

The Concept-Based Curriculum: What's All the Buzz About?

Linda Caputi, MSN, EdD, RN, CNE, ANEF

August, 2014

Dr. Caputi is the editor of the *Innovation Center*, a column in the National League for Nursing's journal *Nursing Education Perspectus*. She is a Certified Nurse Educator, and a fellow in the NLN's Academy of Nursing Education. Dr. Caputi is Professor Emeritus, College of DuPage, and most currently taught in an online Master's in Nursing Education program. She has won six awards for teaching excellence from Sigma Theta Tau and is included in three different years in the *Who's Who Among America's Teachers* and in 2004 was the recipient of the Educator of the Year Award from the National Organization of Associate Degree Nursing. The 2nd edition of her book *Teaching Nursing: The Art and Science* was selected as the winner of the 2010 Top Teaching Tools Award in the print category from the *Journal of Nursing Education*. She has served a three-year term on the NLN's Board of Governors.

Dr. Caputi is President of Linda Caputi, Inc., a nursing education consulting company, and has worked with hundreds of nursing programs over the last 20 years on topics related to revising curriculum, transforming clinical education, test item writing and test construction, using an evidence-based model for NCLEX[®] success, assisting with accreditation, and numerous other nursing education topics.

She has recently co-authored a book with Drs. Jean Giddens and Beth Rodgers titled *Mastering concept-based teaching: A guide for nurse educators* published by Elsevier. She has recently edited two books published through the NLN on Innovative Teaching in Nursing Education and authored the NLN's *Official CNE Review* book all available from the National League for Nursing.

Please contact Dr. Caputi at LindaJCaputi@gmail.com or Linda@LindaCaputi.com or visit the website at www.LindaCaputi.com for your faculty development and consulting needs.

Example:

- Class session (or a few class sessions) are on the care of the adult related to the concept of oxygenation.
- Review and expand on the concept of oxygenation. Consider the concept in depth including: the definition, risk factors, physiologic processes, consequences of impairment, all aspects of assessment across the life span, diagnostic tests, medical interventions, nursing management, interrelated concepts – all this is focused on the concept.
- Exemplars: Asthma; COPD (Present the exemplar in the context of a patient)
- Pathology: What are the main health and illness concepts related to this pathology? For each of the main health and illness concepts affected, how do they affect other concepts? What impact does age, lifestyle, etc. have on this patient?
- How does the pathology relate to patient profile concepts: development, family dynamics, adherence, etc.
- Looking at the Professional Nursing and Health Care Concepts: When caring for a patient with this pathology, what kind of teamwork, clinical reasoning, care coordination, health promotion, etc. are needed?
- What other pathologies are similar to asthma and COPD, and will they relate in the same way to these concepts? You can list other pathologies that are similar but do not go into detailed pathophysiology, etc.

Example: The Concept of Infection

Infection:

1. Definition
2. Score or categories: simple, chronic, complex, local, septic, viral, bacterial, etc.
3. At risk factors:
 - a. Nutrition
 - b. Life choices: high risk behaviors
 - c. Environmental conditions:
 - i. Poor sanitation
 - ii. Lack of clean water
 - iii. Decreased air ventilation
 - iv. Exposure to organisms
 - d. Tissue integrity: broken skin related injury; treatments
 - e. Immunity; related to age; disease; other healthcare issues
 - f. Stress
 - g. Socioeconomic: low → preventive health; poor nutrition
 - h. Acute and chronic illness → diseases and treatments

Pathophysiology of Infection

1. Infectious process
 - a. Mechanism
 - b. Assessment
 - i. History
 - ii. Physical (fever, warmth, swelling, redness, pain)
 - iii. Severity: Hypovolemia/hypertension – decreased urinary output
2. Diagnostics

Clinical Management

Interrelated Concepts: More focused look

1. Inflammation
 - a. Pain
 - b. Tissue integrity
2. Nutrition
3. Fluids and electrolytes
4. Stress
 - a. Immunity
5. Gas exchange
6. Tissue perfusion → mental status
7. Patient education, adherence
8. Collaboration
9. Care coordination
10. Safety

What about each of these concepts related to the concept of infection?

What do you need to think about with each of these?

