

# T.I.G.E.R. Initiative

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# Objectives

- Define T.I.G.E.R. Initiative
- Examine real world applications related to T.I.G.E.R. Initiative
- Demonstrate relationship between T.I.G.E.R. Initiative and nursing informatics
- Evaluate learned concepts through advanced practice case studies



# What is Nursing Informatics & Why is it important?

- Definition of Nursing Informatics
- More technology is being introduced in today's healthcare field
- Goal is to develop and implement information systems that increase efficiency, promote safety, and improve overall patient care
- President Obama has included funds in the economic stimulus to support greater use of technology.

# TIGER Initiative

- T= technology
- I= information
- G=guiding
- E=educational
- R=reform



# The TIGER Initiative

- Formed in 2004

## Goals:

- Aims to engage nurses in digital electronic era
- Identify information for best practices using efficient technology
- Create action plans that can be easily duplicated in all healthcare settings



[greatleadershipbydan.com](http://greatleadershipbydan.com)

- **Twentieth Century to today**

- **2004** speech by former President George W. Bush
- **2004** Office of National Coordinator for Health Information Technology held a summit in response to goal
- **2005** group of nurses met and discussed how nursing could move toward this objective (Stinger, 2011)



- **2006**, November- TIGER summit defined actions steps for nurses
- **2006**, 10 year vision and three year action plan was established (Tiger, 2009)
- **2009**, President Obama supported Former President Bush's goal of EMR by 2014 (Tiger, 2009)
- **2011**, July- TIGER became the TIGER Initiative Foundation establishing it as a 501 (c) (3) organization (tax exempt non profit organization)

# Phases of Tiger

## ○ **First Phase (2006)**

- Formation of Tiger and established committee (all volunteers) who worked to gather leaders from nursing organizations
- Seven Core Pillars of Focus Established
  - Communication and Collaboration
  - Education
  - Informatics Design
  - Information Technology
  - Culture
  - Management and Leadership
  - Policy
- Used to establish 10 year vision and 3 year action plan





# Phases of Tiger

## ○ **Second Phase (2007-2009)**

- Established a list of skills needed to for nursing in the technological age
- List was published in January 2011 in the book, Nursing Informatics: Where Technology and Caring Meet (Stringer, 2011)

### ○ Nine collaborative teams formed:

- Standards and Interoperability
- National Healthcare IT agenda
- Informatics Competencies
- Education and Faculty Development
- Staff Development
- Usability and Clinical Application Design
- Virtual Learning Center
- Leadership Development
- Consumer Empowerment and Personal Health Records



# Phases of TIGER

## ● Third Phase

- Implementation and Education of Recommendations
- Became a transition for nursing recommendations
- The Office of the National Coordinator for Health Information Technology (ONC) relies on TIGER initiative for:
  - Analysis/recommendation
  - Personal Health Records
  - Proposed legislation on research privacy



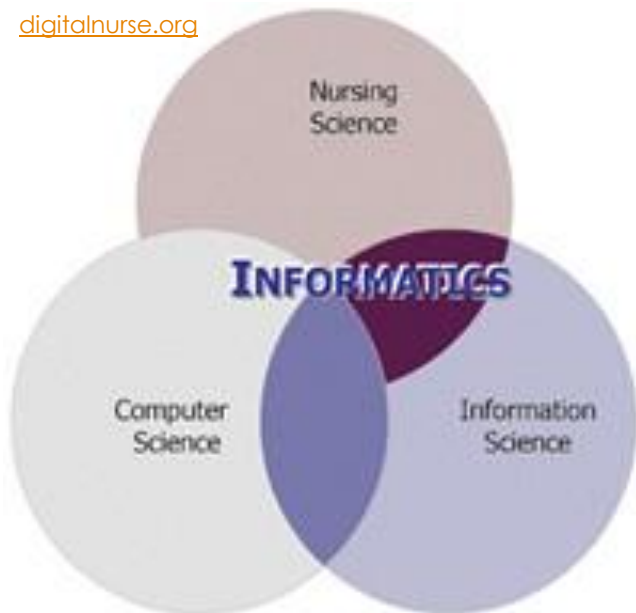
# Today



- 1500 nurses involved
- TIGER is working on:
  - Virtual Learning Environment
  - Addressing the needs of access to informatics education in diverse populations
  - Addressing Comparative Effectiveness Research (CER)
  - Planning an international initiative
  - (TIGER Initiative, 2012)

I is for....

[digitalnurse.org](http://digitalnurse.org)



## Informatics and Integration

- Informatics is a specialty involving computer, cognitive, and information science used to collect and interpret data for a specialized field (McGonigle and Mastrian, 2009).
- Integration- combining parts (information systems, databases, IT technology) to create a structured system (McGonigle and Mastrian, 2009).

