

Optimal Optimization

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April 24, 2013

Introduction

- Electronic Medical Record (EMR) implementation now complete across the enterprise
- New software updates / upgrades
- New care pathways
- New reporting requirements
- New users

Introduction

- Initial training in the EMR
- Now focus on 'optimizing' EMR use and clinical practice
- Imperatives from:
 - Clinical practice; eg: efficiency and documentation
 - Quality programs
 - PCMH: IM and subspecialty
 - ACO development; clinical integration
 - Meaningful Use
 - Financial drivers

Introduction

- How do chiefs and leaders manage and lead in this constantly changing environment?

Goals

- Describe a framework for EMR development and use
- Suggest ways to define and route questions and answers about EMR use
- Discuss health system issues related to EMR and clinical care
- Discuss how chiefs and leaders can be involved in optimization

Definition

- Optimization: : an act, process, or methodology of making something (as a design, system, or decision) as fully perfect, functional, or effective as possible

Optimal Optimization

- Presentation starts in the middle of the EMR story
- Optimization of the EMR assumes that:
 - You already have some form of EMR
 - The EMR is constantly updated
 - Regulatory and reporting mandates are constantly changing; e.g.: Meaningful Use 1 and 2
 - The individual, stakeholders and system all want to continue to improve
 - There can be clarity in defining the current and envisioned state for the EMR and clinical care

Optimal Optimization

- What optimization looks like depends on your viewpoint:
 - Clinical efficiency
 - Billing efficiency
 - Quality
 - Safety
 - Documentation

Optimal Optimization

- Other viewpoints
 - Meaningful Use
 - Satisfaction of stakeholders: patients, physicians, staff
 - Clinical guideline use
 - Accurate medication reconciliation
 - Transitions of care

Optimal Optimization

- Focus on roles as chiefs and leaders
- Our settings are diverse, have various EMR vendors, and are in various stages of implementation

Possible Scenarios

- Care: in the office or hospital, and the physician is not able to complete a task efficiently
- Your faculty has an idea for EMR or clinical improvement but doesn't know how to proceed
- Your resident wants to do a quality project; needs practice data; difficult to obtain from record
- Your practice organization asks about the quality metrics; your data doesn't seem accurate; you need to know how the data was derived

Possible Scenarios

- You feel you are 'rusty' but there is no way to know if you are on track
- What do you do when your 'groove' becomes a 'rut'?
- Your faculty have developed more efficient tools and others could benefit

What are you hearing about EMR optimization in your roles as chiefs and leaders?

Literature

- EMR and optimization = few citations total
- Key words:
 - EMR (Electronic Medical Record)
 - EHR (Electronic Health Record)
 - Diffusion of Innovation
 - Efficiency, organizational

Informatician

- Informatician: An informatician, sometimes called an informaticist, is a person who works in the field of informatics. Informatics, basically, encompasses the collection, cataloging, storing and dissemination of electronic/digitized data. In medicine, this can include biomedical, clinical and public health informatics.
- Informaticians ...tend to operate in the upper technological strata of the world of health information management and to try devise systems that will help frontline healthcare providers.

