The T.I.G.E.R. Initiative

Integrating Informatics Competencies into Education, Staff Development and Leadership Programs

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Necessary Skills for Nurses Portfolio in 2008

- Computer Literacy Skills
- Information Literacy Skills
- Informatics Skills

Create Comprehensive Informatics Competencies for All Areas of Nursing:

- Harmonize and set informatics competencies for all levels of nursing education: nursing assistants, associate degree, diploma, undergraduate and graduate.

- Harmonize and set informatics competencies for nursing practice.

- Advocate for and support adding informatics competencies into nursing specialty certifications.

- Include informatics competencies in the scope and standard statements (and like documents) of nursing specialties.

(Note: informatics competencies are to include information literacy and effective use of information resources.)

Collaborative Action Steps Taken

1. Clarify competencies within nursing and healthcare (WG1)
   – Definition
   – Framework for organizing competencies
2. Develop a comprehensive inventory of existing published resources (WG2)
   - Literature Review
   - Subject Matter Experts
   - Ongoing Projects

Collaborative Action Steps Taken (cont.)

3. Gather existing informatics competencies for health professional students and those in practice (WG3)

  - Nursing

  - Nursing specialty organization

  - Inter-professional

4. Synthesize the collective findings of #1-3 and develop overall framework/roadmap of informatics competency recommendations (HSG Integration Team)

  – Focus on the competency requirements of the basic practicing nurse

  – Overlay other competency models (e.g., academic preparation, roles, KSA, domains, practice scope, beginner to expert, etc.)

WG1 – Develop the Framework/Def.

- Reviewed numerous published frameworks

- Adopted definitions

- Recommended, as primary model, the Knowledge, Skills and Attitude competency framework

  - relatively simple yet multi-axial enough to cover many types of competencies

- Decided not to rule out other models—e.g., especially want consistency and/or ability to overlay other models (e.g. Nursing Scope & Standards)

WG 2 – Create comprehensive inventory of published competencies

- Started with numerous literature reviews
- Collected 30 examples of published competencies
  - Academic (by level of academic preparation)
  - Other domains (e.g., Public Health, American Library Association, etc.)
  - Nursing (Staggers, Gassert, Curran, etc.)
  - QSEN
  - Professional organizations (AORN, AONE, etc.)

WG 3 – Collect "real world" examples of competencies in practice and education

- Collected 53 examples of various types
  - Role-based
  - Job descriptions
  - Skills checklists
- Combined into spreadsheet and in process of removing duplication
- Several were strikingly similar to other publications (e.g., Staggers, et al; scope and standards, etc.)

HSG Integration Team

- Started with over 1200 specific line-item competencies
- Developed three basic categories of competencies:
  - Basic Computer Competencies (computer literacy)
  - Information literacy
  - Informatics/Information Management Competencies

Initial Interpretation

- Each unique set of competencies has a unique framework

- Examples highlighted for TIGER will be base foundational competencies for nurses

- Original competency documents can be overlayed onto the TIGER framework (think of the TIGER framework as a master roadmap)

- Other TIGER collaborative teams (Education, Staff Development and Leadership) can implement the framework, and expand from original list where appropriate

Computer Competencies - Recommendations

- Framework from the European Computer Driving License (ECDL) Foundation Syllabus available at http://www.ecdl.com/products/index.jsp?b=0-102&pID=108&nID=204
- 7 Modules
  1. Concepts of Information Technology (IT)
  2. Using the Computer and Managing Files
  3. Word Processing
  4. Spreadsheets
  5. Database*
  6. Presentation
  7. Information and Communication
- A review of the "real world" and "bare naked" competency lists found that they lined up very well with the ECDL

Computer Competencies

- For example, ECDL further describes the concepts of Information Technology
  - General Concepts
  - Hardware
  - Software
  - Information Networks
  - The Use of IT in Everyday Life
  - Health and Safety, Enviornment
  - Security
  - Copyright and the Law

Computer Competencies – Compare to Competency Lists

- Hardware (PC, laptop/notebook)
- Peripheral devices
- Networks
- Communication
  - Email
  - FAX
  - Vocera-type devices
  - Cell phone/blackberry
- Software
  - Clinical
  - Non-clinical
    - Word processing
    - Spreadsheets
    - Presentations
- Security/Privacy
  - HIPAA
  - Data integrity
  - Passwords
  - Protected health information

Information Literacy

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

Information Literacy

- Step 0
  - Awareness, change management, attitudes
- Step 1
  - Identify information needed
- Step 2
  - Find needed information (how to do a search, etc.)
- Step 3
  - Appraise information (evaluate applicability)
- Step 4
  - Implement information
- Step 5
  - Evaluate outcome of information use

Informatics/Information Management

- Informed by EMR/EHR Functionality
  - Documentation
  - Navigation
  - Viewing patient information
  - Printing
- Quality/Performance Improvement/Safety
  - Knowledge Management (outcomes, work process reform, etc.)
- Leadership
- System Lifecycle/Roles
- Consumer Empowerment/Personal Health Record

Next Steps

- Begin to think about program integration of the three types of competency models
  - Basic Computer Competencies/Computer Literacy
  - Information Literacy
  - Information Management/Informatics
- Identify the basic needs and the extended needs
  - (e.g., education may focus on preparation level examples)
- Obtain the specific examples under each framework (Competency team to deliver within next 3-4 weeks