Integrating Informatics & the Omaha System into Courses in PH Nursing and Informatics at the Undergraduate, Graduate, & Doctoral Levels

ACHNE 2009 Annual Meeting - Session III
Rosemary Chaudry, PhD, MPH, PHCNS-BC
Vicky Elfrink, PhD, RN
Ohio State University College of Nursing
614-247-7211
chaudry.1@osu.edu elfrink.7@osu.edu

Presentation Outline
- Integrating Informatics & The Omaha System into Nursing Education
  - Academic program overview
  - Delivery formats
  - Content examples
  - Student feedback
- Challenges
  - Students at different levels
  - Sharing the spotlight
  - The "competition"
- Lessons Learned
  - Opportunities
  - Going forward

Academic program overview
- College of Nursing, academic medical center, research university
- Undergraduate students/year: ~125 pre-licensure, 90+ RN-to-BSN
- Graduate program:
  - 2nd degree graduate entry ~ 55
  - ~150 post-bacc. Masters
- Doctoral program:
  - DNP 13; PhD total 30

Presenter Disclosures
Rosemary Chaudry
Vicky Elfrink
(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

“We have no relationships to disclose”
Content Delivery formats

- Pre-licensure:
  - “Community Care of Vulnerable Populations” course
  - lecture, case study, videos

- GE Masters: same C/PHN course
  - quiz; case study assignment (individual or group)
  - paper on clinical patient scenario and application
  - integration into community assessment project

- Post-Bacc masters: lecture in nursing mgt. course

Delivery formats – GE masters example

- Community Assessment Project
  - Use terminology from the Omaha System identify: domain and problem, individual/actual modifier, intervention category, target, KBS ratings

- Individual clinical paper
  - Identify nursing specialty
  - Describe:
    - practice setting of encounter and clinical supporting information
    - a priority problem with domain, both modifiers, S&S, initial KBS outcome rating
  - Describe value of the Omaha System for documenting this encounter:
    - Both modifiers, outcome rating scale concepts and anchors
    - Overall benefits/limitations
    - Potential as standardized language tool for YOUR practice and for QI

Delivery formats

- Doctoral - DNP:
  - Lecture, video, case study
  - Assignment: Individual practice case study
    - application of case study to the Omaha System
    - electronic entry of Omaha System case data (KIWIN)
    - aggregate & analyze data
    - generate reports
    - develop data-driven care plan

Delivery formats – DNP example

- Doctoral - DNP:
  - Create a case study based on an actual or fictional patient; no identifiers. The patient can include the community or family as patient; simply adapt the history, etc. Include:
    - Brief social history (family, residence, income)
    - Brief explanation of reason for “visit” or “hospitalization”
    - Description of three observable problems- actual, potential, or health promotion problems
    - Any interventions or plans of care
    - How you would rate the severity of each problem, NOT the patient
Case Study Assignment

- Electronic entry of Omaha System case data
- Cases aggregated, reports generated
- Development of data-driven care plan

C/PHN Course Lecture Content-Examples

Lecture Objectives - Learners will be able to:

- Identify national initiatives related to health information and standardization efforts
- Define a standardized language
- Discuss the benefits of using standardized language in nursing practice.
- Describe the value of the Omaha System to nursing practice

Content Examples:

Standardized Languages in HC and Nursing

- Standardized Languages:
  - Background/importance/benefits
  - Standardized languages in health care
  - Standardized languages in nursing
    - relevance to practice & research

Example:

Thought for the Lesson

The use of standardized languages helps to standardized practice data and impacts nursing’s very existence.

*If we can not name it, we can not control it, finance it, teach it, research it, or put it into public policy.*

Norma Lang, 1992
Example:
This Is Not a New Phenomena: Nursing’s Information Legacy Has Been Data Rich, But Information Poor

In attempting to arrive at the truth, I have applied everywhere for information, but in scarcely an instance have I been able to obtain hospital records fit for any purpose of comparison.”