<http://www.allianceni.org/documents/ANICoreValuePostcard.pdf>

# “Call to Action”

## ○ Informatics Competencies

- Focus of one TIGER collaborative

### ○ Goals include:

- Computer, Information Literacy, and Informatics Skills
- Develop informatics competencies for nurses
- Include nursing informatics competencies on certification tests for healthcare workers

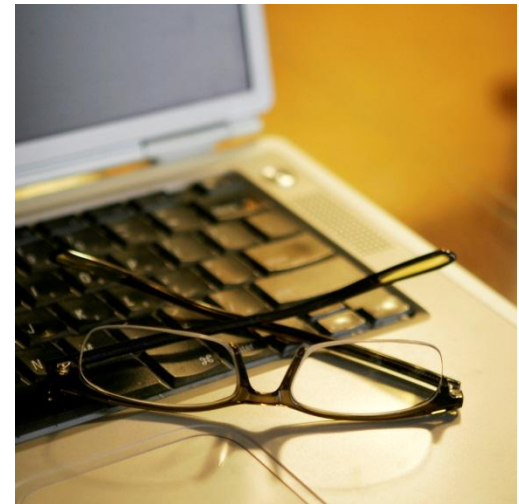


[digitaleblogger.com](http://digitaleblogger.com)

- Include informatics competencies and scope and standards (Delaney and Gugerty, 2009)

# “Call to Action”

- **Computer Competencies- Recommendations**
  - Framework based off of European Computer Driving License (called ICDL outside of Europe)
- **Contains 7 modules to determine computer skills:**
  - Concepts of Information Technology (IT)
  - Using the Computer and Managing Files
  - Word Processing
  - Spreadsheets
  - Database
  - Presentation
  - Information and Communication
- (Delaney, C. and Gugerty, B. 2009)



# “Call to Action”

- Information Literacy- Recommendations

<b>Framework for Application of Information Literacy and Evidence-Based Practice to Nursing Process</b>					
<b>Curriculum Pattern</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<b>Information Literacy</b>	Identify information needed	Find needed Information	Appraise Information	Implement information into practice	Evaluate outcomes of info use
<b>Nursing Process</b>	Assessment	Planning	Intervention	Implementa- tion	Evaluation
<b>Evidence-Based Practice</b>	Develop researchable Question	Search for Evidence	Appraise Evidence	Implement findings into practice	Evaluate outcomes & process

# “Call to Action”

## Informatics Competencies- Recommendations

- System Lifecycle/Roles
- Consumer Empowerment/Personal Health Record

- EMR/EHR
  - Uses: functionality, documentation
- Performance Improvement
- Leadership

(Gugerty & Delaney, 2009)

The screenshot shows the 'Minerva Health Manager - Mary Adams' application window. The main content area is titled 'Personal Profile' and contains the following information:

- Name:** First: Mary, Middle: [blank], Last: Adams, Suffix: [blank]
- Sex:** Female
- Date of Birth:** 02/02/1972, **Age:** 37
- Ethnicity:** Race: White, Group: European (Western), Primary Language: English, Religion: Christianity - Roman Catholicism
- Physical Characteristics:** ABO Blood Type: A, RH Factor: Positive, Height: 5 ft, 7 in, Weight: 142 lb, Eye Color: Hazel, Hair Color: Brown, Identifying Mark: Small birthmark on lower back

A sidebar on the left lists 'Personal Health Information' categories: Identification, Personal Profile, Current Residence, Contacts, Health Conditions, Medications, Treatments, Tests and Diagnostics, Health Indicators, Health Factors, Healthcare Visits, and Future Care Decisions.





[123rf.com](http://123rf.com)

## o Guiding Practice

- o TIGER initiatives goal in guiding practice for nurses (The Tiger Initiative, 2009).

## o Growing Demand

- o Since the 1970's, several authors and organizations have made recommendations (National League for Nursing, 2008).



