Integrating the Electronic Health Record in the Curriculum

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University of Kansas School of Nursing
and
Director of Nursing Informatics
KU Center for Health Informatics
Objectives

• Describe how informatics competencies are reflected in national initiatives and accreditation criteria
• Discuss best practices for integrating an EHR in the curriculum
• Explore opportunities for developing informatics competencies in your curriculum
The Challenge

• In this era of **Meaningful Use** and the mandate of electronic health records (EHRs) for all American by 2014, it is imperative that our students learn about EHRs in the classroom and in the clinical venue.
Health Professions Education: A Bridge to Quality

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

http://books.nap.edu/catalog/10681.html
• BSN Essential IV: Information Management and Application of Patient Care Technology

• MSN Essential V: Informatics and Healthcare Technologies

• DNP Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
Quality and Safety Education for Nurses

• QSEN faculty adapted the Institute of Medicine competencies for nursing, [www.qsen.org](http://www.qsen.org)
  – Patient-centered care
  – Teamwork and collaboration
  – Evidence-based practice
  – Quality improvement
  – Safety
  – Informatics

• Developed definitions and statements of the knowledge, skills, and attitudes (KSAs) for each competency
Technology Informatics Guiding Educational Reform (TIGER)

http://www.thetigerinitiative.org
SEEDS is an EHR that has been optimized for student learning

- **QSEN Informatics Competencies**
  - Use information and technology to communicate, manage knowledge, mitigate error, and support decision making.

- **Example activities**
  - Accurate patient identification
  - Organization of the EHR
  - Digital signatures
  - Data integrity and completeness
  - Confidentiality and security
  - Meaningful Use
In the Classroom with the AES

• Example documentation for lectures
• Homework assignments
  – Reviewing a patient chart
  – Scavenger hunts
    • Medication errors
    • Learning to navigate an EHR
• Integrating information management into student/clinician workflow
Navigating the EHR: Scavenger Hunts

Monday, September 07, 2009 - Tuesday, June 01, 2010: 1 out of 1 documents are accessible. (Admission - Current)

Your patient Jane Whitecloud is a 65 year old Native American Indian with Diabetes. She has been having severe right knee pain for many years. It is limiting her ability to walk over the past 2 years. She has been gaining weight and having more problems controlling her blood sugars.

Like many American Indians, Jane believes in using “white man medicine” to treat “white man’s diseases” and she has been seeing Dr. Grey for help with managing her diabetes. However, she was unsure about accepting “white man medicine” to help with her knee pain and immobility. She wants to stay active, lose some weight and control her blood sugars. After much consideration and discussion, she decided to go ahead with surgery.

She is admitted with a diagnosis of Degenerative Joint Disease. She had a total knee replacement this morning by Meredith Grey, M.D.
Errors (11 total):
- Tinzaparin: IU
- Cimetidine: 300.0 & cc Valium: .5
- Morphine: MS04
- Wound Care: QOD
- Blood Glucose: SS
- Insulin: U (3 times)
- Allergic to Morphine
* Final Report *

You have been assigned Mr. Jayhawk who post-stroke x 5 days. He has been on your medical-surgical floor for two days.

Upon admission a CT Scan of the head revealed a left hemispheric CVA. His 12 lead EKG was normal. Prior to initiating a diet, his video swallow was normal. Yesterday he had a sputum culture that was positive for MRSA. You are to keep the patient in contact isolation.

Mr. Jayhawk has an increased risk for falling and his physician has ordered physical therapy 2 x daily to improve strength of his unaffected side.

Shift report

Situation
Mr. Jayhawk is a 74 year old gentleman who sustained a left hemispheric CVA 5 days ago. He is unable to move his right arm or his right leg. He was out of bed twice on my shift, once last evening and just about an hour ago. He requires a gait belt and 2 assist. He is weak but can bear weight on his left leg and pivot. He was up for about 30 minutes each time. He’s pretty tired right now.

He is very worried about urinary incontinence. His urinary is in place. He voided 3 times last night, approximately 250 mL each time.

He has bowel sounds in all quadrants and is tolerating a mechanical soft diet. He requires some assistance eating, since he is right handed.

We are maintaining contact isolation as he had a sputum culture that was positive for MRSA.

Background
He is alert and oriented X3.

His vital signs were stable and he is afebrile. His cardiovascular assessment is within normal limits. His lung sounds are clear and his oxygen saturation is 97% on room air.

His children visit each evening. His wife was unable to come in today because of transportation issues.

