


The Impact of Information Technology


How will we educate the health workforce in safety and quality in 2020?



Possible Vision for 2020




Healthcare Constants



What will not change:

- There will always be Healthcare Practitioners/Professionals (HCPs) and Patients
- Patient Quality and Safety Principles will remain of concern:
 - The correct identification of a patient and the matching of a patient to their care elements
 - Prevention of patient care hand-over errors and safety during transition of care
 - Assuring medication accuracy during the care giving to a patient
 - Performance of correct procedure at correct site


Healthcare Variables



What will change:

- The roles of the both the HCPs and Patients will evolve
- The Technologies and Methods of Monitoring, Measuring and Addressing Clinical Focus Areas:
 - Medications
 - Medications Lists
 - Search and Prescribe
 - Drug Administration and Interactions
 - Clinical Noting and Assessment
 - Allergies
 - Patient Admissions
 - Handover of Care and Responsibility
 - Patient Identification

Traditional Roles will Evolve



Patient/Consumer

- Learn about the healthcare system and become a smart shopper
- Utilize health infomediaries
- Learn about health and take responsibility for living a healthy lifestyle
- Create and maintain a personal health record (PHR)
- Document advanced directives

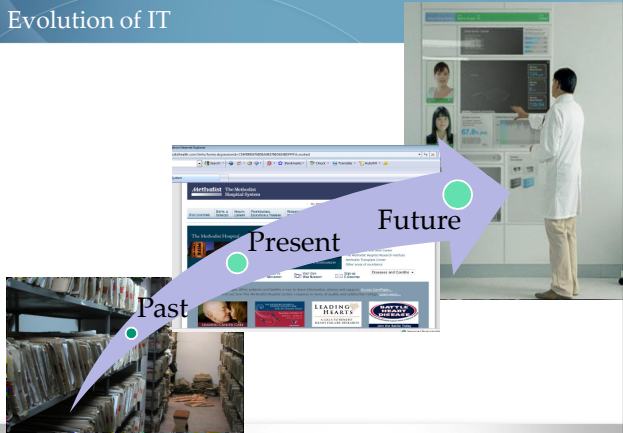
Healthcare Practitioners/Professionals

- Help develop and utilize international evidence-based, standardized processes and care plans
- Help develop meaningful outcomes data
- Develop collaborative partnerships with patients
- Help consumers take more responsibility for their health – proactive vs. reactive
- Expect and monitor compliance
- Expect interoperable EHRs to support information exchange across teams of caregivers

Healthcare Delivery Organizations

- Appropriately focus instead of being “all things to all people”
- Develop care venues closer to the patient (beyond the 4 walls of hospitals/clinics)
- Implement interoperable EHRs to support information exchange across new venues
- Help inform and empower consumers by providing transparency into pricing and quality

Evolution of IT




Environmental Evolution		
Yesterday	Today	2020
Information not readily available	Information electronically available on demand Pull Focused	Relevant info. provided Just In Time (JIT) Push Focused
Patient did not question caregiver knowledge	Patient aware of care pathways	Patient empowered
Educational content: Physician focused Paper based Knowledge updated at a slow pace	Educational content : Limited simplified content available to patients New studies and findings published at a faster pace	Educational content: Delivered in the relevant context Real time conversion from research to practice
Caregivers resistant to IT	Limited adoption of IT	Caregiver dependant on IT
Limited by geography Yearly conferences	Travel made easier Virtual consults Virtual conferences and sharing of information	Telemedicine and Virtual Procedure Delivery

Think of the Training Implications	
Drivers for Change	IT Enablers
Globalization Healthcare without borders	Ever present computing power, interoperable EHRs, PHRs, broadband high-speed network connectivity
Consumerism More power in the hands of patients	Health intermediaries; social networking, "Comparison Shopping" type applications and searches on the internet
The changing nature of disease Chronic illness - formerly lethal conditions (e.g. HIV) are now chronic conditions Aging and overweight populations Drug resistance , new infectious diseases	Continuity of Care records, Decision support tools, E.H.R.'s, PHR's and disease management/tracking business intelligence tools and medical devices
New medical technologies & treatment Genomics, Molecular diagnostics, Pharmacogenomics, Regenerative medicine, Information-based medicine	Data Mining - advanced Clinical Decision Intelligence (CDI)- Digitized data warehouses from molecular testing accessed, integrated, and analyzed Use of nanotechnology and RFID

A Survey

Survey Questions

1. What major goals you will set, to achieve quality results from the workforce **for 2020**?
2. How will you ensure an understanding of quality measures and make sure that safety precautions will always be taken **for 2020**?
3. How will you ensure that you have sufficiently educated the workforce to provide excellence in quality and the utmost attention to patient safety, (i.e.: evaluation measures, examinations, etc.) **for 2020**?
4. What information technology tools will you use for training/education purposes **for 2020**?



