Nursing Excellence
2019 Magnet®-Recognized Organization Success Stories
Nursing has appropriately increased its focus on evidence-based practice (EBP), the development of new knowledge, and baccalaureate education as entry into clinical practice. Programs appear almost daily offering online education, courses to supplement existing knowledge, and continuing education for those who’ve completed their formal education. Clinical nurses are busier than ever with high-acuity patients, shorter hospital stays, staff shortages, and complex technology to master at the bedside. In addition, nurses at all experience levels need innovative strategies to help them conceptualize, design, and complete projects, especially when the American Nurses Credentialing Center (ANCC) Magnet Recognition Program® now requires documentation of two completed and one ongoing nursing research study in each hospital.

The skills needed to conduct EBP projects are rarely taught in associate degree or diploma programs and may be minimally covered in baccalaureate curricula. The combination of limited knowledge, time, and mentors makes the completion of a capstone or dissertation-level project difficult for nurses who juggle heavy workloads, complex coursework, and family responsibilities. Identifying students and staff with similar project
interests who can work collaboratively helps to support project development and completion. One way to do that is through near-peer mentoring.

**Testing a model**

During the recent Magnet® site visit to our 525-bed quaternary care facility, one of the appraisers commented on the approach that we used to encourage research between two nurses who were students at the same university; one was completing her bachelor's degree in nursing (BSN) and the other was completing her doctor of nursing practice (DNP). The situation presented us with an opportunity to test the near-peer mentoring model, which has been used in medical and pharmacy education. In this model, a more experienced student (near-peer) mentors the less experienced student (novice).

Both students are guided by an expert who serves as a resource. In our case, a research expert facilitated the pairing of the two individuals after speaking with them independently about their compatible research interest.

The novice applied what she learned in her didactic coursework and her clinical experience to the project while the near-peer mentor made the research process tangible and understandable as she worked on her DNP project. Frequent, regularly scheduled meetings between the two facilitated smooth, unhurried communication (the expert met with the team intermittently).

**Planning a project**

Near-peer mentored projects begin with an idea that’s developed into a plan that incorporates the skills and knowledge of the near-peer and the novice. With the added support of the expert, all members of the team accrue benefits that can advance their careers and enhance patient care. And in an age of limited resources, the near-peer approach maximizes the expert’s impact and should result in more poster presentations and journal publications. Also, should one of the team members need to resign, the continuity of the project can be maintained more easily.

**Project origination**

Research projects can originate from a need identified by a unit practice council, a clinical nurse’s observation, or a question identified in the literature. The near-peer and novice develop the topic question into a plan for reviewing existing literature and determining next steps. Depending on the available evidence, the project may develop into an EBP project or it may require a nursing research proposal if insufficient evidence can be found in the literature.

**Team member roles**

Each member of the team determines his or her knowledge, skills (clinical and research or EBP), and motivation (class project, capstone, DNP project, or dissertation). The near-peer, usually a graduate student, assumes the role of mentor and leads the project design, maintains oversight, and guides the novice. The novice focuses on specific assigned tasks related to the project, such as literature reviews, article critiques, data collection, or study subject consent, knowing that he or she is in a safe setting with back-up from the near-peer mentor. The expert mentor, ideally someone with doctoral preparation that includes research experience, reviews the process and provides feedback and oversight for both the near-peer and the novice. The expert could be an advanced practice nurse or a faculty member from an academic setting. All three members of the team can benefit from this arrangement. (See Benefits abound.)

**Benefits abound**

The near-peer mentoring model includes three members: the novice nurse, the near-peer mentor, and senior expert. Each member of the team benefits from this model.

**Novice nurses**

- gain research experience in a safe environment where they can ask questions of a near-peer, which may be less intimidating than asking an expert
- build confidence as beginning researchers, increasing the likelihood that they will participate in more projects.

**Near-peer mentors**

- hone their teaching and mentoring skills under an expert’s guidance
- gain experience as project leaders
- may develop an interest in teaching and joining nursing faculty, an area where shortages are predicted.

**Senior experts**

- expand their reach by overseeing multiple projects simultaneously
- share their mentoring skills while providing advice and guidance
- gain access to up-to-date clinical information.

**Capitalizing on congruence**

The strength of the near-peer model rests on the theoretical construct of social congruence, where individuals in a shared social setting who have similar experiences are able to relate more easily than those who don’t share those experiences. In the hospital setting, a nurse completing his or her undergraduate degree while working in a clinical capacity can relate more easily to a peer who’s a higher-level student than she can to a faculty member or a senior expert. Additionally, cognitive congruence (similar knowledge base) enhances the likelihood of good communication, shared understanding, and a perception of being supported.
Exploring together

Our success with this model was based on a shared project idea that benefitted from the clinical expertise of a staff nurse, who was completing a BSN degree and was a novice to the research process, paired with a DNP student who needed that clinical expertise to conduct her research. Working through the research process together made the project more meaningful and less intimidating for both. Each benefitted from what the other provided and together their project was a positive learning experience as well as a model of collaboration. The team graduated from their respective degree programs, presented their findings through posters and presentations, and look forward to developing more projects.

