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## Collaborative Improvement Model

### *A Quality Improvement Approach to Curriculum Revision*

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To stay current with changes in health, health care, and nursing practice, nursing faculty must have competencies in designing and participating in curriculum revisions. Despite these necessary competencies, curriculum redesign is not an easy task. Over the years, some authors credit President Woodrow Wilson with saying, “It is easier to change the location of cemetery, than to change a school curriculum.”<sup>1</sup> Nursing education authors have historically echoed this sentiment, describing curriculum change as an arduous, daunting, and challenging process.<sup>2-4</sup> Although there are a plethora of tools, techniques, and processes for embarking on a curriculum revision, few curriculum revisions are situated in quality improvement (QI) methods.

Quality improvement methods are known for using evidence to build effective and efficient systems. This article provides an exemplar of how faculty in 1 prelicensure nursing program used the Collaborative Improvement Model (CIM), a model created using QI methods, to revise their curriculum.<sup>5</sup> Waterbury<sup>5</sup> designed the CIM drawing on Deming’s<sup>6</sup> System of Profound Knowledge,<sup>7</sup> lean production,<sup>8</sup> and Reid’s<sup>9</sup> process improvement approach. The faculty chose the CIM after a literature search for a curriculum revision structure and process in nursing education. After locating 5 curriculum revision approaches and evaluating their previous use, strengths, weaknesses, and implications, they discussed the pros

and cons of each and used an anonymous voting process to select an approach. Most faculty favored the CIM for a nursing curriculum revision.<sup>10</sup> Although the exemplar presented focuses on undergraduate nursing education, the authors believe the CIM is useful for curriculum revisions in various higher education programs.

### CIM Overview

The CIM includes 4 phases: preparation, discovery, interpretation, and implementation.<sup>5</sup> The preparation phase includes obtaining leadership commitment for process improvement to ensure alignment with an organization’s mission and policies, forming teams, and developing a scope statement. The discovery phase involves a study of the current state and understanding how other organizations with similar processes function to achieve process improvement outcomes. This phase involves reviewing the literature and determining best practices for improvement. The interpretation phase involves using what was uncovered in the discovery phase to reveal present strengths and opportunities for change to develop a future state (ie, new ways of operating). The implementation phase includes the allocation of resources and project management to implement the change in a sustainable manner. The CIM exemplar presented hereinafter describes each phase, including the progression of activities. The total time from preparation to implementation was 2 years (Supplemental Digital Content, Figure, <http://links.lww.com/NE/B12>).

### CIM Exemplar Preparation Phase

In implementing the CIM, the preparation phase commenced with recognition from faculty members about the need to revise the curriculum. Specifically, the faculty expressed concerns about curriculum drift. A once well-designed and scaffolded curriculum was fragmented, and they were struggling to articulate how the curriculum achieved program outcomes. In addition, although faculty had a program assessment plan to continuously improve the curriculum, they recognized it had been 20 years since they completed a comprehensive revision. During this time frame, they understood there were many

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significant program changes, ranging from new clinical sites to admitting students twice rather than once per academic year. Considering these needs, the dean provided university leadership with rationale for the change and explained the faculty concerns, which suggested a need for a revision. School of nursing and university leadership supported a revision, committing time for faculty retreats and providing funding (eg, faculty stipends) for curriculum work. This support was in alignment with the university and school of nursing missions, both of which entail faithful service and ethical leadership.

During the first curriculum revision retreat, the dean presented a summary of trends and issues in nursing education and health care. The associate dean led faculty in a strengths, weaknesses, opportunities, and threat analysis, the results of which furthered the ethical imperative for the revision. The faculty used this information and created a scope statement: Create a curriculum for diverse leaders that is responsive to trends in health care and education, which prepares nurses to provide holistic nursing care in partnership with their community. This statement offered a structure for the formation of teams, which included: (a) Holistic Nursing Care, (b) Trends in Education, (c) Diverse Leader (c) Partnership with Community, and (d) Trends in Healthcare. Faculty wanted to be fully involved in the revision and self-selected into teams, with faculty ensuring an even distribution for effective group size (5-6 members/team). In addition, faculty agreed on the formation of a group known as the Navigators (3 faculty, the dean, and an external facilitator from the school of business) who were charged with organizing and facilitating curriculum revision-related meetings and managing communication flow among the teams.

