Technology Informatics Guiding Education Reform (TIGER) Next Step(s)

The TIGER Initiative Foundation

Patricia Hinton Walker, PhD, RN FAAN
Vice President For Nursing Policy & Professor
Uniformed Services University of the Health Sciences
Bethesda, MD
AMIA 2010
TIGER Vision, Phases and TIGER NEXT STEPS!

- Allow informatics tools, principles, theories and practices to be used by nurses, other interdisciplinary providers and consumers
- Interweave enabling technologies transparently into practice, education and research to improve outcomes, patient safety and reduce costs of healthcare
- Better preparing workforce to use technology and informatics for improvement of patient care

TIGER Phase I
- Engaged stakeholders to create a common vision of electronic health record-enabled practice

TIGER Phase II
- Facilitated collaboration among participating organizations to achieve the vision for practice and education through development of nine collaborative reports.

TIGER Phase III
- Integrate interdisciplinary & allied health professionals into efforts, disseminate results, and develop a Virtual Learning Environment to enhance widespread adoption of Health IT

Emerging News: The TIGER Initiative Foundation is NEXT STEP!!!
TIGER (Technology Informatics Guiding Education Reform) Initiative Phase III

TIGER Phase III Executive Committee
Patricia Hinton Walker, Chair
Dana Alexander
Marion Ball
Rosemary Kennedy
Joyce Sensmeier
Michelle Troseth
Roy Simpson
Barbara Frink
Carolyn Padovano
Mary Walker
Carol Petersen
Alicia Morton
Teresa McCasky
Linking Phase II Outcomes to Virtual Learning Environment (VLE), Interdisciplinary Collaboration and Longer Term Implications for Comparative Effectiveness and Personalized Medicine

Nine Collaboratives from Phase II:
1. Competencies
2. Education and Faculty Development
3. Staff Development
4. Leadership
5. Usability and Clinical Design
6. Standards and Interoperability
7. Health IT Policy
8. Virtual Demonstration Center (now VLE)
9. Consumers and Personal Health Record (PHR)
Application of Relevant TIGER II Collaboratives

Today Highlighting Five TIGER Phase II Collaboratives’ Recommendations Initially Relevant:

- The Competencies Collaborative
- The Staff Development Collaborative
- The Usability and Clinical Design Collaborative
- The Consumer and the PHR
- The Virtual Demonstration Center Collaborative, now renamed as the Virtual Learning Environment (VLE)
TIGER Competencies Collaborative (TICC) formed to establish a minimum set of competencies for ALL practicing nurses and graduating nursing students:
- Foundational to all TIGER work related to preparing nursing workforce for EHRs
- TICC Collected over 1,000 informatics competencies from published literature and practice examples
- Established a Model for the organization of Competencies

Informatics Competencies Educational Resources:
- CSPlacement [www.csplacement.com](http://www.csplacement.com)
- Healthcare Information and Management Systems Society [www.himss.org](http://www.himss.org)
- The Information Literacy in Technology [http://www.ilitassessment.com](http://www.ilitassessment.com)
- Digital Patient Record Certification (DPRC) [http://dprcertification.com](http://dprcertification.com)
## Informatics Competencies Collaborative

<table>
<thead>
<tr>
<th>Component of the Model</th>
<th>Standard</th>
<th>Source (Standard-Setting) Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Computer Competencies</td>
<td>European Computer Driving License</td>
<td>European Computer Driving License Foundation</td>
</tr>
<tr>
<td>Information Literacy</td>
<td>Information Literacy</td>
<td>American Library Association</td>
</tr>
<tr>
<td>Information Management</td>
<td>Electronic Health Records</td>
<td>Health Level Seven (HL7)</td>
</tr>
<tr>
<td></td>
<td>Functional Model – Clinical Care Components</td>
<td>European Computer Driving License Foundation</td>
</tr>
<tr>
<td></td>
<td>International computer Driving License - Health</td>
<td>European Computer Driving License Foundation</td>
</tr>
</tbody>
</table>

Adapted from TIGER Competencies Report
Information Literacy Competencies

1. Determine the nature and extent of the information needed
2. Access needed information effectively and efficiently
3. Evaluate information and its sources critically and incorporates selected information into his or her knowledge base and value system
4. Individually or as a member of a group, use information effectively to accomplish a specific purpose
5. Evaluate outcomes of the use of information

Adapted from TIGER Usability and Clinical Design Report
Information management is the underlying principle upon which TICC Clinical Information Management Competencies are built. Information management is a process consisting of

1) collecting data,
2) processing the data, and
3) presenting and communicating the processed data as information or knowledge.
The Usability and Clinical Application Design Collaborative, was ranked as the highest priority and had the greatest number of volunteers (53.5%) of all the TIGER Collaborative teams.

