JNPD Journal for Nurses in Professional Development • Volume 36, Number 2, 63–67 • Copyright © 2020 Wolters Kluwer Health, Inc. All rights reserved.

Unifying Nursing Education Across the Care Continuum

CE 1.5 ANCC Contact Hours

Creating Consistency in Organ Transplant

Kara Mangold, DNP, RN-BC, CCTN, CNE, EBP-C

Patients with complex healthcare needs, such as those undergoing organ transplantation, must receive consistent care and patient education across the care continuum for successful self-management. A coordinated effort to unify nursing education across acute care and ambulatory practices was successful; benefits included reduction in redundancy of effort on the part of nursing professional development specialists and assured compliance with regulatory requirements. The nursing professional development standards of practice were essential in guiding this program to success.

Care across the continuum efforts are receiving attention in today's healthcare environment as a way to manage risk during the shift from volume to value-based care. These efforts emphasize the need to identify high-risk patients and facilitate care across transitions, especially from acute care to the postacute care setting. When transitions are not managed well, health can decline and costs can increase. Strategies to assist patients with transitions include hand-offs, education, follow-up, and medication reconciliation (Bosko & Gulotta, 2016). Relationships with patients and their caregivers, other healthcare providers and facilities, and payers are important for successful care transitions (Rice, 2015). Care across the continuum is a focus in healthcare works, and nursing professional development practitioners (NPDPs) can use it to drive change and learning in professional nurses.

Individuals seeking health care for ongoing needs often move between and among settings as needs change. This is particularly apparent in patients with end-stage organ failure seeking organ transplantation. Patients receive care in the ambulatory and acute care settings, often transitioning through multiple areas of acute care, including intensive care, progressive care, and medical/surgical. Throughout these phases of care, it is important that the patients receive consistent nursing care related to assessment, monitoring, medications, and patient education. However, nurses who care for these patients in different care settings often receive education on how to care for these patients in a variety of formats and from a variety of sources. A coordinated education effort for nurses caring for organ transplant patients can help ensure consistency in message and compliance with regulatory requirements. This article depicts one organization's experience in bringing together nursing education for organ transplant into one program.

Kara Mangold, DNP, RN-BC, CCTN, CNE, EBP-C, is Senior Education Specialist, Center for Individualized Medicine, and Assistant Professor of Nursing, Mayo Clinic College of Medicine and Science, Mayo Clinic, Phoenix, Arizona.

The author declares no conflicts of interest.

ADDRESS FOR CORRESPONDENCE: Kara Mangold, Mayo Clinic, 5777 East Mayo Boulevard, Phoenix, AZ 85054 (e-mail: mangold.kara@mayo.edu).

DOI: 10.1097/NND.0000000000000610

BACKGROUND

Current Practice

The NPDP is challenged to "recommend consolidating services where and when appropriate to improve cost and efficiency" (McLaughlin, 2017, p. 52). Beyond cost and efficiency, consolidation also has the potential to promote consistency, especially when discussing issues that cross practice environments. In regard to organ transplant, areas where consistency is important include assessment and monitoring for complications, immunosuppressive therapy, and patient education. Nurses across care environments must be able to communicate a consistent message to interprofessional partners. Patient education must be uniform across care environments. Delivering the same message can support the patient in self-management throughout all phases of transplantation.

In the previous model for organ transplant nursing education, education was delivered in individual practice environments. Registered nurse (RN) care coordinators based in the ambulatory setting had a separate education program from the RNs caring for patients in acute care. Furthermore, within acute care, RNs working in intensive care, progressive care, and the inpatient transplant unit all had separate education programs. In addition to issues with consistency, organ transplant practice, policy, and guideline changes had to be disseminated to a large network. With this method, there was a risk of missed or miscommunication.

Regulation

In the United States, organ transplant is highly regulated. The United Network for Organ Sharing (UNOS) manages the country's organ transplant system. This includes the list for those waiting for transplant, a database that contains every transplant that occurs, development of policies, monitoring of processes, and providing patient and public education. Organ Transplant Centers must comply with UNOS regulations (Organ Procurement and Transplantation Network, 2019). In addition, the Centers for Medicare & Medicaid Services (CMS) have Conditions of Participation Requirements for Transplant Centers (CMS & Department of Health and Human Services, 2007). These include requirements related to patient and living donor care and adequate training of nursing staff. The need to adhere to UNOS and CMS requirements provides additional impetus to ensure a coordinated nursing education effort.

