

The Promises & Perils of Automating Clinical Practice Guidelines in a Large Integrated Delivery Network



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Objectives

Upon completion of this presentation, the participants will be able to:

- Identify the purported benefits to healthcare of clinical practice guidelines (CPGs)
- Identify several factors associated with automating (computerizing) and implementing CPGs
- Discuss how automating CPGs might differ between stand-alone facilities and large IDNs
- Discuss key considerations for computerizing and implementing CPGs within an electronic health record (EHR) in a large IDN



Disclaimer

The ideas and opinions expressed during this presentation are those of the speakers. They should not be taken as the official views of Tripler Army Medical Center, the Army Medical Department, the University of Utah, or the Department of Defense.



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Variation in Healthcare

Donald Berwick (1991)

"...variation is a thief. It robs from processes, products and services the qualities that they are intended to have."



Variation in Healthcare

- Variations in patient care:
 - have the potential of robbing patients of quality care if clinicians rely on practices that are based on habits and traditions rather than evidence of what actually works best
 - may also contribute to errors that affect patient safety as well as compromise efficiency and productivity thereby stealing from an organization's financial bottom line.



CPG “Promises”

- Introduced as a tool to overcome the “thievery” imposed by practice variation
- Intended to improve health care decisions, quality of care, patient safety, and organizational effectiveness by:
 - Standardizing care delivery
 - Reducing practice variation
 - Eliminating unneeded tests
 - Reducing delays in treatment
 - Decreasing medical errors



Automating CPGs

Viewed as a way to transcend some of the obstacles related to CPG implementation

- May improve the availability and accessibility of information to guide care, potentially speeding care rendered and allowing better tracking of patient care data
- Opportunity to integrate decision support tools to provide the right alerts at the right time



Automating CPGs

Success depends on aspects of usability:

- how well CPGs are integrated into busy clinicians' practice
- whether they are tailored to specific clinical complaints
- whether clinicians are involved in the software development



Usability & Computerized CPGs

Key Considerations of User Interface Design

- Efficiency Impacts
 - Speed / time to enter orders
- Effectiveness Impacts
 - Accuracy of clinical decision making
 - Adequacy of clinical decision making



Case Study

- Military Health System (MHS) EHR is AHLTA (triservice)
- Designed to be:
 - Global (worldwide)
 - Longitudinal
 - Comprehensive
 - Retrievable
 - Queriable
- Beneficiary population exceeds 9 million individuals
- MHS has been deploying the next generation of its global EHR for two years (approx 144 facilities)
 - Tripler Army Medical Center “go-live” MAY-OCT 2005 (outpatient module)
- Over 1 million encounters documented daily in AHLTA



Case Study

- **DoD / VA CPG development and approval effort**
 - DoD/VA partnership established in 1990s
 - Working Group based on careful consideration of the readiness needs of the military and high-volume, high-cost health conditions treated in military treatment facilities
 - Over 25 evidence-based guidelines developed and approved for use
 - Historically, a paper-based process in both organizations



Case Study

- **DoD / VA approved CPGs (sample)**
 - Tobacco Use Cessation
 - Asthma
 - Chronic Obstructive Pulmonary Disease (COPD)
 - Diabetes Mellitus (DM)
 - Pharmacologic Management of Chronic Heart Failure
 - Post-Deployment Health (PDH): Screening Health Exam
 - Post-Deployment Health (PDH): Medically Unexplained Symptoms (MUS)
 - Ischemic Heart Disease (IHD)
 - Post-Operative Pain
 - Health Promotion and Disease Prevention
 - Immunizations (Influenza, Pneumococcal)
 - Uncomplicated Pregnancy (UCP)
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Case Study

- **aCPG History**
 - Congressionally directed project since 1999; collaborative effort by Tripler Army Medical Center and the Pacific Telehealth & Technology Hui
 - Goal: Automate approved DoD/VA CPGs in target EHRs (AHLTA)

NOTE: Effort does not include development of CPGs



Case Study Lessons Learned

- Technology changes faster than clinical practice
- Change management is real, very hard, and under-resourced
- No local evidence that paper-based CPGs have improved patient outcomes, yet central development offices are moving forward with computerizing CPGs
- Only recently has the facility leadership charged the Medical Records Committee with responsibility for clinical consensus and requirements determination for the EHR
 - Tripler now provides its recommendations for EHR changes to a higher Army HQ



Case Study Lessons Learned

- No overarching integration of Army/Triservice agencies, organizations, or processes for managing the requirements for automating CPGs
 - Human resource function (realignment of resources) is hampered by laws and regulations that are slow and cumbersome
 - No less than five different Army organizations or agencies now charged with some component of CPG responsibility



EHR Mgmt (Facility vs. IDN)

- **Facility**
 - Local user clinical practice standards and technology desires drive EHR decision making
 - Single medical records committee
 - Smaller # of users; history of close working relationships
 - Easy access to collaborating staff (quality/outcomes management, developers, medical records, clinical systems trainers, key leadership)
 - Local systems/application administration
 - Rapid turnaround of user requests



EHR Mgmt (Facility vs. IDN)

- **Large IDN**
 - Central office business drivers and finances guide decision making; user preferences and practice standards secondary
 - Large # of users; few pre-existing work relationships
 - Numerous redundant functions to be integrated
 - Medical records, Quality Mgmt/Outcomes, Clinical systems trainers
 - Centralized systems/application administration
 - No local control over processes, procedures, or standards
 - Slow turnaround of user requests
 - Likely NO central Project Mgmt Office responsible for policy/procedure integration, clinical workflow reengineering, change management, etc



CPG "Perils"

- Systems that are designed, developed, and deployed under a centralized corporate office may not be flexible enough to support site specific needs
- The burden of coordinating user requirements and clinical and business rule sets among numerous facilities within an IDN is extremely complex and resource intensive
- Complexity is heightened by longstanding behaviors and cultures that are unique to individual institutions
 - Behaviors and cultures may no longer be relevant in an era of EHRs and highly mobile patient populations



CPG "Perils"

- Establishing a means for gaining clinical consensus on CPGs across historically disparate institutions requires innovative and deliberate leadership by key clinical leaders across the enterprise
 - Perceived unique
 - Patient populations
 - Priorities
 - User preferences



Key Considerations

- Computerized CPGs that crosscut existing institutions mandate new relationships for effective implementation
- Within an IDN, old structures, agencies, and reporting relationships may need to be systematically dismantled and reorganized (in advance of implementation) to better serve the clinical care, coordination, and reporting needs of the entire network
- Resourcing the new corporate requirements to sustain clinically relevant aCPGs and their integration into the patient's health record requires a tight linkage and united vision between key clinical, administrative, financial, and technical staff



Questions?