Florence Nightingale, 1896

Example:
National Initiatives

“We will make wider use of electronic records and other health information technology to help control costs and reduce dangerous medical errors.”
-- President Bush, January 31, 2006

Example:
Comparable data collected once and used across the health care spectrum

Example:
Meaning

- Lang’s quote: using clear and distinct related terms that describe nursing practice will:
  - facilitate greater understanding about how nurses communicate about health
  - plan more focused care
  - improve quality of nursing & HC

- Key points:
  - Data gathered once at the point of care can be reused many times across the health care spectrum:
    - from the most primary level at the point of care
    - to the most complex level where international standards for health care are developed

Today there are 13 ANA recognized languages:

- NMDS
- NANDA
- NIC
- NOC
- HHCC (CCC)
- Omaha System
- Patient Care Data Set
- AORN Perioperative Data Set
- SNOMED RT
- NMMDS
- ICNP
- ABC Codes
- Logical Observation Nomenclature Codes (LOINC)

Standardized Languages in HC and Nursing: The Omaha System

- Overview of The Omaha System
  - overview
  - linkage to Healthy People 2010

Case study & application

Example:
Standardized Language Application: The Omaha System

- a research-based, comprehensive, standardized taxonomy
- designed to enhance practice, documentation, & information management
- three relational, reliable, & valid components:
  - Problem Classification Scheme
  - Intervention Scheme
  - Problem Rating Scale for Outcomes

Example:
Omaha System model for problem solving process
Structure

Problem Classification

4 Domains: Environmental, Psychosocial, Physical, & Health Related Behavior

- 42 Patient Problems organized under related domains
  - Modifier: Individual, Family, Community
  - Actual, Potential, Health Promotion

- Intervention
  - Teaching, Guidance & Counseling, Treatment & Procedures, Case Management, Surveillance
  - Targets (75)

- Problem Rating Scale-Outcomes
  - Knowledge
  - Behavior
  - Status

http://www.omahasystem.org

Example:
The Omaha System - Uses

XXX ??? CITATION

- 169 user organizations, 8,000 employees in 14 countries
- 169 organizations, 8,000 employees, 14 counties
- nurse-managed centers
- acute care, long term care settings
- hospital-based and managed care case managers
- interdisciplinary use
- nurse educators, occupational health, public health, home health, faith based nursing
- nursing research – 40+ studies, 30 years

Example:
Comparison of Healthy People 2010 to Omaha System Problems

<table>
<thead>
<tr>
<th>Healthy People 2010</th>
<th>Omaha System Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Access to Quality Health Service</td>
<td>Health care supervision</td>
</tr>
<tr>
<td>9. Family Planning</td>
<td>Family planning</td>
</tr>
<tr>
<td>12. Heart Disease &amp; Stroke</td>
<td>Circulation</td>
</tr>
<tr>
<td>18. Mental Health and Mental Disorders</td>
<td>Mental Health</td>
</tr>
<tr>
<td>19. Nutrition and Overweight</td>
<td>Nutrition</td>
</tr>
<tr>
<td>26. Substance Abuse</td>
<td>Substance use</td>
</tr>
</tbody>
</table>

Example:
The Omaha System - A long & rich history of integration into nursing education

San Jose State (CA) nursing student documenting care using the Omaha System-1998
Example:
Portable Documentation at the Point of Care using a standardized clinical language

Example:
Let’s Try a Case Together (FITNE project)
1. Identify two problems
   - Environmental
   - Physiological
2. Select two types of modifiers
3. Identify one problem that is an actual problem with S & S
4. Use the Problem Rating Scale for Outcomes and rate the problem.
mms://streaming1.osu.edu/media2/nursing07/omaha.wmv

Example:
The Omaha System—Application to PH Nursing and PH nursing research
- Video-taped “guest speaker”: Karen Monsen, PhD, RN and the MN User Group Experience

Challenges for Integrating Informatics and the Omaha System:
Students at different levels
- Matching the experience to student level
- Making the message relevant to course objectives, content, assignments
- Linked content to nursing practice and quality initiatives

http://umconnect.umn.edu/p90659852
**Student feedback**

- Lecturer – ~ 98% positive
- Time of lecture - ~ 15 % give earlier in quarter/curriculum
- Application to content –
  - New insight
  - Confusing subject
  - Videos & examples helped me link and understand content better
  - I heard about the Omaha System, but didn’t really understand – now I do!
  - Use more applications in class
  - Standardized languages/IT part too dry

**Challenges for Integrating Informatics and the Omaha System:**

**Sharing the spotlight**

- Placement in curriculum
- IT challenges
- Clinical-classroom issues in C/PHN

**Challenges for Integrating Informatics and the Omaha System:**

**Administrative buy-in and the curriculum “competition”**

Building interest, buy-in:
- Administrative
- Clinical Nursing specialties
- Curriculum

**Opportunities**

*Moving forward: Let’s do this again!*

- Opportunity: Student learning
- Opportunity: Improving outcomes of care
- Opportunity: Enhancing practice
- Opportunity: Practice-academic linkages
Going forward: Slow, but steady

- A User-champion
- An Early Adopter
- Further diffusion – from C/PHN didactic to clinical, other courses
- Potential practice-academic linkages

Thank you!

Questions?