FRAMEWORK

There is a dearth of information in the literature related to experiences of NPDPs in coordinating education efforts across the care continuum. A review of the literature produced no information on how care across the continuum education efforts, generally, or organ transplant education, specifically, is delivered to practicing nurses. Anecdotal information through networking with colleagues revealed a variety of formats. Often times, organ transplant education is focused on the specific care area where the nurse will deliver care (e.g., intensive care, progressive care, medical-surgical, ambulatory). The education effort is coordinated by the educator overseeing that patient population and focuses on the immediate care needs in that care area and does not present the patient experience across the continuum. When education is delivered to a wider audience, it rarely crosses both acute and ambulatory care areas. For example, intensive care and medical-surgical nurses may receive a coordinated education effort for care of the liver transplant recipient, but that effort does not extend to care coordinators working with patients in the pre-organ transplant and post-acute organ transplant phases. It is also rare to see education across many organ types. As the heart organ transplant population has a different care team than the kidney, pancreas, and liver care team, these organ groups are often separated for nursing education.

The *Nursing Professional Development (NPD): Scope & Standards of Practice (3rd Edition)* provides guidance when taking on the care across the continuum education endeavor (Harper & Maloney, 2016). The NPD practice model and standards of practice were utilized. There are 16 standards of practice. Of those, eight were used to guide the process: assessment of practice gaps, identification of learning needs, outcomes identification, planning, implementation, evaluation, change management, and collaboration. It is important to note the crucial role that coordination played in the consolidation program. Each of these is discussed in more detail below.

PURPOSE

The purpose of this work was to create a coordinated effort for education for nurses caring for organ transplant patients to ensure consistency and compliance with regulatory requirements. This program would encompass both initial and ongoing education. It would bring together efforts across four separate practice environments: ambulatory transplant center, intensive care, progressive care, and medical/surgical transplant.

METHOD

The reorganization began by seeking approval to move forward from nursing leadership. Because the initiative involved consolidation of services and supported a consistent message, approval was obtained. Following approval, the NPDP utilized the *NPD: Scope & Standards of Practice* to organize and move forward with the initiative (Harper & Maloney, 2016).

Standard 1: Assessment of Practice Gaps

The NPDP began by defining the target audience: RNs who care for organ transplant patients at the organization. Furthermore, the initial focus would be the orientation program for new RNs to the practice area. To determine the needs of the target audience, the NPDP obtained relevant internal and external policies and regulations. An internal intake of existing education was also obtained and reviewed. Meetings with NPDPs in the individual practice environments that care for organ transplant patients helped in understanding unique needs of each practice environment. This assessment revealed multiple areas of duplicated efforts as well as inconsistencies in the education that was delivered. For example, transplant pharmacology was redundant among practice areas. Inconsistencies related to patient education were also noted.

Standard 2: Identification of Learning Needs

The information from the assessment was organized and compared against internal and external policies and regulations. The content was organized according to the CMS standards related to patient and living donor care and adequate training of nursing staff. Topics that did not align with the identified learning needs were reviewed with the NPDP from the practice area where the topic originated to determine a resolution. An example of this was related to heart transplant and open-heart surgery. There was information from one practice area regarding care of the open-heart surgery patient included in the heart transplant curriculum. It was confirmed that this information was duplicative; there was also an open-heart nursing class that covered the same information. Therefore, it was taken out.

Once the gap analysis was finished, the NPDP met with stakeholders to ensure relevance and completeness. Stakeholders included clinical nurses from each of the practice areas; the organization's quality and compliance coordinator; and interprofessional colleagues from the practice, pharmacy, and nutrition. Modifications were made as needed.

Standard 3: Outcomes Identification

Stakeholder input during the assessment of practice gaps helped drive outcomes identification. The desired outcome of the consolidated program was to create a coordinated effort for education for nurses caring for organ transplant patients to ensure consistency and compliance with regulatory requirements. This would be assessed through evaluation of both participants and stakeholders and is discussed further in Standard 6. The process to complete Standards 1, 2, and 3 occurred over a 2-month time frame.

Standard 4: Planning and Standard 5: Implementation

With a solid foundation established, the NPDP commenced with planning the program. This course would be held quarterly and begin with an overview. The overview included UNOS and CMS regulation, history of transplant, pharmacology, nutrition considerations, and self-care/patient education. Once the overview portion of the course was complete, RNs separated into groups for education related to the specific organ transplant groups they would care for: kidney and kidney/pancreas, heart, and/or liver transplant (see Table 1). During the overview portion, content was led by the NPDP, a transplant pharmacist, and a transplant dietician. Organ-specific content engaged experienced clinical nurses from the practice environments as well as representatives from the practice (physician assistants and nurse practitioners). Ongoing participation of clinical nurses and the organ transplant practice helps to ensure relevance and uncover emerging trends that may be incorporated into the course.