Our organization is in the process of evaluating this model of near-peer mentoring in the hospital setting by developing a nursing research study using mixed methodology. Currently, we have an active nurse residency program with required EBP projects, several nursing staff who are BSN students, and many nurses pursuing graduate degrees. Our active nursing research/EBP council is composed of advanced practice nurses (several with doctoral preparation) and is chaired by a doctorally prepared research lead. These resources provide an ideal setting for testing this model.

As we prepare for the future of our profession, we reflect on a statement that appeared in an article in the Journal of Nursing Education: “We are colleagues at different levels, sharing and exploring the field of nursing together.”

The authors work at Sentara Norfolk General Hospital in Norfolk, Virginia. Susan Mullen Kaplan is a nurse specialist and coordinator of nursing research and evidence-based practice. Tina Kennedy-Schlegel is a nurse anesthetist and patient care supervisor. Pamela Hammond-Miles is an I.V. team/midline inserter. Joanne Williams-Reed is the director of patient care services, education, wound services, diabetes, chaplaincy, AV, Telemetry, and eICU.

Selected reference
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Implementing and evaluating an oral chemotherapy tracking tool

An academic medical center develops guidelines for monitoring medication adherence and side effects in outpatients.

By Kristin M. Ferguson, DNP, RN, OCN; Laurie J. Dohnalek, DNP, MBA, RN, NE-BC, CENP; Susan S. Moreland, DNP, RN, AOCN, CRNP; Susan M. Schneider, PhD, RN, AOCN, FAAN

The past 10 years have seen an increase in the use of oral chemotherapy to treat cancer. Patients administer these medications at home, which provides treatment option flexibility but also can lead to potential complications, including medication nonadherence and unreported side effects. For example, a systematic review of oral chemotherapy by Greer and colleagues reported patient adherence rates from 46% to 100%. In addition, many chemotherapy and targeted cancer agents have a narrow therapeutic window, requiring them to be taken within a specific time frame and dose to prevent cancer progression.

In 2013, the American Society of Clinical Oncology (ASCO) and the Oncology Nursing Society (ONS) published recommendations that cancer centers develop outpatient oral chemotherapy guidelines to help nurses and providers teach patients about the medications and monitor them for adherence and side effects between provider visits. As part of creating these types of guidelines at MedStar Georgetown University Hospital Lombardi Comprehensive Cancer Center (MGUH LCCC), a nurse coordinator, acting as project investigator, developed and implemented a quality improvement (QI) project in which an oral chemotherapy tracking tool for the nurse coordinator department was piloted.

**Project goals**
The tracking tool, which was created based on published guidelines and recommendations, prompts nurse coordinators to ask patients specific questions related to medication adherence and side effects and to reinforce initial medication education during phone calls 7 to 14 days after chemotherapy initiation. (See Oral chemotherapy tracking tool.) Project goals included:

- making all nurse coordinators aware of the tool
- achieving at least 80% of nurse coordinators reporting the tracking tool as helpful to their practice
Based on published guidelines and recommendations, this oral chemotherapy tracking tool helps oncology nurse coordinators monitor medication adherence and side effects and reinforce initial education.

**Oral chemotherapy tracking tool**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Date of birth</th>
<th>Oral chemotherapy agent/specialty pharmacy</th>
<th>Start date</th>
<th>Date spoke with patient after starting chemotherapy</th>
<th>Can patient identify possible side effects?</th>
<th>How many doses has patient missed since beginning medication?</th>
<th>Have you documented communication in EHR* via progress note?</th>
<th>When is patient’s next set of labs?</th>
<th>When is patient’s next provider visit?</th>
<th>Is follow-up needed?</th>
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Questions to ask patient 7 to 14 days after beginning oral chemotherapy:

- Do you have any concerns about your medication?
- What are three common side effects of your medication?
- Since beginning the medication, how many doses have you missed? (Example: Missed 2 out of 14 days or 2/14.)
- Do you know when you’ll next need lab work?
- Do you know the date of your next appointment?

*EHR = electronic health record

- contacting 80% of patients newly prescribed oral chemotherapy by the nurse coordinator (by phone or email) 7 to 14 days after medication initiation to evaluate for side effects and medication adherence
- ensuring that patients can state three common side effects of their prescribed medication and understand that they should contact the medical team when experiencing side effects
- ensuring 85% patient medication adherence as measured by self-report.

