

Dedicated education unit: An innovative clinical partner education model

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This article describes the implementation and evaluation of the Dedicated Education Unit (DEU) as an innovative model of clinical nursing education. A partnership of nurse executives, staff nurses and faculty transformed patient care units into environments of support for nursing students and staff nurses while continuing the critical work of providing quality care to acutely ill adults. Various methods were used to obtain formative data during the implementation of this model in which staff nurses assumed the role of nursing instructors. Results showed high student and nurse satisfaction and a marked increase in clinical capacity that allowed for increased enrollment. This article reports on a 3-year project to operationalize the DEU concept with 6 nursing units in 3 hospitals. The development of staff nurses as clinical instructors, best practices to teach and evaluate critical thinking in students, and the mix of student learners continue as focus areas.

In response to the current nursing shortage, the call has been made for schools of nursing to increase their enrollments and for health care institutions to design approaches to retain their experienced nurses. The University of Portland School of Nursing and clinical partners, Providence St. Vincent Medical Center, Providence Portland Medical Center and Portland Veterans Affairs Medical Center, have joined together to develop

an innovative strategy that achieves these goals. This article describes the implementation and evaluation of the Dedicated Education Unit (DEU) clinical education model.

BACKGROUND

In 2001, the Oregon Nursing Leadership Council (ONLC) developed a strategic plan to solve Oregon's nursing shortage. The goal to "double the enrollment in Oregon nursing programs by 2004"¹ challenged the schools to develop new educational models that supported optimal clinical learning with increased numbers of students. At the same time, another ONLC goal to "develop, implement and evaluate staffing models that make the best use of the available nursing workforce"¹ challenged clinical agencies to develop clinical practice and staffing models that incorporate fully the "contributions and expertise of an aging nurse workforce."¹ Practice as usual and the traditional educational model would not achieve these goals. It was obvious to us that a new clinical education model was needed.

A new concept in clinical nurse education—Dedicated Education Unit (DEU)—was developed by The Flinders University of South Australia (FUSA) School of Nursing.² The DEU as designed is a venture between administrators, nurse-clinicians and faculty to create an optimal and efficient learning environment for students. In the DEU, staff nurses are the instructors of the students and the university faculty member's role is to work with the staff nurses to support their clinical teaching, facilitate transfer of classroom learning and assure the students' achievement of expected learning outcomes. A central concept is the belief that the staff nurses' educational role is vital to the development of students' professional skills and knowledge. Built on mutual respect, open communication and collaborative relationships, the DEU is unique in that it is a partnered commitment to student learning. The benefits of the DEU concept achieved at FUSA, in the areas of student, faculty and nurse satisfaction,³ led us to propose the

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adaptation of this clinical education model with our clinical partners.

COMMUNITY-UNIVERSITY PARTNERSHIP

A first step in any change is to build on strengths. Our school of nursing and clinical partners have a history of mutual respect, support, and trust. There is open communication and a commitment to quality patient care and student education. We realized that partnerships on multiple levels would be required to meet the ONLC goals.

Level I: Dean and Nurse Executive

Conversations began at the highest level with the dean and nurse executives. Within the clinical agencies, discussions at the administrative level were already ongoing about how to deal with the growing nursing shortage, retain and recruit nurses, and manage the increased need for student clinical placements. The DEU concept was received enthusiastically as a means to address these issues with pilot development to occur in one unit of each of the partner facilities. A senior university faculty member and a health system director in each facility were appointed to coordinate the project.

Level II: Project Coordinators & Nurse Managers

The initial nursing units selected to become the pilot DEUs were new patient care units. The nurse managers of these units were viewed as leaders with respect to their relationships with their nurse executive and staff, desire to work with the university to develop a positive clinical learning environment, and commitment to quality patient care. Advertisements for nursing staff announced that the units would be dedicated education units seeking clinically experienced nurses interested in teaching to serve as primary teachers of the students and work in collaboration with University faculty to develop as clinical instructors and build an optimal learning environment for students. The nurse managers formed the staffs from the applicants, giving preference to BSN-prepared nurses.

