



## Catching the Tiger

*Planning for the Data Driven Future*

Brian Phillips, M.A., M.Ed.  
Regional Extension Center / AHIE  
Ohio University Heritage College of Osteopathic Medicine



### Top 5 “Must Haves” in the tool box

1. 8 day work week
2. Unlimited staff/budget
3. Rosetta Stone *Foreign Language Course for Acronyms* (order that ASAP)
4. Insomnia (for reading government regulations)
5. Patience and a sense of humor



## Making the Transition



## Where we were...

### Process vs. Practice

- Physicians spend up to 38% of their time writing up patient charts.
- Nurses spend up to 50% of their time writing up charts.
- Medical records are misplaced or missing in 30% of patient visits.
- The average patient record weighs 1.5 lbs\*.



\*Source: Committee on Improving the Patient Record, Institute of Medicine

## Where we were...

- A patient's age is not included in the medical record 10% of the time.
- A diagnosis is not recorded in the patient's record 40% of the time.
- Healthcare providers, while taking a medical history, fail to note the chief complaint in the patient's record 27% of the time\*.



*\*Source: Committee on Improving the Patient Record, Institute of Medicine*

## Appropriate Technology

### Building a data driven infrastructure:

- Affordable paper to digital transition solutions
- Affordable and available network solutions
- Safeguards for access:
  - HIPAA and all state and federal requirements
  - Governance?
  - Patient access?
  - Liability?...



## Meaningful Use (HSS, ONC)

Meaningful use (MU) is the criteria established for the acceptable use of electronic health records (EHR) and related technology within a healthcare organization.



- Use a computerized physician order-entry (CPOE) system.
- **Implement drug-drug, drug-allergy and drug-formulary checks.**
- Maintain an up-to-date problem list of current and active diagnoses based on ICD-9-CM or SNOMED CT. Generate and transmit permissible prescriptions electronically (eRx).
- Maintain active medication list.
- Maintain active medication allergy list.
- Record demographic information.
- Record and chart changes in vital signs.
- Record smoking status for patients 13 years old or older.
- Incorporate clinical lab-test results into EHRs as structured data.
- **Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities and outreach.**
- **Report quality measures to the Centers for Medicare & Medicaid Services (CMS) or the states.**
- **Send reminders to patients per patient preference for preventive or follow-up care.**
- Implement five clinical decision support rules, including diagnostic test ordering, along with the ability to track compliance with those rules.
- **Check insurance eligibility electronically from public and private payers.**
- Submit claims electronically to public and private payers.
- Provide patients with an electronic copy of their health information upon request.
- Provide patients with an electronic copy of their discharge instructions and procedures at time of discharge, upon request.
- **Provide patients with timely electronic access to their health information.**
- Provide clinical summaries for patients for each office visit.
- Exchange key clinical information among providers of care and patient-authorized entities electronically.
- Perform medication reconciliation at relevant encounters and each transition of care.
- Provide summary care record for each transition of care and referral.
- Submit electronic data to immunization registries and actual submission where required and accepted.
- Provide electronic submission of reportable lab results (as required by state or local law) to public health agencies and actual submission where it can be received.
- **Provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.**
- **Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.**



Meaningful Use



## Meaningful Use (HITECH)

According to the provisions of the Healthcare Information Technology for Economic and Clinical Health Act (HITECH), healthcare organizations that have achieved meaningful use by 2011 will be eligible for incentive payments; those who have failed to achieve that standard by 2015 may be penalized.



## Investing in EMR and Exchange

### Economic stimulus incentive funds:

- \$26.8 Million for Regional Partners to Help Implement Ohio's Health IT Strategy.
- \$14.9 million to establish a health information exchange.
- \$17 billion will be incentives paid as increased Medicare and Medicaid payments. Incentives will start in 2011 and be paid over 5 year for a physician who can show "meaningful use" of an EHR system.