Nurses who actively led and contributed to the collaborative cited reasons for their involvement to be: “A good design can make the system easier to use and enhance clinical practice; Usability is a “make or break” part of a clinical informatics solution and “Many lessons from end-users as DESIGN is translated into PRACTICE. There is a definite need for standards and guidance.”

Adapted from TIGER Usability and Clinical Design Report
Usability . . . A Pervading Perspective?

Medical (and Nursing) professionals have been trained to expect that some things just do not work, and they should devise ways to work around them, rather than notifying managers to change the system (Wears & Perry, 2002).
Importance of Workflow Integration

• Integrating technology into a complex clinical workflow like nursing practice is not easy
• Appropriate devices
• Support of Nursing Practice Models and frameworks for care planning & documentation
• Support the process of critical thinking ... nursing thought-flow
• People, Process, & Technology
• Vendor systems are still more data-driven rather than knowledge and workflow-driven!
Usability and Clinical Design

- Usability is the extent to which a product can be used by specific users in a specific context to achieve specific goals with effectiveness, efficiency and satisfaction (adapted from ISO 9241-11, 2006).
- Usability is centered on the fit between elements (Rubin, 1995).
- Usability topics include how easy a product is to learn, to remember, to use in everyday work or play and the effectiveness of a product for a specific task at hand.
- Usability can include how quickly nurses adapt and use technology or product in efficient, effective and satisfactory ways.

Adapted from TIGER Usability and Clinical Design Report
Significance of Usable Design for Patient Safety

• The design of safer, more usable systems is important because it facilitates error prevention and ensures that nurses provide the effective care (or other work) intended.

• Payoffs for using human factors approaches are:
  • fewer errors involving patients, healthcare personnel, and other users;
  • decreased training cost;
  • a better fit with the way nurses work and think;
  • improved decision-making; reduced time spent redesigning systems that don’t meet expectations; and
  • greater user satisfaction.

• Human factors approaches are very relevant to nursing today because of the penetration of advanced technologies in the clinical setting, greater complexity of patient care, the amount of information generated in settings, and the high cost of litigation on the health care system.
• Recommendations to Administration, Vendors and Individual Health Care Providers:
  – *Nurses must be involved from the outset considering*
    • Clinical Requirements
    • Safety and Usability
    • Human Factors
    • Evidence-Based Practice
  – *Nurses (as end-users)* involved in evaluation of the systems and in the revision process.

• See Best Practice Exemplar (page 21) in Usability and Clinical Design TIGER Collaborative Report for a Model
Learning Strategies:
• Availability of Technology for practice
• Ensure Evidence-Based and connected to the Decision-Support System
• System Thinking consistent with IOM Patient Safety Study
• Attention to Interdisciplinary innovation competencies
• Allow Data to Inform and Create new Knowledge
• Accept Responsibility for some of your own learning!

Adapted from TIGER Staff Development Report
Self-education is necessary to endure the lifecycle of technology and informatics changes today.

- Six Factors that lead to Success in Adoption of Health IT:
  - Addressing Staff Attitudes
  - Improving access to technology
  - Focusing on Patient Safety
  - Using a variety of Teaching Methods
  - Using Nursing Informatics Specialists as resources
  - Keeping the programming competency-based

Adapted from TIGER Staff Development Report
• If the PHR is a tool that supports the patient’s engagement in their own healthcare, then:
  • nurses as healthcare professionals and patient advocates are obligated to become familiar with the technology and
  • to promote its use when the technology is available and the patient is amenable.
• Education in all health professions should include information about PHRs as well as methods for teaching patients how to use them.
TIGER