The DEU project coordinators met with the unit managers multiple times before the units were opened to develop a shared vision and operationalize the DEU concept. In addition, the dean visited the DEUs at Flinders Medical Centre, Adelaide, Australia and met with FUSA faculty and the clinical nurses. Insights from this visit helped to adapt the Australian Model to meet our mutual goals.^{2,3} For instance, in the FUSA model, students are assigned to a unit and a designated DEU nurse receives a pay differential to serve as an “agency liaison” to assign patients and nurses to students. We chose instead to arrange a staffing pattern where the same staff nurse as clinical instructor (CI)

would be scheduled to work with the same 2 students for the 6-week rotation, a change from the FUSA model where students work with several nurses and work schedules are not changed. We also choose to increase faculty presence and partnership on the unit and designed the role of clinical faculty coordinator (CFC) for each DEU to serve primarily to support the clinical instructors (CIs) and to have a daily presence on the unit. This contrasts with the FUSA model where a faculty as “Principle Academic” has a more limited presence on the unit and works directly with students “eight to ten hours per week.”² We also chose not to begin with the FUSA model of peer teaching and mixing of 3 levels of undergraduates and, instead, chose initially to keep the clinical level of the students the same on each unit.

Our collaborative process resulted in the initial concept paper. The concept paper described the purpose and features of the DEU as follows:

A Dedicated Educational Unit (DEU) is a client unit that is developed into an optimal teaching/learning environment through the collaborative efforts of nurses, management, and faculty. It is designed to provide students with a positive clinical learning environment that maximizes the achievement of student learning outcomes, uses proven teaching/learning strategies, and capitalizes on the expertise of both clinicians and faculty.

The agreed upon special features of the DEU model were:

- Exclusive use of the DEU by one school of nursing.
- Use of staff nurses who want to teach as clinical instructors and are prepared for their teaching role through collaborative staff development activities.
- Continuity of students with the staff nurse clinical instructor over the length of the clinical rotation, usually 6 weeks.
- Use of faculty expertise as educators to support the development and comfort of the staff nurse as the clinical instructor.
- Commitment by all parties to work together to build an optimal practice environment for students and staff that is consistent with the unit’s goal for its patients and staff.

The DEU model was visualized as a “village” working together and contributing talents to “raise” the student nurses. This image helped staff and faculty appreciate their roles as being broader than the student and nurse interaction of either the traditional clinical faculty or preceptor models.

Level III: Clinical Instructors, Clinical Faculty Coordinator and Students

The DEU required a major change in the roles of the university faculty and staff nurses. The staff nurses now

are the teachers of the students and designated as clinical instructors (CIs). The CIs are responsible for the clinical education of the student. They provide on-going feedback about performance and collaborate with the student and university faculty in the design of learning experiences with the mutual goal for the student to gain the clinical knowledge, skills and judgment needed for entry into professional nursing practice. The School of Nursing submits the BSN-prepared CI's credentials to the State Board of Nursing for designation as clinical instructors, thus CIs become adjunct clinical faculty at the University. Clinical instructors are initially prepared for their clinical teaching role in DEU orientation workshops. The traditional university faculty role changed from a primary focus on the student to an emphasis on the development and support of CIs as educators. The university faculty member is called the clinical faculty coordinator (CFC) and works with the CIs to encourage the use of evidenced-based teaching/learning strategies, assure the students' attainment of expected clinical outcomes, and to collaborate in the evaluation of student achievement.

DEU Orientation Workshop

In preparation for the opening of the DEU, all nurses who will be clinical instructors, charge nurses and nurse managers attend an all-day workshop at the University with the dean, associate dean and CFCs. Scheduled 3 times a year, the workshop is designed as an overview to be expanded through the continued work of the CFC on the unit and return to campus CI "Enrichment Days" held semi-annually on campus using student actors in the simulation lab. Components of the workshop include: the School of Nursing's mission, philosophy and curricular design; the DEU concept and model of clinical instruction; teaching-learning principles; clinical reasoning tool; and course specifics related to the learning activities of the student and evaluation. All participants are given a packet of resource materials including faculty and student handbooks, clinical course syllabus, clinical expectations and evaluation forms, contact information, the DEU concept paper and a clinical teaching handbook.⁴

The workshops proved to be an important step in the development of the DEUs. Nurses brought together away from their workplace enjoyed being welcomed as faculty and hosted on their new campus. The workshops provide the opportunity for nurses, nurse managers and CFCs from multiple units to work collaboratively on DEU issues of: ensuring quality patient care with learners; staff scheduling for learner continuity; learner-driven patient assignments; and dealing with students in difficulty. A critical concept to operationalize was the DEU as an "optimal learning environment" focused on the learning needs of the student and not solely driven by patient care. Early on, DEU nurse managers realized that staffing had to be adjusted at the first days of the

rotation to lessen the CI's patient load to allow for the orientation, assessment and relationship-building with the new students. This is markedly different from a preceptor model in which the nurse teaches and supervises the student within the context of his/her patient assignment.