[antranik.org](http://antranik.org)

## Electronic Health Record

- All healthcare facilities to have upgraded to computerized HER's by 2014 (National League for Nursing, 2008)
- EHR's ensure safety and quality of care
- Interdisciplinary healthcare teams are able to navigate data and shared information among all health professionals
- Personalized care
- Decrease in errors (orders entered in computer vs. handwritten)
- Automated check for drug allergies and prescribed medications

## **Nursing Education:**

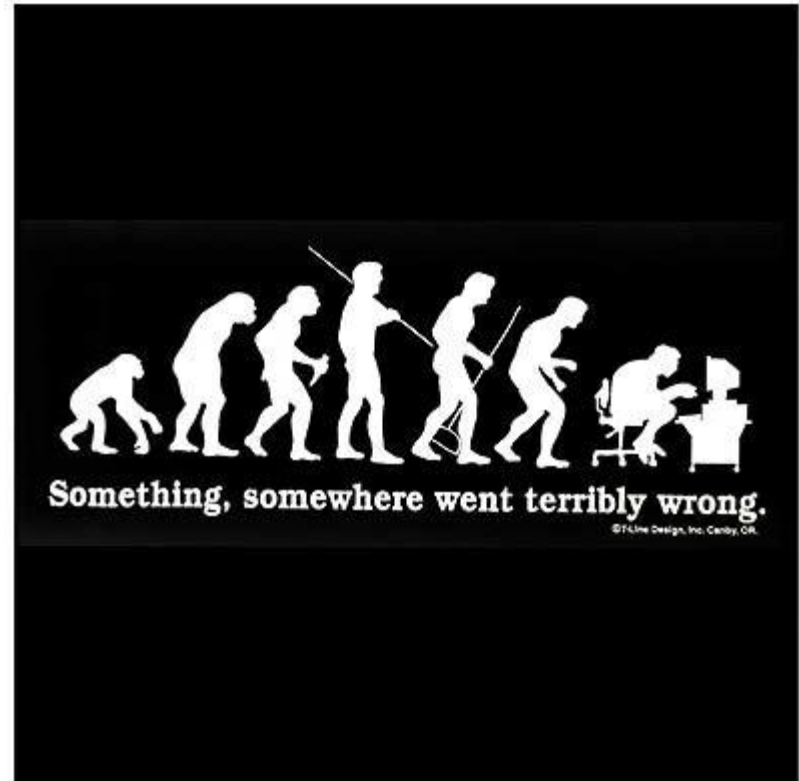
- Competencies (annual)
- Continuing Education (CEU's)
- PDA's, Bluetooth, software for care plans/education for patients

## **Information Technology:**

- Virtual programs (offer more options to learn)
- PDA's/Bluetooth- Lexicomp program
- Robotics in surgery
  - Helps reduce the amount of staff required in the operating room. The use of computerized surgery (telesurgery) can help enhance precision, reduce trauma, and cost

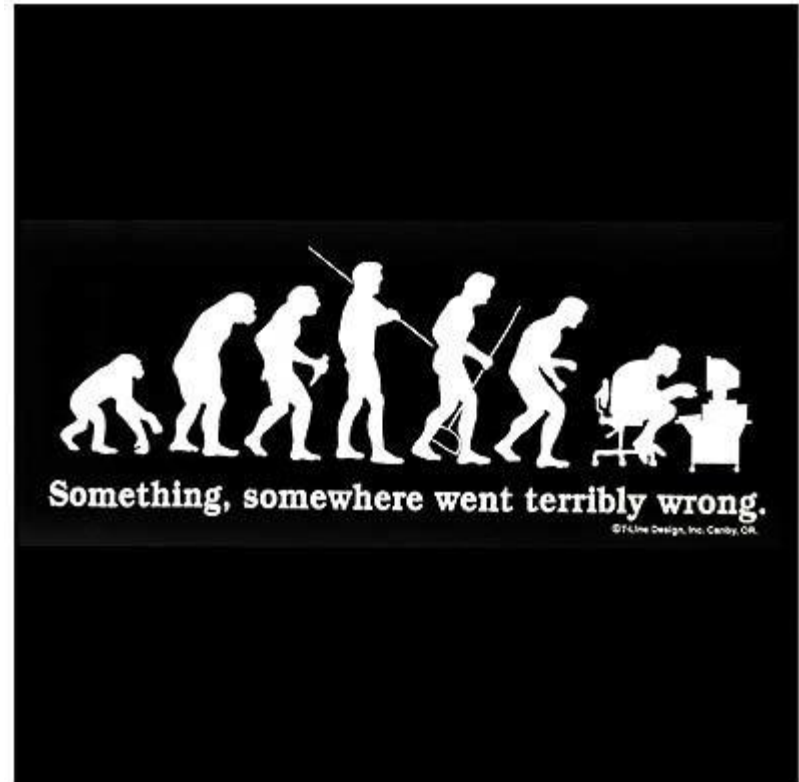
## Evolving

- Today the TIGER group continues to work on phase III of the TIGER initiative.
- Goals include:
  - Virtual Learning Center
  - Invitational Summit
  - ([www.tigersummit.com](http://www.tigersummit.com))



## Evolving

- TIGER members continue to post new resources.
- Making informatics recommendations and use of technology in healthcare information readily available
- The majority of VLC now only available as pilot programs in certain universities and through military access