Common Exemplars

Exemplars to Study In Depth

First year:

- MRSA
- Infected pressure ulcers
- Pneumonia
- Otitis media

Second year:

- Infections in specific organs such as GI, GU, reproductive. List the infections (UTI, gastroenteritis, conjunctivitis, healthcare acquired infections): what do they have in common? How are they different?
- What do you remember? What should we think about if the infection is becoming systemic?
 - Systemic: sepsis
 - HIV
 - Encephalitis

For each **specific** exemplar discuss the pathophysiology, how the interrelated concepts may manifest/relate, the medical treatment, and the nursing care.

When presenting diseases, present them in a patient context using the

"Community" or some other collections of patients. Then be sure you also discuss:

- Pathology: What are the main health and illness concepts related to this pathology?
For each of the main health and illness concepts affected, how do they affect other concepts? What impact does age, lifestyle, etc. have on this patient?
- For residents in the community with these pathologies, what specific concepts relate to their individual situations and lifestyles that are important to think about with the pathology under consideration?
- How does the pathology relate to **patient profile concepts**: development, family dynamics, adherence, etc.

- Looking at the **Professional Nursing and Health Care Concepts**: When caring for a patient with this pathology, what kind of teamwork, clinical reasoning, care coordination, health promotion, etc. are needed?
- What other pathologies are similar to the ones we covered, and will they relate in the same way to these concepts? You can list other pathologies that are similar but do not go into detailed pathophysiology, etc.
- How are these pathologies the same as the exemplar? How are they different?

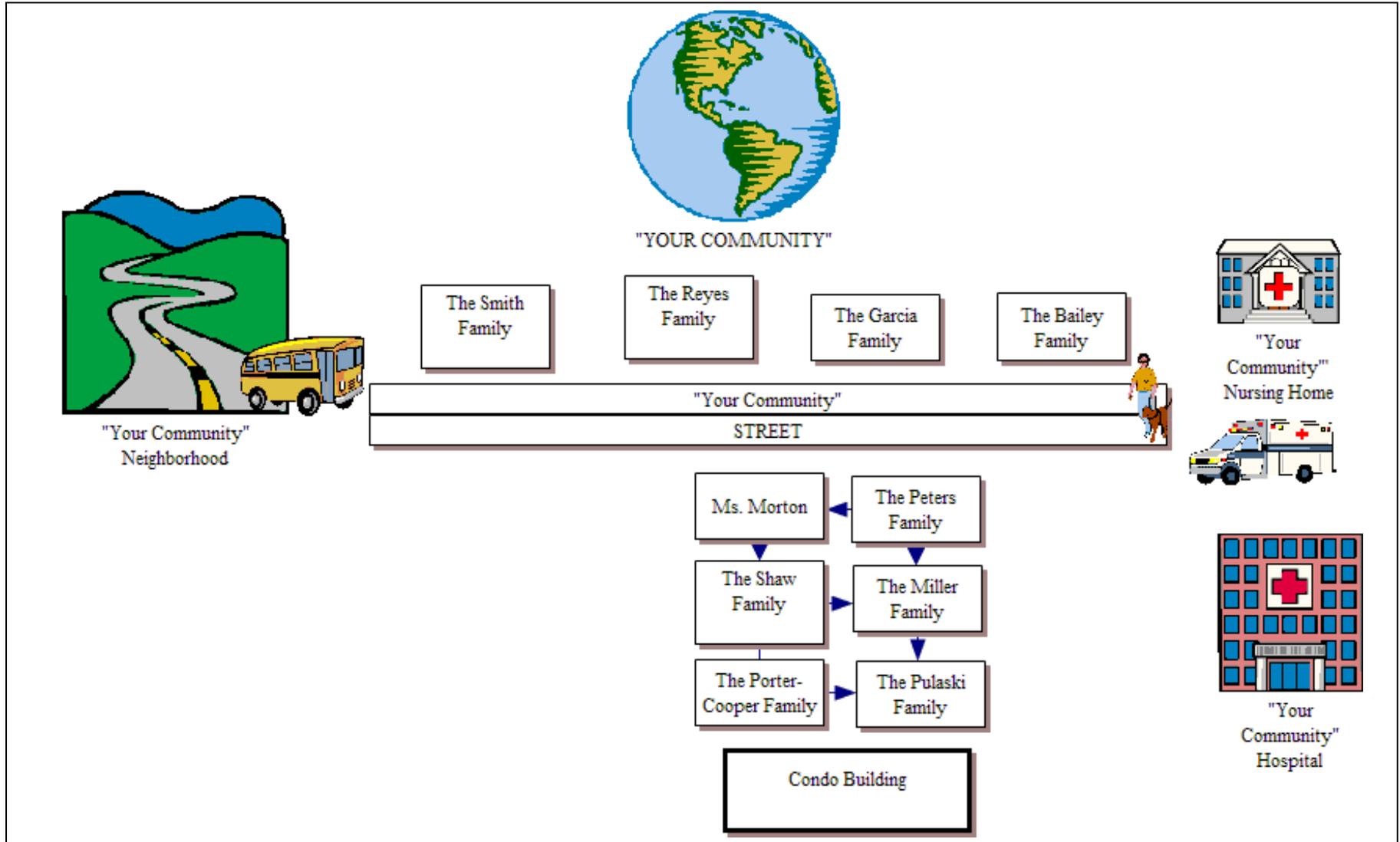
You could present the above in a concept map format or ask students to develop an unfolding concept map as you go through the class.

