Preparing the Nursing Workforce of the Future

What can Technology and Informatics do for You?
Nursing Informatics Symposium
World of Health IT, Copenhagen, Denmark
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TIGER Vision

- Allow informatics tools, principles, theories and practices to be used by nurses to make healthcare safer, effective, efficient, patient-centered, timely and equitable

- Interweave enabling technologies transparently into nursing practice and education, making information technology the stethoscope for the 21st century

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TIGER Summit – Phase 1

- October 31-November 1, 2006
- 100 participants representing all stakeholders
- 70 organizations committed to the TIGER 3 year Action Plan
- Summary report available at www.tigersummit.com

The Alliance for Nursing Informatics is….

a collaboration of organizations,
representing a unified
voice for nursing informatics

Sponsored by **AMIA** & **HIMSS**

ANI and the TIGER Initiative

- In 2007, ANI became the enabling organization for the TIGER initiative
- The TIGER initiative seeks to better prepare practicing nurses and nursing students to use technology and informatics to improve the delivery of patient care
- Phase one of TIGER engaged stakeholders to create a common vision of ideal EHR-enabled nursing practice
- Phase two of TIGER will facilitate collaboration among participating organizations to achieve the vision

Pillars of the TIGER Vision

Management and Leadership:
Revolutionary leadership that drives, empowers and executes the transformation of healthcare

Education:
Collaborative learning communities that maximize the possibilities of technology toward knowledge development and dissemination, driving rapid deployment and implementation of best practices

Pillars of the TIGER Vision

Communication & Collaboration:

Standardized, person-centered, technology-enabled processes to facilitate teamwork and relationships across the continuum of care

Informatics Design:

Evidence-based, interoperable intelligence systems that support education and practice to foster quality care and safety

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Pillars of the TIGER Vision

Information Technology:

Smart, people-centered, affordable technologies that are universal, useable, useful and standards-based

Policy:

Consistent, incentives-based initiatives (organizational and governmental) that support advocacy and coalition-building, achieving and resourcing an ethical culture of safety

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Pillars of the TIGER Vision

Culture:

A respectful, open system that leverages technology and informatics across multiple disciplines in an environment where all stakeholders trust each other to work together towards the goal of high quality and safety

3 Year Action Plan - Education

- Integrate informatics competencies into the nursing curriculum and the learning process
- Foster faculty development through funding and incentives
- Nurture innovation via collaborative partnerships with practice and industry

3 Year Action Plan - Practice

- Take an active role in the design and integration of informatics tools that are intuitive, affordable, useable, responsive, and evidence-based
- Create tools that serve nurses and other professionals as members of multi-disciplinary care teams

3 Year Action Plan - Both

- Integrate industry standards for IT interoperability with clinical standards for practice and education
- Educate practice and education communities on IT standards
- Establish standards, and set hard deadlines for adoption

Academic institutions should:

- Adopt informatics competencies for all levels of nursing education and practice.
- Encourage faculty to participate in faculty development programs in informatics
- Develop a school task force/committee to examine the integration of informatics throughout the curriculum.
- Encourage HRSA Division of Nursing to continue and expand their support for informatics specialty programs and faculty development.

Academic institutions should:

- Measure baseline and changes in informatics knowledge among nurse educators and nursing students and among the full range of clinicians seeking continuing education.
- Collaborate with industry and service partners to support faculty creativity in the design, acceptance, and adoption of informatics technology.
- Develop strategies to recruit, retain, and train current and future nurses in the areas of informatics education, practice, and research.
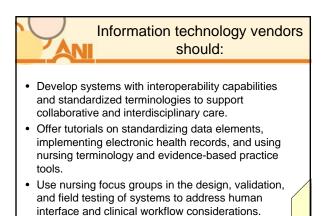
Healthcare delivery organizations should:

- Support the collection, sharing, and promotion of best practices and expertise for adoption of IT, including design and delivery of improved healthcare.
- Partner with local educational institutions to offer informatics tools and curricula that support and enhance the use of technology and informatics in practice.
- Develop competency-based, cost-effective training strategies that can be used within the work setting and that address cultural issues and overcome concerns relating to new technologies.

Healthcare delivery organizations should:

- Develop a scope of practice statement/career model for nurses that includes informatics education, training, career development, and competencies at all levels of the organization.
- Facilitate nursing leadership to understand, promote, own, and measure the success of IT projects.
- Mandate use of IT standards across their organizations.

Information technology vendors should:

- Develop systems with interoperability capabilities and standardized terminologies to support collaborative and interdisciplinary care.
- Offer tutorials on standardizing data elements, implementing electronic health records, and using nursing terminology and evidence-based practice tools.
- Use nursing focus groups in the design, validation, and field testing of systems to address human interface and clinical workflow considerations.

