Supporting the Advancement of Nursing Informatics throughout the Graduate Curriculum

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IPFW was established in 1964

Serving over 14,000 students

400 undergraduate and 60 graduate nursing students

State-of-the-art simulation labs
Objectives

- Share strategies to help students appreciate the role of technology in safe, effective patient care.

- Illustrate of how QSEN informatics competencies are threaded throughout the graduate curriculum.
IOM Recommendations & Technology for Nursing
1. ...advanced practice nurses (APN) demonstrate use of EHR for collection and exchange of data

2. ...nurses lead collaborative improvement efforts - involved in testing ITS products

3. ...nurse residency programs use health technologies to assist nurse in transitioning

4. ...increase number of advanced practice nurse on-line programs
5. ...double number of doctorates: **enable networks of faculty & students** to support one another’s work through **on-line learning**

6. ...life long learning: demonstrate **competencies for innovative practices**

7. .... lead change: nursing informaticians to **bridge gap between clinicians & technology**

8. ...collect and analyze healthcare workforce data: APN can perform analytic
At the onset of the QSEN project, informatics was identified as critical.

One of six QSEN competencies.

Other support - NLNAC, CCNE, TIGER initiative.
“It is a crime to graduate nursing students who don’t know how to interact in this complex and information intensive environment.”

Abbott, as cited in Birz, 2005
Strategy to help students achieve competence
Informatics

Definition: Use information and technology to communicate, manage knowledge, mitigate error, and support decision making. [qsen.org]

Graduate curriculum designed to build informatics knowledge & skills with the goal of transforming attitudes about health information technology

http://www.qsen.org/ksas_graduate.php#informatics
IPFW Graduate Nursing Program Outcome Objectives

- Employ knowledge of evidenced-based practice using information, informatics and cultural literacy
- Collaborate with interdisciplinary healthcare members including client, family and community to facilitate desired outcomes
- Demonstrate continued growth as a nursing professional through self-reflection
Integrated Approach

How an EHR developed for pedagogy is leveraged

- NUR 50300: Advanced Health Assessment
- NUR 53300: Acute Illness: Adult Practice
- NUR 52500: Informatics in Nursing
- NUR 56100: Advanced Teaching Methods
Clinical Log: Cerner Academic Education Solution (AES)

- Authentic EHR modified for pedagogy (demo)
- Integrates
  - online patient assessment
  - problem identification
  - treatment and evaluation
  - documentation of best practice
Discovering Cerner AES

- Followed publications from KU School of Nursing
- 2001: Simulated E-hEalth Delivery System (SEEDS)
- KU-Cerner partnership
- August 2008: met with Cerner representative, toured KU
- January 2009: Launch at IPFW
Learning outcomes for the integration of EHRs into the Nursing Curriculum

Use various methods of integrating the EHR into the curriculum to provide assessment and experiential learning

- Encourage adoption of EHRs
- Create knowledge from data
- Communication for safer patient care
- Information management skills
NUR 50300 & NUR 53300: Course Objectives & Informatics

**NUR 50300: Advanced Health Assessment**

- Develop a comprehensive history and physical database that will provide a foundation for diagnostic decision making.

**NUR 53300: Acute Illness: Adult Practice**

- Synthesize clinical data to formulate, implement, and evaluate care for acutely ill clients and their families.

- Analyze the collaborative role and scope of practice of the advanced practice nurse in the treatment of acute conditions.
Clinical Log & Reflection

- NUR 503
  - Orientation to system use
  - Patient assessment

- NUR 533
  - Log clinical interactions
  - Reflections of experience
**QSEN Competencies**

- **Knowledge**: Formulate **essential information** that must be available in a common database to **support patient care** in the practice specialty.

- **Skill**: Serve as a resource for **how to document nursing care** at basic and advanced levels.

- **Attitude**: Appreciate the **need for consensus and collaboration** in developing systems to manage information for patient care.
NUR 52500: Informatics in Nursing

- Synthesize knowledge from various information sources to increase accessibility and usability of a healthcare information system.