Informatician

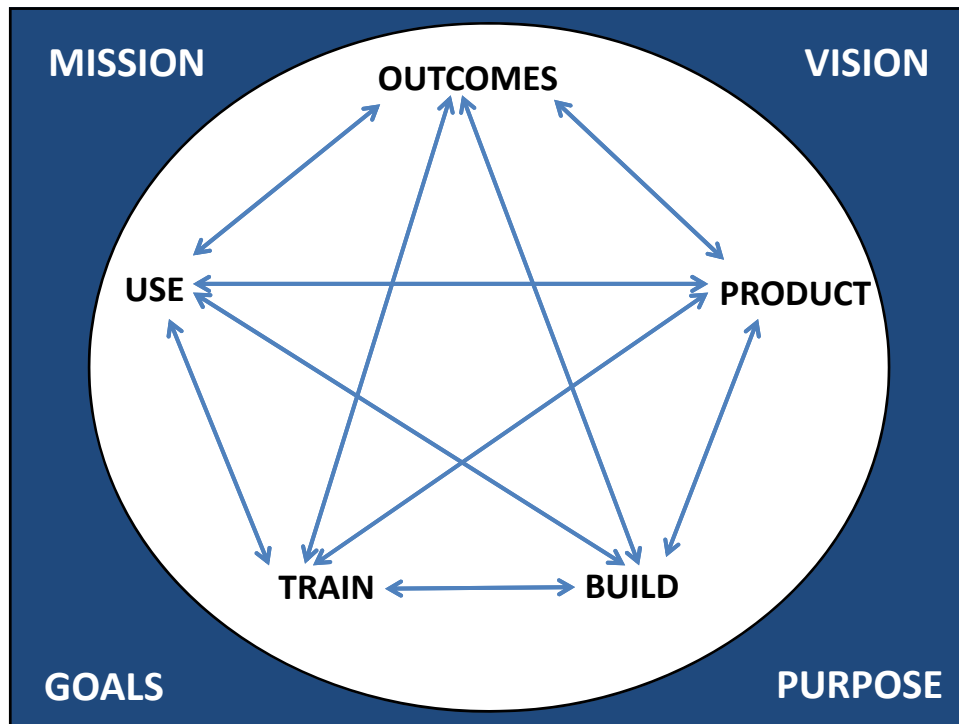
- The field of informatics is becoming increasingly important as [e-patients](#) and even less geeky, regular patients are coming to expect online but secure (easier said than done) access to their own health information.
- Career tip: now is a good time to get into informatics. There is often government funding available for training in it and salaries are good.
- [Researchraven.com](#)

How Informaticians Think: Part 1

- Develop the requirements for EMR
- Choose and purchase a product
- Design
- Build
- Validate
- Train
- Use
- Repeat / review

How Informaticians Think: Part 2

- Iterative, interactive process involving various members of the IT team and health system
- Describe a model
- Goal of the model is to help delineate the various steps in EMR development, maintenance and optimization
- Use a common language when asking IT related questions and offering ideas for improvement



EMR Implementation linked with care process change

- EMR design and implementation requires addressing the processes of care in all settings
- Critical to design the practice changes in parallel with the EMR changes

Outcomes

- Patient outcomes
- Quality
- Safety
- Efficiency
- Cost effective
- High value
- User satisfaction (stakeholder groups)
- Clinical guideline incorporation

Product

- The current version of your EMR
- You don't know the specifications of what was purchased
- Your questions may relate to knowing the functions of the system, and what is not possible

Design / Build

- Know who the design team is, and what physician input there was/is/will be
- Built by software writers initially
- In optimization, physicians can:
 - Advise
 - Develop order sets
 - Develop documentation tools
 - Templates

Train

- Trainers expert in the product and software
- Basic computer lab course of 12 hours
- At first go-live, trainers present
- What is the availability of subsequent training?
- In optimization, for example, you can advise on the best ways to incorporate further training

Training

- Real time with patients
- Real time without patients
- Asynchronous
 - Training environment
 - Web based modules
 - Static announcements

Feedback on Optimization

- Helpful
 - Quick Tips-and-Tricks moment at regularly scheduled Division meetings
 - At elbow support (real time in context)
- Not helpful
 - “Play” environments
 - emails (get discarded)
- Learning about essentials of non-primary site of care. i.e. “Ambulatory O2 essentials for the Hospitalist,” and vice-versa.
- Consider defining high priority issue and tools used for training.
 - Transitions of Care
 - Opiates
 - Resuscitation status
 - Disease based care refresher


Use

- Daily use in your clinical environment
- How you were trained?
- What you have learned?
- Work arounds developed?
- Can you avoid work arounds?
- In optimization, how do you find out what you don't know?
- How to you disseminate the good ideas from peers and trainers?

User Support

- Clinic super user; in clinic most of the time
 - RN and/ or MD
- Hospital super user; often one on a floor
- System:
 - Optimization analyst (Practice plan)
 - Help line (Hospital)
 - Heat ticket (request for optimization) (Hospital)

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Optimal Outcomes

Optimization Request Form

Date: _____

Department: _____

Name and Title of person logging request: _____

Phone number of Person logging request: _____

Who is the request for (User): _____

Contact Information of the User: _____

Optimization is requested for:

Patient safety

Workflow efficiency/improvement

Regulatory or compliance requirement

REQUEST:

Attach examples if applicable. Please place completed form in optimization request box; fax to 5-6280 or complete on-line @ <http://intranet.kudoc.org/EMR/EMRDocuments.aspx>.