****The Streets of “Your Community”

- The Streets of “**Your Community**” is a community of fictitious people and families that is used to help students process information during class. It provides a context to make the connection between **acquiring** and **using** knowledge. Shifts content from decontextualized knowledge to application of knowledge.
- The same people/families are used throughout all the courses in the nursing program.
- The lives of the people can change as students encounter new content. For example, when students study critical care, one of the residents can experience respiratory failure secondary to emphysema and be admitted to the intensive care unit. Because these people have families, students will have a ready-made context for considering how the illness may impact the family. For example, during the maternal health course, the newlyweds have become pregnant, etc.
- Using the same families throughout the program provides students familiarity with the families. They can produce a more in-depth consideration of concepts and topics because they have a history with the families.
- Each faculty member or group of faculty can develop the information about a family to provide the beginning information. Can also use NLN's ACES patients. Advancing Care Excellence for Seniors
- As faculty teach their specific courses, they can then move the families through time with a variety of experiences.

Here’s a sample graphic of the Streets of “**Your Community**”.

The Streets of "Your Community"



Families Living in “Your Community”

The Smith Family:

Caucasian Family

Mom: 38, weighs 175 pounds, works full-time, volunteers for kid’s activities,

Dad: 40, weighs 250 pounds, works full-time, travels out-of-town 3 days a week, smokes 2 packs of cigarettes a day. Takes medication for depression.

Son: 8 years old, easy-going personality, active in sports, good student, asthma for 3 years, frequent URIs in the winter

Daughter: 3 years old, attends day-care, frequent ear infections, stubborn, does well at school but parents have difficult time controlling tantrums

Grandfather Smith: 75 years old; lives in the “Your Community” Nursing Home. Has mild dementia, uses a wheelchair after falling and breaking his right hip, has moderate to severe emphysema secondary to smoking but quit smoking 2 years ago.

The Reyes Family:

Filipino Family

Dad: 58 years old, 150 pounds, smokes 1 pack of cigarettes a day, 3 alcoholic beverages a day, 3 coronary arteries have stents placed 3 years ago, employed as an architect

Mom: 56 years old, 110 pounds, cares for grandchild of daughter who was never married,

Maria: Lives with mom and dad and her 5-year-old daughter, and works as a nurse in “Your Community” Nursing Home. Works 12-hour shifts sometimes 3 in a row

Rose: 5-year-old born with cystic fibrosis. Grandmother cares for child when mom is working; father of child visits every other week, but is unemployed and doesn’t pay child support. Father is Italian and lives with his family who supports him.

The Garcia Family:

Mexican Family

Mom: 45 years old, works two jobs; weighs 180 pounds, has 5 children ages 27, 25, 23, 18, and 15

Dad: 57 years old, smokes 2 packs of cigarettes per day, works as a dry wall installer.

Weights 230 pounds and states he is able to eat anything. Enjoys American food including

fried chicken, French fries, fast foods, and sweets but continues to eat foods of Mexican culture. Visits Mexico every year for 2 weeks

Jose: age 18, attends local community college, smokes cigarettes and occasionally marijuana, volunteers to help neighborhood children learn English

Roseanne: 15 years old, had a miscarriage 1 month ago but did not tell family; earns As in school, steady boyfriend who is occasionally verbally abusive

Relatives and friends of relatives: every few months, two to three people from Mexico enter as undocumented immigrants and stay with the Garcia's until they can find a permanent place to live.

The Bailey Family

African-American family

Mom: 37 years old, a lawyer, weighs 135 pounds, has 1 child living at home

Dad: 45 years old, weighs 180 pounds, has had HTN for 20 years,

Peter: 15 years old, attends a private high school and is a member of the orchestra, plays in a band with friends who smoke marijuana during practices but Peter refuses to smoke.