Assessment
His major problems seem to be immobility and a potential for nutritional deficit related to his stroke.

Recommendations
He needs to be turned side to side q2 hours to prevent skin breakdown. I would recommend you get him up in the chair for lunch, but for now he needs to rest. He will need assistance with his meals, and he needs to have his urinal checked about every 2 hours. He needs to have neuro checks every shift.
### Diagnoses & Problems

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### Problems

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Evidence-based order set with outcome documentation

**Outcomes**
- Reports pain intensity in acceptable range last 24 hours - Met
- Pain managed with oral or no analgesics last 24 hours - Met
- No observed side effects of parenteral analgesia - Met
- If unable to self-report
- No pain is evident by behavior observed in last 24 hrs - Met

**Interventions**
- Pain Assessment Adult
- Respiratory Assessment
- Multimodal treatment (medication/non-medication) can increase pain control, activity, function, family involvement; and decrease analgesic use, depression anxiety.
- Comfort Measures
- Coach the patient in accurately reporting pain and involve family in all aspects of assessment and planning for pain management
- Education Pain (Pain Education)
### Evaluation

**Test: Judy**

**Allergies:** Latex, penicillin

**DOB:**

**Wt:**

**Ht:**

**Sex:**

**Inpatient PIN:** <No - Financial number> [AdmitDt: 7/16/2009 1:01 PM]

**Results Review**

**Rowsheet:** Quick View

**Level:** Quick View

**Date Range:** July 16, 2009 1:01 PM CDT - September 05, 2011 10:03 AM CDT (Admit to Current Date)

#### Navigator

- Blood Gases
- General Hematology
- UA Dipstick
- UA Microscopic
- Lipids
- Cardiac Enzyme / Markers
- Measurements
- Vital Signs
- Basic Oxygen Information
- Orthostatic Vital Signs
- Checklist of Non-Verbal
- Pain Intensity Tools
- Pain Assessment Detail
- Additional Pain Information
- CHEOPS Pain Scale
- NIPS Pain Scale
- RIPS Pain Scale
- FLACC Pain Scale

#### Quick View

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#### Checklist of Non-Verbal

- Administered: Yes
- Bracing: None
- Facial Grimaces/Wincing: With Mover:er
- Restlessness: None
- Rubbing: None
- Total NonVerbal: 4
- Vocal Complaints NonVerbal: With Mover:er
- Vocal Complaints: None

#### Pain Intensity Tools

- Pain Scale Type: 0-10 Pain scale
- Pain Intensity 0-10: 8

#### Pain Assessment Detail

- Location: Head, Shouldle
- Radiation Location: Severe
- Concentration: Heavy, Incision
- Quality: Aching, Heavy
- Duration: Constant
- Onset: Sudden
- Appetite: Very severe
- Emotions: Siers
- Aggravating Factors: Breathing, Pals
- Alleviating Factors: Deep breathing
- Associated Symptoms: Palpations, S:
- Acceptable Pain Intensity: 3

#### Additional Pain Information

- Pain Symptoms: Yes
- Pain Interventions: Medications, F
### Pain Assessment

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<th>Location</th>
<th>Quality</th>
<th>Radiation</th>
<th>Pain Scale Type</th>
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Right click to add a new row.

#### Effect of Pain

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This pain assessment meets the requirements for the Joint Commission on Accreditation.

### CHEOPS Pain Scale

- **Pain Scale**: Children’s Hospital of Eastern Ontario Pain Scale (CHEOPS)
- **Age Range**: Children 1 to 5 years of age
- **Scale**: Measures 6 areas: cry, facial, child verbal, torso, touch, legs
  1. Observe client and record score for all six parameters based upon the above criteria.
  2. Children’s Hospital of Eastern Ontario Pain Scale Score = Sum of scores for all six parameters
     - Minimum Score = 4
     - Maximum Score = 13
  3. The higher the score, the more marked the pain.