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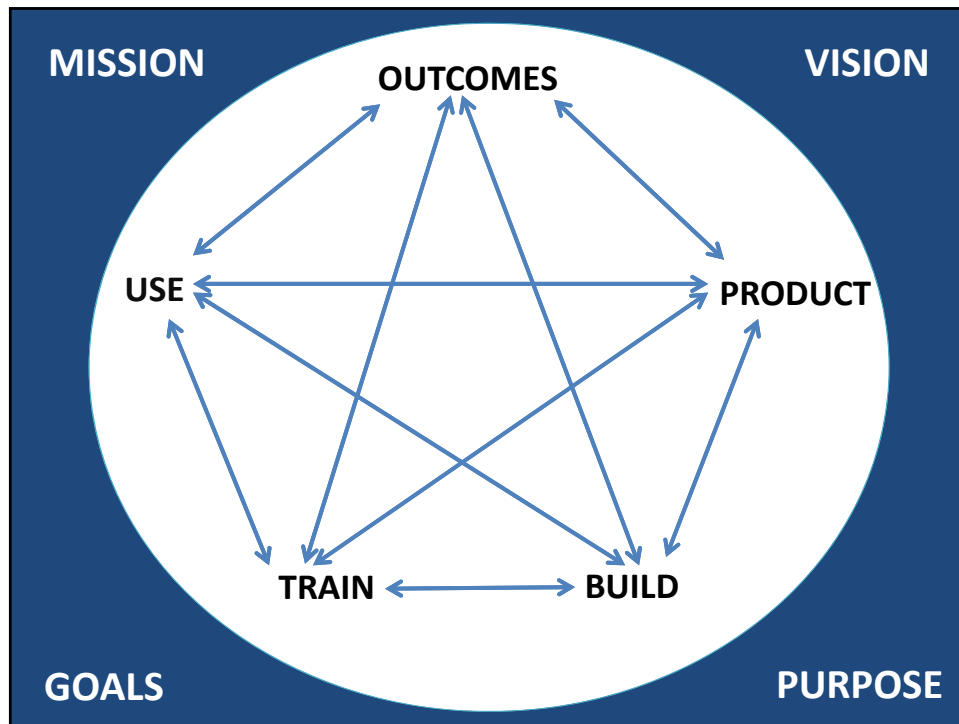
Model in System context

- Health System
- Mission
- Vision
- Goals
- Purpose

Model in practice context

- Practice philosophy
- One Patient One Record
- Expectations of IT and Health system leadership for how physicians and other professionals will use the EMR
 - Who manages the problem list?
 - How to respond to clinical alerts?
 - Expectations for internal and external communication

Where do you place your EMR issues
in this model?



Your Health IT Leadership Structure

- What entity or entities are responsible for your IT?
- Our example: practice plan and hospital
- Where does this reside in organizational governance?
- How are physicians involved?

Health IT Leadership

- Chief Medical Information Officer
- Associate Chief Medical Information Officer
- EMR Medical Directors
 - Total number 12
 - Gen med = 4; Department total of 6

Health IT Leadership

- Discussion with CIO
- Resource constrained environment
- Prioritizing a key issue
- Steering committee includes physicians
- Articulate the care processes which may need to change before, with or after the EMR related changes
- Articulate the support for those care processes

Your role in EMR leadership

- Frame the questions to EMR leadership in the common vocabulary and organization
- Help your leadership in defining the solutions to the issues you both face
- Offer to pilot new ideas
- Reinforce your group's expertise
- Advocate for members of your group to become EMR super users

Emotional Reaction: Kubler-Ross

- Recognizing, validating and managing the emotional reactions to EMR use
- Stages of grief:
 - Denial
 - Anger
 - Bargaining
 - Depression
 - Acceptance
- Remember resilience

Maslow's Hierarchy of Needs



Maslow's Hierarchy and Managing in the EMR

- EMR holds promise for the upper part of this framework, however...
- The work of patient care is our core professional effort, and the EMR is an integral part of that care
- Important to acknowledge the stress, especially when it is part of our psychological and safety levels
- Acknowledge the promise of care, quality, education and scholarship, and the part that your faculty and learners can play in that.

