T.I.G.E.R.

Getting Started: Adding Informatics to the Nursing Curriculum

Education Collaborative

November 19, 2008

Logistics

- Audio for participants
- Questions and Answers Session

Goals

- Describe three models for incorporating informatics into the curriculum

- Examine the advantages and necessary resources to implement these models

Speakers

- Dr. Jane M. Brokel, Assistant Professor, University of Iowa
- Dr. Josette Jones, Assistant Professor, Indiana University
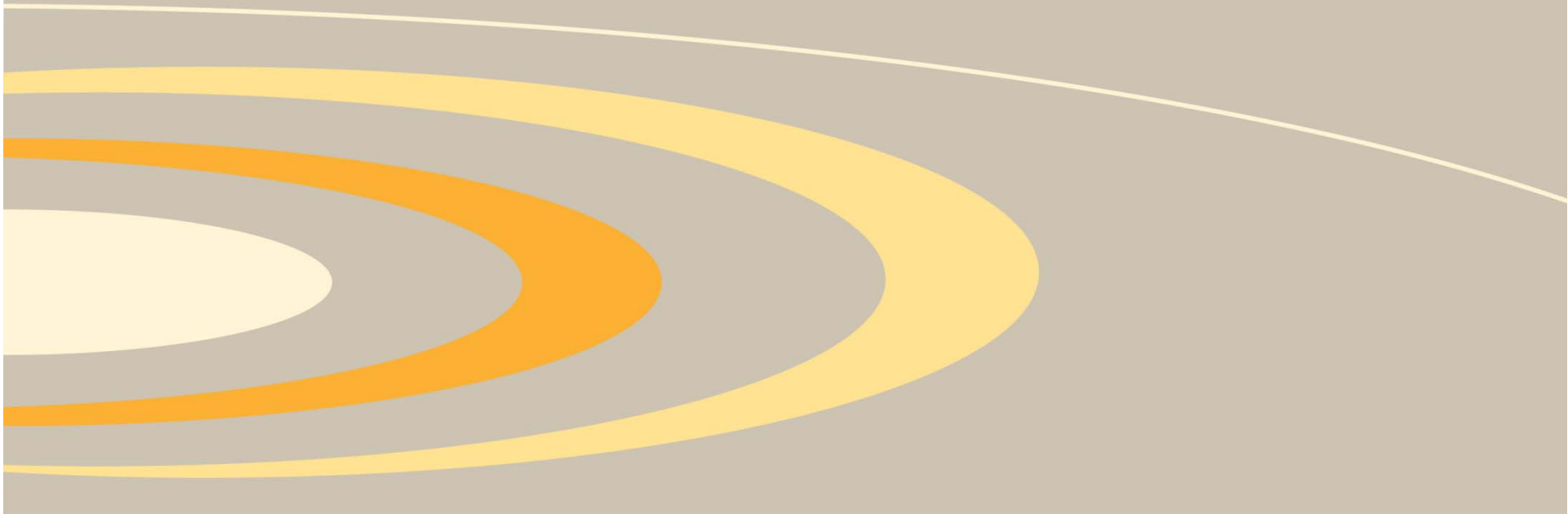- Dr. Trish Trangenstein, Professor, Vanderbilt University

- Moderator, Diane J. Skiba, University of Colorado Denver

Informatics in Education Programs

UNIVERSITY OF IOWA – Jane M. Brokel

NOVEMBER 19, 2009

T.I.G.E.R.

TECHNOLOGY INFORMATICS GUIDING EDUCATION REFORM

Academic Programs - Undergraduate - BSN

- For the high school graduate – admission letter
- Offer a broad course of study for entry into nursing practice and set a foundation for graduate study.

In-class version: "Information Management and Patient Care Technology in Practice" course is early in the program. Summer 8-10 wk or Fall course option Prerequisite is that they completed a core clinical practicum.