### References:

Centre for Evidence Based Physiotherapy (2007) Riley Infant Pain Scale. Retrieved on 1/25/07 from [http://www.cebp.nl/media/m333.pdf](http://www.cebp.nl/media/m333.pdf)
Basic Clinical Decision Support

Respiratory Assessment

Inspection

Respiratory Effort

- Abdominal breathing
- Diaphragmatic breathing
- Dyspnea
- Dyspnea on exertion
- Gasping
- Grunting
- Labored
- Nasal flaring
- Ophthalmia
- Pursed lips
- Quiet
- Shallow
- Stertor
- Triad position
- Unlabored
- Use of accessory muscles

Other:

Chest Wall Characteristics

- Barrel chest
- Bony structures asymmetrical
- Bony structures symmetrical

Retractions

- Absent
- Present

Retraction Location and Severity

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Evidence-based Practice
Approaches for the Academic EHR

- Working with documentation forms
- Clinical decision support
- Order sets
- Viewing evidence
Degenerative joint disease

All Categories
Include Only Selected Categories

Therapy
Etiology

All Publication Types
Include Only Selected Publication Types

Twin Study
Review
Degenerative joint disease AND ((("Diagnosis"[MH] BUT NOT "Prognosis"[MH]) OR "Arthritis"[MeSH Terms] OR "Bone and Joint Disease"[MeSH Terms] OR "Osteoarthritis"[Mesh] OR "Joint Disease"[Mesh] OR "Joint Pain"[Mesh] OR "Joint Injuries"[Mesh] OR "Joint Inflammation"[Mesh] OR "Joint Deformities"[Mesh]) AND (("Clinical Trial"[PT] OR "Observational Study"[PT]) AND Quality of Life[MeSH Terms] OR "Health Status" OR "Quality of Life" OR "Quality of Life Assessment" OR "Patient Outcome" OR "Patient Satisfaction" OR "Patient Experience" OR "Patient Preferences" OR "Patient Values" OR "Patient Acceptability" OR "Health Indicators" OR "Health Outcome" OR "Health Status Indicators" OR "Health Status Evaluation" OR "Health Status Assessment" OR "Health Status Measurement" OR "Health Status Determination" OR "Health Status Determinants" OR "Health Status Predictors" OR "Health Status Determinants" OR "Health Status Predictors" OR "Health Status Determinants" OR "Health Status Predictors" OR "Health 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1. Articular cartilage and subchondral bone in the pathogenesis of osteoarthritis.
   Goldring MB, Goldring SR.
   PMID: 20392241 [PubMed - indexed for MEDLINE]
   Related citations

   Dyke JP, Aaron RK.
   PMID: 20392223 [PubMed - indexed for MEDLINE]
   Related citations

3. Continucus passive motion following total knee arthroplasty in people with arthritis.
   Harvey LA, Brosseau L, Herbert RD.
   PMID: 20236330 [PubMed - indexed for MEDLINE]
1. Medication Adherence must be assessed at each encounter and include a number of key elements. These key elements include: health beliefs (perceived barriers and benefits of medications to overall well being), self-care abilities, medication knowledge, skills, confidence/ease, frequency and complexity of medication regimen, medical problems, socioeconomic, cultural/racial factors, cognitive and mental health factors, and factors associated with overall relationship with health care provider experience. Barriers associated with access and costs are also important to determine overall medication compliance.

Assess patient medication management along 5 dimensions:

- Medication Knowledge
- Medication Adherence
- Medication Complexity
- Medication Problems (symptoms and side effects impact on self management)
- Medication Frequency

Rationale:

- Medication adherence has been reported to as a good prognostic for poor health outcomes. Rodgers and Ruffin (1998) reported findings from the Coronary Drug Project Research Group (CDPRG) prospective cohort study of 1,103 men with coronary heart disease that patient non-compliant with treatment regimen were 2.6 times more likely to die than those compliant with treatment regimen (p. 59), concluding that non-compliance is an independent risk factor for mortality. Eagle et al. (2004) in the large commi sample study of patients discharged with acute coronary syndromes reported that non-adherence to key medications leads to decreased health condition outcomes and health costs.

- Multiple factors have been associated with non-adherence to treatment regimen and include: age <85 yrs, racially categorized as other, multiple pharmacies, large total number of medications, complex medications regimen, number of meds prescribed and number of meds taken daily, Rodgers and Ruffin (1998), under the care of multiple providers, forgetfulness, lack of cardiologist provider, patient isolation, perceived or experienced drug related side effects, lack of knowledge about disease, mental health problems, depression in particular, dementia, residence in a skilled nursing facility, medication availability poor, racial/ethnic minority, lack of patient perceived effective communication with provider (Eagle et al. 2004). Additional factors reported include: deficits with complex reasoning, difficulty absorbing information and retaining inform and/or lack of recognition that the information is relevant. (Bennett & Sause 2003; Dunbar-Jacob et al. 2000; Lackey 2004)

- According to Dunbar-Jacob et al. (2000) and others these factors include the following:
  - Medication Taking:
    - Rate of poor adherence similar across chronic conditions generally considered near 50%. Non-adherence to medication among more common chronic diseases near or significantly below the 50% level.