Grandmother Bailey: Lives at the "Your Community" Nursing Home; suffers from Alzheimer's, has severe COPD from 50 years smoking, but quit smoking because she "just forgot she smoked"; suffered a heart attack and has chronic heart failure

Miss Morton

Single Asian lady working as a paralegal. Has been in this country for 5 years. Believes in non-Western approaches to health care. Is very thin; very important to her to be thin. Recently ordered some tape worms through the internet to help her maintain her weight.

The Shaw Family

Single mom, 35 years old, with a teen-age son. The husband committed suicide one year ago due to financial difficulties; had no job or insurance. Mrs. Shaw has HTN and IBS. She works cleaning houses. Has a difficult time paying all the bills. Son is adjusting but having difficulty focusing in school.

The Porter-Cooper Family

Lesbian family

Ann Marie: 35 years old; teaches English at the local community college; volunteered for the Peace Corp 10 years ago and spent time in Uganda.

Betsy: 38 years old, smokes 1 pack a day, works nights as a nursing supervisor at “Your Community” Hospital

Natalie: 3 month old child conceived by artificial insemination. Jose Garcia donated sperm, but his parents do not know. He visits Natalie but is not listed as the father.

Natalie was born 2 months premature.

The Peters Family

John and Marie have been married for one year. Hoping to get pregnant soon. John has a successful position as a financial adviser with a local bank. Marie teaches grade school. Last winter she developed renal complications secondary to a strep throat she likely acquired from the children in her class.

The Miller Family

Tom owns the condo and rents out one of the bedrooms to Joseph Petrinelli, a friend from college. Joseph is engaged to be married. Joseph has a colostomy since age 15 due to inflammatory bowel disease. They are both healthy, work out, and eat a healthy diet. Tom occasionally drinks alcohol and smokes marijuana.

The Pulaski Family

Mr. and Mrs. Pulaski are first generation immigrants from Poland. Neither speak English. Their daughter, Tina, is 20 years old and attends the local community college. Both the mother and father work for a Polish restaurant. Mr. Pulaski is diabetic and takes insulin but often forgets. Mrs. Pulaski tries to cook the right food for him but he often eats at the restaurant. Mrs. Pulaski has scleroderma and often times has difficulty functioning. They have no medical insurance.

Sample Worksheets

Pneumonia

Etiology and Risk Factors

Pathophysiology

Clinical Manifestations/Diagnostic Tests (Include nursing implications)

Medical Management (Including medications)

Nursing Management

Respiratory Medications Worksheet

Instructions: For each medication/classification fill in the information in the boxes provided.

Classification	Example Medications	Route(s)	For which respiratory condition would this medication be used?	Assessments to make while patient is on this medication.	Nursing Considerations/ Patient Teaching
Antitussives	codeine benzonatate (Tessalon)				
Mucolytics,	Acetylcysteine (Mucomyst)				
Expectorants	Guaifenesin (Robitussin)				
Antihistamines	Diphenhydramine (Benadryl) Cetirizine (Zyrtec)				
Decongestants	Pseudoephedrine (Sudafed)				
Bronchodilators	Albutrol (Proventil) Epinephrine Formoterol (Foradil) Aminophylline theophylline (Theo-Dur)				
Etc.					

Active, Contextual Learning: Example exercises

Students will break into small groups and,

- Review nursing care in the text on one of the exemplars.
- Using the patient from the community of patients, the groups are provided with questions to answer and discuss, then share with the class. Students are asked to provide specific information related to this patient (the patient's personal information, his/her family, etc.) and what they know about this patient from interactions in previous semester.
- In their answers (discussions) students should provide rationales based on the patient in "Your Community".

Here are some example questions to focus their learning:

- What is the goal of your nursing care for this patient?
- What are the priority nursing interventions while the patient is hospitalized?
- What are the important priorities for discharge teaching?
- What are important nursing considerations for the patient with this condition?
- What interventions can you delegate to an LPN/LVN? To a nursing assistant?
- What follow-up information will you collect after performing each of the interventions?
- Who are the other healthcare providers that you will communicate with regarding this patient's condition?

Students will also share the following:

- Decide what information is important to teach patients regarding the topic of their group.
- Prioritize the importance of the information to be taught.
- Role play teaching a patient.
- Students watching the role play are asked to summarize what they watched.
(promotes active listening)

The above requires the student to read the nursing care, then use that information the way a nurse would use the information for that particular patient.