- Identify key trends and issues in nursing informatics and the impact on healthcare information systems.

- Evaluate how evidence supports decision-making through information structures, information processes, and IT.
Designing HIS

- EHR Usability Studies
- Heuristic evaluation
- Task analysis
- Cognitive walkthrough
- Workflow analysis
- Hands-on class projects
**Knowledge**: Evaluate the strengths and weaknesses of information systems used in patient care

**Skill**: Participate in the selection, **design**, implementation and evaluation of information systems.

**Attitude**: Appreciate the time, effort, and skill required for computers, databases and other technologies to become reliable and effective tools for patient care.
NUR 56100: Advanced Teaching Methods

Utilize effective multimedia communications techniques based on learning principles.

Structure course materials appropriate for web-based delivery.

Design sound instructional activities, grounded in learning principles, using a wide variety of technological resources and artifacts.
EHR Training

- Incorporate multimedia instructional technology in nursing education and professional development.
- Design and evaluate interactive, collaborative, and student-centered instruction.
Gives students the opportunity to read a patient record before entering the patient’s room.

After reading the documentation critical thinking can begin as students begin to formulate a picture of the patient.

As documentation progresses students can identify different nursing diagnosis to formulate a care plan.
Developed multimedia training materials
Knowledge: Contrast benefits and limitations of common information technology strategies used in the delivery of patient care.

Skill: Communicate the integral role of information technology in nurses’ work.

Attitude: Value the use of information and communication technologies in patient care.
Using an EHR in graduate nursing education
...is it worth the hassle?
Technology as enabler

Bridge the quality chasm with information technology

Enable nurses to use informatics in practice and education

Provide safer, higher-quality patient care

- Transforming Education for an Informatics Agenda: TIGER Education and Faculty Development Collaborative (2008)
Funding

- Parkview Health Grant
- Health Resources and Services Administration (HRSA) Grant
- Proposal to the IPFW to fund the audio/video capabilities
- Awarded 4 of 5 IPFW Course Development Grants
Consortium of SONs

- Monthly teleconferences & annual face-to-face meeting
  - Pedagogical decisions
  - Creating standard approach
  - Sharing solutions
- Continuum of Expertise
  - Junior: early struggles
  - Senior: vision of potential
Faculty Support

- Getting faculty buy-in
- Obtaining grant monies to support faculty time and equipment
- Flaunting pride of EHR curriculum integration projects
- Patience, understanding the work required to implement an EHR into existing courses
Benefits to Students

- Prepare nurses who
  - Understand health information technology
  - Apply informatics to practice
  - Use technology to provide safe, quality patient care
- Ultimate goal
  - Help our graduates realize that EHRs enable practice, not simply another technology they have to use
“Information and communication technology is not about the technology but about finally achieving the quality of care and continuity of care that have long been professional aspirations.”

-McBride (2010)
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Online Orientation

- Blackboard Learning Management System
- Repository of Information
- Video Tutorials
- Written Manuals
- Course Specific
- Trouble Shooting FAQ’s
**EHRNE Information**

**Introduction**
EHRNE is an electronic charting system produced by Cerner Corporation. It is used in IPFW Nursing Department to give students the opportunity to experience clinical simulation experience.

The EHRNE Information Center is here to help students prepare to use EHRNE and to assist faculty in monitoring student progress. Please take the time to use this resource and feel free to return as often as necessary to refresh your skills.

**Initial Login Instructions**
Start Here (Students and Faculty)

**EHRNE Login Quick Guide**

**Tutorials for Students**
This folder contains valuable information that you will need in order to successfully log in and navigate EHRNE. Please take time to review this material before the first day of clinicals.

**Information for Faculty**
This folder contains information and videos that will assist you in navigating EHRNE and monitoring student work.

**Frequently Asked Questions (FAQ)**