Optimal Optimization

Stewart Babbott, MD FACP
Hess Institute
ACLGIM
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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)
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