Evidence Grade: III


Evidence Grade: II


Evidence Grade: II


Evidence Grade: III


Evidence Grade: III


Evidence Grade: VII


Evidence Grade: VII


Evidence Grade: III


Evidence Grade: VII

An intervention study to enhance medication compliance in community-dwelling elderly individuals.

Fulmer TT, Feldman PH, Kim TS, Carty B, Beers M, Molina M, Putnam M.
Division of Nursing, New York University, NY 10012, USA.

Abstract

OBJECTIVE: To determine whether daily videotelephone or regular telephone reminders would increase the proportion of prescribed cardiac medications taken by a sample of elderly individuals who have congestive heart failure (CHF). METHODS: The authors recruited community-dwelling individuals age 65 and older who had the primary or secondary diagnosis of CHF into a randomized controlled trial of reminder calls designed to enhance medication compliance. There were three arms: a control group that received usual care; a group that received regular daily telephone call reminders; and a group that received daily videotelephone call reminders. Compliance was defined as the percent of therapeutic coverage as recorded by Medication Event Monitoring System (MEMS) caps. Subjects were recruited from 2 sources: a large urban home health care agency and a large urban ambulatory clinic of a major teaching hospital. Baseline and post-intervention MOS 36-Item Short-Form Health Survey (SF-36) scores and Minnesota Living with Heart Failure (MLHF) scores were obtained. RESULTS: There was a significant time effect during the course of the study from baseline to post-intervention (F[2,34] = 4.08, p < .05). Over time the elderly individuals who were called, either by telephone or videotelephone, showed enhanced medication
Simulations in Education

• High fidelity patient simulation has gained popularity in nursing education

• Simulation is a way to help students understand and put together complicated workflows and technology before engaging in them in the clinical arena

• This goal is further supported by the need to teach patient safety strategies, such as administering medications using barcoding

• The problem is: how do you create a high fidelity barcoding simulation.
Mrs. Maria Theresa Ruiz, 40-year-old Hispanic woman admitted to the ED in acute pain. Vital signs: Family members are present. Pt. placed in semi-fowlers position.
* Final Report *

Maria Ruiz’s Chest X-Ray: Clear
Maria Ruiz’s Abdominal Sonogram:

Abdominal ultrasonography is performed on this patient complaining of left flank pain. Multiple cross-sectional views demonstrate echogenicity consistent with multiple left renal calculi, notably the presence of two echogenic patterns, demonstrating a classic corona and echogenic shadow. Unable to determine stone size. Image as presented.
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**VITAL SIGNS**

- **Heart Rate**: 106
- **Respiratory Rate**: H 29
- **Systolic Blood Pressure**: H 160
- **Diastolic Blood Pressure**: 88
- **Mean Arterial Pressure**: 112
- **Pulse oximetry**: 96

**PAIN ASSESSMENT**

- Pain Comments
- Pain Assessment/Location Grid

**Cardiovascular**

Cardiovascular comments
### Medications

**Scheduled**

- **Fentanyl**
  - 25 mcg, IV Push, Once, 04/11/07 7:00:00, Stop date 04/11/07 7:00:00

- **Fentanyl**
  - 25 mcg Auth

- **Ketorolac (Toradol)**
  - 30 mg, IV Push, Once, 04/11/07 7:00:00, Stop date 04/11/07 7:00:00

- **Ketorolac**
  - 30 mcg Auth

- **Morphine**
  - 40 mg, IV Push, Once, NOW, 04/11/07 3:22:00, Stop date 04/11/07 3:22:00

- **Morphine**
  - 40 mcg Auth

- **Naloxone (Narcan)**
  - 2 mg, IV Push, Once, NOW, 04/11/07 8:36:00, Stop date 04/11/07 8:36:00

- **Naloxone**
  - 2 mcg Auth IV

**Unscheduled**

**Continuous Infusions**

- **Dextrose 5% with 0.45% NaCl 1000 mL + potassium chloride 20 mEq IV, Routine, 04/11/07 7:00:00, 125 mL/hr, 8 hr, 1000 mL**

- **Administration Information**
  - Begin Bag 1, 1.000 mL/hr

- **Dextrose 5% with 0.45% NaCl + potassium chloride**
  - 20 mEq Auth
Bar Coding Simulation