It is essential that students, faculty, staff nurses, and nurse managers understand the roles and responsibilities of the CFC, CI and student in the DEU. The model of clinical instruction (see [Figure 1](#)) is an important focus of student, faculty and CI orientation. Because students have other clinical rotations in traditional instructional models, the DEU concept and model of clinical instruction is reviewed at the beginning of each clinical course. The model of clinical instruction is in the student, faculty, and DEU handbooks as an ongoing reference source.

EXPANSION OF DEUs

Since the introduction of the DEU concept 3 years ago, 6 DEU units have been opened on medical-surgical units in 3 clinical facilities. The initial pilot units were new or remodeled patient care units. Subsequent DEU units have been conversions of operating patient care units with their existing nursing staff. Change theory was applied⁵⁻⁹ and various methods were used to involve staff in adoption of the DEU concept including unit meetings, presentations by the dean, associate dean and university faculty, discussions with other DEU participants, visits to operational DEU units and use of nurse "innovators" as the first CIs.⁹ Elements found to contribute to the staff's decision to become a DEU were: the opportunity to teach students; working with university faculty and students to apply new knowledge to practice; and enhanced professional development which was also recognized during annual performance reviews. Units initiating the DEU model began with senior students selected for DEU placement based on interest, clinical competence and communication skills—to control the challenge for nurses who maintained patient care responsibilities during their role transition as CIs.

METHODS

Level I and Level II partners were involved in the development of multiple methods to examine the implementation and expansion of the DEUs. Following approval of the university's institutional review board, formative evaluative strategies were initiated to include: surveys of students; focus groups, faculty meetings, a CFC time survey, and regularly scheduled meetings at each partnership level. A clinical survey was distributed to students before and after clinical rotations to examine the expectations of students regarding clinical experiences on DEUs and traditional clinical teaching units. Focus group questions were developed to gather student and CI perceptions of the