Students work in groups to develop concept maps related to the topic.

Compare and Contrast

1. Divide students into groups.
2. Assign each an exemplar. (pneumonia; influenza; tuberculosis)
3. In class each group provides the **most** important aspects of patient care related to that exemplar.
4. A separate group is assigned to compare and contrast – how is the nursing care the same and how is it different for each exemplar.

Then provide students with patients from your "Community" for each condition. The groups then work on concept maps specifically related to that patient. You might ask them to include different aspects of care such as physiological adaptation, psychosocial adaptation, safety, etc.

Clinical Learning

A conceptual-approach to clinical.

Continuum of Care: Oxygenation

1. Two students arrive on the unit for the day.
2. These two students will assess/interview, gather data on a group of patients (2 or 3) with alteration in oxygenation. They do not give traditional patient care so are not “assigned” to these patients.
3. They compare/contrast the patients; they compare and contrast treatment modalities.
4. They develop an in-hospital care plan.
5. They talk with the discharge planner. Decide what community resources they will need and are available for adults, for children, etc.
6. These 2 students search the internet and learn about these community resources, gathering data about how this community resource works.
7. They then relate these community resources to their specific patients. (Will this community resource be helpful; will it not be helpful; what is needed to make it work – such as, transportation, home health nurse, etc.)
8. Present their work in postconference.

Relating Concepts to Nursing Skills

Two students review three nursing skills procedures (including a checklist for performing the skill). The two students assess 3 patients. After assessing each patient, determine how each skill will be modified to accommodate the individual needs of each patient. Then for each area that needs to be modified, discuss the concept that relates to the modification. For example, if insertion of a urinary catheter is one of the 3 skills and the patient has limited range of motion, then mobility would be a concept of concern for a necessary modification in the positioning of the patient.

Judging how much ambiguity can be tolerated

Two students will take vital signs on all patients (minimum of 6 patients). They will then look at the patient's history, medications, etc. and **explain variations**. Discuss what would be **acceptable and unacceptable ranges** of the vitals signs for each patient and why.

Example Activity for Advanced Beginner Stage

Compare/contrast patients with the same condition:

- Two students find 4 patients with the same medical diagnosis (for example heart failure)
- They collect information on all 4 such as: history, other pre-existing conditions, diet, medications, treatments, limitations in function, etc.
- Visit each patient and perform an assessment.
- Compare and contrast each patient during post-conferences, noting how what they learned in the textbook compares with what they are seeing, and identify what is different and why.
- Discuss all the patient information and note reasons why diet, meds, treatments, etc. vary from patient to patient.
- Discuss the assessment findings and note when specific findings would be out of range, what those would be, and what action to take.
- Note possible complications for each patient and nursing interventions to prevent those complications.

This assignment helps students begin to **notice patterns across clinical situations and note variances and what to do about them**.

Delegating and Prioritizing Exercise Medical/Surgical Patient

Today you have the following team members working with you: an LVN and a CNA.

Step 1:

Obtain the following information on three patients. You might use information from the shift report, cardex, and medication administration record.

Name:

Medical Diagnosis:

Nursing care for today:

Activity:

Assistance needed with activity:

Diet:

Assistance or special needs related to diet:

Pain rating:

Medications ordered for pain:

Side effects of analgesics:

Safety issues:

IV fluids:

Medications: Fill out the information on the attached sheet for each medication.

State of fluid balance:

Labs scheduled for today:

How the labs relate to nursing care:

Diagnostics studies scheduled for today:

How the studies relate to nursing care:

Dressing changes:

Suctioning:

Enema:

Other treatments:

On another sheet of paper, fill in the following information for each medication to be administered while you are caring for this patient.

Name of medication:

1. Classification of the medication.
2. Reason why the medication was ordered.
3. When it will be administered.
4. Teaching that needs to be done relative to the medication.
5. Any special instructions regarding administration of this medication.

Which medication for each patient is most important to give on time?

Which medication can be given toward the end of the window of time and still be given "at the right time" without adverse effects?

Medications administered at other times:

What other medications are prescribed for the patient that were administered on the previous shift or will be administered on the next shift?

How will those medications affect the patient assessments and the care you will be giving this shift?

Step 2:

Visit each patient and perform a quick, two-minute assessment of both the patient and the patient's environment.