2009 - 2011 Phase III

• Dissemination of recommendations of nine Phase II Collaboratives;
• Focus on Development of the Virtual Learning Environment (built on the Virtual Demonstration Center concept in Phase II).
• Conduct TIGER Organizational Assessment and Determine longer-term plan for future of TIGER and organizational connections to:
  – Identifying a permanent structure and connection for future of TIGER:
    • Facilitate Opportunities for Fund Raising and Accepting Funds
    • Facilitate Development of Partnerships with Professional Organizations, Academic Institutions and Business/Industry Communities (Wikinomics)
• Publication of TIGER II Collaborative reports in 4th Edition of Nursing Informatics: Where Technology and Caring Meet;
• Introduce/emphasize longer term implications of use of EHRs and PHRs in future Best Practices Decision-Support such as: Comparative Effectiveness Research and Personalized Medicine; and
• Plant Seeds for TIGER International roll-out in Montreal, Canada - 2012
‘Wikinomics’ Based on four powerful new ideas:
  - Being Open
  - Peering
  - Sharing
  - Acting Globally

Key Benefits of Peer Production for Businesses/Organizations
  - Harnessing External Talent
  - Keeping up with Users
  - Boosting Demand for Complementary Offerings
  - Reducing costs
  - Shifting the Locus of Competition
  - Taking the Friction Out of Collaboration
  - Developing Social Capital
• Keys Re: Platforms for Participation:
  • Exciting New Business Opportunities
  • Collaboration and ‘Wikinomics’ Principles
  • Become Open Platforms
  • Age of Modularity, open architectures, value constantly changes
  • Intellectual property is widely dispersed
  • Organization into loosely coupled networks of firms, organizations, and products
  • Focus on Continuous Learning from Examples and Partners
  • Creation of transparent and Egalitarian Ecosystem
  • Sharing of Costs and Risks
  • Stay focused on the Future and Changing Needs
Technology Informatics Guiding Education Reform (TIGER)

Phase III and Beyond

Virtual Learning Environment and Strategic Collaborations
Without access to health IT tools such as: EHRs, PHRs, CPOE, and other health IT related technologies to enhance learning, there are distinct challenges for:

- Educators in universities and community colleges cannot prepare the workforce of the future unless they learn new health IT technologies
- Staff development educators in hospitals and other care delivery settings cannot prepare the current interdisciplinary workforce
- Minority populations do not have equal internet access for learning
- Small rural hospitals cannot afford training materials and educators to teach staff new health IT technologies
- Individual providers in small practices and/or rural settings do not have access enough to know which systems to purchase to meet goals of ‘meaningful use’ or how to use the systems when purchased
Our Solution: **TIGER Virtual Learning Environment (VLE)**

- Developed from TIGER Phase II Collaborative Reports
  - Initially TIGER Competencies
  - Amended to include national QSEN Competencies (RWJ Funded)
  - Integrate Competency Examinations (from ONC grants)
  - Integrate content from nine TIGER collaborative reports

- Designed through interdisciplinary collaboration serving nurses, other interdisciplinary groups, rural health and minority populations

- Designed to address traditional and futuristic instructional design through technology-enhanced learning including:
  - Tutorials
  - Scenario-based learning including pre-post tests
  - Traditional online learning
  - Second Life and Educational gaming/modules/scenarios

- Plan for Open-sourced system housed in Government or Non-Government setting to ensure it belongs to the people!
Integration of Nine TIGER Collaboratives Content

Pilot(s): Virtual Learning Environment
For Partnership Entities

Proposed Early Pilot Groups Can Include Partners such as:
- American Nurses Assoc.?
- National League for Nursing?
- American Federation of Teachers?
- Univ. Pitt Nursing & Medicine?
- Selected Universities Baylor? Kansas?
- Specialty Organizations (AORN and ??
Conceptual Design of TIGER
Virtual Learning Environment

Evaluation data:
- What modules taken
- Demographics
- Type of profession
- Outcomes
  - Regional
  - National

Learning modules

Virtual communities

Consumers
Rural & Minorities
Faculty / Students & Interdisciplinary Colleagues
EHR Vendors
Universities
Community College Consortiums
Regional Extension Centers
Resource Center & Classroom Content

Resource Center Contains Web-based Library Links to Free Learning Content & Documents