[123rf.com](http://123rf.com)

## Real world application

- 2006 the American Health Information Community was created
- Identified priority areas
  - computer systems developed for ambulatory/inpatient areas.
- TIGER initiative's informatics competencies collaborative team was instrumental in getting the inclusion of medication indications
  - (Halley & Sensmeier, 2009)

# Applications

- Smart Phone Applications
  - Example: ITriage, Epocrates, Medscape, Skyscape and Pepid
  - Applications are giving nurses information at their fingertips related to assessing, triage, medication use, and patient education (ED Nursing, 2011)





## Education

- The education of Masters prepared RN's as well as Bachelors prepared RN's is enhanced by virtual communities
  - The Neighborhood: developed by Pearson Health Science. (Pearson Health Science, 2012)
  - Commercially developed application gives nurses insight into patient's lives.
  - Uses the patient's history and disease process to enhance assessment skills.
  - Allows for advances in assessment, medical record analysis as well as case studies (Gonzalez, 2012)



# SIMULATION



- The University of Toledo simulation centers
  - Focused on enhancing student development in different areas
  - State of the art center contains:
    - health assessment lab
    - automated medication management system
    - manikins
    - many skills models (University of Toledo, 2012)

# Video Technology



- VA clinics available in rural areas
- Clinics use video technology to place the patient in contact with needed specialist.
- Technology also used to send electronic information to remote physicians

# Case Study

- History:
- MI x 2 (1982 & 1999). CABG x4, CHF, A-FIB, diabetic type 2 (new diagnosis-controlled with diet), obesity BMI (31), Stent placement x 2 (1999 & August 2011), coronary artery disease.
- NKDA
- Medications:
  - Digoxin 0.125mcg daily
  - Coreg 80mg CR daily
  - Lisinopril 20mg daily
  - Lasix 20 mg BID
  - Coumadin 4mg daily
  - Zocor 40 mg daily
  - Aspirin 81 mg daily
  - Plavix 75 mg daily

# Case Study

## Scenario:

- 62 y.o. Male wakes up at 7 am with complaints of fatigue, mild shortness of breath, and leg swelling. The patient was up late the night before and ate fried chicken at a fourth of July family picnic. He is somewhat nauseous and related his fatigue to staying out late. Patient has telehealth communication software including a scale and a machine which takes his vitals including HR, B/P, and O2 saturation because he lives 50 miles away from the nearest hospital and last year was frequently readmitted for CHF exacerbations.
- Patient completes his normal routine using his automated electronic scale. The scale then tells him he has gained 3 lbs. since the previous day. He now weighs 198 lbs.
- He uses his electronic blood pressure machine. B/P reads 156/94. Patient's blood pressure normally runs 120-130 systolic. HR is 90 bpm and O2 sat is 94%. Patient has already taken his morning medications. This information is then sent electronically through a wireless system to the on-call nurse practitioner in the CHF clinic.

# Case Study

## Scenario:

- NP on call for outpatient CHF clinic checks morning communication results on the computer and calls the patient.
- NP discusses abnormal results with patient, inquires about current medication compliance, activities from the previous days along with diet. NP determines that patient is in the early stages of heart failure. NP instructs patient to double Lasix dose x 2 and patient repeats instructions back to verbalize understanding.
- NP also discusses the importance of maintaining low sodium diet and offers suggestions of appropriate foods.
- IF patient's symptoms worsen or patient's weight increases at all, patient instructed to call 911.
- NP to follow-up with phone call the following AM after telehealth results received.

# Discussion Questions

- What recommendations as APRN could you suggest for the patient following this telehealth conference?
- How do you think technology such as telehealth can be used by APN's to advance their practice?
- What other advanced healthcare technology could an APN use to help in this scenario?

# TELEHEALTH

- Telehealth is the use of technology and telecommunications to advance the care of individuals from a distance
  - Uses videoconferencing, the internet, store and forward technology, streaming media, and terrestrial and wireless communication devices
  - Can be used to support long distance health care, education, and public health administration (US Department of Health and Human Services, 2012).
  - APN's can use telehealth to monitor CHF patients management for oncology patients in remotes locations
  - Telehealth field is expanding at a very fast pace



# Telehealth

- The Veterans Administration (VA) has been a leader in using Telehealth
- Initiative to keep veterans in their homes
- Technology used to manage chronic diseases including:
  - Diabetes
  - Heart failure
  - Chronic Obstructive Pulmonary Disease
  - Depression
  - Post Traumatic Stress Disorder
- Patients use devices to collect vital signs and manage symptoms
- Information relayed to nurse who is their point of contact





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