

Concept-Based Curriculum to Address Oversaturation, Prepare More Confident New Nurses



BY TERRA OSTERLING

Donna Fabry, DNP, RN, CNS, clinical associate professor and coordinator of pre-licensure programs at State University at Buffalo School of Nursing, has been a faculty member since 2010 and a nurse for 40 years. Over the span of her career, the number of medications, technologies, complex processes, and diagnoses of diseases and conditions have all grown exponentially. But how nursing students are taught has gone largely unchanged over that same period.

"After their first two years of prerequisite classes, nursing students at UB heading into their junior year are just beginning to see patients in the clinical setting," Fabry said. "In our traditional curriculum, we would be trying to teach them everything exhaustively following a linear thinking approach."

This meant volumes of textbooks and nightly reading assignments on top of daily clinical instruction. This oversaturation from the ever-expanding amount of content in the traditional curriculum has, Fabry said, become unsustainable. A solution is emerging from nursing education reform.

"Our undergraduate faculty have been working on developing the curricula since fall of 2017," Catherine Mann, EdD, RN, CNS, assistant dean for undergraduate studies and clinical professor, said. "Now that we

have completed the approval process at UB, SUNY and the New York State Education Department Office of Professionals, we are excited to be implementing the concept-based curriculum in fall of 2022 with our traditional nursing students and summer of 2023 for our accelerated bachelors of science nursing students."

When the concept-based curriculum (CBC) was first presented to the faculty, Fabry asked to be part of the committee to form the CBC at UB School of Nursing. She knew that this considerable shift in nursing education would deeply impact how and what she teaches, so to fully invest in the change she chose to be part of the entire process — for herself and for her colleagues, and for her future students.

Shifting to Big Ideas and Application of Knowledge

The School of Nursing's new CBC is a student-centered teaching approach that relies on teaching a major concept, such as perfusion, instead of attempting to teach the over 10,000 human disease processes and conditions seen in today's health care environment.

For students, this will mean learning how to apply their knowledge of key concepts and exemplars — correlating any condition or physiological process to any number of diagnoses made of across the lifespan.

"For example, in the past, students were taught how to detect and manage hypertension in adult patients, but now, in their first semester, they will learn the concept of perfusion and how impaired perfusion causes hypertension," Fabry said.

Students will then apply that knowledge of impaired perfusion to the exemplar of hypertension across the lifespan, from the elderly patient to the pregnant mother with preeclampsia.

"It's going to be about teaching the building blocks of concepts across the lifespan."

The 46 concepts used in the UB curriculum are organized under five pillars: **Health Care Systems and Processes; Wellness and Illness; Professional Nursing Practice; Person, Family, and Population Centered Care; and Evidence-Based Practice for Quality and Safe Outcomes.** (The lists of concepts vary only slightly among educational institutions making the switch to a CBC.) Each of the five pillars will have a faculty 'champion' at UB School of Nursing; Fabry will champion concepts under the Wellness and Illness pillar.

In one example from UB School of Nursing's CBC, the Growth and Development concept is defined as "The sequence of physical, psychosocial and cognitive developmental changes that take place over the human lifespan," and is taught under the Wellness and Illness pillar. Relevant clinical exemplars include failure to thrive, cleft lip/palate, Duchene's muscular dystrophy, autism spectrum disorder, ADHD, central auditory processing disorder and traumatic brain injury.

"Throughout the curriculum, students will be taught both how to apply these concepts and the inter-connectedness of the concepts in caring for patients and populations across the lifespan," Mann said. This will apply in health promotion and disease prevention, care of patients experiencing alterations in health and end-of-life care. Students taught in this new manner will learn about broad, common health-related concepts in relationship to patient-, family- and population-centered nursing care.

Building New Nurse Confidence

The CBC is also expected to support confidence in new nurses.

In the traditional nurse education model, students rely on clinical hours for experience providing care for various diagnoses and diseases. However, this "education by random opportunity," as Fabry calls it, could mean, for example, a nursing student may never care for an infant with a ventricular septal defect, but will be able to apply their knowledge of the concept of impaired perfusion to this type of patient in the future.

Under the new student-centered CBC model, the goal is to address such educational ambiguities by improving graduates' ability to translate knowledge to practice in multiple settings when caring for patients at various stages of wellness, illness and life. Students will do this by tapping into higher order thinking to make clearer connections between theory and practice.

Improving Patient Outcomes

The catalyst for nursing education reform has been in acknowledging how the preparedness of new nursing graduates is affected by the ever-increasing complexities associated with modern health care. UB's choice to develop and implement a concept-based curriculum, a shift which is gaining traction throughout the nursing education community, was in part in response to how this oversaturated traditional curriculum has translated to impact on patient outcomes.

"UB School of Nursing has a very high NCLEX pass rate, at 97%," Fabry said. As a result of this reputation, new nurse graduates of UB School of Nursing have always been actively recruited and considered very well-prepared in the clinical setting.

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According to research, 60-70% of medical errors, which includes failure to rescue events, are made by newly graduated nurses.

Not only are nurse educators aware of these statistics, but the National Council of State Boards of Nursing, the board that develops the nursing boards (NCLEX), has also been called to action. The NCLEX has been updated to include 'next generation' questions which will challenge the graduating students to apply their conceptual knowledge to these higher-level test items.

"Ultimately, teaching conceptually will help improve students' ability to improve their clinical judgment and provide quality, safe care to the patients they will serve," Mann said.

The faculty involved in developing the UB School of Nursing CBC included all undergraduate faculty with leads being taken by Catherine Mann; Donna Fabry; Jennifer Guay, DNP, CNM, RN to BS program coordinator and clinical associate professor; Melinda Haas, DNP, RN, FNP-BC, clinical assistant professor; and Linda Steeg, DNP, RN, ANP-BC, clinical associate professor.



Donna Fabry



Catherine Mann