Information technology vendors should:

- Partner with local educational institutions to offer informatics tools as well as curricula that support and enhance the use of technology and informatics in practice.
- Create interoperable systems that speed the translation of research into practice and foster the creation of new knowledge.

9 Collaborative TIGER Teams

1. **HIT Standards and Interoperability**
2. National Healthcare IT Agenda/HIT Advocacy
3. **Informatics Competencies**
4. **Education and Faculty Development**
5. Staff Development/Continuing Education
6. Usability/Clinical Application Design
7. **Virtual Demonstration Center**
8. **Leadership Development**
9. Consumer Empowerment/Personal Health Record

Phase II - Facilitating collaboration among participating organizations to achieve the TIGER vision

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HIT Standards and Interoperability

The HIT Standards & Interoperability Collaborative Team was formed to help promote the importance of health IT standards and interoperability for the delivery of safe, effective, efficient and patient centered care.

Facilitators: Elizabeth C. Halley RN, MBA, & Joyce Sensmeier MS, RN-BC, CPHIMS, FHIMSS

HIT Standards and Interoperability

1. Catalogue and develop an inventory of the most relevant health IT standard setting efforts and resources
- This workgroup is developing an inventory of existing resources including the following sources of information:
  - comprehensive literature review
  - ongoing research programs
  - publications
  - expert resources
  - access to intended audience
  - comprehensive list of specialty-specific standards efforts (working with nursing professional organizations)

HIT Standards and Interoperability

2. Create an awareness campaign on standards and interoperability
   – Reviewed and commented on HITSP Medication Management Interoperability Specification
   – Reviewed and commented on AHIC Consultations and Transfers of Care Use Case
3. Create tutorials on topics related to standards and interoperability
   – Presented educational webinars on HIT Standards activities – located at:
     http://tigerstandards.pbwiki.com/
4. Review work from the nursing and healthcare environments to define and collect standards and interoperability examples

HIT Standards and Interoperability Recommendations

- Recognizing that interoperable standards are an essential part of all health IT systems, stakeholders should *encourage the adoption of recognized health IT standards*
- Healthcare delivery organizations should *mandate use of recognized health IT standards* for information exchange across their systems
- Government and policy makers should *engage nurses in national efforts* for harmonizing and implementing standards that ease communication of secure patient information across the continuum of care

HIT Standards and Interoperability Recommendations

- Educators should *offer tutorials, curricula and forums* on secure exchange of health information, standardizing data elements, implementing electronic health records, and using nursing terminology models and evidence-based practice/decision support tools
- Information technology vendors should *develop and support adoption of systems* with interoperability capabilities that promote standardized terminologies
- Nurses should *support use of evidence-based nursing concepts* that have been mapped into standard terminologies such as SNOMED CT®

Informatics Competencies

The TIGER Informatics Competencies Team has organized and harmonized the informatics competencies into four primary categories:
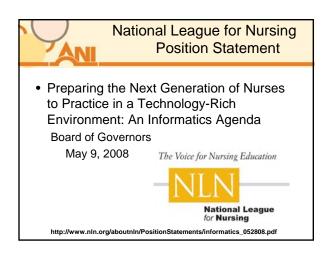
1. Basic Computer
   - Concepts of Information Technology (IT)
   - Using the Computer and Managing Files
   - Word Processing
   - Spreadsheets
   - Database
   - Presentation
   - Information and Communication

Informatics Competencies

The TIGER Informatics Competencies Team has organized and harmonized the informatics competencies into four primary categories:

2. Information Literacy
   - Framework (S. Pierce, 2001)
   - Competencies
   - Sources
3. Information Management and Informatics
   - ANSI/HL7 Electronic Health Record-System (EHR-S) Functional Model
   - Direct Care
   - DC.2 (Clinical Decision Support)
   - DC.3 (Operations Management and Communication)
   - Supportive
   - Information Infrastructure

Informatics Competencies

The TIGER Informatics Competencies Team has organized and harmonized the informatics competencies into four primary categories:

4. Attitudes and Awareness
   - Understands concepts and processes regarding computer systems and impact on practice
   - Understands the benefits/limitations of communication technologies and impact on healthcare
   - Understands the advantages of electronic tools for consumer health and healthcare
   - Understands the importance of the contributions of nurses for clinical information systems
   - Change management
   - Scholarly process

Education & Faculty Development

The TIGER Education & Faculty Development Collaborative was formed to identify innovative academic educational programs that are preparing the nursing work force to better use technology and information systems to provide safer, more effective, more efficient, and patient-centered care.