Reflections on your experiences in leading and managing optimization

A Word About the System Philosophy

- One Patient One Record
- Raises questions about how we organize our care
- What happens when an alert 'fires', not in a primary care office?
- What is each physician's responsibility for the problem list
- What is each physician's responsibility for communication, especially once everyone is in the system

System Philosophy

- CPOE (Computerized Physician Order Entry)
- COE (Computerized Order Entry)

Quality

- Data used for quality initiatives is drawn from the EMR
- Is data put into the system such that it is accessible?
- Is data available?
- Who develops the reports?
- What if the lack of accurate data is because of how we practice?
- Examples: Meaningful Use or PCMH measures

Managing to Peers

- Product:
 - Can't change this now
 - Can advocate for more involvement in these discussions
- Design / build
 - Ensure physician input
 - Work with trainers to anticipate training needs
- Train
 - Advocate for training methods appropriate to the task, to include onsite real time training

Managing to Peers

- Use
 - Ask for feedback on process and system
 - Using:
 - Order sets
 - Standing lab sets
 - Problem lists

Managing to Management

- Product:
 - Give recommendations on functions for future purchases
 - Frame in organizational terms in order to meet goals for patient care, and meeting quality reporting requirements
- Design / build
 - Ensure physician input with Medical Directors
- Train
 - Advocate for training methods appropriate to the task, to include onsite real time training
- Use
 - Advocate for reports to assess changes in practice
 - Advocate for practice support to populate HM tab

Financial

- Product: has documentation and billing functions
- Design / use: for entry of key elements and flow of care
- Train: initial and ongoing training for maximizing the ability to document accurately and completely
- Use: implementation, and periodic review of billing and documentation (routine audits)

Education

- Optimization can help with education for all professions, particularly through using a high quality EMR
- Product: designed to be used by learners (can include any inter-professional education stakeholder)
- Design / build: able to build out so learners can use
- Train: new learners in system constantly
- Use: in practice for learners to use, and have review

Research

- Optimization can benefit research through development of accurate records with accurate data points
- Product: have ability to access and work with data
- Design / build: so data can be both documented and retrieved efficiently
- Train: ability to access data
- Use: ensuring that users know the importance of complete data entry

Variables in the user to consider when implementing optimization programs

- Openness to change
- Facility with computing
- Time on task in the EMR
 - Percent effort per week (eg 1-2 sessions per week or 7-8)
 - 1 month on the wards or 7 months
- Time away from the EMR
 - Rotations away from the institution, eg: researchers, residents

Variables in the user to consider when implementing optimization programs

- Physician learning preferences
- Rate of adoption (early, mid or late)

Variables

- Consider refreshers for those away from EMR
- Consider periodic tutorials and EMR assessments for those with low regular use

Future Study

- What approaches most effective based on the specific optimization need
- Developing a set of EMR competencies (at the level of the computer)
- Developing a set of EMR/Practice competencies (at the level of patient care)
- Develop milestones and EPAs

Future Study

- Look at the EMR and practice in the EMR as attainment of competency, from novice to mastery; what would the stages look like and be assessed?
- Describe the effective ways for physicians to be integral in the various EMR and care process development and optimization activities

Wrap Up

- Described a model of EMR development
- Discussed optimization methods
- Described how chiefs and leaders can frame questions and answers as they manage to their colleagues and to management
- Discussed how chiefs and leaders can envision EMR / HIT solutions and bring them to leadership in a common framework



Health Maintenance Tab

- Ambulatory record
- Health maintenance tab
- Cancer screening and immunization
- Important trackable data for quality measurements

- It was 'broken'

HM Tab

- Product: the current version..
- Design:
 - at the time of the initial design 3 years ago, little attention was paid to this HM function;
 - the focus was hospital based implementation for several years as the priority with the ambulatory build secondary and in parallel
- Build: not initially built out

HM

- Train
 - Initial 12 hours of training
 - Addressed as indicated in the initial roll out
- Use
 - Because this does not work, physicians developed work arounds
 - However, data inputs are not able to be counted
 - Results in gaps in data

What does broken mean?

- Dates not accurate
 - Immunizations
 - Colon, breast cancer screening
- Only one option for colonoscopy follow up
- Reminder function

What does broken mean?

- Physicians used work arounds
- Developed a problem list entry for health maintenance
- Can not access the problem list entry to access data
- Health maintenance tab becomes moot when assessing rates of screening and immunization

What was done

- Ambulatory Quality Committee
- Meet 2 mornings a week, 7-8 am
- Present:
 - IM, FM, Peds physicians (medical center based)
 - Hospital sponsored practice physicians
 - CMIO
 - Members of leadership in IT with links to the designers, and optimization analysts