MODEL OF CLINICAL INSTRUCTION - DEU

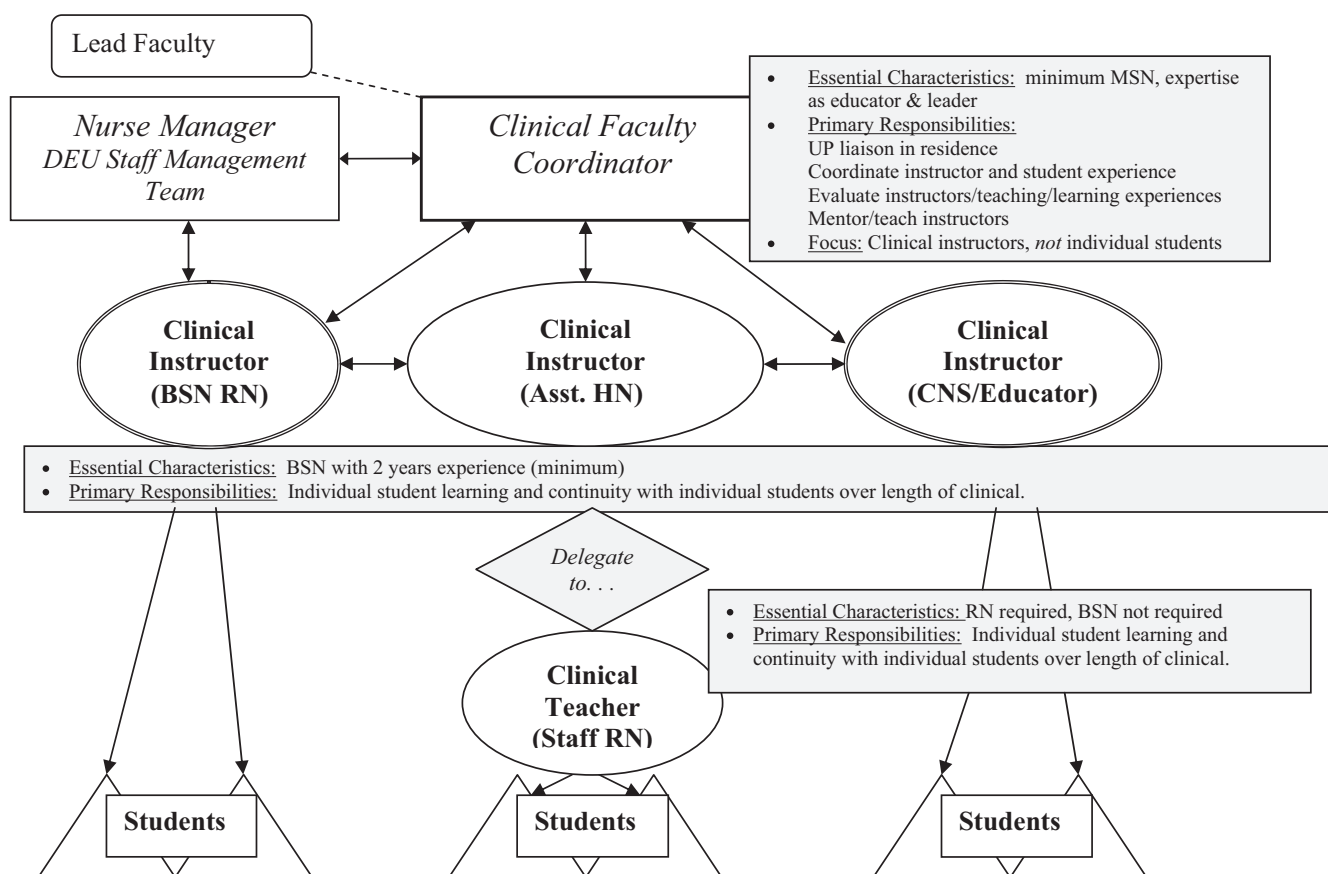


Figure 1. Model of Clinical Instruction—DEU.

DEU, compare experiences with the traditional clinical education model and identify challenges and suggestions for improvements. Transcripts of the focus groups were independently reviewed by 2 senior faculty members for the identification, coding and validation of themes. Meetings with nurse managers, CFC, and staff educators with CIs at the end of each rotation were used as a quality improvement strategy.

RESULTS

Outcomes Related to Number of Students

In 2002, prior to the beginning of the DEUs, 227 students had clinical experiences on 14 medical-surgical units. In 2006, 333 students had their clinical medical-surgical experiences in 6 DEU clinical learning environments. Use of the DEU model allowed us to support optimal clinical learning with increased numbers of students and to more efficiently use clinical resources. We estimate that if the traditional clinical education model had been used, we would have needed 25 medical-surgical units and 14–15 clinical faculty to provide medical-surgical clinical for the students.

Outcomes Related to Student Learning

The clinical survey of students found significant differences ($P < .05$) between students on the DEU compared with students receiving traditional clinical instruction (6–8 students on a unit with university faculty) for 6 survey items. Students on the DEU were significantly more likely to report: “nurses modeled professional behavior and values”; “nurses were my teachers”; “staff understood my learning needs”; “nurses helped develop my clinical learning skills”; “I was a member of the nursing unit responsible to nursing staff and health team”; and “I was in charge of my own learning during clinical.”

Student themes from the focus groups reflected the welcoming environment of the DEU and the teaching-learning supportive “village” conceptual image where the nurses “wanted to be there and to help me.” The DEU environment was contrasted with the traditional model where “you have to re-prove yourself each time” and “are never able to develop a working relationship with the nurse.” Students described the value of consistency with one CI throughout the rotation as

“HUGE” and commented on having an instructor who was always available, knew their strengths and limitations, and was able to “challenge me to the next step.” Increased accountability was another theme. Students commented that it was often easy to “hide” in the traditional educational model, but not so in the DEU model. Because their CI knew them so well, they were held accountable to improve daily and remember and apply what they had learned.

An unexpected early outcome related to student learning was reported in faculty meetings as a consequence of students moving from DEU to the traditional clinical group model used in pediatric and maternity courses. University faculty reported that some students were hesitant to assume patient care activities, waiting instead for the staff nurse to validate and guide them as had been done on the DEU with a CI. Once recognized, this was satisfactorily resolved in end-of-rotation care conferences by the CFC re-orienting students to the traditional model of clinical instruction and facilitating student discussion of the knowledge from their DEU experiences they were taking to the next rotation. Students identified assessment and communication skills, ability to work with families, physicians and interdisciplinary teams, and the confidence and accountability for performance they had built, and discussed ways these knowledge and skills would be applied in the new clinical sites.

