White Paper

Strengthening Students’ Clinical Judgment Through Conceptual Care Mapping
Nursing students are required to develop complex clinical judgment skills essential for professional nursing practice. The estimated doubling of medical knowledge every 73 days by 2020 (Densen, 2011) requires educators to better prepare students to be lifelong learners. Teaching methods must actively engage students in critical thinking strategies that require the application of theory to practice. This will encourage students’ pursuit of knowledge and set students up for success on the Next Generation NCLEX® (NGN). Various forms of concept mapping, including conceptual care mapping that consistently incorporates the nursing process, are evidence-based teaching strategies that help students develop higher-level cognitive skills.

Educational Theory Behind Conceptual Care Mapping

Concept maps were first created by Novak and Gowin (1984) based on Ausubel’s (1963, 2000) assimilation theory of meaningful learning. Concept map research in nursing education began in the 1990s. More recently, concept mapping has been shown to promote critical thinking and build clinical judgment skills (Yue, Zhang, Zhang, et al., 2017; Williams-Brennan & Flynn-Post, 2015; Gerdeman, Lux & Jacko, 2013), enhance students’ ability to problem solve (Chan, 2017; Yu, Zhang, Xu, et al., 2013), link theory to practice (Bressington, Wong, Lam, et al., 2018), and contribute to test success (Joshi & Vyas, 2018; Jaafarpour, Aazami & Mozafari, 2016). Breytenbach, et al. (2017), in their literature review of eight evidence-based teaching strategies, noted that concept mapping was one of only three strategies found to significantly increase nursing students’ knowledge and contribute to deep learning.

Concept mapping promotes active learning and student preparation for class, clinical, lab, and simulation experiences. It requires students to read assigned textbook content, conduct literature reviews, and collaborate with peers and faculty. Research suggests that concept mapping is an excellent way to help motivate students to learn (Chan, 2017). Concept maps (also referred to as conceptual care maps) that replace traditional care plans, “provide a visual model for students to view the interactions and relationships between bio–psycho–social aspects of the patient, disease signs and symptoms, medical management, medications, and nursing process” (Cook, Dover & Dickson, et al., 2012, p. 92).

Parallels Between Clinical Judgment and the Nursing Process

Clinical judgment layers identified for the NGN (NCSBN, 2019), parallel the five steps of the nursing process to evaluate a new graduate’s thought process related to patient needs (Figure 1). A strong and consistent emphasis on the nursing process in our classrooms, labs, and clinical sites helps students develop the clinical judgment required for safe practice. Students must be challenged to use knowledge and evidence-based practice (EBP) gained throughout their nursing curriculum to guide their decision making. Novice nurses are expected to integrate research evidence; patient needs and values; clinical expertise; and quality, cost-effective health care when using EBP to plan and implement patient care.
NGN Clinical Judgment Process – Nurse Thought Process Focused

ASSESSMENT
- Assess • Medical Diagnosis • Etiology • Signs & Symptoms
- Analyze
- Prioritize
- Hypothesize
- Generate Solutions
- Take Action

NURSING DIAGNOSIS (Patient Problem)

PLANNING (Outcome Identification)
- Requires knowledge of
- Medical Diagnosis
- Etiology
- Signs & Symptoms
- Patient Interview
- Health History
- Physical Examination
- Laboratory Results
- Diagnostic Test Results

IMPLEMENTATION
- Independent Actions
- Dependent Actions
- Collaborative Actions

EVALUATION
- Highest priority first
- Goal Attainment?
- Continue/Revise/Adapt Plan of Care?
- Discontinue Plan of Care?

EVALUATE OUTCOMES

NGN Clinical Judgment Process – Patient Focused

Figure 1.

Nursing Process – Patient Focused
Conceptual Care Mapping to Develop Strong Clinical Judgment

The conceptual care map (CCM) facilitates student development of strong clinical judgment skills utilizing the nursing process. CCMs can be used in all clinical and simulation settings, as well as with case studies in the classroom or lab. The student nurse recognizes cues following assessment of the patient (case study, simulated, or real) and the organization of data obtained from the patient, as well as the electronic health record (EHR). Those cues are analyzed after data is clustered to identify the patient's nursing diagnosis or problem. Students prioritize hypotheses and generate possible solutions in the planning phase of the nursing process. Through implementation of interventions, a student takes action; delivering safe, quality patient care, sometimes through collaboration or delegation. Students evaluate outcomes during the evaluation phase of the nursing process. The use of color highlighting of related data within the CCM by students allows faculty to quickly evaluate students' ability to recognize, analyze, and hypothesize accurately. The care plan area of the CCM can clearly and succinctly demonstrate a student's ability to generate solutions, take action, and evaluate patient outcomes (Figures 2a and 2b).

Figure 2a.
Research supports using concept maps, like the conceptual care map, to help students see the big picture in patient care situations and promote analysis and synthesis of new and previously acquired knowledge (Gerdeman, Lux & Jacko, 2013). Providing students with checklists for CCMs and grading rubrics that delineate expectations are valuable to their learning process. Having guidelines for completing all forms of concept maps reduces student anxiety and facilitates increased learning and recall of critical content in stressful clinical situations.

Nursing care continues to become more complex, requiring students to think at a higher level and make clinical judgments based on EBP and patient needs and values. Use of the CCM across the curriculum will enhance students’ ability to make sound clinical judgments required for safe, quality patient care and passing the NGN.
References


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