Classroom Content Topics will be Organized According to Leveled TIGER Competencies & QUSEN Competencies when applicable.
Resource Center and Classroom Content

- **Resource Center and TIGER Open Door**
  - The Portion of the VLE that contains materials readily available on the web such as:
    - Free Web-Based Resources and Health IT-related documents
    - Free Webinars and/or Demonstration Modules
  - The TIGER Open Door provides:
    - Access to all resources by providers, faculty, students and consumers
    - Access without being a member of one of the TIGER VLE Partners

- **Classrooms Content Donated and/or Leveraged by TIGER VLE Partners** such as:
  - Case-Based Scenarios linked to EHRs and Clinical Decision Support
  - Scientific Content such as: Comparative Effectiveness Research
  - Content related to challenges of Adoption of Health IT including:
    - Web Links
    - Information related to relationship of content to potential certification
    - Reading Lists
Virtual Communities & TIGER Open Door

Virtual Communities

A. Workforce Development
B. Education & Faculty Development
C. Future Workforce Development
D. Leadership & Management
E. Science & Technology
F. Consumer EHRs & PHRs
G. Specialty Communities
H. Nutrition/Dietary
I. Non-Acute Care Settings

EHR Vendors
Universities
Community College Consortia
Regional Extension Centers

Consumers
Rural & Minorities
Interdisciplinary Providers

Partners Portals access shared content & resources

TIGER Public Portal to free content in Resource Center

Classroom Content Topic A
Classroom Content Topic B
**Tentative VLE Infrastructure Plan for Virtual Communities**

A. **Workforce Development**
B. **Education & Faculty Development**
C. Future Workforce Development
D. Leadership & Management?
E. Science & Technology
F. Consumer EHRs & PHRs?
G. Specialty Communities
H. Nutrition/Dietary?
I. Non-Acute Care Settings
J. Underserved/Minority Outreach?
K. Future/Other???

- Additional Virtual Communities may be added;
- Two Co-Chairs per Virtual Community;
- Potential Five Leaders for each Virtual Community (including Chairs);
- Allowing Three Leaders to Sign-off Educational Offerings;
- Each Community creates Content Map Needed;
- Standard Submission Criterion for CEU offerings;
- Technology Criteria Will be Provided for Educational Offerings.
Healthcare or Health Informatics Occupation Tour

Register & Start Classes and/or Experiential Learning

Entry Survey, Registration, Select Learning Options

Complete Module/Course &/or Experiential Learning

Exit Survey Certification(s)

Career and/or Informatics Competencies Assessment

Learning Community Advisor

Learning Community Advisor

Learning Community Advisor

Home Workspace with books and reading materials

Study Groups

Part time job

Help Wanted

Pass!

ANCC

American Nurses Credentialing Center

ACCME

Accreditation Council for Continuing Medical Education
Proposed VLE Data Flow
Proposed VLE Governing Structure

VLE Governing Council

Content Management Sub-Structure

Content from Individual Volunteers

Content from VLE Partners

International Advisory

Interdisciplinary Advisory

Competency Group
VLE Governing Structure (explanation)

• A **Governing Council** will be established to be the final approval of content and learning experiences in the Virtual Learning Environment to ensure educational integrity including:
  – Members from Academic Communities such as University of Kansas and University of Minnesota and University of Colorado
  – Members from the Staff Development Community (for providers)
  – Members from the Nursing Student organization to ensure relevance to youth and other representative groups (such as minority populations)

• A Content Management Subgroup will contact and work with both TIGER Partners and TIGER individual volunteers to obtain content and learning experiences:
  – These will be evaluated for relevance and meeting pre-established criteria – then to the Governing Council for review and posting to TIGER VLE Server.
  – For VLE Pilot II, a competency-review will take place to determine which competency the learning experience addresses – then will be sent on to VLE Governing Council for final decision.