*(Checks in the mail!)*



# ~~CHNs~~, RHIOs, HIEs..... and the NHIN



Appalachian Health Information Exchange

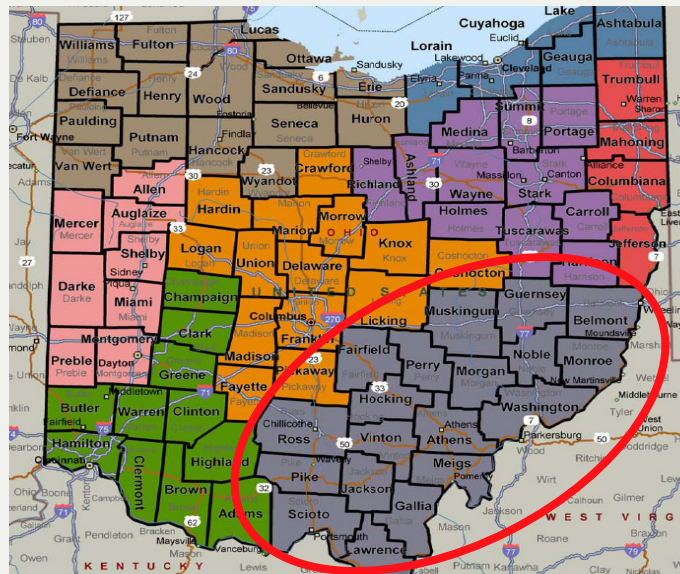
2,200 beds

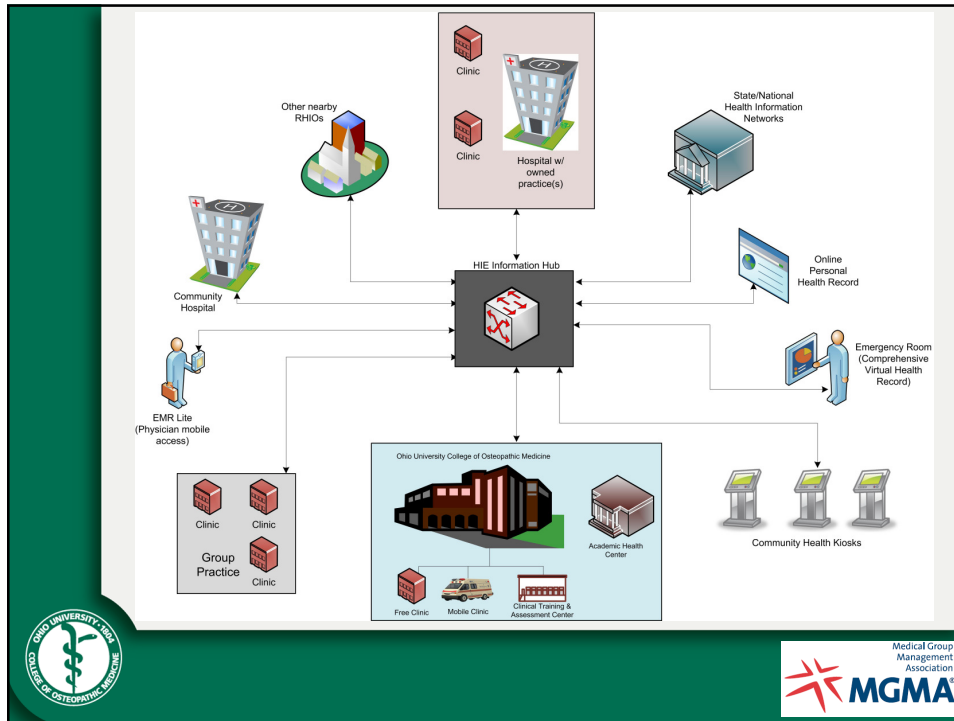
1,700+ physicians



Regional  
Extension  
Centers

OU-HCOM  
& AHIE

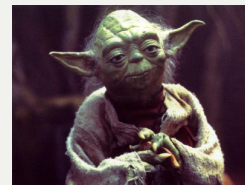




## “The Future of IT in Healthcare”

The “buzz” within the stakeholder communities around health IT (HIT) including purchasers, payers, and policymakers at every level of health care.

*“Always in motion is the future.”*



## “The Future of IT in Healthcare”

- *Preparing to “invent” accountable care organizations,*
- *Support of the medical home model(s),*
- *Realizing the goal of a national health information network (NHIN)*



## “The Future of IT in Healthcare”

- *Resolution of basic infrastructure barriers,*
- *Locking down system security and identifying best practices for private and humane access to data,*
- *Develop systems for leveraging the data to enhance clinical decision making and support evidence based medicine.*



## Accountable Care Organizations (ACOs)

*Silver bullets are only effective if no one moves the target!*



One of the central issues with preparing for ACOs is the fragmentation of data across providers and systems, limited access to silo data in a timely manner, and the ability to synthesis data in order to be useful in clinical decision making and practice management.



