Advanced Practice Nursing Education: Teaching QSEN Informatics and Teamwork Competencies

Judith Warren, PhD, RN, BC, FAAN, FACMI
Christine A. Hartley Centennial Professor
University of Kansas School of Nursing, Kansas City, KS

Teri Thompson, PhDc, RN, CPNP
Graduate Teaching Assistant
University of Kansas School of Nursing, Kansas City, KS
Objectives

• Describe the QSEN competencies for informatics and teamwork
• Identify informatics strategies that advance practice nurses engage in order to run a clinic
• Examine the use of online simulation in the teaching of QSEN competencies
• DNP Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
The DNP program prepares the graduate to:

- Design, select, use, and evaluate programs that evaluate and monitor outcomes of care, care systems, and quality improvement including consumer use of health care information systems.
- Analyze and communicate critical elements necessary to the selection, use and evaluation of health care information systems and patient care technology.
- Provide leadership in the evaluation and resolution of ethical and legal issues within healthcare systems relating to the use of information, information technology, communication networks, and patient care technology.
- Evaluate consumer health information sources for accuracy, timeliness, and appropriateness.

Four of five essentials
NRSG 857 - Transforming Health Care through Use of Information Systems and Technology
Module One: Professional Activities in Health Informatics

- Information technology is used to produce deliverables
- Team Meetings via IM
- C-Map, http://cmap.ihmc.us
- Listservs, RSS, online news sources
QSEN Informatics Competencies for Advanced Clinical Practice Worksheet

Name:

QSEN defines Informatics as the use information and technology to communicate, manage knowledge, mitigate error, and support decision making. Though the competencies have been developed for advanced practice nursing, other disciplines have found them to be true for all clinicians educated beyond a baccalaureate degree.

In the grid below, please rate the degree of your achievement of this competency. Place an X in the appropriate box.

<table>
<thead>
<tr>
<th>QSEN Competency</th>
<th>Very Competent</th>
<th>Moderately Competent</th>
<th>Somewhat Competent</th>
<th>Not Competent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contrast benefits and limitations of common information technology strategies used in the delivery of patient care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate the strengths and weaknesses of information systems used in patient care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in the selection, design, implementation and evaluation of information systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicate the integral role of information technology in clinician’s work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model behaviors that support implementation and appropriate use of electronic health records</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist team members to adopt information technology by piloting and evaluating proposed technologies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value the use of information and communication technologies in patient care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QSEN Teamwork and Collaboration Competencies for Advanced Clinical Practice Worksheet

Name:

QSEN defines Teamwork and Collaboration as functioning effectively within nursing and inter-professional teams, fostering open communication, mutual respect, and shared decision-making to achieve quality patient care.

In the grid below, please rate the degree of your achievement of this competency. Place an X in the appropriate box.

<table>
<thead>
<tr>
<th>QSEN Competency</th>
<th>Very Competent</th>
<th>Moderately Competent</th>
<th>Somewhat Competent</th>
<th>Not Competent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze own strengths, limitations and values as a member of a team</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze impact of own advanced practice role and its contributions to team</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>functioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrate awareness of own strengths and limitations as a team member</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuously plan for improvement in use of self in effective team development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and functioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Act with integrity, consistency and respect for differing views</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acknowledge own contributions to effective or ineffective team functioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe scopes of practice and roles of all health care team members</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze strategies for identifying and managing overlaps in team member roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and accountabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze strategies that influence the ability to initiate and sustain effective</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
KUMC Isle Weight Management Center Simulation

• We use the Weight Management Center on KUMC Isle, in Second Life, as a simulation environment for this course
• Please visit the Center and think about how it can be transformed by HIT
• Review the slides in the course overview about how to access and navigate KUMC Isle in Second Life.
Please select a food item for more information.

VEGETABLES:
- Corn
- Green Peas
- Cucumber
- Potato
- Green Pepper
- Romaine Hearts
- Carrots
- Celery

Corn:
- Size: 1/2 cup
- Calories: 76
- Fat: 1 grams
- Saturated Fat: 0 grams
- Carbohydrates: 18 grams
- Protein: 3 grams
- Cholesterol: 0 mg
- Fiber: 2 grams
- Sugar: 3 grams
- Sodium: 3 mg

Comments:
Since corn is a "starchy" vegetable, the calories can add up fast! Make sure you are watching your portion sizes. If you are eating canned corn, make sure you rinse it before eating to get as much sodium out as possible.
Follow-Up from Last Week

- Data reporting
- Any issues this past 2 weeks?

