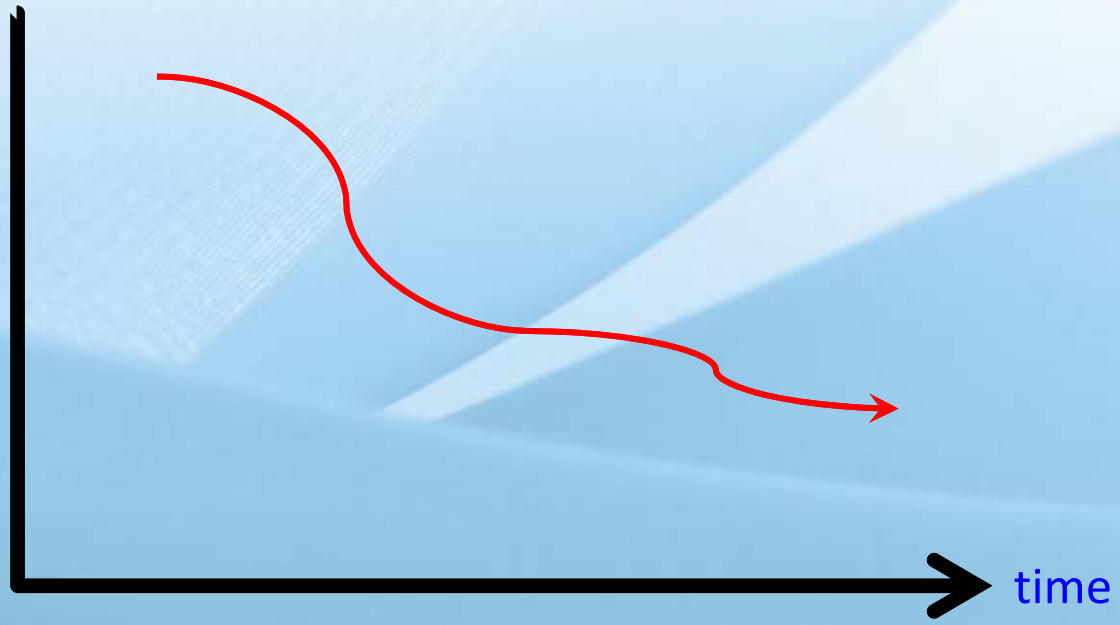


Physician Pulse

- System measurements of utilization of the system
  - On the spot resources to improve performance
- Documentation in the room
- MU parameters
- Time to close out visits (before patient gets out door)
- Orders in the exam room

Efficiency is the King

- RVU / hour on system



Clinical Decision Support

- Group – specialized skill sets
  - What behavior do you want to change?
    - Order sets
    - Alerts
    - Reminders
- Reports in background
- Monitor for change in behavior
- Watch overall burden

Evidence Based Medicine (EBM)

- Good to have it – better to use it
  - Must measure and provide feedback, investigate why not?
- Create vs buy
- Drive performance
- Drill down.

Real time is always better

- Process improvement while everyone remembers the case
- Medical archeology

Risk

- Stakes increase – attention increases
- Must Measure it – to Manage it…
- Over time as payment modalities mature we will all be participating in risk.

Value adds for physicians

- HIE
  - Unprecedented access to records
- Clinical Decision Support
  - Alerts that are helpful
  - Signal to noise ratio must be tended.
  - Alerts that help us take better care – drug – disease
- Efficiency
  - What can record do well…change our practice

Summary

- As we move towards value based payment we will continue to see a maturing relationship between HIT and the clinician with the CMIO acting as intermediary.
- The introduction of value based payments will be a very important motivator for the creation of structured data like the problem list. When performance is supported by CDS then the factors that allow for successful CDS become more and more valuable and adoption increases.
- Risk will drive us to measure, evaluate and manage to performance which will be a positive for the CMIO role and the HIT resources that work with them on a daily basis.

Summary

- As performance is valued more highly than volume the computer will be seen as less the foe and more as a good and valuable tool in every aspect of patient care. HIT and CMIOs will be much the better off for that.

References

- Deloitte Overview of Value Based Purchasing
  - http://www.deloitte.com/assets/Dcom-UnitedStates/Local Assets/Documents/Health Reform Issues Briefs/US_CHS_ValueBasedPurchasing_031811.pdf
  - http://goo.gl/ReH8k
- Standards and Guidelines for NCQA's Patient-Centered Medical Home (PCMH) 2011
  - http://www.iafp.com/pcmh/ncqa2011.pdf
  - http://goo.gl/SvTzk