For the undergraduate introduction course:

- Learn to manage data, information, knowledge, and technology to communicate with others effectively

- Learn to provide safe patient care – technology and information use [Simulation exercises and testing already address across the 3 years]

- Learn to use clinical evidence and research to inform practice decisions (Library, Smart phones, Web online databases) [already partially in courses]

What is introduced in the course?

• Clinical Information technologies – PHRs, EHRs in state [currently in leadership course but moving to introduction course now]

• Decision support systems – types of interventions used in the technologies to support users.

• Standardized terminologies – move from textbooks to online sources e.g. skyscape with NANDA-I nursing diagnoses; e.g. HANDS with NNN concepts and linkages

What is introduced in the intro course?

- Finding evidence to guide practice – health sciences library & data resources e.g. FirstDataBank, Skyscape, FA Davis, Zynx Health, Multum, epocrates,

- Smart Phone technologies (e.g. HTC Touch, Samsung)

- How data are collected and used to evaluate compare and improve outcomes? – e.g. healthgrades.com

Draft Course Objectives:

1. Describe the role of information technology in improving patient outcomes and supporting safe care environments.

2. Use standardized terminology and CIS systems to document interventions that reflect nursing's contributions to patient outcomes.

3. Apply patient care technologies to address the needs of a diverse patient population.

Draft Course Objectives:

4. Understand the ethical standards related to patient data security, confidentiality, regulatory requirements, and patient's right to privacy with use of protected information.

5. Apply clinical decision making tools and safeguards embedded in patient care technologies and information systems to create a safe practice environment for both patients and healthcare workers.

6. Demonstrate skills in using patient care technologies, information systems, and telecommunication devices that facilitate safe nursing practice in a variety of settings.

Draft Course Objectives:

7. Understand the need to evaluate safeguards in patient care technology and information systems to create safe practice policy, procedures and environmental structures for both patients and healthcare workers.

8. Demonstrate knowledge of regulations and quality improvement processes that impact the care processes and redesign of workflow in use of technology in patient care.

9. Evaluate data from relevant sources that contribute to delivery of care.

RN-BSN Progression - Online

Available in all regions of the state.
Networks with 21 community colleges.
For associate degree and diploma-prepared RNs

Current: EXPECTATIONS FOR COMPUTER COMPETENCY
             ICON – Desire to Learn application for all courses.
             List serve
             Iowa Communications Network (ICN) fiber optics
             ElluminateLive! – Web conferencing
             Adobe Connect – web conferencing and live classes

MSN – i.e Clinical Nurse Leader

Build on a bachelor's degree or BSN Degree

This pre-licensure program will allow individuals to earn a Master of Science in Nursing degree .

Students sit NCLEX exam and test for certification as a Clinical Nurse Leader (CNL).

CORE Courses for all Master Degrees in Nursing

96:211 Evidence Based Practice

96:263 Informatics in Nursing and Health care **[also in DNP]**

96:209 Health System/Economics/Policy

96:208 Leadership for Adv Nursing Practice

Thanks you
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T.I.G.E.R. Adding Informatics to the Nursing Curriculum