Step 3:

1. Prioritize which patient you should care for first, second, and third. Why?
2. What are the primary assessments/data collection that should be completed first for each patient? Why?
3. What nursing interventions need to be carried out for each patient?
4. What interventions will you do first?
5. Which of the above interventions can be delegated and to whom? Why?

What information will be given to the person to whom the task is delegated and what information will be collected after the task is finished?

The Clinical Microsystem: Assessing, Diagnosing, and Treating your Inpatient Unit

www.clinicalmicrosystem.org

Medication Administration from a Systems Perspective

Medication administration from a systems viewpoint.

- Two students work with two different nurses on day one and then two different nurses on day two: four nurses total. “Shadow” the nurse watching and noting **every** step of system in which medications are administered – from the time the medication prescription is written until the effects of that medication have been evaluated.
- Half way through the 2nd day of the experience, the two students work together to develop a description of the system used in that healthcare agency. They might develop a chart, a concept map, or any other visualization of the process.
- Describe and discuss in postconference. Focus on the elements of the larger system and where in the process an error might be made and by whom that can result in a medication error by the nurse.

Go to ismp.org

What information on that site relates to your experience today?

What new information did you learn?

References

- Benner, P. E., Malloch, K., & Sheets, V. (2010). *Nursing pathways for patient safety*, NCSBN. St. Louis: Mosby Elsevier.
- Benner, P. E., Sutphen, M., Leonard, V., & Day, L. (2010). *Educating nurses: A call for radical transformation*. San Francisco: Jossey-Bass.
- Caputi, L. (2010). An introduction to developing critical thinking in nursing students. In L. Caputi (Ed.) *Teaching Nursing: The Art and Science*. (2nd ed.). Glen Ellyn, IL: College of DuPage. www.dupagepress.com
- Caputi, L. (2010). Developing critical thinking in the nursing student. In L. Caputi (Ed.), *Teaching nursing: The art and science*. (2nd ed.). Glen Ellyn, IL: College of DuPage Press www.dupagepress.com
- Caputi, L. (2010). Operationalizing Critical Thinking. In L. Caputi (Ed.) *Teaching Nursing: The Art and Science*, (2nd ed.). Glen Ellyn, IL: College of DuPage Press.
- Del Bueno, D. (2005). A crisis in critical thinking. *Nursing Education Perspectives*, 26,(5), 278-282.
- Erickson, H. L. (2007). *Concept-based curriculum and instruction for the thinking classroom*. Thousand Oaks, CA: Corwin Press.
- Giddens, J. (2010). The Concept-based Curriculum for Nursing Education, in L. Caputi, (Ed), *Teaching nursing: The art and science* (2nd ed.), Glen Ellyn, IL: College of DuPage Press.
- Giddens, J. F. (2013). *Concepts for nursing practice*. St. Louis: Mosby Elsevier.
- Giddens, J. F., Caputi, L., & Rodgers, B. (2015). *Mastering concept-based teaching: A guide for nurse educators*. St. Louis: Elsevier.
- Giddens, J. F., & Brady, D. P. (2007). Rescuing nursing education from content saturation: The case for a concept-based curriculum. *Journal of Nursing Education*, 46, (2), 65-69.
- Giddens, J., Brady, D., Brown, P., Wright, M., Smith, D., & Harris, J. (2008). A new curriculum for a new era of nursing education, *Nursing Education Perspectives*, (29), 4, 200-204.
- Giddens, J., & Morton, N. (2010). Report card: An evaluation of a concept-based curriculum. *Nursing Education Perspectives*, (31), 6, 372-377.
- Giddens, J. F., Wright, M., & Gray, I. (2012). Selecting concepts for a concept-based curriculum: Application of a benchmark approach. *Journal of Nursing Education*, 51, (9), 511-515.
- Hardin, P. K., & Richardson, S. J. (2012). Teaching the Concept Curricula: Theory and Method. *Journal of Nursing Education*, 51, (3), 155-159.
- Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health*. Washington, DC: Author.
- Ironside, P. M., & McNelis, A. M. (2010). *Clinical education in prelicensure nursing programs: Results from an NLN national survey 2009*. New York: National League for Nursing.
- Tanner, C. (2006). The next transformation: Clinical education. *Journal of Nursing Education*, 45, (4), 99-100.
- Tanner, C. (2006). Thinking like a nurse: A research-based model of clinical judgment in nursing. *Journal of Nursing Education*, 45, (6), 204-211.