The course incorporates modalities to engage learners in the content. Audience response systems, games, videos, and discussion are utilized throughout the course. The patient education information provides information about both the "what" and "how" of patient education. Resources and patient materials are reviewed. Time is also spent practicing patient education utilizing organ transplant-specific content.

It was noted during the planning phase that the quarterly occurrence of the course would not meet all needs. Some RNs would be hired and finished with orientation prior to being able to attend a class, therefore not gaining the knowledge and resources needed to care for organ transplant patients. This would be even more evident for traveler and contract staff. Thus, online learning modules were created for these situations. The online learning modules were developed from the live course content with adaptations to fit the different format.

In addition to the course, resources were created for use on the patient care unit. These could be used in conjunction with a preceptor or independently by the RN. These covered key internal and external information about organ transplant. Internal information included policies, protocols, guidelines, and patient education. External resources included information on UNOS, organ transplant professional organizations, and professional certification.

In addition to the course for new RNs, continuing education needs for organ transplant are also coordinated. When changes to heart transplant allocation were announced, the NPDP worked with stakeholders to develop and disseminate consistent information to the three practice environments that care for heart transplant patients. Internally, when a trough lab draw time change was instituted, the NPDP created unified information to share with the two practice environments impacted by the change. Both of these changes were seamlessly incorporated into the new RN transplant course by the NPDP.

TABLE 1 New Hire Registered Nurse Organ Transplant Education Agenda

Day 1
0800–1400 (With Lunch): Transplant Overview 1415–1700: Heart Transplant or Kidney and Pancreas Transplant
Day 2
1300–1600: Liver Transplant

Standard 6: Evaluation

Evaluation of the program is ongoing. Formative evaluation during the new RN transplant course helps to evaluate learning and determine new practice gaps. This involves observation of the course as well as input from the clinical nurses who teach content. Participants complete an evaluation of the course, and results are synthesized for trends over time. Results are shared with course faculty and leadership to guide future direction of the course. This evaluation has been positive, with 92% of evaluation respondents rating the course as excellent or very good (scale: excellent, very good, fair, poor). One troubling finding was that only 56% of evaluation respondents indicated that the course increased confidence in caring for organ transplant patients "completely" or to a "great extent." Adding in those who selected "to a moderate extent" increases that percentage to 86%. Although concerning, it may be that these new RNs need time in actually providing nursing care to organ transplant patients before confidence will increase. Table 2

TABLE 2 New Hire Registered Nurse Organ Transplant Course: Summary Evaluation

Topic	Overall Positive Rating
Course Met Expectations	95%
Course Helpful for Future Success	98%
Ability to Use Learning Immediately	96%
Would Recommend Course	98%
Transplant Overview: Information Relevant	100%
Patient Education: Information Relevant	100%
Dietary/Nutrition: Information Relevant	99%
Living Donor: Information Relevant	100%
Pharmacology: Information Relevant	99%
Heart Transplant: Information Relevant	100%
Kidney & Pancreas Transplant: Information Relevant	100%
Liver Transplant: Information Relevant	98%

Note. $N = 88$; 81% response rate. Positive rating criteria: % strongly agree and agree. Scale: strongly agree, agree, disagree, strongly disagree.

provides a summary of additional key evaluation data for the first year of the new RN transplant course. Over the course of the first year, 109 new RNs completed the course.

In addition, nursing leadership and NPDPs from the practice areas were asked if the integrated process is beneficial and if RNs have the information they need to care for organ transplant patients on the unit. Answers to both questions have been unanimously positive. Because of the fragmented nature of organ transplant education for nurses before the new project, it is not possible to compare evaluations more completely in a before/after fashion.

Standard 11: Change Management and Standard 13: Collaboration

When the NPDP had a vision to bring together organ transplant education across practice environments, change was inevitable, and acting as a change agent was a large part of the process. Although specific changes are outlined in Standards 1–6 above, the need to work with others to identify problems and solutions was essential. Collaboration helped the NPDP to see a broader perspective of the change, anticipate challenges, and leverage advantages. The change was identified as meaningful in that it consolidated efforts and helped to ensure consistency in meeting regulatory requirements. The most challenging part of the change process has been implementation. During the implementation process, the NPDP needed to keep key concerns of the stakeholders at the forefront and be flexible in navigating challenges. One of the larger challenges is availability of consistent clinical nurses and providers to teach the course due to scheduling fluctuations. It has been important to have alternate resources ready in the event that they are unavailable. This has involved bringing in additional individuals to teach the content or the NPDP taking on the content depending on the situation.

