



# Nursing Informatics Competencies:



---

Weaving Computer & Information  
Literacy Skills into Organizational  
Support Structures & Processes

Ruth Schleyer MSN, RN-BC, CPHIMS

Colleen Burch RN MSN

July 2007



# Objectives

---

- Describe the organizational approach used to define and integrate nursing informatics competencies in existing tools and nursing support structures.
- Describe how PH&S is using Patricia Benner's model of novice-expert skills acquisition and Donna Wright's theories of competency assessment and validation to support nurse attainment of competencies.
- Describe the specific tools used to support integration of competencies in orientation, performance evaluations and ongoing professional development opportunities at one PH&S facility.





# Providence Health & Services, OR

---

- 7 Hospitals: 4 urban, 3 rural
- Home Care/Hospice: 1,500 patients
- PPO Health Plan: 242,0000 lives
- Employed Medical Group: 240+ employed primary care & specialty physicians
- 2,000 private affiliated physicians
- 3,500 registered nurses





# PH&S, OR Systems Environment

---

- **Clinical & Communication Systems**  
Acute Care, Home Health, Hospice, Ambulatory  
Voice & Text Communication
- **Administrative Systems**  
Staffing & Scheduling, Time & Attendance, Email,  
Intranet, Bed & Patient Tracking
- **Research & Quality Systems**  
Clinical Queries, Clinical & Administrative Reporting,  
Nursing Dashboard & Scorecard
- **Education Systems**  
Learning Mgmt System, On-line Resources, Patient  
Education Content, Simulation



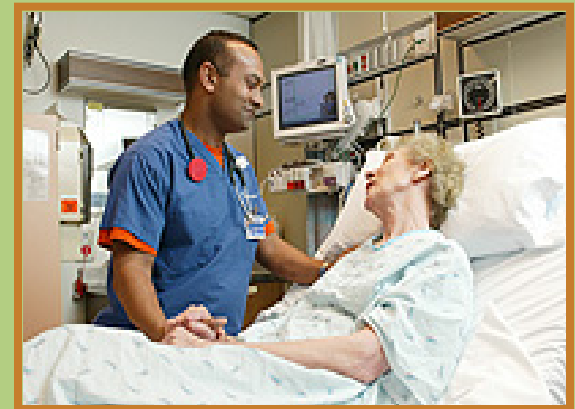
# Why Are We Doing This?

- **It is all about the patient**

- Patient safety
- Patient care
- Patient satisfaction

- **It is also about the nurse**

- Right tools at the right time for the right person – to make the right decision





# Informatics: A Core Competency

---

*“. . . informatics competencies are needed by all nurses whether or not they specialize in nursing informatics. . . . all nurses must be both information and computer literate.”*

*ANA Scope and Standards of Nursing Informatics Practice, 2001, p. 24*

*“All health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics.”*

*IOM, Health Professions Education:  
A Bridge to Quality, 2003, p. 3*





# A Local Work Force Issue

---

- Oregon Nurse Leadership Council Education Committee (9/9/05)
  - Articulated the competencies for nursing at all levels within Oregon health care systems today & over the next decade
    - Category of 'overall professional competencies'
      - Use communication & information technology effectively & appropriately
- PHS Oregon's Nursing Center of Excellence - information management is a key component





# Organizational Response

---

- Formed an Oregon PH&S nursing informatics and nursing education competency work group to
  - Identify the expected computer & informatics competencies for PHS Oregon nurses
  - Link those competencies to levels of skill acquisition described in Benner's model (novice, advanced beginner, competent, proficient, expert)
  - Develop a nursing informatics competency action plan







# Organizational Response

---

- Built work group knowledge
  - Literature review & interdisciplinary education
- Developed initial informatics competency action plan
  - Identified expected informatics competencies for each level of skill acquisition, 'novice' to 'expert'
  - Described behavioral evidence for each competency
  - Incorporated competencies into context of existing processes & structures for education & evaluation
  - Identified & addressed gaps