Check-In Question:
What tools have you used the most to stay on track?
Module Two: Health Information Technology

• Develop a narrated PowerPoint presentation entitled, *HIT for the KUMC Isle Weight Management Center*.

• Go to Second Life and transport to KUMC Isle.

• Explore all the components of the Weight Management Center

• Create a proposal for using HIT and Web 2.0 tools for the Center.

• The PowerPoint should describe the selected technologies and how you see the Center using these technologies.
Apps for the Weight Management Store

- Twitter account
- RSS Feed - [http://www.betterrecipes.com/community/rss-feeds.html](http://www.betterrecipes.com/community/rss-feeds.html)

Tag Cloud produced by Wordle
http://www.wordle.net
Module Three: Legal, Ethical and Security Issues

- Develop a concept map displaying the legal, ethical (privacy and confidentiality), and security issues for your proposal.
- Identify concepts from all three areas to be considered in the design, implication, and use of your proposed HIT and Web 2.0 projects.
- Post your presentation on the Discussion Board.
- Critique each other’s maps:
  - Were there any surprises on the concept map?
  - Did the identified issues match the proposal?
  - Were any key legal, ethical, or security issues not addressed?
  - What was the major insight gained by viewing the map?
What are the legal, ethical (privacy and confidentiality) and security issues associated with integrating HIT and Web 2.0 at the KUMC SL Weight Management Center?

- **Web 2.0**
  - has potential specifically the **EHR**

- **HIT**
  - **EHR**
  - must develop
  - Policies on how to use HIT and Web 2.0 Tools in Center

- **Security Risks**
  - blogs IM
  - you tube
  - doodle etc.
  - Access to certain documents and info
    - data integrity
    - for
    - financial info demographics published PHI
  - interception of data
  - prohibit
  - to minimize prevent

- **Ethical Issues**
  - identity stolen
    - such as
    - PHI in PHR
    - financial info demographics
  - privacy and confidentiality
    - aim to protect
    - put into use

- **Legal Issues**
  - security mechanisms
    - such as
    - by meeting the
    - ARRA
    - meaningful use for EHR as outlined in HITECH Act
  - data encryption
    - by using
    - anonymous database
    - so that
    - strong passwords, etc.
    - removes identifying attributes
    - then
    - uses another database to link together attributes
  - certain computers access users with authenticated passwords
  - certain computers access users with authenticated passwords
  - access to only appropriate users
  - patient identification medical conditions financial info
  - securely transmitted across network
Module Four: Consumer Informatics

• The KUMC Isle Weight Management Center is known as a leader in the use of HCT. The Center is currently exploring the selection and implementation of several HCTs, including a PHR, for use by clients so that real time data can be gathered, feedback can be given, and evaluation can occur prior to the client visit. The Center staff is concerned about the safe and ethical use of these devices.

• Each team will develop a mind map, using FreeMind, that contains the following information:
  – what information would need to be monitored
    • what information should be in the PHR for a client of the Weight management Center
  – what are the ethical concerns for use of the device,
  – what are the safety concerns for use of the device, and finally,
  – what devices other than a PHR need to be included.
Module Four: Consumer Informatics

• Create a PowerPoint presentation that presents an overview of the mind map and the devices selected.

• Propose an evaluation of the PHR and the devices recommended.
  – Consider the nine human factors contributing to user acceptance of HCT
Module Five: Human Computer Interaction

• Develop an iPhone application mock-up for the KUMC Isle Weight Management Center

• Think creatively—this could be monitoring weight loss, counting calories or food exchanges, a diet diary, etc.

• To give you some ideas of what you could include in your iPhone application, here’s an article with videos of the “Best iPhone App for Weight Loss: Applications Review”
  - http://b4tea.com/information/review-information/best-iphone-app-for-weight-loss-applications-review
Usability Testing

Create a mock-up of the proposed application. Use the “Group iPhone Mock-Up Planning Tool”; http://iphonemockup.lkmc.ch/

Evaluate the other teams’ mock-ups using Jakob Nielsen’s usability heuristics, http://www.useit.com/papers/heuristic/heuristic_list.html
Monitor your friend’s weight loss journey and share your own. Use the message button to send and receive messages from friends in your network. Send a request to add new friends by using the + button.
Module Six: Life Cycle of the Electronic Health Record

• Develop a plan to implement an electronic health record for the Jayhawk Community Living Center located on KUMC Isle.

• Meet at least once in Windows Live Messenger and to work on the plan and submit a transcript of the meeting. Be sure to review the teamwork rubrics--TeamSTEPPS

• Present your Implementation Plan in the KUMC Isle Poster Pavilion. The team will present their poster, using audio functionality (microphones) and answer questions posed by the other teams.