• **Interdisciplinary and International Advisory Groups** will review to determine if content needs to be ‘tweaked’ to meet international and interdisciplinary needs.
Sample Topics for Upcoming Survey: Engaging Former and New TIGER Volunteers for VLE

<table>
<thead>
<tr>
<th>Category Of Development</th>
<th>EHRs Training</th>
<th>PHRs Consumer</th>
<th>Meaningful Use</th>
<th>Usability &amp; Clinical Design</th>
<th>Clinical Decision Support</th>
<th>Health Info Exchange HIE</th>
<th>Standards &amp; Interoperability</th>
<th>Comparative Effectiveness Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web-Resource</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision-Tree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop Modules</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Levels: TIGER Competencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simulation-Based</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Web-Resource

Case Studies

Decision-Tree

Develop Modules

3 Levels: TIGER Competencies

Simulation-Based

Second Life
• Announcement made at HIMSS 2011 in Orlando

• February 22, 2011

• TIGER WILL EXIST AS A 501 C-3 LEGAL ENTITY as the

• THE TIGER INITIATIVE FOUNDATION!

• Special thanks to HIMSS,

• and all of the other contributing partners and individual collaborators
beginning in TIGER Phase I and continuing through TIGER Phase II and TIGER
Phase III!

• The TIGER Executive Committee and HIMSS Leadership is

• finalizing legal processes, structure, and strategies for the

• TIGER Initiative Foundation and for the TIGER VLE!!! News will

• be coming out to past and current TIGER volunteers soon!

• STAY TUNED!!!
Preferred Structure: TIGER AS 501 C3 FOUNDATION
Now: The TIGER Initiative Foundation

MODEL #1
More Breaking News!

- TIGER Continues with GREAT PROGRESS – Key CONTRIBUTIONS!
  
  - IBM and the Center for Connected Medicine at University of Pittsburg Medical Center has contributed a server which will allow the content to be posted when the 501-c3 is established and partnership arrangements can be formalized!!!
  
  - TIGER has taken the first step to acquire a copy of the the Veteran’s Administration (VA) Vista Electronic Health Record . . . And will be moving forward to establish educational sessions using this EHR for VLE partners and participants!!!
  
  - TIGER is in the process of working out arrangements with the John A. Logan Community College in Southern Illinois to:
    
    • Obtain access to a server (as a sand-box) where virtual community leaders can come together to review content, and where governing council can review/ accept content that is ready for posting on the IBM Server.
    
    • Help design and manage learner some of the outcome data from VLE
    
    • Serve as sandbox for implementation of Vista EHR with Case Studies
TIGER Initiative Foundation (Technology Informatics Guiding Education Reform)

The TIGER Initiative FOUNDATION Transition Board

Patricia Hinton Walker, Chair
Dana Alexander          Barbara Frink
Marion Ball             Carolyn Padovano
Rosemary Kennedy        Mary Walker
Joyce Sensmeier         Carol Petersen
Michelle Troseth        Alicia Morton
Roy Simpson             Diane Skiba
Beth Halley             Charlotte Weaver
Marcia Zitowsky (HIMSS Treasurer) Mark Sugrue
Christel Anderson (Temporary HIMSS Secretary until Staff Hired)
Health Care At a Turning Point & The TIGER Initiative FOUNDATION Will Continue to Contribute . . . into the Future!

Informatics, Genomics, Comparative Effectiveness Research and Personalized Medicine create a turning point in health care:

- Coverage and payment policies will increasingly reflect population-based findings and standardize patterns of care

Yet . . .

- Evolve to reflect a growing understanding of individual and subgroup differences within broad populations

AND

- TIGER will be Involved in Health IT and Technology Changes to Come!!!
THE TIGER Initiative Foundation
(Technology Informatics Guiding Education Reform)

Some Future Directions (s)

Evidence-Based Practice Benefits;
mHealth for Patients and Consumers;
and More Diffusion of Health IT Adoption
Tentative Future Directions for THE TIGER INITIATIVE FOUNDATION!!