**Project scope and design**

The sample for this project included adult oncology patients recently prescribed oral chemotherapy in the outpatient setting at MGUH LCCC and 10 oncology nurse coordinators. Patients were included regardless of primary language, diagnosis, or cancer stage. Exclusion criteria included pediatric cancer patients, adult patients prescribed hormonal/endocrine therapy only, those enrolled in research protocols, and those who were admitted as inpatients when they started oral chemotherapy. The oncology nurse coordinators (many of them oncology certified nurses) work directly with medical oncologists, providing initial in-person education about oral chemotherapy at the medical oncology visit when it’s first prescribed and meeting with patients at various points during care.

Data collected through random audits of the electronic health record (EHR) were used to evaluate patients before (July 2016 to December 2016) and after (August 2017 to December 2017) the tool was implemented to assess improvement in their knowledge of side effects and medication adherence. A total of 45 audits of patient records were completed before implementation, with 45 audits performed after implementation. Comparisons were made using baseline data and data collected after intervention implementation to evaluate patient knowledge and the effectiveness of patient education. The date of initial prescription of oral chemotherapy was noted by viewing the “Rx/Prescription” tab in the EHR, and then the “Progress Notes” section was reviewed to determine if the oncology nurse coordinator documented communication with the patient to assess for side effects and if the patient knew who to contact if he or she experienced side effects.

Patient adherence was measured by asking patients open-ended questions derived from a validated tool. The nurse coordinators also asked patients during their calls if they had missed any medication doses since starting oral chemotherapy 7 to 14 days before. Adherence was assessed in 68 patients. Because the tracking tool was anonymous, some of the chart audits completed postintervention may have included some of these 68 patients.

In addition to these random chart audits, the
project investigator reviewed each oncology nurse coordinator’s tracking tool 3 months after implementation to determine how many patients were contacted and if they could identify teaching conducted by the nurse coordinator at a prior visit.

Results
Pre- and postimplementation chart audits demonstrated that communication with patients 7 to 14 days after they began oral chemotherapy increased from 42.2% to 51.1%. Education on side effects documented in progress notes during calls showed a statistically significant increase of over 25% ($p = .010$). Before the intervention, only 15.6% of EHR progress notes about patient calls mentioned side effect discussions. After the intervention, 42% documented a discussion of side effects. A statistically significant increase (from 11.1% preintervention to 31.1% postintervention [$p = .037$]) also was noted in the number of patients who could identify when they should call their provider about side effects. The 89.7% self-reported adherence rate reported by this sample was higher than national rates, which can be as low as 46%.

Three months after implementing the oral chemotherapy tracking tool, the 10 oncology nurse coordinators participated in an anonymous paper survey at a staff meeting. (See Nurse coordinator survey.) Descriptive statistics were used to evaluate sur-
The results showed that all were aware of the tool and how to use it, and 80% found it helpful when monitoring patients receiving oral chemotherapy and in their EHR documentation.

Some comments from the nurse coordinators included: “Helpful to keep tracking new patients to make sure they start and receive their drugs” and “It was helpful in tracking and reminding me of who is on oral therapies.” One nurse coordinator commented that tracking medication adherence so soon after initiation “was not necessarily informative because patients were so early in treatment that they had not missed a dose” and one suggested that “doing a check-in at a later point, like 30 days, would be better.” Another nurse coordinator said that it would have been helpful to have the tool integrated into the online EHR database.

Filling a gap
This QI project sought to implement a structured set of guidelines in the form of a standardized tracking tool to meet evidence-based standards recommended by ONS and ASCO with regard to side effect and medication adherence monitoring. The piloted tool proved to be an effective way to facilitate care coordination in a large cancer center clinic, and improvements will be made based on nurse coordinator feedback. This tracking tool can be easily adopted by other practices to promote continuity of care.

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Selected references
Peripheral IV (PIV) assessment and care is an important component in clinical nursing. Organizations must ensure that nursing practice policies regarding the use and care of PIVs are updated according to the best available evidence. After reviewing guidelines from the Infusion Nurses Society (INS) about the frequency of rotating PIVs, nurses at Salem Health formed an interprofessional team and used lean methodology, in conjunction with evidence-based practice (EBP), to align nursing practice with the updated national standards. The lean culture prompted our nurses to close the gap between what should be happening and what is actually happening when it comes to PIV rotation.

Preparing for change
In 2015, a clinical nurse from one of our critical care units attended the American Association of Critical-Care Nurses’ National Teaching Institute (NTI). While in a conference session, she learned that the INS had updated their standards of practice for changing PIVs based on results from a Cochrane Database systematic review. The new standard recommended changing PIVs only when clinically indicated, as opposed to rotating based on a routine frequency. However, our organization’s policy, “Peripheral I.V. assessment & care,” still required that RNs change PIV cannulas every 72 to 96 hours.