• Simulate barcoding using health IT strategies matching current patient safety practices
• Use informatics standards to create the simulation—NDC codes
• Interface the task with a patient simulator and the academic EHR
• Teach students to administer medications safely using barcoding
Steps to set up Functionality

• Case studies were created to simulate the medication barcode workflow
• When the student barcoded the medication and the patient, the eMAR automatically charted the medication as given.
• Then the student verified and signed the eMAR
Interprofessional Simulation: Medicine, Nursing, Pharmacy

• Case Study:
  – The faculty: Mitzi Scotten, Larry Davidow, Mary Meyer, Lorraine Buchanan
  – Their students

• Patient record in AES
  – The staff: April Roche, Judith Warren, LaVerne Manos
Using Clinical Notes to give expectations of each student where all students know what the other is doing.
Quick guide—Placing Orders

Fourth year Medical Students
KU Pharmacy Interprofessional Case: Review Orders / Chart

Pharmacy students are 30 miles away
Wednesday, April 27, 2011 - Thursday, June 09, 2011. 2 out of 3 documents are accessible. [Admission - Current]

**Final Report**

Document Has Been Updated

Brief Description of Client

- **Patient:** Morgan, Cara InterProf-27-Apr_Pre
- **DOB:** 08/28/10
- **Age:** 9 months
- **Sex:** Female
- **MRN:** 0070023292
- **Inpatient:** 04/27/2011 8:00 - 05/24/2011 23:59
- **Loc.:** Pediatrics, 6

**History of Present Illness:**

Morgan had not been acting right.* She was falling asleep repeatedly during feedings and was difficult to arouse. She has also been crying much more than usual at home and is running a fever. Mom and Dad brought her to the ER when she began vomiting and she was immediately admitted to the pediatric unit because the ER staff was concerned about the possibility of an infection.

**Health Status**

- **Allergies:**
  - **Known Allergies:** None
  - **Known Reactions:** None

**History**

- **Social History:**
  - Family:** Social situation: Living with mom, dad, and 6 siblings on a farm in southern Johnson County.
  - Past: None
  - Present: None

**Physical Examination**

- **Vitals:**
  - Temperature: Normal
  - Blood Pressure: Normal
  - Heart Rate: Normal
  - Respiratory Rate: Normal

**Health Maintenance**

- **Immunizations:** Not up to date (parents refuse all immunizations due to religious beliefs).

**Impression and Plan**

- **Plan:**
  - Review Admission Orders

**Result type:** Admission Note:Physician
**Result date:** 27 April 2011 06:00 CDT
**Result status:** Modified
**Result title:** Brief Description of Client
**Performed by:** Robbins, Arizona on 19 April 2011 14:47 CDT
**Verified by:** Robbins, Arizona on 19 April 2011 14:57 CDT
**Encounter info:** 40000015782, KUMC, Inpatient, 04/27/11 - 05/24/11
Interprofessional Simulation in Action: Cara Morgan

Medical and Nursing Students
Strategies for Faculty and Student Adoption

Rogers Adoption / Innovation Curve

2.5% 13.5% 34% 34% 16%

Innovators Early Adopters Early Majority Late Majority Laggards

Gartner’s Hype Cycle

Combined Models
“Learning to use an EHR is more than documenting the care of a patient. It is learning to **collect and analyze information** about a patient and then **passing that information on to the next clinician** who cares for the patient. Only with quality patient information at the point of care can clinicians provide safe, effective care.”

Judith J. Warren, 2005
Questions?
QSEN Informatics Competencies for Prelicensure Nursing Students Worksheet

Name:

QSEN defines Informatics as the use information and technology to communicate, manage knowledge, mitigate error, and support decision making.

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>
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</thead>
<tbody>
<tr>
<td>Explain why information and technology skills are essential for safe patient care</td>
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<tr>
<td>Seek education about how information is managed in care settings before providing care</td>
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<tr>
<td>Apply technology and information management tools to support safe processes of care</td>
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<tr>
<td>Appreciate the necessity for all health professionals to seek lifelong, continuous learning of information technology skills</td>
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<tr>
<td>Identify essential information that must be available in a common database to support patient care</td>
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<td>Contrast benefits and limitations of different communications technologies and their impact on safety and quality</td>
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<td>Navigate the electronic health record</td>
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<tr>
<td>Document and plan patient care in an electronic health record</td>
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<td>Employ communication technologies to coordinate care</td>
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<tr>
<td>Value technologies that support clinical decision making, error prevention, and care coordination</td>
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<tr>
<td>Protect confidentiality of protected health information in electronic health records</td>
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<tr>
<td>Describe examples of how technology and information management are related to the quality and safety of patient care</td>
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<tr>
<td>Recognize the time, effort, and skill required for computers, databases, and other technologies to become reliable and effective tools for patient care</td>
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</tr>
</tbody>
</table>
The BSN program prepares the graduate to:

- Demonstrate skills in using patient care technologies, information systems, and communication devices that support safe nursing practice
- Use telecommunication technologies to assist in effective communication in a variety of healthcare settings
- Apply safeguards and decision making support tools embedded in patient care technologies and information systems to support a safe practice environment for both patients and healthcare workers
- Understand the use of CIS systems to document interventions related to achieving nurse sensitive outcomes
- Use standardized terminology in a care environment that reflects nursing’s unique contribution to patient outcomes
- Evaluate data from all relevant sources, including technology, to inform the delivery of care
The BSN program prepares the graduate to:

- Recognize the role of information technology in improving patient care outcomes and creating a safe care environment
- Uphold ethical standards related to data security, regulatory requirements, confidentiality, and clients’ right to privacy
- Apply patient care technologies as appropriate to address the needs of a diverse patient population
- Advocate for the use of new patient care technologies for safe, quality care
- Recognize that redesign of workflow and care processes should precede implementation of care technology to facilitate nursing practice
- Participate in evaluation of information systems in practice settings through policy and procedure development
The MSN program prepares the graduate to:

• Use information and communication technologies, resources, and principles of learning to teach patients and others
• Evaluate outcome data using current communication technologies, information systems, and statistical principles to develop strategies to reduce risks and improve health outcomes
• Analyze current and emerging technologies to support safe practice environments, and to optimize patient safety, cost-effectiveness, and health outcomes
• Promote policies that incorporate ethical principles and standards for the use of health and information technologies
• Provide oversight and guidance in the integration of technologies to document patient care and improve patient outcomes
• Use current and emerging technologies in the care environment to support lifelong learning for self and others
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.

• Demonstrate the conceptual ability and technical skills to develop and execute an evaluation plan involving data extraction from practice information systems and databases.
Human Flourishing: Incorporate the knowledge and skills learned in didactic and clinical courses to help patients, families, and communities continually progress toward fulfillment of human capacities.

Nursing Judgment: Make judgments in practice, substantiated with evidence, that synthesize nursing science and knowledge from other disciplines in the provision of safe, quality care and that promote the health of patients, families, and communities.

Professional Identity: Express one's identity as a nurse through actions that reflect integrity, a commitment to evidence-based practice, caring, advocacy, and safe, quality care for diverse patients, families, and communities; and a willingness to provide leadership in improving care.

Spirit of Inquiry: Act as an evolving scholar who contributes to the development of the science of nursing practice by identifying questions in need of study, critiquing published research, and using available evidence as a foundation to propose creative, innovative, or evidence-based solutions to clinical practice problems.
NLN Competencies for Master's Programs

• Human Flourishing Function as a leader and change agent in one's specialty area of practice to create systems that promote human flourishing.

• Nursing Judgment Make judgments in one's specialty area of practice that reflect a scholarly critique of current evidence from nursing and other disciplines and the capacity to identify gaps in knowledge and formulate research questions.

• Professional Identity Implement one's advanced practice role in ways that foster best practices, promote the personal and professional growth of oneself and others, demonstrate leadership, promote positive change in people and systems, and advance the profession.

• Spirit of Inquiry Contribute to the science of nursing in one's specialty area of practice by analyzing underlying disparities in knowledge or evidence; formulating research questions; and systematically evaluating the impact on quality when evidence-based solutions to nursing problems are implemented.
NLN Competencies for Practice Doctorate Programs

• Human Flourishing Systematically synthesize evidence from nursing and other disciplines and translate this knowledge to promote human flourishing within the organizational culture.

• Nursing Judgment Systematically synthesize evidence from nursing and other disciplines and translate this knowledge to enhance nursing practice and the ability of nurses to make judgments in practice.

• Professional Identity As a nurse-scholar, seek ways to translate research findings into practice, and help design and implement changes in nursing practice and health policy that will best serve a diverse population and a diverse nursing workforce.

• Spirit of Inquiry Disseminate practice-based knowledge by engaging in practice with an open mind, systematically studying the practice of other nurses, and reviewing extant research to formulate evidence-based proposals enhancing nursing practice, nursing education, or the delivery of nursing services.