### Discovery Phase

The next step was the discovery phase. To initiate this phase, the Navigators created a Checklist for Group Work (Figure). The checklist required team members write a charge statement, identify a team lead and key stakeholders (eg, students, clinical partners, advisory board members), identify meeting dates and times, develop a communication plan, devise plans for record keeping and storage, and complete a gap analysis. The gap analysis required teams to identify content in the present curriculum relevant to their team charge that needed to be retained or eliminated and identify new content needs through locating and drawing on pertinent literature and resources. The checklist also included teams suggesting new program outcomes related to their charge. Overall, the checklist provided enough structure for teams to discover, but not so much that they would be constrained from thinking creatively. Each team had 3 months to complete the discovery phase.

### Interpretation Phase

After the discovery phase, faculty participated in the interpretation phase. This phase began with each team assimilating the information from the discovery phase and developing recommendations for the curriculum revision. The Navigators coordinated a retreat where the teams presented their findings from the discovery phase. The Holistic Nursing Care team built on the program's historic emphasis on holistic nursing practice. Their work resulted in a unanimous faculty vote to prepare the new curriculum to be in alignment with the American Holistic Nurses Credentialing Corporation (AHNCC) in preparation for becoming an

<b>Checklist for Work Group</b>	
Workgroup Name:	
Group Members:	
<input type="checkbox"/> Chair/Lead Identified	Date Completed:
<input type="checkbox"/> Key Stakeholders and Students Identified and Confirmed	Date Completed:
<input type="checkbox"/> Meeting Dates through Spring Semester Chosen	Date Completed:
<input type="checkbox"/> Charge Identified and Charge Statement Created	Date Completed:
<input type="checkbox"/> Communication and Record and Storage Plan Identified	Date Completed:
<input type="checkbox"/> Gap Analysis/Literature Review	Date Completed:
(Include content to retain and eliminate, needed content, and supporting resources and literature)	
<input type="checkbox"/> Suggested Program Outcomes	Date Completed:

**Figure.** Checklist for work group.

AHNCC-endorsed program. The Trends in Education team's findings resulted in a majority faculty vote to move from a predominantly medical-population-focused (eg, gerontology, adult health, family) and content-laden curriculum to a concept-based curriculum (CBC). Through their study, they understood a CBC would help manage content saturation; assist students in locating, analyzing, and interpreting information, and applying evidence to practice; and facilitate students' clinical reasoning and judgment abilities.<sup>11</sup> They also recognized how a CBC provided an organizational framework, which would shift the curriculum from an educator-centric, content- and task-oriented focus to a focused approach through using concepts and exemplars across the curriculum.<sup>12</sup>

The work of the Diverse Leader, Partnership in the Community, and Trends in Healthcare teams set the direction for faculty to develop the new curriculum, with particular foci, such as systems-based care, QI, safety, teamwork, partnership, technology, chronic disease management, diversity, and social determinants of health.

### Implementation Phase

The implementation phase, which was the final phase of the CIM, included the Navigators creating a timeline with tasks and milestones, which included consulting with others who had developed and were using a CBC, finalizing new program outcomes, developing a new plan of study, building a framework for the CBC, and developing new courses. During this time, faculty shared curriculum changes with student advising services, admissions, faculty teaching support courses, and other departments impacted by the curriculum revision. The Navigators vetted the curriculum through school of nursing and university governance, achieving approval for its implementation. Because the faculty involved key internal stakeholders in disseminating and submitting comprehensive documentation for the revision, university administration continued to support the revision, providing time and resources for the change (eg, faculty time to complete the implementation, Deans' Council review and approval, registrar involvement and catalog changes, etc). The new curriculum was launched in fall 2021.

Since its implementation, faculty have reported the new curriculum reflects the collaborative work the nursing faculty undertook using the CIM. They have conveyed recognition that the CIM's QI foci resulted in the CBC, resulting in a curriculum better suited for today's learner. This recognition has been supported through ongoing faculty development, which has included continually learning about a CBC and drawing on the wisdom of those from other nursing programs who created

and implemented a CBC. They have further reported the new curriculum supports students in their formation to think, act, and feel like a nurse and will better prepare students to develop clinical judgment skill. According to one of the Navigators, "It is as if lightbulbs continue to go on about how the CBC will improve learning. There is excitement about how the CBC prepares students for the Next Generation NCLEX® and contemporary nursing practice."

### Conclusion

The exemplar presented in this article provides a call for nursing faculty to use the CIM for a revision. The CIM is especially valuable in easing the process of a large-scale curriculum revision. The exemplar presented demonstrates how the CIM was key to changing a curriculum from medical population-focused curriculum to a contemporary CBC where such a significant systemic change can generate uncertainty and anxiety. The CIM helped faculty identify shared goals, set realistic timelines, determine roles and responsibilities, and create a sense of ownership that indeed reflected QI to benefit students and the nursing profession.

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