Outcomes Related to Staff and Nursing Units

Four common themes arose from the CI focus groups and end-of-rotation meetings. The CIs liked being accountable for the student learning and expressed satisfaction in watching “my students grow.” They appreciated the opportunity to be the primary instructor of the student because this was seen to facilitate patient care, increase trust, and diminish student fears of asking questions. As one stated, “It is nice that the layer between you and the student is removed.” Clinical instructors felt challenged and energized by working with the students. Nurses noted that students “keep you on your toes” and “make you look at things more carefully” and this led many to review their own nursing practices. The challenge of learning and “translating” the vocabulary learned in the classroom into the clinical situation was identified. Some had not used nursing diagnoses since their student days. Increased fluency and comfort in “academe-ese” was noted as they worked with students and was seen as another area of professional growth.

A persistent early theme was the CIs’ uncertainty about their performance and wish for “expert” validation and development as instructors. While CIs commented on how it was “fun to see the light bulb go on” in student learning, there was expressed worry that they were providing what the student needed to learn, think, and grow. The difficulty in teaching and evaluating

critical thinking at the bedside was another issue. Clinical instructors were comfortable in evaluating skill performance, but less comfortable in evaluating performance and critical thinking according to the School of Nursing’s program outcomes.

Clinical Faculty Coordinator Time Survey

From university faculty meetings, nurse focus group and end-of-rotation meetings, an early major theme was the challenge for the CFC of maintaining communication about the student learner and providing instructor development in the busy and demanding clinical situations of the patient care area. A CFC time survey was conducted to examine CFC activities and time on DEU units. Results showed that the CFCs were spending considerable time on the nursing units but only a minimal amount of time directly involved teaching, coaching and evaluation activities with the CI. The majority of CFC time involved direct teaching with the student in clinical reasoning activities conducted via seminars, paperwork and on unit discussion. These were the same faculty activities in a traditional clinical instructor model. A contributing factor was that the CIs were often too busy with patient care and student supervision to interaction with the CFCs. The ability of the CFCs to provide support for the teaching/learning development of the CIs grew as the CIs became more comfortable in their roles, time management improved, and a trusting, collegial relationship developed between the unit CFC and CI.

Costs of DEU

In the DEU model, regular staffing is maintained with temporary adjustments at the beginning of each student rotation handled in different ways. Some units staffed a “resource” nurse to assist the CI, and other units reduced the nurse-to-patient ratio. This increased costs early in the rotation. Nurse productivity defined as “the ability to take the usual number of patients” is impacted by factors including: the experience level of the students (juniors take more CI time); learner differences (ie, learning style, comfort in the clinical arena, organizational and critical thinking skills); the ability of the students to organize and provide care for more than one patient; and the experience, style and comfort of the CI with delegation and supervision. Additional administrative costs associated with the DEU model involve the release time and staff coverage for CI orientation and continuing staff development, as well as additional charge nurse time associated with scheduling, staffing, and patient care assignments. The intangibles of cost/benefits are seen as a factor. The CIs favor the DEU model and a common theme is “I never want to go back to the other way.” Another benefit is expressed by a nurse manager, “I believe that staff is most satisfied when they are intellectually challenged and are empowered to manage their own work environment to the

extent possible. This seems to occur more for the CIs than for nurses who are not CIs.”

The process of evaluating the costs of our DEU model is a work in progress. Because our DEUs are different in size, number of CIs, RNs, and student capacity, rigorous economic modeling is not possible. Data is being gathered on recruitment results, orientation time for new graduates hired on the DEU, and retention. A discussion of the cost benefit of the DEU model used at Pacific Lutheran University found that the creation of the DEU allowed increased enrollment that contributed to increased revenue, increased recruitment and decreased orientation time for new graduates and increased staff and physician satisfaction.¹⁰

DISCUSSION

The operationalization of the DEU concept continues as a work in progress with sustained close, committed involvement of partners for its success. Since the first DEUs opened in the Fall of 2003, our collaborative partnerships has grown to 6 DEUs on medical-surgical units. The CIs continue to develop in their roles as clinical teachers, express confidence in evaluation and monitoring, and exhibit pride and ownership in building an optimal learning environment for the students. We have seen a goal of professional development realized. For instance, on one DEU, 5 of 16 CIs have returned to school to complete their BSN or begin master's programs. Our DEUs were used as exemplars of nursing excellence by Magnet reviewers in all 3 partner sites. The word is spreading about professional satisfaction with the DEU clinical teaching model and we have been solicited by other units wanting to collaborate with us and become a DEU. We are currently opening our first DEU on a psychiatric unit in a partner facility.