Getting things moving
After returning from NTI, the nurse conducted a literature search to find the Cochrane review presented at the conference. In her search, she uncovered other original research studies, as well as the INS standards. The 2011 INS Standards of Practice stated, “The nurse should consider replacement of the short peripheral catheter when clinically indicated…[t]he decision to replace the short peripheral catheter should be based on assessment of the patient’s condition.” The 2015 Cochrane review, which included seven trials of 4,895 patients, concluded that “No difference in phlebitis rates was found whether catheters were changed according to clinical indications or routinely.” The INS’s recommendation was validated in its 2016 Policies and Procedures for Infusion Therapy: “A vascular access device (VAD) is removed on the order of a licensed independent practitioner (LIP) when therapy is completed, when clinically indicated, or when deemed no longer necessary for the plan of care.” The INS does not base removal on a specified timeline.

The nurse presented a summary of these findings
in the form of an evidence synthesis table, along with associated proposed policy updates, to the EBP and Practice Councils at Salem Health. After receiving support from these councils and nursing administration, the nurse proceeded to establish an interprofessional team (including the nurse proposing the change, nurse manager, clinical nurse specialist, Kaizen clinical nurse consultant, I.V. therapy nurse, other clinical representatives, and a student intern) to formulate an intervention to address the problem. The neuro-trauma care unit (NTCU) volunteered to serve as the pilot unit.

The purpose of the initiative was to align I.V. practices with best practice recommendations that reduce the use of I.V. therapy resources and decrease RN workload and required equipment without negatively impacting the patient experience with an increased incidence of phlebitis.

Educating staff
The interprofessional team used lean methodology and initiated four-step problem-solving. Baseline data were collected on the NTCU to determine the total number of I.V. restarts performed per protocol in 1 month, as well as phlebitis incidence. The team developed a test of change (TOC) where nurses would rotate PIVs based only on clinical indication. This meant that instead of automatically removing a PIV when the 96-hour deadline was near, nurses would leave the current I.V. in place as long as signs of phlebitis, infiltration, or extravasation were absent.

Before starting the TOC, the infection prevention department was consulted to ensure optimal patient safety. NTCU staff were educated on the new process and signs and symptoms of phlebitis, infiltration, and extravasation. In addition, the NTCU resource nurses and leaders of the unit’s specialty practice team disseminated education about the TOC. If a PIV was left in because of the TOC, nurses documented this action in the electronic health record. The NTCU was the only unit participating in the TOC, so if a patient was to be transferred and had a PIV dwell time of greater than 96 hours, a new PIV was started before transfer. (See Unnecessary PIV restarts.)

Reviewing the change
At the end of the 3-month (March to May) TOC, NTCU nurses were surveyed about their perception of the practice change. Results indicated that NTCU RNs believed the TOC improved the patient experience and also saved clinical nurse and I.V. therapy staff time. Before the TOC, nurses frequently paged I.V. therapy staff when they weren’t successful with PIV restarts. In addition, patients no longer had to
withstand unneeded needlesticks and vessel preservation was promoted.

A business intelligence report was created from the electronic health record to accurately collect TOC data. Results showed no negative outcomes during the intervention, including no increase in phlebitis rates. During the TOC, 137 PIVs had dwell times greater than 96 hours on the NTCU. Estimated cost savings from the reduced supply usage and RN labor were $435 per month, with an annualized savings of $5,737.44 for a 30-bed critical care unit.

**Moving forward**

The project team shared the TOC results with Salem Health’s policy stakeholders. The housewide policy was updated to reflect current evidence and went live in August 2016. The Practice Council created a tip sheet that was distributed to nursing units to provide education, and the updated policy was shared in unit announcements, at shift changes, and via e-mail.

After implementing the change, the team presented a follow-up project summary to the EBP Council. The lead nurse presented poster sessions at the Greater Portland Chapter-AACN Critical Care Symposium in November 2016, at the American Nurses Credentialing Center’s National Magnet Conference® in October 2017, and the American Nurses Association’s Quality and Innovation Conference in March 2018.

**Impact**

Our critical care nurse colleague learned about new evidence that could shape nursing practice and dedicated herself to bringing this new knowledge back to her colleagues. She served as a transformational leader, planting the seed and inspiring other nurses to be champions of the change to improve patient, nursing, and organizational outcomes.

Ellie Barnhart is a clinical nurse on the intermediate care unit at Salem Health in Salem, Oregon. Ann Alway is a critical care CNS at Salem Health Hospitals and Clinics in Salem, Oregon. Margo Halm is the associate chief nurse executive for nursing research and evidence-based practice at VA Portland Healthcare System in Portland, Oregon.

**Selected references**


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