Survey Results

Goals


- Foster a Culture of Safety and Quality
- Understand the Patient
- Use Leadership as Guiding Principles
- Promote Ownership/Everyone is a Stakeholder
- Business / Technology Integration
- Master Recruitment /Training Process

Ensuring an Understanding

- Educate, measure, improve, analyze, control and reinforce
- Lead by Example
- Promote Regularity in Training Measures
- Training Program Champions

Quality and Safety Training Measures


- Integrated Dashboards
- International Benchmarking
- Rewards Based Education Feedback Model
- Clinical Outcome Data Collection
- Patient Experience Data Collection
- Professional Report Cards
- Dedicated Personnel to Champion effort
- Educate Staff (before, during, continuing)



Training in 2020

Technology Tools

- Digital simulations
- IPODS as Teaching/Storage Device
- Mp3 Recorded Educational Session
- Palm PC
- Remote video sessions
- 3-D virtual reality training environments
- E-prescribing software
- Electronic report cards
- Web-Based training
- PowerPoint presentations
- Annual on-line in services and tests



Example: Current Technical Training

Methodist Institute for Technology, Innovation & Education - MITIE

- A comprehensive education and research center at The Methodist Hospital in Houston, Texas
- A venture dedicated to procedural skills acquisition and the development of image-guided technology, medical robotics and procedural techniques
- Essential research and training facilities are housed in one location
- A platform that enables a logical, progressive development of collaborative research and training efforts

MITIE: Components Methodist Methodist
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- A virtual hospital for recreating high-risk patient care environments
- A procedural skills lab for hands-on training with state-of-the-art models
- A suite of operating rooms for image-guided procedure research, robotic surgery and technology development

MITIE Training Laboratory Methodist Methodist
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MITIE Training Laboratory

Example: Current Patient Training Methodist Methodist
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Web-based interactive patient education tool

- Emmi programs are a series of web-based, multimedia programs that educate patients and encourage them to take an active role in their care.
 - Using a multi-modality approach the content is created using the appropriate health literacy levels
 - Use of empathetic messaging to keep viewers' attention
- The programs have been shown to:
 - Add value to existing educational resources
 - Improve customer service and patient satisfaction
 - Increase quality of care and promote patient safety
 - Mitigate malpractice risk

EMMI Example Methodist Methodist
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EmmiPrep® Angioplasty w/ possible Angiogram program
© Emmi Solutions 2009

Training Will Evolve Methodist Methodist
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<p>Training given to today's Patient:</p> <ul style="list-style-type: none"> • Given materials when unwell • Self research – good & poor quality information online 	<p>Patient in 2020:</p> <ul style="list-style-type: none"> • Programs like Emmi – web based patient education • Live Q&A with healthcare specialists • Infomediaries, portals, kiosks
<p>Training given to today's HCPs:</p> <ul style="list-style-type: none"> • Formal Classroom Training • Ongoing learning via webinars, conferences, self-study 	<p>HCPs in 2020:</p> <ul style="list-style-type: none"> • Decision support tools • J.I.T. training (just in time) using appropriate media • Self paced web, DVD learning • Simulation centers • Virtual reality and 3D Labs • Artificial Intelligence, Subliminal Learning...

Measuring Success & Training Effectiveness Methodist Methodist
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Today	2020
<ul style="list-style-type: none"> • Observation of "student" satisfaction with web-based training is studied • Long term study of outcomes yet to confirm training effectiveness • Traditional test scores relied on heavily • Multigenerational, Multicultural Employee Engagement studies used as indicators of success in training • Pay for performance and continuous learning credits 	<ul style="list-style-type: none"> • Possibilities in learning centre (brain wave) analysis • Sensitive monitoring devices will yield patient results to treatment more quickly thereby providing training feedback • Use of multi-modal and empathetic messaging will increase training effectiveness • Pay for outcomes

Your Thoughts?

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