Benner Level	Competencies	Behavioral Evidence Med/Surg	Skill Acquisition/ Education	Verification/Evaluation
<b>Competent</b>	<b>Informatics Skills</b>			
	Demonstrates use of system applications for structured data entry at a level consistent with policy or clinical practice guideline.	Document and use systems that assist with admission and discharge processes and specialized clinical care for familiar patient populations and routine procedures.	<b>Education resources received in new hire orientation (i.e., clinical practice guidelines, P&amp;P)</b>	<b>Competency Verification:</b> documentation component of performance evaluation
		Use tools to develop and manage individualized in-depth patient care plans including cultural, spiritual and communication needs.		Give evaluator's tools to reference - examples of what you would expect to see at the competent level.
		Document complex patient education content to communicate sequential learning needs.		Weave into current performance evaluation
<b>Competent</b>	Locates and uses multiple sources of data that are relevant to the patient in order to interpret findings and improve clinical decision-making.	Retrieve and review interdisciplinary contributions to the patient's plan of care.	<b>New Hire Computer Training &amp; Develop into Healthstream Module</b>	Presents the patient's story (from admission to current time, including patient progress and interdisciplinary contributions to plan) to Nursing Management.
		Identify and integrate use of specialized review screens focused on nurse-sensitive indicators and population-based programs (i.e., skin care, pain management, stroke care, etc.)		<b>Competency Verification:</b> performance evaluation
<b>Competent</b>	Articulates core nursing informatics framework of data-information-knowledge-wisdom continuum.	Describe a scenario whereby data are transformed to information used in care delivery.		Presents exemplar describing how data translated to information for care delivery (review screen, report, etc.)
		Explain that only data entered correctly are available for reporting.		<b>Competency Verification:</b>



# Linking Competencies to Benner

---

## Novice

- Basic computer skills
- Intro to PHS privacy, confidentiality & data security

## Advanced Beginner

- Intranet, telecom tools, clinical system basic skills
- Demonstrates point of care charting
- Uses nursing data to improve practice
- Tells patient story
- Verbalizes role as information manager





# Linking Competencies to Benner

---

## Competent

- Optimizes use of core application advanced features
- Integrates tools into clinical practice
- Uses multiple data sources to interpret findings & improve clinical decision-making

## Proficient

- Interprets & integrates data and information
- Maximizes use of tools to support practice
- Influences attitudes of other nurses toward computer use to support practice





# Linking Competencies to Benner

---

## Expert

- Mastery of applications & tools
- Role models integration of clinical data systems & development of practice wisdom
- Demonstrates innovative leadership in system use
- Articulates value of information systems & links to quality, financial & satisfaction outcomes



# Weaving Competencies into Existing Processes & Tools

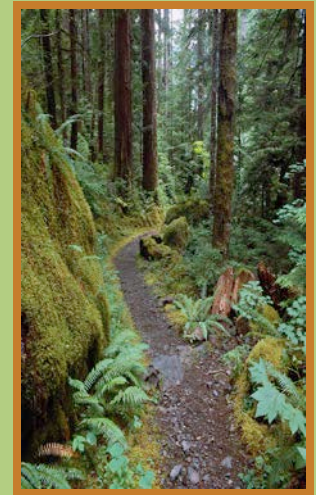
## The journey begins at Providence Portland Medical Center

- Changing vocabulary & culture
- Stakeholder engagement
  - Nurse executive & Nursing leadership team
  - Facility-based councils
- Emerging partnerships
  - Preceptors
  - Clinical Resource Educators
  - Current nursing staff
  - Affiliated schools of nursing



# Weaving Competencies into Existing Processes & Tools

- Concept introduction
  - Nursing Informatics video
  - Expectation to achieve Competent level within one year
- New Hire Computer & Informatics Training Program
  - Standard track
  - Accelerated track



*Forging a new trail . . .*



# Weaving Competencies into Existing Processes & Tools

- Individualized follow-up with new nurses two months after orientation
  - Assess 2-3 key competencies
  - Provide education
  - Assist nurse in identifying learning objectives to achieve Competent Level