Josette Jones, RN, PhD

School of Nursing

Indiana University, Indianapolis

November 19, 2008

Indiana University – School of Nursing

- Undergraduate Program
  - Bachelor of Science in Nursing
  - Second Degree BSN Option
  - RN to BSN Option
- Graduate Program
  - Master of Science in Nursing (with NI electives)
  - RN to MSN Option
  - BSN to PhD Option
  - PhD in Nursing Science
    Graduate certificates (including NI certificate)
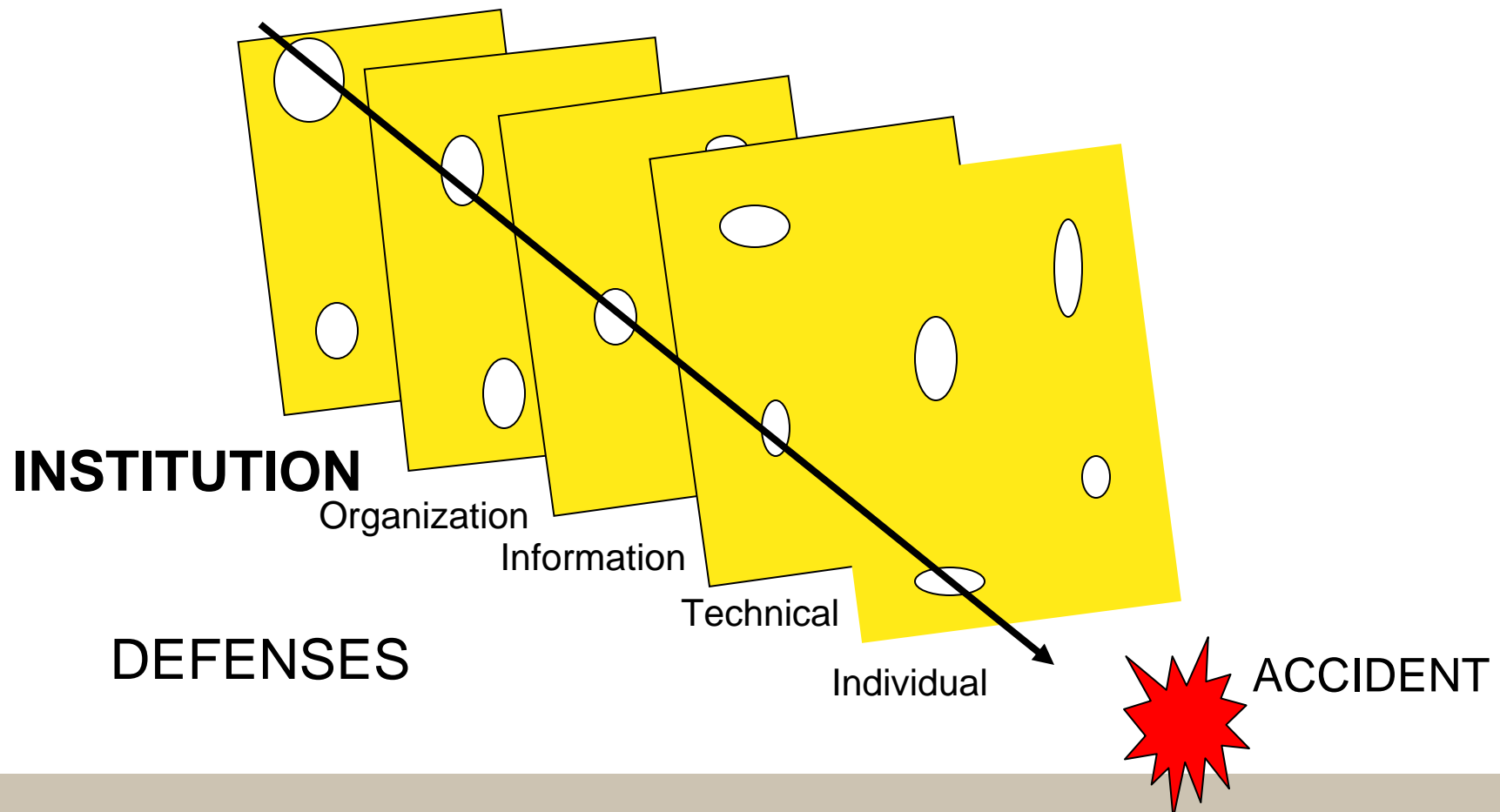   Post-master's Options

Why NI competencies ?