## Medical Home

*...a blend of the personalized, comprehensive, coordinated care that capitalizes on new technology and helps patients make sense of the increasingly complex health care system.*



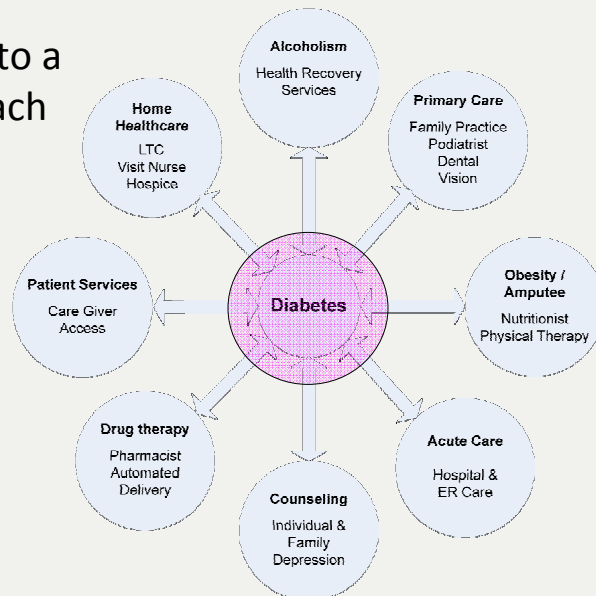
## Case Study: *Diabetes*

- More than 17 million Americans currently have diabetes; 5.9 million of them are undiagnosed.
- One million new cases of diabetes are diagnosed each year.
- By the year 2050, the number of people with diagnosed diabetes is projected to increase from 11 million to 29 million.
- Diabetes costs the United States about \$98 billion annually: \$44 billion for direct medical care and \$54 billion for indirect costs associated with disability, work loss, and premature mortality.



CDC (2011) <http://www.cdc.gov/diabetes/pubs/action/facts.htm>

## Silos of Care to a Team Approach



## Medical Home Model

A patient-centered medical home integrates patients as active participants in their own health and well-being. Patients are cared for by a physician who leads the medical team that coordinates all aspects of preventive, acute and chronic needs of patients using the best available evidence and, appropriate technology.



American Academy of Family Physicians  
(May Board 2008) Copyright © 2010

## Patients as Active Participants

- Association web sites-
  - *American Heart & Cancer Assoc., etc.*
- Government web sites-
  - *CDC, CMS, Medline Plus (NLM), etc.*
- Consumer stakeholder groups-
  - *AARP, pharmacies, insurance companies, etc.*
- Social Networking sites



## Virtual Communities

- [Disaboom](#) is a site for the disabled. Example: women with spinal cord injuries who have had children, can talk with others who want to have children and are wondering how their injury will affect pregnancy.
- [Diabetic Connect](#) is a social network for people with diabetes and their caregivers and doctors. "It's a place to talk when no one else understands..."
- [IMedix](#) general social network for anyone who wants to talk about health. Scans for articles, videos and blogs that are ranked by other users on how helpful they are.
- [Inspire](#) has mini social networks for different diseases and health conditions, each sponsored by health organizations.



From well developed professional (and sponsored) sites to grassroots blogs.

**The Assertive Cancer Patient**  
 Living with cancer—and an attitude.

**» Dr. E Saves the Day!**

Important typo: The fifth graf of this post should have read (and now does). The mets are NOT big enough... That's what happens when I write when I'm tired.

This is going to be a short post, because I'm tired and I want to get off the end and back to reading Jane Eyre....

As I mentioned in yesterday's post about my hospital stay, the doctors there had me firmly convinced that I needed radiation therapy in two—possibly three—places. My femur. My lower back. And possibly the left shoulder.

I, of course, refused to let them start my treatments there, while I was hospitalized for dehydration and a couple of other problems, and I went back to see Dr. Eube, who has been my radiation oncologist for years.

**about**

**recent posts**

- » Jane's Perlimonor: Jewelry on Charmed Bracelets
- » A Funny Footnote
- » Home From the Hospital
- » Up, Down, Touch the Ground...
- » Saturday Soup
- » Stormy Weather
- » Dumb People Smoke
- » WHO Gives These Awards? Do

**My Cancer Place**  
 Join the Community

HOME | BLOGS | PERSONAL WEB PAGES | CALLERS | FORUM | POLL | GROUPS | RECORDED | EVENTS | STORE | MY ACCOUNT

**FEATURED MEMBER**

godard  
 Female  
 61 years old  
 California, United States

**MEMBERS LOGIN**

Username:   
 Password:   
 Remember Me

**MEMBER LOGIN**

My Cancer Place is the only place to join a community of people with cancer, share information, give and receive support, learn from the experiences of others, and create a free web page with text and photos that you can change anytime.