*Building confidence on any path . . .*





# Weaving Competencies into Existing Processes & Tools

- Developed support processes for competency attainment
  - Education modules
  - Elbow-elbow training sessions focused on a different competency each month
  - Nursing informatics web site
  - Preceptor development program
- Identified 2-3 key competencies for annual validation process



*The journey continues . . .*





# Weaving Competencies into Existing Processes & Tools

---

Example using one specific competency:

**Demonstrate use of system applications for structured data entry and simple data review.**



# Tool: Development Plan

## 3/06 DRAFT INDIVIDUAL DEVELOPMENT PLAN

GOAL	PLAN	TIME LINE	MET	NOT MET
DIAGNOSTIC & MONITORING FUNCTION  4. To demonstrate use of system applications for structured data entry and simple data review.	On assigned patients, select a patient each week to demonstrate ability to "tell the patient's story through documentation" to preceptor, Nursing Management or Nursing Informatics designee: <ul style="list-style-type: none"> <li>• Week 1—Use basic nursing review screen</li> <li>• Week 2—Complete patient admission and discharge documentation. Present story focusing on a concern such as falls, pain, skin or patient education.</li> <li>• Weeks 3-4—Present story focusing on different key patient concerns and management as documented in the plan of care.</li> </ul> Conclusion of orientation—Present patient case to demonstrate competency in patient management and documentation.			



# Tool: Clinical Ladder

PPMC October 2006

## Menu Items for Clinical Ladder\*

- An activity can only be used for one menu item. I.E., attending a research seminar may not be used to document both the research seminar option and as part of the non-mandatory education hours option.

<b>Domain: Diagnostic and Monitoring Function</b> <i>Detection and documentation of significant changes in patient condition.</i>		
<b>To advance to Level 2 (Competent)</b>	<b>To advance to Level 3 (Proficient)</b>	<b>To advance to Level 4 (Expert)</b>
<ul style="list-style-type: none"><li>• <b>Required:</b> Describe the typical course for a patient population common to your unit/department. Including red flag symptoms, standard interventions and emergency interventions, patient teaching opportunities, and documentation of changes in patient condition.</li><li>• <b>OR: Present a patient case to your AHN/preceptor navigating through the electronic documentation including assessment information, planning, interventions and evaluation or results.</b> (Document in your performance appraisal)</li></ul>	<p><b>Required:</b> Describe a patient situation that exemplifies your level of practice.</p>	<p><b>Required:</b> Describe a patient situation that exemplifies your level of practice.</p>



# Tool: Performance Appraisal

PPMC October 2006



## EMPLOYEE PERFORMANCE APPRAISAL AND COMPETENCY ASSESSMENT - OREGON REGION

Employee Name: \_\_\_\_\_

Appraisal Date: \_\_\_\_\_ Next Review: \_\_\_\_\_

Position: \_\_\_\_\_ Registered Nurse

Employee ID #: \_\_\_\_\_

Department/Entity: \_\_\_\_\_ Nursing Services

Type of Review: \_\_\_\_\_ Annual \_\_\_\_\_ Other \_\_\_\_\_

12. Demonstrates use of system applications for structured data entry and review.

Exceeds Expectation: Uses system tools for care processes of unfamiliar and complex patient populations. Maximizes use of communication tools available for interdisciplinary or community hand-offs.

Meets Expectation: Uses system tools for care processes of familiar patient populations. Demonstrates use of advanced navigation features. Able to tell the patient's story using the available electronic health record tools. Consistently documents care according to downtime procedures when appropriate.

Requires Improvement: Unable to tell the patient's story using the available electronic health record tools. Unable to demonstrate advanced navigation features. Does not follow appropriate documentation downtime procedures.

### Behavior Guide

- Individual is able to tell the patient's story from admission to current time on one patient using advanced navigation features such as class drop-down, full word, configuration features.
- Individual is able to describe how to document care during a downtime.



# Beyond Survival

## Informatics competencies for

- Patient-centered care
- Evidence-based practice
- Quality improvement processes

*“Because of the need to manage data volume and complexity, nurses need informatics skills and knowledge for survival in any arena.”*

*Staggers, Gassert, & Curran, 2002, p. 383*





*THANKS!!*

*Questions??*