- Growing integration of information technology in clinical practice
- Increased interest of students (undergraduate – graduate) for nursing Informatics courses
- Faculty development opportunities
- Strong support of administration

Bridging the Quality Chasm:
Avoiding Complex System Failure
Angela McBride, 2007

From Slow Start

- Nursing Informatics Certificate (12 credits)
- Graduate electives in Nursing Informatics
- Guest lectures for undergraduate students
- Occasional faculty workshops

to a Program Matrix to include Complexity and Nursing Informatics

- Initial step: Town Hall Meeting (2007) to discuss
  - McBride, A. B. (2005). Nursing and the informatics revolution. *Nursing Outlook, 53*(4), 183-191.
  - Literature Review Nursing Informatics Competencies
  - T.I.G.E.R. Summit 2006
- Revision of Program Outcomes
- Introduction of Simulation Lab

Examples

- **PROGRAM OUTCOME 1: A critical thinker who demonstrates intellectual curiosity, rational inquiry, problem-solving skills, and creativity in framing problems.**
  - Sophomore Level Competency 1.1: Participates in selected problem solving exercises that promote critical examination of the professional role.

- *Suggested informatics competencies:*
  - Introduced to principles of knowledge bases, decision support systems, clinical information systems, electronic health care records as bases for gathering data

Examples

- **PROGRAM OUTCOME 9: A responsible manager who balances human, fiscal, and material resources to achieve quality health care outcomes.**
  - JUNIOR Level Competency 9.1: Discusses the relationships among adequate human, fiscal, and material resources and effective, efficient provision of health care.
- *Suggested informatics competencies:*
  - Demonstrates the use of information technology and information exchange for human, fiscal, and material resources management for effective, efficient provision of health care

Examples

- **PROGRAM OUTCOME 9: A responsible manager who balances human, fiscal, and material resources to achieve quality health care outcomes.**
  - SENIOR Level Competency 9.1: Evaluates the impact of human, fiscal, and material resources on health care..

- *Suggested informatics competencies:*
  - Evaluates the impact of information technology on human, fiscal, and material resources management for health care.

Evaluation of approach

- Informatics Competencies are introduced in undergraduate courses
- Application in Clinical Practice depend on site and faculty

- Students' perceptions

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The Vanderbilt Experience

Trish Trangenstein, PhD, RN-BC

November 19, 2008

- Do not have an entry level program
  - Have bridge programs
    - Non-RN
    - RN

- MSN (including a specialty in Nursing Informatics)

- Doctoral programs (both DNP and PhD)

- At the bridge and Master's level NI competencies are integrated

- At doctoral level have a single course

- Students are expected to enter with basic competencies in
  - Computer literacy
  - Information literacy
  - Information technology

- All students are encouraged to complete a self-evaluation of basic abilities

- Just in time self-remediation available online (TechTools)

- Given breadth of programs NI competencies leveled across all three levels

  – Bridge students are users and integrators of NI tools

  – Advanced Practice Nurses (APNs) are modifiers

  – Doctorally prepared nurses are creators

- Three conceptual areas

  - Systems and infrastructure

  - Information and knowledge management

  - Organizational issues

Bridge Level

- Systems and Infrastructure
  - Uses a course management system

  - Uses clinical information systems and EHRs to retrieve information and document care

  - Uses available websites in formulating responses to ethical questions

Bridge Level

- Information and knowledge management
  - Uses available electronic decision support tools

  - Access and retrieve articles from digital library

  - Uses available databases to determine types of nursing care needed for a selected population

Bridge Level

- Organizational Issues

  - Describes the protection of electronic information and HIPPA regulations

  - Performs selected nursing interventions and demonstrates clinical decision-making using simulation models

  - Safely operates various electronic devices

Contact:

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Let's take a poll

Advantages

- What advantages do you see with the approach you have taken to address the incorporation of informatics into your curriculum?

Necessary Resources

- In order to implement your model, what are necessary resources to consider?

Words of Wisdom

- Do you have any words of wisdom or lessons learned that you would like to share with the audience?

Q and A Time

- We will be reading your questions and posing them to the panel?

- For those we have not answered, we will post responses on the web page.

Thank you