**RECENT LOGINS**

**RANDOM PICS**

**NEW WEB PAGES**

**VIEW YOUR WEB PAGE**

TERMS & CONDITIONS | HELP CENTER | CONTACT US | PRIVACY POLICY | BROWSER COMPATIBILITY | ABOUT US | GET INVOLVED

My Cancer Place

## Scott's Diabetes Journal

MY ALL TIME FAVORITE QUOTE, WHICH PERFECTLY CAPTURES MY FEELINGS:  
 "DIABETES IS LIKE BEING EXPECTED TO PLAY THE PIANO WITH ONE HAND WHILE JUGGLING ITEMS WITH ANOTHER HAND, ALL WHILE BALANCING WITH DEFTNESS AND DEXTERITY ON A TIGHTROPE" - MARLENE LESS, 1983.



## Physician Lead the Medical Team

- Every person should have **access** to a medical home—a person who serves as a trusted advisor and provider supported by a coordinated team—with whom they have a continuous relationship.
- **Payment** for the medical home model should appropriately recognize and reward healthcare providers for their contributions to prevention, patient care, and care coordination.



© 2008 AAMC

## Physician Lead the Medical Team *cont.*

- Health care providers should be **trained** to understand and enact the medical home model as part of a team.
- Further **research** is necessary to better understand how to measure the core functions of the medical home and to develop an evidence base for how the model is best implemented.



© 2008 AAMC

## Information Overload

*...most outpatient care visits don't need "everything", those visits would be ridiculously long and confusing if I had to wade through every piece of information ever accumulated on a patient.*



Lyle Berkowitz, MD  
Healthcare informatics expert,  
Clinical Information Systems, Chicago.

## Best Available Evidence

The most common definition of EBM is "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means **integrating individual clinical expertise** with the **best available external clinical evidence** from **systematic research**."



(Sackett D, 1996)

## Delivery and Research Partnership



ohio university  
edison  
biotechnology  
institute

*We are all  
happier when  
we look  
ahead with  
confidence.*

- about the institute
- technology commercialization
- staff members
- research news updates
- related links
- contacting us

Thomas Alva Edison



## Controlled Clinical Trials

- Integrate processes
  - Identification of eligible candidates
  - Enrollment integrated with scheduling and registration
  - Order Entry and Order Communication
  - Results review
- Re-use infrastructure
  - Data exchange standards
  - Terminology standards
  - Knowledge interchange standards



## Technology Driving a Global Health Care Economy

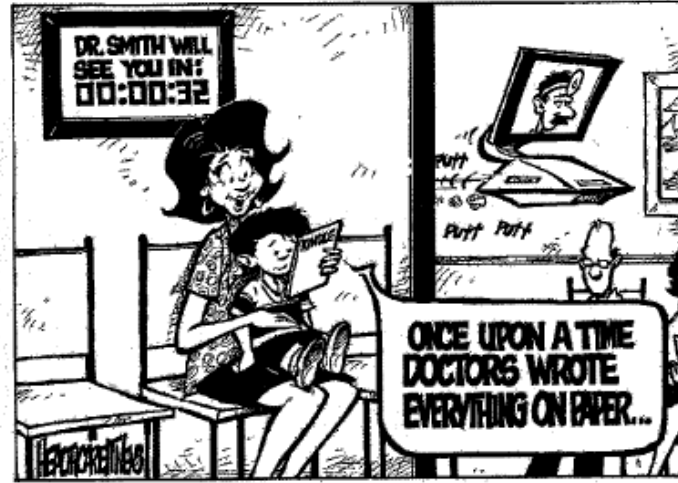
- Quality & Access- *market driven healthcare?*
  - *Health care as an import / export market*
- Medical Holiday and Telemedicine
- Policies and Governance in the use of technology



## Summary

- We are just getting started!
  - Re-engineering of work processes.
  - Develop strategies for leveraging the data for clinical delivery and practice management
  - Development of a national, comprehensive, medical information system.
  - Re-think medical data for research.
  - Develop new strategies in medical education to meet the need of future health care delivery.





*Thank you...questions?*