Facilitators: Mary Anne Rizzolo, EdD, RN, FAAN
& Diane Skiba, PhD, FAAN, FACMI

– Provided comment on the 5th draft of the Essentials of Baccalaureate Education for Professional Nursing Practice
– Formed National League for Nursing Task Force
  • Provided impetus for development of a Position Statement and Call for Reform

National League for Nursing Position Statement

• Preparing the Next Generation of Nurses to Practice in a Technology-Rich Environment: An Informatics Agenda

Board of Governors

May 9, 2008

The Voice for Nursing Education

NLN
National League
for **Nursing**

http://www.nln.org/aboutnln/PositionStatements/informatics_052808.pdf

NLN Position Statement

• The intent of the position statement is to support the reform of nursing education to promote quality education that prepares a workforce capable of practicing in a healthcare environment where technology continues to increase in amount and sophistication.

• It is imperative that graduates of today's nursing programs know how to interact with these important informatics tools to ensure safe and quality care.

NLN Position Statement

- March 2006 survey solicited input of NLN member and non-member faculty and nursing education administrators.
- Only 50-60% of respondents said that informatics was integrated into the curriculum and that clinical experience with information systems was provided during clinical experiences.
- 10 recommendations for nurse faculty
  » 540 deans/directors and 1,557 faculty respondents

NLN Position Statement
Recommendations for Nurse Faculty

- Participate in faculty development programs to achieve competency in informatics
- Designate an informatics champion in every school of nursing
  – to help faculty distinguish between instructional technologies and using informatics to guide and inform practice
  – to translate technology & informatics into curriculum
- Incorporate informatics into the curriculum
- Incorporate ANA-recognized standard nursing language and terminology into content

NLN Position Statement
Recommendations for Nurse Faculty

- Identify clinical informatics exemplars to serve as examples for the integration of informatics into the curriculum
- Partner with clinicians and informatics people at clinical agencies to develop competence
- Collaborate with clinical agencies to:
  – ensure that students have hands-on experience with informatics tools
  – demonstrate transformations in clinical practice produced by informatics
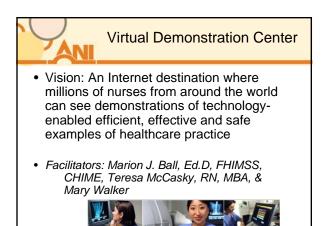- Establish criteria to evaluate informatics goals for faculty

Leadership Development

The Leadership Development collaborative was formed to develop revolutionary leadership that drives, empowers, and executes the transformation of health care.

Facilitators: Judy Murphy, RN, FACMI, FHIMSS & Dana Alexander, RN, MSN, MBA

Leadership Development Objectives
- Develop programs for nurse executives that stress the value of information technology and empower them to use IT knowledgeably, giving the leaders of the profession a strong and identifiable voice.
- Facilitate nursing leadership to understand, promote, own and measure the success of IT projects.

Virtual Demonstration Center

- Vision: An Internet destination where millions of nurses from around the world can see demonstrations of technology-enabled efficient, effective and safe examples of healthcare practice

- *Facilitators: Marion J. Ball, Ed.D, FHIMSS, CHIME, Teresa McCasky, RN, MBA, & Mary Walker*

Virtual Demonstration Center

Benefits and Virtual Demonstration Center Outcomes
- Nurses that can visualize the benefits of an IT-enabled future will be more likely to fully engage in the electronic health record within their practice setting.
- Most exposure to IT capabilities are site-specific (exception is nursing informatics resources).
- Most academic institutions have very limited accessibility to IT demonstration resources to use within their curriculum.
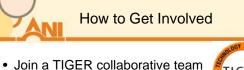
Virtual Demonstration Center

Benefits and Virtual Demonstration Center Outcomes

- Most IT training occurs in the field when a new system is implemented and focuses on system mechanics vs. user benefits and impact on patient care.
- Universal adoption of informatics competencies for all nurses will require universal access to informatics resources.
- **HIMSS Virtual Conference & Expo November 19-20, 2008** www.himssvirtual.org

Next Steps for TIGER

1. Create a mechanism for sharing action plans, goals, successes, best practices, and expert resources across all stakeholder groups and the entire nursing profession
2. Connect like-minded organizations to better leverage their expertise, skills, ideas and practices to move forward the TIGER agenda
   - Presentations at regional, national and global conferences and meetings and journal publications
3. Publish the progress, outcomes, success stories and TIGER achievements
   - Call to Action Summary Reports – Electronic format
   - 4th Edition of Nursing Informatics Series
     - "Where Caring and Technology Meet"

How to Get Involved

- Join a TIGER collaborative team
- Be an involved TIGER advocate!

Visit the TIGER web site at: www.tigersummit.com

Visit the TIGER WIKI at:
http://tigerstandards.pbwiki.com/

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