IMPLICATIONS

Coordinating education efforts for nurses caring for organ transplant patients across the care continuum has been successful on multiple levels. The initial effort to assess practice gaps, identify learning needs, and identify outcomes was resource intensive but beneficial to uncover redundancies and inconsistencies in organ transplant education for nurses. The role of the NPDP in coordination and collaboration was essential in the success and ongoing sustainability of the effort. The largest benefits from the program, thus far, are related to consolidation of efforts and the ability to provide uniform RN education regarding the care of the patient population. The use of the NPD standards of practice provided a strong framework to be successful with this work. The NPDP should leverage this framework to guide practice and facilitate change related to nursing education.

It is key in an endeavor such as this, with many unknowns and delayed results, that the NPDP remember the outputs of the NPD practice model (learning, change, and professional role competence and growth) that ultimately protect the public (Harper & Maloney, 2016). In order for this initiative to be successful, the influence of the NPDP's expertise in assessment, design, implementation, and evaluation of efforts to develop professional role competence was paramount. Thorough environmental scanning and discussion with key stakeholders were necessary in formulating a project proposal that was endorsed by the nursing leadership. It was necessary to take a wide view of the initiative in the assessment phase to synthesize practice gaps, regulatory requirements, organizational priorities, and trends in organ transplant to inform the proposal. No one of these issues alone was enough to convince the NPDP, stakeholders, or nurse leaders to embrace the change.

It is also imperative that the NPDP demonstrate systems thinking and be able to demonstrate the potential return on investment. Return on investment is not only cost but also resource use. The reduction in duplicative efforts on the part of the NPD team is important, but the consolidation of efforts also decreased burden in other areas. Guest faculty, such as providers and pharmacists, were not repeating the same information over and over. In addition, the interprofessional team had one point of contact related to organ transplant needs for education; there was no longer

a need to contact multiple educators when practice changes occurred. The system-wide implementation of the program integrated educational services in a way that proved satisfactory to learners, stakeholders, and NPDPs.

By far, the biggest impact for NPDPs was related to Standard 11: Change Management (Harper & Maloney, 2016). The NPDP must use evidence and experience to be bold in introducing new ideas that have the potential to have positive impacts, making sure that change efforts are meaningful and wide ranging. Communicating the vision and providing solid rationale for the change were important in getting the initiative started with good momentum. Flexibility during the assessment process ensured that the NPDP was open to new ideas as they emerged so that they could be explored and incorporated. Through constant scanning and monitoring of the process, the NPDP could not get weary and had to be at the ready to notice what was happening during the implementation process and quickly pivot when indicated. Readiness for change varied among different stakeholders. Through dialogue and careful listening, concerns were presented and addressed in order to successfully manage the change. Sustaining the change through continuation of the initial effort and growth and adaptation are essential to long-term success.

LIMITATIONS

A more robust evaluation process to capture learning, behavior, organizational impact, and return on investment would strengthen this work. Although redundancies have been reduced and consistency has been improved, it has not been possible to compare the new process to the previous process. This is due to the fragmented nature of education prior to the consolidation process. This work would be strengthened by understanding how nursing education that promotes care across the continuum impacts patient outcomes, such as readmission rates and the patient experience.

CONCLUSION

A NPDP-coordinated effort to unify nursing education across the care continuum was successful as it helped ensure consistency, reduced redundancy, and aided in compliance with regulatory requirements. The NPD standards of practice were essential in providing a guiding framework for the initiative (Harper & Maloney, 2016). The importance of the NPDP as a change agent, collaborator, and coordinator was vital to the success of the endeavor.

References

Bosko, T., & Gulotta, B. (2016). Improving care across the continuum. *Journal of Healthcare Management*, *61*(2), 90–93.

Centers for Medicare & Medicaid Services & Department of Health and Human Services. (2007). *Medicare program; hospital conditions of participation: Requirements for approval and reapproval of transplant centers to perform organ transplants*, 42 CFR Parts 405, 482, 488, and 498.

Harper, M. G., & Maloney, P. (2016). *Nursing professional development: Scope & standards of practice* (3rd ed.). Chicago, IL: Association for Nursing Professional Development.

McLaughlin, M. (2017). Current and future issues, innovations, and trends. *Journal for Nurses in Professional Development*, *33*(1), 51–53.

Organ Procurement and Transplantation Network. (2019). *Member Evaluation Plan*. Retrieved from: https://optn.transplant.hrsa.gov/media/1202/evaluation_plan.pdf

Rice, S. (2015). Top-performing systems focus on improving across care continuum. *Modern Healthcare*, *45*(16), 20–21.