- Including, but not limited to:
  - Educating Providers: Longer-term Just-In-Time Evidenced-Based Practice with Adoption of Health IT (EHRs and PHRs)
  - Bridging Practice, Academic Institutions, Professional Organizations and Business/Industry to enhance adoption of Health IT
  - Operationalizing TIGER VLE nationally and internationally
  - Interdisciplinary Goals Related to Applied Clinical Informatics
  - Continue to Inform Policy for Nursing, Other Disciplines, and Consumers
  - Working with Organizations to Advance Informatics-Related Scholarship and Research
  - Integrating mHealth-related data and information into TIGER goals for:
    - Nurses
    - Other Interdisciplinary Providers
    - Consumers and Patients
  - Fostering International TIGER activities and collaborations
  - Continuing Health IT Diffusion through nursing, consumer and other Interdisciplinary, academic and practice organizations
Personalized medicine: the ePatient and eProvider

Wireless in Healthcare

Adapted from NLM Presentation by Michael J. Ackerman, Ph.D. Assistant Director High Performance Computing and Communications National Library of Medicine
ePatients and Their Contribution to Health Care Research

**Equipped**

**Enabled**

**Empowered**

**Engaged**

**Educated**

**Expressive**

**Expert**

**Electronic**

- Patient-generated research questions
- Patient-adapted protocols
- Patient-facilitated recruitment
- Patient participation and retention
- Patient-focused policy agenda

Adapted from NLM Presentation by Donna R. Cryer, JD
Health IT Adoption: EHRs + Best Practice (and Evidence-Based Practice)

**Background**

- EHRs will facilitate the creation of evidence that is directly relevant to everyday clinical decisions.
- EHRs greatly increase real-time access to knowledge in the practice setting.
- EHRs offer a novel approach to the creation of clinical knowledge, in which observing, intervening, and creation of clinical evidence are part of the normal clinical encounter.
- Registries and Clinical Data Repositories for Health Information Exchange (HIE):
  - Registries represent a unique and powerful model for the collection of observational, epidemiologic, health management, economic and other outcomes data.
TIGER III Goal: Educate Providers about Evidence-Based Practice Benefits of Health IT Adoption

**Comparative Effectiveness Research**

- Nurses, physicians and other interdisciplinary providers need to:
  - Understand more about Comparative Effectiveness Research (CER)
  - How EHR data can be used for research purposes
  - How EHR data in the future can inform practice through CER

- Nurses and Other Health Care Scientists need to become aware of and where relevant, develop expertise in:
  - Research Methodologies used in CER
  - Privacy Requirements related to use of clinical data
  - Possibilities of the changes in Evidence-Based Practice with increase of CER

- More clearly identify clinical and other relevant data that should be captured to inform future CER research
mHealth . . . Headlines Tell the Story

Cell Phones Manage Diabetes: With Wireless Blood Sugar Monitoring

Electronic Medical Records Accelerate Genome-Driven Diagnosis and Treatments

Pilot Study Success: Adolescent Diabetes Management Through Personalized Text Messages

Consumers SMS their ECG to ER: Portable Heart Monitors Send Emergency Alerts and ECG as Text Message using Bluetooth Heart Monitor!

SENDING SCIENCE DOWN THE PHONE: Mapping Research with Consumer ‘s Engaged!

Microsoft HealthVault Connections Allow self-management for Health and Chronic Conditions through Device Connections! (Mayo Clinic)

TINY SENSORS tucked in Cell Phones Map Airborne Toxins in REAL TIME!!!

Project funded by Dept. Homeland Security
Accountable Care Organizations: Regardless of Model Requires Informatics

ACO Model 1:
- Hospital
- PCP Group
- Specialty Group

ACO Model 2:
- Community Hospital
- Mental Health Facility
- Home Health Services
- PCP Group
- Specialty Group

ACO Model 3:
- Multi-Specialty Group Practice

Specialty Physicians
Tertiary Care Facility
Specialty Hospital

*Optional entities that can be a part of any of these models

- Interoperability
- Health Information Exchange
- Data Liquidity
Consumer and Patient Use of Health Information Technology

- Easy, secure access for patients to Health IT in real-time (or near real time).
- Health IT tools make information meaningful & useful to patient based on specific health needs.
- Ability to have two-way communication
- Ability of patients to contribute key info to health records
- Availability of: online appointments, prescription refills; securing information for decision-making and screening.
- Links to reliable resources for additional information and/or help!
Consumer & Patient Engagement/Empowerment

Help Translate FIVE Myths to Practice, Professional and Academic Organizations:

- Consumers and Patients are interchangeable
- Field of Dreams (if you build it they will come)!
- Patient’s oppose sharing of data for treatment and research purposes
- Provider-controlled EMRs is the only way to control and have data integrity
- Health IT only serves small segment of privileged society and is not for underserved, less educated, etc.