As we continue to learn and work to achieve our goal of partnering for an optimal teaching-learning environment, we have identified areas of focus. A primary focus is the sustained development, recognition and support of the CIs. We have developed a teaching/learning handbook for the CIs, cue sheets for the evaluation forms, weekly summary of clinical class topics for application to practice, and set up text and reference libraries on the DEUs. We listen to the CIs in daily conversations, end-of-rotation debriefings and through continuing education activities. Students and CFCs provide written evaluative feedback to the CIs that assist growth and development in the role. We have begun a series of on-campus “*Day of Enrichment for Clinical Instruction*” sessions for CIs that include clinical simulation experiences, best practices discussions, and a reward of a therapeutic massage. Dialogue continues as to the best method to provide teaching in time and feedback that validates success and continues development as instructors.

A second focus relates to the evaluation of students’

critical thinking. We recognize the difficulty in teaching and evaluating critical thinking at the bedside and are actively looking at ways to assist students with clinical reasoning. We have developed clinical teaching sessions on asking lower-order questions to test knowledge and recall and asking higher-order questions to stimulate critical thinking that have been useful to stimulate practice behaviors and CI-CFC dialogue.⁴ Clinical Faculty Coordinators evaluate the student paperwork, share results with the CIs and work with the CIs to teach clinical reasoning. The CIs use Outcome-Present State-Test (OPT), our clinical reasoning model, to break down their clinical thinking into steps to share with students. Clinical instructors ask students to identify the “keystone issue,” how they will “test” the effectiveness of their interventions and evaluate the outcomes of their care,¹¹ and are becoming more adept at promoting and finding holes in students’ clinical thinking.

Another focus is the implementation of a junior/senior student mix and peer teaching on the DEUs. The concept of peer teaching is an integral part of the FUSA-DEU model and we are preparing to initiate this strategy. Our vision is to extend our learning environment to encourage peer discourse, role modeling, delegation and direct teaching of skills between seniors and juniors. We have begun developing guidelines for the selection of students, peer teaching content, and strategies to equip seniors for their role, and identify CI education needed to work with different levels of students at the same time.

Finally, an ongoing focus is to foster and support strong, consistent communication on all levels of the partnership. One nurse manager comments, “beyond good faith and really liking each other,” clear consistent communication is a challenge but is essential to the success of our partnership and the DEU goals. We have formed a consortium of our DEU partners and have quarterly city-wide dinner meetings with the DEU nurse managers, the deans, and CFCs to foster communication, collaboration, and continued development of our clinical model. We have begun to collect productivity data and, as the first students with DEU experience graduate, we have begun to measure cost savings in orientation time, new graduate transition into practice, and retention.

As partners in developing our DEU model, we are pleased with our progress and outcomes. We have doubled our enrollment while supporting optimal clinical learning. Our partners have achieved and, in one case, renewed Magnet hospital status with recognition of the DEUs as an exemplar of professional nursing service and practice. We have been able to assess CI, CFC, and student satisfaction through focus groups, evaluations, collaboration activities, recruitment, and retention. We have close, collaborative, committed relationships with our clinical partners, and others want to partner with us to develop as DEUs. We find the

DEU model is an innovative collaborative bridge between education and practice that has resulted in pride, ownership, and professional growth in our partners and School of Nursing.

This article is dedicated to the nursing staff of 4L, 5G, 9W, 9E, 8E, and 6D who created the DEU learning communities that support and grow our future generations of nurses. Deep appreciation is extended to the individuals who had the initial vision for a new model of clinical education—Terry Misener, Kathy Johnson, Kathy Chapman, Carol Mitchell, and Joanna Kaakinen. The implementation and expansion of the DEU was made possible through the leadership and efforts of Tricia Gatlin, MaryAnn Custer, Diane Goodmanson, Becca Fowler, Cindy Fahy, Pam Aneshansley, Lauren Bridge, Phil Hostetler, Mary Beth Rosenstiel, John Reed, Lorretta Krautscheid, Joanne Warner, Sherry Shuldheis, and Mary Schoessler.

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