From Donna Cryer: Cryer Health
Advancing Patient Activation Strategies Through Health IT

The **Patient Activation Measure (PAM)** is a 22-item measure, valid reliable scale measuring four stages: that assesses patient knowledge, skill, and confidence for self-management.

1. **believing the patient role is important,**
2. **having confidence & knowledge necessary to take action,**
3. **actually taking action to maintain & improve one's health,** &
4. **staying the course even under stress.**

- **First, measurement:** Focus on patient, including patient experience and patient outcomes,
- **Second measurement:** integrated into care delivery process to improve care of the patient,
- **Final measurement:** Longitudinal, capturing what happens over time, measuring capabilities for self-management, quality of life, health, and ability to function. (Institute of Medicine 2004).
PHRs and mHealth Devices—Key to Health-Care Management and Cost Reduction!

Important Contents also include:
From Patient/Consumer Centered Mobile or Home Devices:
- Health and Prevention data such as:
  - Diet and Nutrition
  - Exercise
- Data re: Chronic-Care Management
  - Blood Sugar Monitoring
  - Blood Pressure Monitoring
  - Weight in context of fluid retention/diuretics
  - Heart rate and regularity
  - Other relevant indicators
PHRs and mHealth Devices—Key to Health-Care Management and Cost Reduction!

Important Contents such as:
- Identification sheet
- Discharge Summary
- Problem list – List of illnesses, etc.
- Medication Record
- History and Physical
- Progress Notes – Evidence/progress of health issue
- Consultations/ specialists report
- Physician’s Orders
- Online or printable education resource materials
ONE Example: How Health IT Data can Inform Consumers, Patients and Providers

Partner Applications

- Aetna
- LiveHealthier
- American Diabetes Association
- Walgreens
- Blue Button
- Surveyor health
- Quest Diagnostics

Devices

Microsoft HealthVault

HealthVault Connection Center
ONE Example: How Health IT Data can Inform Coaches, Patients and Consumers

Users (with physician participation) can easily import test results into their HealthVault account. They can order commonly used diagnostic tests online, and share test results with additional providers. Those with chronic conditions can more closely track their health status.
ONE Example: How Health IT Data can Inform Coaches, Patients and Consumers

Mayo Clinic Health Manager, offers people the ability to organize and manage their family’s health, offering personalized condition and wellness guidance developed by the experts at Mayo Clinic—based on compatible health information shared from people’s HealthVault record such as data from labs and pharmacies, as well as personal monitoring devices.

The Mayo Clinic Health Manager helps people track progress towards recommended and personal goals, assess risk, monitor vital health stats like blood pressure, weight, and cholesterol, and get the most out of medical appointments.
This online wellness center helps people track and manage risk factors for heart attack, heart disease and stroke. Tracks blood pressure, cholesterol, blood glucose, weight, physical activity and medications. Can receive information from HealthVault-enabled devices and applications and share that data with the caregiver.

“The ability to monitor weight, blood pressure and activity levels of heart failure patients on a regular basis ensures more timely provider visits and avoidance of more expensive interventions.”

-Randall C. Starling, MD, Cleveland Clinic
The Digital AGE Has Arrived & Health Care Must Be Integrated into ALL OF HEALTH CARE!

Truly - No Longer a New Direction!

T.I.G.E.R.
TIGER is ALIVE, WELL with PERMANENT HOME at HIMSS

• As The TIGER Initiative Foundation

• For more information and to participate:

  – The first TIGER Summary Report and Executive Summary Phase II Report is available at https://www.tigersummit.com/

  – For TIGER Phase III and New TIGER Foundation currently contact Patricia Hinton Walker, PhD, RN, FAAN @ phintonwalker@usuhs.mil or phintonwalker@comcast.net and/or any TIGER Executive Committee Member

  – NEW TIGER WEB-SITE READY SOON!!!

www.thetigerinitiative.com
Technology Informatics Guiding Education Reform (TIGER) Next Step(s)

The TIGER Initiative Foundation

Patricia Hinton Walker, PhD, RN FAAN
Vice President For Nursing Policy & Professor
Uniformed Services University of the Health Sciences
Bethesda, MD
AMIA 2010